

Data Management Package for Human Carrying Capacity Estimation on Brazil's Transamazon Highway

Pacote de Programas para Manejo de Dados para Estimativa de Capacidade de Suporte Humano na Rodovia Transamazônica

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EROSIONNEIGHB – Erosion prediction information intersample distances
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PDENS – Planting density

MASTERPRINT – Prints crop-yield prediction master files

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SORTSOILPRED – Sorts soil-change prediction data

SOILADD – Adds soil result data from SORTSOILPRED to SOILHIST

YIELDSOILADD – Adds soil result data from crop master files

BOOKKEEP – Tabulation of soil results

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1      SUBROUTINE BEINTR(ICCASE, IBEG, IFOLD0, ICAS10, IEND)
2      C      THIS SUBROUTINE (BEINTR) TABULATES INTERPLANTING DATA WHERE BEANS
3      C      (EITHER PHASEOLUS OR VIGNA) IS THE PRINCIPAL CROP. ARGUMENTS ARE:
4      C      ICCASE: THE NUMBER OF CARDS FOR CASE IN THE "K" ARRAY OF IPLANT;
5      C      IBEG: THE DAYS SINCE 1900 FOR BEAN PLANTING; IFOLD0: THE DAYS
6      C      SINCE 1900 FOR INTERPLANTED MAIZE FOLDING; AND ICAS10: THE NUMBER
7      C      OF CARDS FOR THE CASE IN PS10 OR V110. THE BEINTR SUBPROGRAM IS
8      C      CALLED BY THE IPLANT MAIN PROGRAM.
9      C      FUNCTIONS NEEDED ARE: CA1900 AND PDENS
10     C
11     INTEGER CURUSE, CA1900
12     INTEGER VAR107, VAR109, VAR110, VAR111, VAR112, VAR113, VAR114,
13     1VAR115, VAR116, VAR117, VAR128
14     C      ABOVE TYPE DECLARATION FOR CARD 9
15     INTEGER VAR131, VAR133, VAR134, VAR135, VAR136, VAR137, VAR138,
16     1VAR139, VAR140, VAR141, VAR142, VAR143, VAR144, VAR145, VAR146,
17     2VAR148, VAR150, VAR151, VAR152
18     C      ABOVE TYPE DECLARATION FOR CARD 10
19     COMMON/C1/ VAR131(10), VAR133(10), VAR134(10), VAR135(10),
20     1VAR136(10), VAR137(10), VAR138(10), VAR139(10), VAR140(10),
21     2VAR141(10), VAR142(10), VAR143(10), VAR144(10), VAR145(10),
22     3VAR146(10), VAR147(10), VAR148(10), VAR149(10), VAR150(10),
23     4VAR151(10), VAR152(10)
24     COMMON/C2/ VAR107, VAR109, VAR110, VAR111, VAR112, VAR113, VAR114,
25     1VAR115, VAR116, VAR117, VAR128
26     COMMON/C3/ KL1(30), KL2(30), KL3(30), KL4(30), KL5(30), KL6(30),
27     1KL7(30), KCURUS(30)
28     COMMON/C4/ PLANTD, METHCD, ICERT
29     IN133 = 0
30     IN134 = 0
31     IN135 = 0
32     IN136 = 0
33     IN137 = 0
34     IN138 = 0
35     IN139 = 0
36     IN141 = 0
37     IN142 = 0
38     IN143A = 0
39     IN143B = 0
40     IN144 = 0
41     IN145 = 0
42     IN146 = 0
43     IN147 = 0
44     IN148 = 0
45     IN149 = 0
46     IN150 = 0
47     IN151 = 0
48     IN153A = 0
49     IN153B = 0
50     IN154A = 0
51     IN154B = 0
52     IN155 = 0
53     IN156 = 0
54     IN157 = 0
55     IN158 = 0
56     IN159 = 0
57     IN160 = 0
58     IN161 = 0
59     IN162 = 0
60     IN163 = 0

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61      IN165 = 0
62      IN166 = 0
63      IN167A = 0
64      IN167B = 0
65      IN169A = 0
66      IN169B = 0
67      IN169A = 0
68      IN169B = 0
69      IN170 = 0
70      IN171 = 0
71      IN172 = 0
72      IN173 = 0
73      IN174 = 0
74      IN175 = 0
75      IN176 = 0
76      IN177 = 0
77      IN178 = 0
78      IN179 = 0
79      IN180 = 0
80      IN181 = 0
81      IN182 = 0
82      IN183 = 0
83      IN184 = 0
84      IN185 = 0
85      RIN14C = 0.
86      PIN152 = C.
87      PIN164 = 0.
88      LAST = 0
89      ISTART = C
90      CC 119 I10 = 1, ICCASE
91  C    MAKES TABULATION CALCULATIONS SCANNING "K" ARRAY
92      KPREV = I10 - 1
93      IF (KPREV .LE. 0) KPREV = 1
94      IF (I10 .EQ. 1) IPVUSE = 4
95      IF (I10 .GT. 1) IPVUSE = KCURUS(KPREV)
96  C    IPVUSE IS USE DURING PREVIOUS INTER-EVENT INTERVAL
97      IF (KL6(I10) .GT. IEND .OR. LAST.EQ.1) GO TO 119
98      IF (KL6(I10) .EQ. IEND) LAST=1
99      IF (ISTART .EQ. 0) IBDATE = IBEG
100  C    ASSIGNS PRINCIPAL CROP PLANTING DATE AS BEGINNING DATE FOR FIRST
101  C    INTER-EVENT INTERVAL
102      IF (KL6(I10) .LE. IBEG) GO TO 119
103      IF (ISTART .GT. 1 .AND. KL6(KPREV) .EQ. KL6(I10)) GO TO 119
104      ISTART = ISTART + 1
105      IF (ISTART .GT. 1) IBDATE = KL6(KPREV)
106  C    CALCULATES BEGINNING DATE FOR EACH INTER-EVENT INTERVAL (IBDATE)
107      IN170 = IEND - IBEG
108      IN171 = MAX0(VAR113, VAR117)
109      IF (IPVUSE .EQ. 21) GO TO 122
110      IF (IPVUSE .EQ. 23) GO TO 123
111      IF (IPVUSE .EQ. 26) GO TO 124
112      IF (IPVUSE .EQ. 24 .OR. IPVUSE .EQ. 32) GO TO 125
113      IF (IPVUSE .EQ. 25) GO TO 126
114      IF (IPVUSE .EQ. 22) GO TO 127
115      IF (IPVUSE .EQ. 27) GO TO 128
116      IF (IPVUSE .EQ. 13 .OR. IPVUSE .EQ. 20) GO TO 128
117      IF (IPVUSE .EQ. 41 .OR. IPVUSE .EQ. 50) GO TO 128
118      IF (IPVUSE .EQ. 33 .OR. IPVUSE .EQ. 39) GO TO 128
119      IF (IPVUSE .EQ. 54 .OR. IPVUSE .EQ. 56) GO TO 128
120      IF (IPVUSE .EQ. 58) GO TO 128

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121         IF (IPVUSE .EQ. 70 .OR. IPVUSE .EQ. 71) GO TO 128
122         IF (IPVUSE .EQ. 72 .OR. IPVUSE .EQ. 77) GO TO 128
123         IF (IPVUSE .EQ. 80 .OR. IPVUSE .EQ. 82) GO TO 128
124         IF (IPVUSE .EQ. 83 .OR. IPVUSE .EQ. 84) GO TO 128
125         IF (IPVUSE .EQ. 85 .OR. IPVUSE .EQ. 86) GO TO 128
126         IF (IPVUSE .EQ. 95 .OR. IPVUSE .EQ. 96) GO TO 128
127         IF (IPVUSE .EQ. 98 .OR. IPVUSE .EQ. 119) GO TO 128
128         WRITE (9,1003) IPVUSE, KL1(I10)
1003      FORMAT(1X,'ERROR: PREVIOUS USE ',I3,' NOT RECOGNIZED IN PRIN. CRP')
129      1 CASE '15, 1X, / 1X, / 1X, / 1X)
130      GO TO 138
131
132      C      FOLLOWING FOR BEANS ALONE
133      122 IN172 = IN172 + KL6(I10) - IBCATE
134      IN173 = MAX0(IN50, KL7(I10))
135      GO TO 119
136      C      FOLLOWING FOR BEANS WITH GREEN MAIZE
137      123 IN175 = IN175 + KL6(I10) - IBCATE
138      IN177 = MAX0(IN177, KL7(I10))
139      GO TO 119
140      C      FOLLOWING FOR BEANS WITH GREEN MAIZE AND MANIOC
141      124 IN182 = IN182 + KL6(I10) - IBCATE
142      IN183 = MAX0(IN183, KL7(I10))
143      GO TO 119
144      C      FOLLOWING FOR BEANS WITH MANIOC
145      125 IN178 = IN178 + KL6(I10) - IBCATE
146      IN179 = MAX0(IN179, KL7(I10))
147      GO TO 119
148      C      FOLLOWING FOR BEANS WITH DRY MAIZE AND MANIOC
149      126 IN180 = IN180 + KL6(I10) - IBCATE
150      IN181 = MAX0(IN181, KL7(I10))
151      GO TO 119
152      C      FOLLOWING FOR BEANS WITH DRY MAIZE
153      127 IN174 = IN174 + KL6(I10) - IBCATE
154      IN175 = MAX0(IN175, KL7(I10))
155      GO TO 119
156      C      FOLLOWING FOR BEANS WITH OTHER COMBINATIONS OR CROPS
157      128 IN184 = IN184 + KL6(I10) - IBCATE
158      IN185 = MAX0(IN185, KL7(I10))
159      119 CONTINUE
160      IN146 = IN179 + IN180 + IN182
161      IN133 = VAR107
162      IGTHER = 0
163      DO 136 I12 = 1,ICAS10
164      C      MAKES TABULATIONS OF CROPS IN ANY COMBINATION FROM SCAN OF CARD 10
165      IDATE1 = DA1900(VAR135(I12),VAR136(I12),VAR137(I12),VAR138(I12),3)
166      C      IDATE1 IS THE PLANTING DATE OF INTERPLANTED CROP
167      IDATE2 = DA1900(VAR143(I12),VAR144(I12),VAR145(I12),VAR146(I12),5)
168      C      IDATE2 IS THE HARVEST DATE OF INTERPLANTED CROP
169      IF (VAR145(I12) .EQ. -0 .AND. VAR146(I12) .GT. 0) IDATE2 = IEND
170      IF (VAR134(I12) .EQ. 14) IDATE2 = IDATE1 + 100
171      IDATE3 = IDATE1
172      C      IDATE3 IS BEGINNING DATE FOR INTERPLANTED CROP PRESENCE WITHIN THE
173      C      LIFESPAN OF THE PRINCIPAL CROP
174      IDATE4 = IDATE2
175      C      IDATE4 IS THE END DATE OF INTERPLANTED CROP PRESENCE WITHIN THE
176      C      LIFESPAN OF THE PRINCIPAL CROP
177      IF (IDATE1 .LE. I8EG) IDATE3 = I8EG
178      IF (IDATE2 .GE. IEND) IDATE4 = IEND
179      ISPAN = IDATE4 - IDATE3
180      C      ISPAN IS SPAN OF TIME INTERPLANTED CROP WAS PRESENT IN ANY COMB.

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181 C WITHIN LIFESPAN OF PRINCIPAL CROP
182 IF (VAR134(I12) .EQ. 0) GO TO 129
183 PLANTD=0.
184 METHOD=0
185 ICERT=0
186 CALL PDENS(VAR134(I12), VAR147(I12), VAR148(I12), VAR149(I12),
187 LVAR150(I12))
188 IF (VAR134(I12) .EQ. 14) GO TO 130
189 IF (VAR134(I12) .EQ. 23) GO TO 131
190 IOTHER = IOTHER + 1
191 IF(IOther .EQ. 1) GO TO 133
192 IF(IOther .EQ. 2) GO TO 134
193 IF(IOther .EQ. 3) GO TO 135
194 WRITE(9,1004) VAR131(I12)
195 1004 FORMAT(1X,'MORE THAN 3 OTHER INTERPLANTED CROPS FOR P.C. CASE ',I5
196 1, 1X, / 1X, / 1X, / 1X)
197 GO TO 138
198 133 CONTINUE
199 C FOR FIRST OTHER INTERPLANTED CROP
200 IN155 = VAR134(I12)
201 IN167A = VAR151(I12)
202 IN157B = VAR152(I12)
203 GO TO 137
204 134 CONTINUE
205 C FOR SECOND OTHER INTERPLANTED CROP
206 IN156 = VAR134(I12)
207 IN168A = VAR151(I12)
208 IN168B = VAR152(I12)
209 GO TO 137
210 135 CONTINUE
211 C FOR THIRD OTHER INTERPLANTED CROP
212 IN157 = VAR134(I12)
213 IN169A = VAR151(I12)
214 IN169B = VAR152(I12)
215 137 CONTINUE
216 C FOR ALL "OTHER" INTERPLANTED CROPS
217 IN153 = MAX0(IN158, ISPAN)
218 IN159 = MAX0(IN159, VAR138(I12), VAR148(I12))
219 IN160 = ICATE1 - IREG
220 IN161 = MAX0(IN161, VAR138(I12), VAR113)
221 IN162 = IEND - ICATE2
222 IN163 = MAX0(IN163, VAR146(I12), VAR117)
223 RIN164 = RIN164 + PLANTD
224 IN165 = MAX0(IN165, METHOD)
225 IN166 = MAX0(IN166, ICERT)
226 GO TO 136
227 129 CONTINUE
228 C FOR CASE OF NO INTERPLANTED CROPS
229 IN172 = IN170
230 IN173 = IN171
231 GO TO 136
232 130 CONTINUE
233 C FOR CASE WHERE INTERPLANTED CROP IS MAIZE
234 IDRY = ICATE1 + 100
235 IF(IFCLOD .EQ. 0 .OR. IFCLOD .EQ. -0) IFOLDD = IDRY + 1
236 ICATE2 = MIN0(IDRY, IFOLDD)
237 ICATE4 = MIN0(IEND, ICATE2)
238 ISPAN = ICATE4 - ICATE3
239 IN134 = ISPAN
240 IN135 = 4

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241      IN136 = IOATE1 - IBEG
242      IN137 = MAX0(VAR113, VAR139(I12))
243      IN138 = IEND - IOATE2
244      IN139 = 4
245      RIN140 = PLANTD
246      IN141 = METHCD
247      IN142 = ICERT
248      IN143A = VAR151(I12)
249      IN143B = VAR152(I12)
250      IN144 = IFOLDD - IBEG
251      IN145 = MAX0(VAR113, VAR142(I12))
252      GO TO 136
253
254 131 CONTINUE
255 C     FOR CASE WHERE INTERPLANTED CROP IS MANIOC
256      IN146 = ISPAN
257      IN147 = MAX0(VAR138(I12), VAR146(I12))
258      IN148 = IOATE1 - IBEG
259      IN149 = MAX0(VAR113, VAR138(I12))
260      IN150 = IEND - IOATE2
261      IN151 = MAX0(VAR117, VAR146(I12))
262      RIN152 = PLANTD
263      IN153A = METHCD
264      IN153B = ICERT
265      IN154A = VAR151(I12)
266      IN154B = VAR152(I12)
267
268 132 CONTINUE
269      WRITE (9, 1003)
270 1008 FORMAT(1X, 'INTERPLANTING TABULATIONS ON FOLLOWING 3 LINES')
271      WRITE (9, 1005) IN133, IN134, IN135, IN136, IN137, IN138, IN139,
272      1RIN140, IN141, IN142, IN143A, IN143B, IN144, IN145, IN146, IN147,
273      2IN148, IN149, IN150, IN151, RIN152, IN153A, IN153B, IN154A, IN154B
274 1005 FORMAT(1X, I4, 3(I4, I2), F7.0, 3(I2, I1), 4(I4, I2), F7.0, 3(I2, I1))
275 C     ABOVE FORMAT 1005 FOR FIRST LINE OF TABULATION OUTPUT: BEANS WITH
276 C     GREEN MAIZE (ANY COMBINATION), AND BEANS WITH EITHER BITTER OR
277 C     SWEET MANIOC (ANY INTERPLANTING COMBINATION).
278      WRITE (9, 1006) IN155, IN156, IN157, IN158, IN159, IN160, IN161,
279      1IN162, IN163, RIN164, IN165, IN166, IN167A, IN167B, IN168A,
280      1IN168B, IN169A, IN169B
281 1006 FORMAT(1X, 3(I4, I2), F7.0, 2(I2, 3(I2, I1))
282 C     ABOVE FORMAT 1006 IS FOR SECOND LINE OF TABULATION OUTPUT: BEANS
283 C     WITH OTHER INTERPLANTED CROPS
284      WRITE (9, 1007) IN170, IN171, IN172, IN173, IN174, IN175, IN176,
285      1IN177, IN178, IN179, IN180, IN181, IN182, IN183, IN184, IN185
286 1007 FORMAT(1X, 8(I4, I2))
287 C     ABOVE FORMAT 1007 IS FOR THIRD LINE OF TABULATION OUTPUT: INTERPLANTING
288 C     COMBINATIONS
289
290 138 CONTINUE
291 C     END OF SUBROUTINE "BEINTR"
292      RETURN
293      END
294
295 SUBROUTINE RIINTR(ICCASE, IBEG, IFOLDD, ICAS10, IEND)
296 C     DUMMY SUBROUTINE "RIINTR"
297      RETURN
298      END
299
300 SUBROUTINE MNINTR(ICCASE, IBEG, IFOLDD, ICAS10, IEND)
301 C     DUMMY SUBROUTINE "MNINTR"

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301
302
END OF FILE

RETURN
END

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1 C THIS PROGRAM (IPLANT) TABULATES INTERPLANTING DATA FOR SIX ANNUAL
2 C CROPS: RICE, MAIZE, PHASEOLUS, VIGNA, BITTER MANIOC AND SWEET
3 C MANIOC. THE SUBPROGRAMS RIINTR, MZINTR, BEINTR,
4 C AND MNINTR ARE CALLED TO MAKE THE TABULATIONS. THE SUBROUTINE
5 C HISTPN IS ALSO OPTIONALLY CALLED TO PRINT A TABULATION OF THE
6 C INTERPLANTING HISTCPY FOR EACH FIELD. THIS IS VERY USEFUL IN FINDING
7 C ERRORS IN THE DATA FILES. FUNCTIONS USED BY
8 C IPLANT ARE CURUSE AND DA1900. SUBPROGMS NEEDED BY THE TABULATION
9 C SUBPROGRAMS ARE DA1900 AND PDENS. INPUT FILES FOR RICE ARE : 5=DATAFILE
10 C 7= RI9-13-16-29 AND 9= RI10: OUTPUT FILE ARE 9=RI10 10=RIHISTORY
11 C
12 C BEGINNING OF MAIN PROGRAM
13 C
14 C INTEGER VAR107, VAR109, VAR110, VAR111, VAR112, VAR113, VAR114,
15 C 1VAR115, VAR116, VAR117, VAR128
16 C ABOVE TYPE DECLARATION FOR CARD 9
17 C INTEGER VAR131, VAR133, VAR134, VAR135, VAR136, VAR137, VAR138,
18 C 1VAR139, VAR140, VAR141, VAR142, VAR143, VAR144, VAR145, VAR146,
19 C 2VAR148, VAR150, VAR151, VAR152
20 C ABOVE TYPE DECLARATION FOR CARD 10
21 C INTEGER DA1900, CLPUSE
22 C DIMENSION JL1(30), JL2(30), JL3(30), JL4(30), JL5(30), JL6(30),
23 C 1JL7(30), JCURUS(30)
24 C COMMON/C1/ VAR131(10), VAR133(10), VAR134(10), VAR135(10),
25 C 1VAR136(10), VAR137(10), VAR138(10), VAR139(10), VAR140(10),
26 C 2VAR141(10), VAR142(10), VAR143(10), VAR144(10), VAR145(10),
27 C 3VAR146(10), VAR147(10), VAR148(10), VAR149(10), VAR150(10),
28 C 4VAR151(10), VAR152(10)
29 C COMMON/C2/ VAR107, VAR109, VAR110, VAR111, VAR112, VAR113, VAR114,
30 C 1VAR115, VAR116, VAR117, VAR128
31 C COMMON/C3/ KL1(30), KL2(30), KL3(30), KL4(30), KL5(30), KL6(30),
32 C 1KL7(30), KCURUS(30)
33 C READ(5,1000) IPCODE, ICDS9, ICDS10, IHIST
34 C 1000 FORMAT(1X,I3,2I5, I2)
35 C ABOVE FORMAT 1000 FOR PRINCIPAL CROP CODE (1=RICE, 2=MAIZE,
36 C 3=PHASEOLUS, 4=VIGNA, 5=BITTER MANIOC 6=SWEET MANIOC, THE NUMBER
37 C OF CASES (ICDS9 = ONE-FOURTH OF RECORDS IN 9-13-16-28 FILE FOR CROP),
38 C AND NUMBER OF CARD 10 RECORDS IN FILE FOR CROP.
39 C IHIST IS THE CODE FOR HISTPN CALL: 1=PRINT INTERPLANTING
40 C HISTORY, 0=NO HISTORY PRINTED
41 C DO 500 III=1, ICDS9
42 C DOES ONE ITERATION FOR EVERY CASE
43 C READ(7,1001) VAR107, VAR109, VAR110, VAR111, VAR112, VAR113,
44 C 1VAR114, VAR115, VAR116, VAR117, VAR128
45 C 1001 FORMAT(9X,I5, 4X, I3, 2(I3, 3I2), 40X, I2///)
46 C ABOVE FORMAT 1001 IS FOR CARD 9 INFORMATION IN 9-13-16-28 FILES
47 C DO 100 I1=1,30
48 C INITIALIZES "K" AND "J" APRAYS WITH ALL ITEMS EQUAL TO ZERO
49 C KL1(I1) = 0
50 C JL1(I1) = 0
51 C KL2(I1) = 0
52 C JL2(I1) = 0
53 C KL3(I1) = 0
54 C JL3(I1) = 0
55 C KL4(I1) = 0
56 C JL4(I1) = 0
57 C KL5(I1) = 0
58 C JL5(I1) = 0
59 C KL6(I1) = 0
60 C JL6(I1) = 0

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61         KL7(I1) = 0
62         JL7(I1) = 0
63         KCURUS(I1) = 0
64         JCURUS(I1) = 0
65     100 CONTINUE
66         IFOLD = -0
67         DO 121 I13=1,10
68 C         INITIALIZES CARD 10 VALUES AT -0 OR -0.
69         VAR131(I13) = -0
70         VAR133(I13) = -0
71         VAR134(I13) = -0
72         VAR134(I13) = -0
73         VAR135(I13) = -0
74         VAR136(I13) = -0
75         VAR137(I13) = -0
76         VAR138(I13) = -0
77         VAR139(I13) = -0
78         VAR140(I13) = -0
79         VAR141(I13) = -0
80         VAR142(I13) = -0
81         VAR143(I13) = -0
82         VAR144(I13) = -0
83         VAR145(I13) = -0
84         VAR146(I13) = -0
85         VAR147(I13) = -0.
86         VAR148(I13) = -0
87         VAR149(I13) = -0.
88         VAR150(I13) = -0
89         VAR151(I13) = -0
90         VAR152(I13) = -0
91     121 CONTINUE
92         DO 101 I2=1,9
93 C         READS CARD 10 INFORMATION FOR CASE
94         READ(8,1002) VAR131(I2), VAR133(I2), VAR134(I2), VAR135(I2),
95         1VAR136(I2), VAR137(I2), VAR138(I2), VAR139(I2), VAR140(I2),
96         2VAR141(I2), VAR142(I2), VAR143(I2), VAR144(I2), VAR145(I2),
97         3VAR146(I2), VAR147(I2), VAR148(I2), VAR149(I2), VAR150(I2),
98         4VAR151(I2), VAR152(I2)
99     1002 FORMAT(9X, I5, 4X, I2, I3, 3(I3, 2I2, I2), F5.1, I2, F8.0,
100         1I2, 2I3)
101 C         ABOVE FORMAT 1002 FOR CARD 10 INFORMATION
102         IF (VAR131(I2) .NE. VAR107) GO TO 501
103         IF (VAR133(I2) .EQ. 1) GO TO 102
104     101 CONTINUE
105         WRITE(9,1111) VAR131(I2)
106         IF (IHIST.EQ.1) WRITE(10,1111) VAR131(I2)
107     1111 FORMAT(1X, 'MORE THAN 9 INTERPLANTED CROPS OR NO LAST CARD
108         1INDICATOR FOR CASE', I5, / 1X, / 1X, / 1X)
109         GO TO 500
110     501 WRITE (6,2510) VAR107
111     2510 FORMAT(1X, 'MISSING OR UNORDERED TYPE 10 CARDS AT CASE',
112         1 I3, ' CAUSES INTERRUPT')
113         GO TO 502
114     102 ICAS10 = I2
115 C         ICAS10 IS NUMBER OF CARD 10 CARDS FOR THE CASE
116 C
117 C         FOLLOWING STATEMENTS PUT PRINCIPAL CROP INFO. IN "K" ARRAY
118 C         KL1 IS PRINCIPAL CROP CASE NO.
119 C         KL2 IS THE ITEM CODE
120 C         KL3 IS THE EVENT CODE

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121 C      KL4 IS THE QUALITY CODE
122 C      KL5 IS THE CERTAINTY OF THE EVENT OR QUALITY
123 C      VL4 IS THE DAYS SINCE JAN. 1, 1900 FOR EVENT DATE
124 C      VL7 IS THE DATE CERTAINTY
125 C      KCURUS IS THE CURRENT USE
126      KL1(1) = VAR107
127      KL2(1) = VAR109
128      KL3(1) = 3
129      KL4(1) = -0
130      KL5(1) = -0
131      IF (VAR112 .EQ. -0) GO TO 270
132      GO TO 271
133      270 WRITE (9, 2503) VAR107
134      IF (IHIST .EQ. 1) WRITE(10,2503) VAR107
135      2503 FORMAT(1X, ' NC PRINCIPAL CROP PLANTING YEAR CODED FOR P.C. CASE ',
136      1 IS, / 1X, / 1X, / 1X)
137      GO TO 500
138      271 CONTINUE
139      KL6(1) = D41900(VAR110, VAR111, VAR112, VAR109, 3)
140      IREG = KL6(1)
141 C      SAVES PRINCIPAL CROP PLANTING DATE FOR USE AS BEGINNING DATE FOR
142 C      TABULATIONS (IREG)
143      KL7(1) = VAR113
144      KL1(2) = VAR107
145      KL2(2) = VAR109
146      KL3(2) = 5
147      KL4(2) = -0
148      KL5(2) = -0
149      IF (VAR116 .EQ. -0) GO TO 260
150      GO TO 263
151      300 WRITE(9,3000) VAR107,VAR106
152      IF (IHIST .EQ. 1) WRITE(10,3000) VAR107, VAR106
153      3000 FORMAT(1X, ' P.C. HARV. YR. CERT & YIELD CERT BLANK FOR P.C. CASE ',
154      1 IS, ' FN=', IS, / 1X, / 1X, / 1X)
155      GO TO 500
156      260 CONTINUE
157 C      FOLLOWING STATEMENTS FOR CASE OF UNDEFINED PRINC. CROP HARVEST DATE
158      IF (VAR117 .EQ. -0 .AND. VAR125 .EQ. -0) GO TO 300
159      IF (IPCODE .EQ. 1) KL6(2)=KL6(1) + 120
160      IF (IPCODE .EQ. 2) KL6(2)=KL6(1) + 120
161      IF (IPCODE .EQ. 3) KL6(2)=KL6(1) + 90
162      IF (IPCODE .EQ. 4) KL6(2)=KL6(1) + 90
163      IF (IPCODE .EQ. 5) KL6(2)=KL6(1) + 456
164      IF (IPCODE .EQ. 6) KL6(2)=KL6(1) + 456
165      KL7(2) = 4
166      GO TO 262
167      262 CONTINUE
168      KL6(2) = D41900(VAR114, VAR115, VAR116, VAR109, 5)
169      KL7(2) = VAR117
170      VAR116 = VAR112 + 1
171      262 CONTINUE
172 C      PRINC. CROP HARVEST YR ARBITRARILY ASSIGNED P.C. PLANTING YR + 1 = 0
173 C      LATER USE IN CREATING INTERPLANTED CROP HARV. YR DEFAULTS IF BLANK
174      IEND=KL6(2)
175 C      SAVES PRINC. CROP HARVEST DATE FOR USE AS ENDING DATE FOR
176 C      TABULATION INTERVAL
177 C      FOLLOWING STATEMENTS PUT CARD 10 INFORMATION IN "K" ARRAY
178      I4 = 2
179      IF (VAR109 .NE. 14) GO TO 109
180      IEND = 100 + KL6(1)

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181 C   INTERVAL END RE-ASSIGNED AS THE DRYING DATE RATHER THAN HARVEST
182 C   DATE IF MAIZE IS THE PRINCIPAL CROP
183   IF (KL6(2) .LT. 3) GO TO 109
184   IEND = MINO(IEND, KL6(2))
185 C   ABOVE ALLOWS FOR OVERRIDE OF DEFAULT IF MAIZE HARVEST
186 C   CODED FOR LESS THAN 100 DAYS AFTER PLANTING
187   109 CONTINUE
188   I5 = C
189   104 CONTINUE
190 C   BEGINNING OF EXPLICIT DO LOOP (ENDING AT STATEMENT 105) TO CREATE
191 C   "K" ARRAY CASES FOR CARD 10 EVENTS.
192 C   "I4" IS COUNTER FOR "K" ARRAY
193 C   "I5" IS COUNTER FOR INTERPLANTED CROPS
194   I5 = I5 + 1
195   I4 = I4 + 1
196   IF (I5 .GT. ICAS10) GO TO 105
197   IF (VAR134(I5) .EQ. 0 .OR. VAR134(I5) .EQ. -0) GO TO 105
198 C   FOLLOWING FOR INTERPLANTED CROP PLANTING
199   KL1(I4) = VAR131(I5)
200   KL2(I4) = VAR134(I5)
201   KL3(I4) = 3
202   KL4(I4) = -0
203   KL5(I4) = -0
204   IF (VAR137(I5) .EQ. -0) GO TO 250
205   KL6(I4) = DA1900(VAR135(I5), VAR136(I5), VAR137(I5), VAR134(I5), 3)
206   KL7(I4) = VAR138(I5)
207   IF (VAR134(I5) .NE. 14) GO TO 106
208   IF (VAR141(I5) .GT. 1) GO TO 107
209   GO TO 106
210   250 CONTINUE
211   WRITE (7, 2500) VAR131(I5)
212   IF (IHIST .EQ. 1) WRITE (10, 2500) VAR131(I5)
213   2500 FORMAT(1X, 'INTER. CROP PLANTING YR. UNDEFINED FOR PRINC. CROP CASE
214   1 NO.', I4, / 1X, / 1X, / 1X)
215   GO TO 500
216   107 CONTINUE
217 C   FOLLOWING FOR INTERPLANTED MAIZE FOLDING
218   I4 = I4 + 1
219   KL1(I4) = VAR131(I5)
220   KL2(I4) = VAR134(I5)
221   KL3(I4) = 4
222   KL4(I4) = -0
223   KL5(I4) = VAR142(I5)
224   KL6(I4) = DA1900(VAR139(I5), VAR140(I5), VAR141(I5), I4, 4)
225   KL7(I4) = VAR142(I5)
226   IFOLD = KL6(I4)
227 C   IFOLD SAVES DATE OF MAIZE FOLDING
228   106 CONTINUE
229 C   FOLLOWING FOR INTERPLANTED CROP HARVEST
230   I4 = I4 + 1
231   KL1(I4) = VAR131(I5)
232   KL2(I4) = VAR134(I5)
233   KL3(I4) = 5
234   KL4(I4) = -0
235   KL5(I4) = -0
236   IF (VAR145(I5) .EQ. -0) GO TO 251
237   GO TO 259
238   251 CONTINUE
239 C   FOLLOWING STATEMENTS FOR CASE WHERE I.C. HARVEST YEAR IS BLANK.
240   VAR145(I5) = VAR116 + 1

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241 C      ABOVE ARBITRARILY ASSIGNS YEAR AFTER PRINCIPAL CROP HARVEST FOR
242 C      THE INTERPLANTED CROP HARVEST YEAR IF THE INTERPLANTED CROP HARVEST
243 C      YEAR IS BLANK. THIS WILL THEN FALL OUTSIDE OF THE PRINCIPAL CROP
244 C      LIFESPAN INTERVAL
245 IF (VAR145(I5) .LT. 3) VAR145(I5)=VAR112 + 2
246 IF (VAR145(I5) .LT. 3) GO TO 254
247 GO TO 259
248 254 WRITE (3, 2501) VAR107
249 IF (IHIST.EQ. 1) WRITE(10,2501) VAR107
250 2501 FORMAT(1X,'NO YR. CODED FOR INTER. CROP FOR P.C. CASE NO. ',I5
251 1, / 1X, / 1X, / 1X)
252 GO TO 500
253 259 CONTINUE
254 KL6(I4) = DA1900(VAR143(I5),VAR144(I5),VAR145(I5),VAR134(I5),5)
255 KL7(I4) = VAR146(I5)
256 GO TO 104
257 105 CONTINUE
258 ICCASE = I4 - 1
259 C      ICCASE IS THE NUMBER OF "CARDS" FOR THE CASE
260 DO 108 I6 = 1,ICCASE
261 C      ORDERS INFORMATION IN "J" ARRAY BY DATE
262 JJ = 1
263 JL1(I6) = KL1(I1)
264 JL2(I6) = KL2(I1)
265 JL3(I6) = KL3(I1)
266 JL4(I6) = KL4(I1)
267 JL5(I6) = KL5(I1)
268 JL6(I6) = KL6(I1)
269 JL7(I6) = KL7(I1)
270 JCURLS(I6) = KCURUS(I1)
271 IF (ICCASE.EQ. 1) GO TO 108
272 DO 110 I7 = 2,ICCASE
273 C      SECCNO ORDERING DO LCCP
274 IF (JL6(I6) .LE. KL6(I7)) GO TO 110
275 JL1(I6) = KL1(I7)
276 JL2(I6) = KL2(I7)
277 JL3(I6) = KL3(I7)
278 JL4(I6) = KL4(I7)
279 JL5(I6) = KL5(I7)
280 JL6(I6) = KL6(I7)
281 JL7(I6) = KL7(I7)
282 JCURUS(I6) = KCURUS(I7)
283 JJ = I7
284 110 CONTINUE
285 KL6(JJ) = 999999
286 108 CONTINUE
287 C
288 C      AT THIS POINT ALL EVENTS FOR BOTH PRINCIPAL CROP AND INTERPLANTED
289 C      CROPS, WITH THE EXCEPTION OF DEFAULT-CREATED MAIZE DRYING EVENTS,
290 C      ARE IN DATE ORDER IN THE "J" ARRAYS
291 C
292 DO 111 I8 =1,ICCASE
293 C      RE-INITIALIZES "K" ARRAY WITH ALL ITEMS EQUAL TO ZERO
294 KL1(I8) = 0
295 KL2(I8) = 0
296 KL3(I8) = 0
297 KL4(I8) = 0
298 KL5(I8) = 0
299 KL6(I8) = 0
300 KL7(I8) = 0

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301      KCURUS(I8) = 0
302      111 CONTINUE
303      KCURUS(I) = JL2(I)
304      C      THE ITEM CODE FOR THE FIRST EVENT OF THE DATE-ORDERED "J" ARRAY
305      C      IS ASSIGNED TO THE FIRST USE IN THE "K" ARRAY
306      IGRMZD = 0
307      C      INITIALIZES GREEN MAIZE DAY COUNTER
308      I9 = 0
309      K3 = 0
310      112 CONTINUE
311      C      BEGINNING OF EXPLICIT DO LOOP (ENDING AT STATEMENT 113) TO CREATE
312      C      DEFAULTS FOR MAIZE DRYING. COUNTER IS "I9"
313      I9 = I9 + 1
314      IF (I9.GT. ICCASE) GO TO 113
315      IF (JL2(I9).EQ. 14 .AND. JL3(I9).EQ. 3) GO TO 114
316      C      SELECTS MAIZE PLANTING EVENTS
317      GO TO 115
318      114 IGRMZD = 1
319      IGRMZ5 = JL6(I9)
320      C      STARTS GREEN MAIZE DAY COUNT AND SAVES START DATE
321      GO TO 117
322      115 CONTINUE
323      C      DEFAULT TRANSITION FOR GREEN MAIZE TO DRY MAIZE FOLLOWS
324      IF(IGRMZD.GE.1)GO TO 116
325      C      SELECTS EVENTS WHERE GREEN MAIZE IS PRESENT
326      GO TO 117
327      116 JPREV = I9 - 1
328      IF (JPREV.EQ. 0) JPREV = 1
329      IGRMZD = IGRMZD + JL5(I9)-JL6(JPREV)
330      IF(IGRMZD.LT.100.AND. JL2(I9).EQ.14 .AND. JL3(I9).GE.4) GO TO 600
331      IF (IGRMZD.GE. 100) GO TO 118
332      C      SELECTS GREEN MAIZE OVER 100 DAYS OLD FOR DEFAULT DRYING
333      GO TO 117
334      118 ITDAOF = IGRMZ5 + 100
335      C      ASSIGNS DEFAULT DAY AS 100 DAYS AFTER GREEN MAIZE START
336      K3 = K3 + 1
337      KPREV = K3 - 1
338      IF (KPREV.LE. 0) KPRLSE = 4
339      C      ASSIGNS PARE AS PREVIOUS USE FOR FIRST EVENT
340      IF (KPREV.LE. 0) KPREV = 1
341      IF (KPREV.GT. 0) KPRUSE = KCURUS(KPREV)
342      KCURUS(K3) = CURUSE(KPRUSE, 14, 4, 0, 4)
343      KL1(K3) = JL1(I9)
344      KL2(K3) = 14
345      KL3(K3) = 6
346      KL4(K3) = 0
347      KL5(K3) = 4
348      KL6(K3) = ITDAOF
349      KL7(K3) = 4
350      600 IGRMZD = 0
351      IGRMZ5 = 0
352      117 CONTINUE
353      C      TRANSFER OF "J" ARRAY VALUES TO "K" ARRAY FOLLOWS
354      K3 = K3 + 1
355      KL1(K3) = JL1(I9)
356      KL2(K3) = JL2(I9)
357      KL3(K3) = JL3(I9)
358      KL4(K3) = JL4(I9)
359      KL5(K3) = JL5(I9)
360      KL6(K3) = JL6(I9)

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361      KL7(K3) = JL7(I9)
362      KPREV = K3 - 1
363      IF (KPREV .LE. 0) KPRUSE = 4
364      C      ASSIGNS BARE AS PREVIOUS USE FOR FIRST EVENT
365      IF (KPREV .GT. 0) KPRUSE = KCURUS(KPREV)
366      KCURUS(K3)=KPRUSE,          KL2(K3),KL3(K3),KL4(K3),KL5(K3))
367      GO TO 112
368      113 CONTINUE
369      ICCASE= K3
370      C
371      C      AT THIS POINT ALL EVENTS INCLUDING BOTH PRINCIPAL CROP AND INTERPLANTED
372      C      CROP EVENTS AND DEFAULT-CREATED EVENTS ARE IN DATE ORDER IN
373      C      THE "K" ARRAYS.
374      C
375      IF(IHIST.EQ.1) CALL HISTPN(ICCASE,IBEG,IFOLDD,ICASIO,IEND)
376      C      CALLS SUBROUTINE "HISTPN" IF SPECIFIED FOR PRINTING
377      C      INTERMEDIATE HISTORY INFORMATION
378      IF(IPCODE .EQ. 1)CALL RIINTR(ICCASE,IBEG,IFOLDD,ICASIO, IEND)
379      C      CALLS SUBROUTINE FOR RICE TABULATIONS. ICCASE IS CARDS FOR CASE IN
380      C      "K" ARRAY, IBEG IS PRINCIPAL CROP PLANTING DATE, IFOLDD IS MAIZE
381      C      FOLDING DATE, ICASIO IS NUMBER OF CARD 10 CARDS FOR CASE, IPCODE
382      C      IS PRINCIPAL CROP CODE: 1=RICE, 2=MAIZE, 3=PHASEOLUS, 4=VIGNA,
383      C      5=BITTER MANIOC, 6=SWEET MANIOC
384      IF(IPCODE .EQ. 2) CALL MZINTR(ICCASE,IBEG,IFOLDD,ICASIO, IEND)
385      IF(IPCODE .EQ. 3) CALL REINTR(ICCASE,IBEG,IFOLDD,ICASIO, IEND)
386      IF(IPCODE .EQ. 4) CALL BEINTR(ICCASE,IBEG,IFOLDD,ICASIO, IEND)
387      IF(IPCODE .EQ. 5) CALL MNINTR(ICCASE,IBEG,IFOLDD,ICASIO, IEND)
388      IF(IPCODE .EQ. 6) CALL MNINTR(ICCASE,IBEG,IFOLDD,ICASIO, IEND)
389      500 CONTINUE
390      C      END OF MAIN PROGRAM "IPLANT"
391      502 CONTINUE
392      END
END OF FILE

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1 C      THIS PROGRAM ("CAPOBURNTAB") TABULATES CAPOEIRA, PASTURE, WEEDS, AND
2 C      CANE BURN INFORMATION. WEATHER INFORMATION BETWEEN CUTTING AND BURNING
3 C      AND IN THE 15 DAYS PRIOR TO BURNING IS TABULATED. AS IS INFO. ON OTHER
4 C      BURN QUALITIES OBTAINED DURING THE SAME BURNING. TWO LINES OF OUTPUT
5 C      ARE GENERATED IN THE OUTPUT FILE "CAPOBURNDATA" PER CASE. SUBROUTINES
6 C      CALLED ARE WEATHRD AND CA1900.
7 C      INPUT UNITS ARE: 5=DATAFILE 7=TYPE4 9=WEATHCUMLIST
8 C      9=DAILYWEATHER  OUTPUT UNIT IS 10=CAPOBURNDATA
9 C      THE FORTRAN MONITOR "MINUSZERC" FEATURE IS USED, AS IS
10 C      THE MTS LOGICAL COMPARISON OF CHARACTERS ("LCONC") FUNCTION.
11 C
12 C      INTEGER DA1900
13 C      INTEGER VAR070, VAR071, VAR072, VAR073, VAR074, VAR075, VAR076,
14 C      1VAR077, VAR078, VAR079, VAR080, VAR081, VAR083, VAR085, VAR087,
15 C      2VAR090, VAR091, VAR092, VAR093, VAR095
16 C      ABOVE TYPE DECLARATION FOR CARD TYPE 4
17 C      ABOVE DIMENSION FOR DAILYWEATHER
18 C      DIMENSION IWC1(1700), IWC2(1700), IWC3(1700), IWC4(1700), IWC5(170
19 C      0), IWC6(1700), IWC7(1700), IWC8(1700), WC9(1700), WC10(1700),
20 C      2WC11(1700), IWC12(1700), IWC13(1700), IWC14(1700)
21 C      ABOVE DIMENSION FOR WEATHCUMLIST
22 C      COMMON/C1/ L41(1700), RL46(1700), RL47(1700), RL48(1700)
23 C      COMMON/C2/ RAINRD, EVAPRD, SUNRD, MISPRE, MISEVA, MISINS
24 C      DATA MINZERC/Z30000000/
25 C      CALL FTNCOM('SET MINUSZERC=CN',16)
26 C      READ (5,1000) ICDS4, IWCUM, IDAWEA
27 C      1000 FORMAT(1X, 3I5)
28 C      ICDS4 IS NO. OF CARDS IN TYPE4 ; IWCUM IS NO. OF CARDS IN WEATHCUMLIST ;
29 C      IDAWEA IS NO. OF CASES (NO. OF CARDS/5) IN DAILYWEATHER
30 C      READ (6, 1002)(L41(I2), RL46(I2), RL47(I2), RL48(I2), I2=1, IDAWEA)
31 C      1002 FORMAT(/// 2X, 16, 12X, F6.1, 2F5.1)
32 C      ABOVE FORMAT 1002 IS FOR DAILYWEATHER
33 C      READ (3, 1003)(IWC1(I3), IWC2(I3), IWC3(I3), IWC4(I3), IWC5(I3),
34 C      1IWC6(I3), IWC7(I3), IWC8(I3), WC9(I3), WC10(I3), WC11(I3), IWC12(I
35 C      23), IWC13(I3), IWC14(I3), I3=1, IWCUM)
36 C      1003 FORMAT(1X, 16, 3I3, 16, 3I3, F7.1, 2F6.1, 3I3)
37 C      ABOVE FORMAT 1003 IS FOR WEATHCUMLIST
38 C      IC317 = 0
39 C      DO 100 I1=1, ICDS4
40 C      DOES ONE ITERATION FOR EACH CAPO. BURN CASE
41 C      READ (7, 1001) VAR070, VAR071, VAR072, VAR073, VAR074, VAR075,
42 C      1VAR076, VAR077, VAR078, VAR079, VAR080, VAR081, VAR082, VAR083,
43 C      2VAR084, VAR085, VAR086, VAR087, VAR088, VAR089, VAR090, VAR091,
44 C      3VAR092, VAR093, VAR094, VAR095
45 C      1001 FORMAT(3X, 15, 14, 2(I3, 3I2), 2A2, A4, A2, F5.2, A2, A3, A4, 3A+,
46 C      1I2, A3, I2, F5.2, I2)
47 C      ABOVE FORMAT 1001 FOR CARD TYPE 4
48 C      CR13 = 0.
49 C      CR16 = 0.
50 C      IC314 = 1
51 C      IC313 = 1
52 C      IF(VAR074 .EQ. -0) GO TO 150
53 C      151 ICUT = CA1900(VAR072, VAR073, VAR074, VAR091, 1)
54 C      152 IF (VAR078 .EQ. -0) GO TO 102
55 C      IBURN = CA1900(VAR076, VAR077, VAR078, VAR091, 2)
56 C      IC31 = IBURN - ICUT
57 C      DO 103 I5=1, IWCUM
58 C      FINDS WEATHER INFORMATION FOR 15 DAY PERIOD PRIOR TO BURN
59 C      IF (IWC5(I5) .EQ. IBURN) GO TO 104
60

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61      103 CONTINUE
62      CB3 = -0.
63      CB9 = -0.
64      CB10 = -0.
65      ICB11 = -0
66      ICB12 = -0
67      ICB13 = -0
68      GO TO 105
69
70      102 CONTINUE
71      C   FOR CASE OF NO BURN DATE
72      C   ICB1 = 150
73      C   NOTE: 150 DAYS ASSIGNED AS CUTTING-BURNING INTERVAL IF NO BURN DATE
74      C   IRURN = ICUT + 150
75      C   ISTART = ICUT + 15
76      C   CB9 = 9999.
77      C   DO 111 I10=1,IWCUM
78      C   FINDS WEATHER CUMULATIVE DATA FOR DAY WITH LOWEST CUMULATIVE RAINFALL
79      C   IN THE PREVIOUS 15 DAYS IN THE PERIOD BEGINNING 15 DAYS AFTER CUTTING
80      C   AND ENDING 150 DAYS AFTER CUTTING
81      C   IF (IWC5(I10) .GE. ISTART .AND. IWC5(I10) .LE. IBURN) GO TO 112
82      C   GO TO 111
83      112 IF (IWC9(I10) .LE. CB9) GO TO 113
84      C   GO TO 111
85      113 CB8 = IWC9(I10)
86      C   CB9 = IWC10(I10)
87      C   CB10 = IWC11(I10)
88      C   ICB11 = IWC12(I10)
89      C   ICB12 = IWC13(I10)
90      C   ICB13 = IWC14(I10)
91      111 CONTINUE
92      GO TO 105
93
94      150 CONTINUE
95      C   FOLLOWING FOR CASE OF NO CUTTING DATE
96      C   IF (VAR075 .GE. 1) GO TO 153
97      C   VAR074 = VAR079
98      C   IF (VAR077 .GE. 1 .AND. VAR077 .LE. 4) VAR074 = VAR078 - 1
99      C   ICB13 = 0
100      C   VALUE OF "0" ASSIGNED TO CAPD UNCUT (ICB13) IF BOTH YR. AND CERT. BLANK
101      C   GO TO 151
102      153 ICUT = DA1900(VAR076, VAR077, VAR078, VAR091, 2)
103      C   IF YR. OF CUTTING BLANK BUT CERTAINTY IS NOT BLANK, DATE OF CUTTING
104      C   ARBITRARILY ASSIGNED AS SAME AS DATE OF BURN FOR WEATHER AND ELAPSED
105      C   DAYS TABULATION, BUT SPACE (VAR074) REMAINS BLANK (ACTUALLY ZERO)
106      C   IN OUTPUT.
107      C   ICB13 = 2
108      C   VALUE OF "2" FOR ICB13 INDICATES BURNING WITHOUT CUTTING
109      C   GO TO 152
110      104 CB9 = IWC9(I5)
111      C   CB9 = IWC10(I5)
112      C   CB10 = IWC11(I5)
113      C   ICB11 = IWC12(I5)
114      C   ICB12 = IWC13(I5)
115      C   ICB13 = IWC14(I5)
116      105 CONTINUE
117      CALL WEATRD(ICUT, IRURN)
118      CB2 = RAINED
119      CB3 = EVAPRD
120      CB4 = SUNRD
121      ICB5 = MISPRE
122      ICB6 = MISEVA

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121      ICB7 = MISINS
122      IF (VAR093 .EQ. -0) ICB14 = 1
123      IF (LCCMC(4,MINZRO,VAR094).NE.0 .AND. LCOMC(4,MINZRO,VAR084).NE.0)
124      1 CB15 = VAR094 / VAR084
125      IF (LCCMC(4,MINZRO,VAR094).NE.0 .AND. LCOMC(4,MINZRO,VAR084).NE.0)
126      1 CB16=(VAR084 - VAR094)/ VAR084
127      IF (VAR095 .EQ. 5) CB15 = 1.00
128      IF (VAR095 .EQ. 5) CB16 = 0.00
129      WRITE (10, 1001) VAR070, VAR071, VAR072, VAR073, VAR074, VAR075,
130      1VAR076, VAR077, VAR078, VAR079, VAR080, VAR081, VAR082, VAR083,
131      2VAR084, VAR085, VAR086, VAR087, VAR088, VAR089, VAR090, VAR091,
132      3VAR092, VAR093, VAR094, VAR095
133      C      ABOVE WRITE FOR CAPO TYPE 4
134      WRITE (10, 1004) ICB1, CB2, CB3, CB4, ICB5, ICB6, ICB7, CB8, CB9,
135      ICB10, ICB11, ICB12, ICB13, ICB14, CB15, CB16, ICB17, ICB18
136      1004 FORMAT(1X, I4, 2(F7.1, 2F6.1, 3I3), I2, 2F5.2, 2I2)
137      C      ABOVE FORMAT 1004 FOR WEATHER CALCULATIONS AND BURN QUALITY PROPORTIONS
138      IF (ICB17 .GE. 1) GO TO 108
139      IF (VAR093 .NE. -0) ICB17 = 1
140      C      SETS "PREVIOUSLY MENTIONED" INDEX=1 FOR NEXT CASE IF "OTHER BQ" EXISTS.
141      C      NOTE THAT MULTIPLE BURN QUALITIES FOR THE SAME SITE AND BURN ATTEMPT
142      C      MUST BE IN CONSECUTIVE CASE ORDER
143      IF (VAR095 .EQ. 5) ICB17 = 0
144      C      ABOVE CONSIDERS CASES WHERE CUTTING DATES DIFFER FOR SAME BURN DATE
145      C      AS SEPARATE AND INDEPENDENT CASES (PREV. MENTION = 0)
146      GO TO 100
147      108 ICB17 = 0
148      100 CONTINUE
149      C      END OF PROGRAM "CAPOBURNTAB"
150      END

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END OF FILE

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1      SUBROUTINE HISTPN(ICCASE,IBEG,IFOLDD,ICAS10,IEND)
2      C      THIS SUBROUTINE ("HISTPN") PRINTS INTERPLANTING HISTORY INFORMATION
3      C      WHICH IS CALCULATED IN INTERMEDIATE STEPS IN THE INTERPLANTING
4      C      TABULATIONS. THE SUBROUTINE IS CALLED BY IPLANT IF THE "INTERPLANTED
5      C      CROP CODE" IS SET EQUAL TO ZERO. THE SFUNCTION
6      C      SUBPROGRAM CAL900 IS CALLED. OUTPUT IS ON DEVICE 10.
7      C
8      INTEGER CA1900
9      INTEGER VAR107, VAR109, VAR110, VAR111, VAR112, VAR113, VAR114,
10     1VAR115, VAR116, VAR117, VAR128
11     C      ABOVE TYPE DECLARATION FOR CARD 9
12     INTEGER VAR131, VAR133, VAR134, VAR135, VAR136, VAR137, VAR138,
13     1VAR139, VAR140, VAR141, VAR142, VAR143, VAR144, VAR145, VAR146,
14     2VAR148, VAR149, VAR151, VAR152
15     C      ABOVE TYPE DECLARATION FOR CARD 10
16     COMMON/C1/ VAR131(10), VAR133(10), VAR134(10), VAR135(10),
17     1VAR136(10), VAR137(10), VAR138(10), VAR139(10), VAR140(10),
18     2VAR141(10), VAR142(10), VAR143(10), VAR144(10), VAR145(10),
19     3VAR146(10), VAR147(10), VAR148(10), VAR149(10), VAR150(10),
20     4VAR151(10), VAR152(10)
21     COMMON/C2/ VAR107, VAR109, VAR110, VAR111, VAR112, VAR113, VAR114,
22     1VAR115, VAR116, VAR117, VAR128
23     COMMON/C3/ KL1(30), KL2(30), KL3(30), KL4(30), KL5(30), KL6(30),
24     1KL7(30), KCURUS(30)
25     COMMON/C4/ PLANTD, METHCD, ICERT
26     WRITE (10, 2001) VAR107, VAR109
27     2001 FORMAT(1X, /1X, 'PRINC. CROP CASE:', I5, ' CROP:', I3, / 1X)
28     WRITE (10, 2000) ICCASE, IBEG, IFOLDD, ICAS10, IEND
29     2000 FORMAT(1X, 'ICCASE=', I4, ' IBEG=', I6, ' IFOLDD=', I6,
30     1 ' ICAS10=', I3, ' IEND=', I6)
31     WRITE (10, 2003)
32     2003 FORMAT(2X, 'NO.', 2X, 'CASE', 2X, 'ITEM', 2X, 'EVENT', 2X, 'QUAL', 3X,
33     1 'ICERT', 3X, 'DATE', 3X, 'CERT', 2X, 'USE')
34     DO 119 I10=1, ICCASE
35     WRITE (10, 2002) I10, KL1(I10), KL2(I10), KL3(I10), KL4(I10),
36     1 KL5(I10), KL6(I10), KL7(I10), KCURUS(I10)
37     2002 FORMAT(2X, I2, 3X, I3, 3X, I3, 4X, I3, 4X, I2, 3X, I2, 3X, I6, 3X, I2, 3X, I3)
38     119 CONTINUE
39     WRITE (10, 2004)
40     2004 FORMAT(1X, 'INTERPLANTED CROPS IN ANY COMBINATION:',
41     1 /1X, 'ICROP', 2X, 'PLANT', 3X, 'HARV.', 3X, 'BEG.PRES', 2X,
42     2 'END PRES', 2X, 'SPAN', 2X, 'DENSITY', 2X, 'METHOD', 2X,
43     3 'CERT')
44     DO 136 I12=1, ICAS10
45     C      MAKES TABULATIONS OF CROPS IN ANY COMBINATION FROM SCAN OF CARD 10
46     IDATE1 = CA1900(VAR135(I12), VAR136(I12), VAR137(I12), VAR138(I12), 3)
47     C      IDATE1 IS THE PLANTING DATE OF INTERPLANTED CROP
48     IDATE2 = CA1900(VAR143(I12), VAR144(I12), VAR145(I12), VAR146(I12), 5)
49     C      IDATE2 IS THE HARVEST DATE OF INTERPLANTED CROP
50     IF (VAR145(I12) .EQ. -C .AND. VAR146(I12) .GT. 0) IDATE2 = IEND
51     IF (VAR134(I12) .EQ. 14) IDATE2 = IDATE1 + 100
52     IDATE3 = IDATE1
53     C      IDATE3 IS BEGINNING DATE FOR INTERPLANTED CROP PRESENCE WITHIN THE
54     C      LIFESPAN OF THE PRINCIPAL CROP
55     IDATE4 = IDATE2
56     C      IDATE4 IS THE END DATE OF INTERPLANTED CROP PRESENCE WITHIN THE
57     C      LIFESPAN OF THE PRINCIPAL CROP
58     IF (IDATE1 .LE. IBEG) IDATE3 = IBEG
59     IF (IDATE2 .GE. IEND) IDATE4 = IEND
60     ISPAN = IDATE4 - IDATE3

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61      C      ISPAN IS SPAN OF TIME INTERPLANTED CROP WAS PRESENT IN ANY COMB.
62      C      WITHIN LIFESPAN OF PRINCIPAL CROP
63      PLANTD=0.
64      METHODD=0
65      ICERT=0
66      IF (VAR134(I12) .EQ. 0) GO TO 129
67      CALL PDENS(VAR134(I12),VAR147(I12),VAR148(I12),VAR149(I12),
68      1 VAR150(I12))
69      GO TO 130
70      129 IDATE1=-0
71      IDATE2 = -0
72      IDATE3 = -0
73      IDATE4 = -0
74      ISPAN = 0
75      130 CONTINUE
76      WRITE (10, 2005) VAR134(I12), IDATE1, IDATE2, IDATE3, IDATE4,
77      1 ISPAN, PLANTD, METHCD, ICERT
78      2005 FORMAT(2X, I3, 3X, I6, 2X, I6, 2X, I6, 4X, I6, 1X, I7, 2X, F8.0,
79      1 3X, I2, 5X, I2)
80      136 CONTINUE
81
82      C      END OF SUBROUTINE "HISTPR"
83      RETURN
84      END
85      SUBROUTINE BEINTR(ICCASE,IBEG,IFOLDD,ICAS10,IEND)
86      C      DUMMY SUBROUTINE "BEINTR"
87      RETURN
88      END
89      SUBROUTINE MZINTR(ICCASE,IBEG,IFOLDD,ICAS10,IEND)
90      C      DUMMY SUBROUTINE "MZINTR"
91      RETURN
92      END
93      SUBROUTINE MNINTR(ICCASE,IBEG,IFOLDD,ICAS10,IEND)
94      C      DUMMY SUBROUTINE "MNINTR"
95      RETURN
96      END
97      SUBROUTINE RIINTR(ICCASE,IBEG,IFOLDD,ICAS10,IEND)
98      C      DUMMY SUBROUTINE "RIINTR"
99      RETURN
100     END
END OF FILE

```

```

1  $RUN *WATFIV 7=TYPE29 9=-CD2
2  $CCMPIL
3  C    THIS PROGRAM GENERATES THE DATA SECTION OF THE"COORD" SUBROUTINE
4      DO 200 I=1,236
5      READ (7,2000) ICCL, IX1, IY1, IX2, IY2
6      2000 FORMAT(16X, I3, 4I6)
7      IF (.NOT.(ICOL .GE. 1)) GO TO 200
8      WRITE (8,2001) ICOL,ICCL,ICCL,ICOL,IX1,IY1,IX2,IY2
9      2001 FORMAT(6X,'DATA IX1(', I3, '),IY1(', I3, '),IX2(', I3, '),IY2(', I
10     13,')/', I5, ',', I5, ',', I5, ',', I5, ',/')
11     200 CONTINUE
12  C    END OF GENERATING PROGRAM
13     RETURN
14     END
15  /EXECUTE
END OF FILE

```

```

1  C    TEST PROGRAM FOR CCORC SUBROUTINE
2      COMMON/CCORC2/IXCO,IYCC
3      100 CONTINUE
4          WRITE(6,1002)
5      1002 FORMAT(1X, 'ENTER COLONIST NUMBER (FORMAT=I5)')
6          READ (5,1000) ICCL
7      1000 FORMAT(I5)
8          WRITE (6,1003)
9      1003 FORMAT(1X, 'ENTER "FRONT" COORDINATE (FORMAT=I5)')
10         READ (5,1000) IX
11         WRITE (6, 1004)
12      1004 FORMAT(1X, 'ENTER "DEPTH" COORDINATE (FORMAT=I5)')
13         READ (5, 1000) IY
14         CALL CCORC(ICCL,IX,IY)
15         WRITE (6,1001) ICCL,IX,IY,IXCC,IYCC
16      1001 FORMAT(1X,'ICCL=',I4,' FRONT=',I4,' DEPTH=',I5,' IXCO=',I8,' IYCC
17          1=',I9)
18         WRITE (6, 1005)
19      1005 FORMAT(1X, 'ENTER CONTINUE CODE (1=RETURN FOR MORE DATA; 2=END RUN)(FORMAT=I5)')
20         READ (5, 1000) ICONT
21         IF (ICONT .EQ. 1) GO TO 100
22     C    END OF "CCORC TEST"
23     END
END OF FILE

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1 C
2 C THIS PROGRAM ("ERPRTAB") CALCULATES TRANSFER PROBABILITIES FOR
3 C EROSION-RELATED DATA IN THE FILE "ALLNEIGHBORS" (GRANULOMETRIC
4 C DATA, SLOPE AND SOILDEPTH). TABLES OF PROBABILITIES ARE OUTPUT
5 C IN "EROSIONPROBS" WITH APPROPRIATE HEADINGS. THE PROGRAM ACCEPTS
6 C PARAMETERS READ IN AS DATA SPECIFYING THE UPPER AND LOWER LIMITS
7 C FOR DISTANCES FOR TWO LENGTHS OF MOVES, THE CUT POINTS FOR 7 LEVELS
8 C OF 6 VARIABLES FOR WHICH TABLES ARE TO BE MADE, AND TITLE AND
9 C HEADING INFORMATION. DEVICES ARE: 5=EPDATA, 7=ALLNEIGHBORS,
10 C 9=EROSIONPROBS. NO SUBPROGRAMS ARE CALLED.
11 C THE FORTRAN MONITOR "MINUSZERO" FEATURE IS USED, AS IS THE MTS
12 C LOGICAL COMPARISON OF CHARACTERS (LCOMC) FUNCTION
13 C
14 C DIMENSION IE1(1500), IE2(1500), IE3(1500), E4(1500), E5(1500)
15 C 1, E6(1500), E7(1500), E8(1500), E9(1500), E10(1500),
16 C 2 E11(1500), IE12(1500), IE13(1500), E14(1500), E15(1500),
17 C 3 E16(1500), E17(1500), E18(1500), E19(1500), E20(1500)
18 C DIMENSION HEAD(90), CUTS(60), THEAD(130), P(50), B(50), C(10)
19 C READ (5, 1003) ICALLN, CRITD1, CRITD2, CRITD3, CRITD4, INCHAR,
20 C 1 IMOVE1, IMOVE2
21 C 1003 FORMAT(IX, I5, 4F5.0, I2, 2I5)
22 C "ICALLN" IS THE NUMBER OF CARDS IN ALLNEIGHBORS
23 C "CRITD1" AND "CRITD2" ARE THE LOWER AND UPPER LIMITS FOR DISTANCES
24 C BETWEEN SAMPLES TO BE INCLUDED IN THE FIRST OF THE TWO SETS OF
25 C TABULATIONS FOR MOVES OF DIFFERENT DISTANCES
26 C "CRITD3" AND "CRITD4" ARE THE LOWER AND UPPER DISTANCE LIMITS FOR
27 C THE SECOND SET OF TABULATIONS
28 C "INCHAR" THE NUMBER OF VARIABLES (UP TO 6) FOR WHICH TABULATIONS
29 C ARE TO BE MADE
30 C "IMOVE1" AND "IMOVE2" ARE THE LENGTHS OF THE MOVES TO APPEAR IN
31 C THE TITLES OF THE TABLES
32 C READ (5, 5002) (THEAD(II), II=1,120)
33 C 5002 FORMAT(20A4)
34 C "THEAD" IS THE TABLE TITLE INFORMATION
35 C READ (5, 5000) (HEAD(I), I=1,84)
36 C 5000 FORMAT(IX, 14A4)
37 C "HEAD" IS THE HEADING INFO. FOR THE ROWS AND COLUMNS IN THE TABLES
38 C READ (5, 5001) (CUTS(IC), IC=1,48)
39 C 5001 FORMAT(IX, 8F5.0)
40 C "CUTS" ARE THE CUTPOINTS FOR TABLE ROWS AND COLUMNS
41 C READ (7, 1004) (IE1(I), IE2(I), IE3(I), E4(I), E5(I), E6(I), E7(I),
42 C 1 E8(I), E9(I), E10(I), E11(I), IE12(I), IE13(I), E14(I), E15(I),
43 C 2 E16(I), E17(I), E18(I), E19(I), E20(I), I=1,ICALLN)
44 C 1004 FORMAT(IX, I5, I4, IX, I4, 4F4.0, 2F5.0, 2F8.0, / 6X, I4, I4,
45 C 1 F8.0, 4F4.0, 2F5.0)
46 C ABOVE FORMAT 1004 FOR ALLNEIGHBORS
47 C DO 501 IROUND=1,2
48 C MAKES ONE ITERATION FOR EACH ROUND OF CALCULATION (100M OR 500M)
49 C IF (IROUND.EQ. 1) IMOVE = IMOVE1
50 C IF (IROUND.EQ. 2) IMOVE = IMOVE2
51 C WRITE (9, 1020) IMOVE
52 C 1020 FORMAT(10(IX, /), 'TRANSITION PROBABILITIES FOR A MOVE OF', I5, 2X,
53 C 1 'METERS')
54 C DO 502 ICHAR=1,INCHAR
55 C DOES ONE ITERATION FOR EACH VARIABLE (UP TO 6) TO BE TABULATED
56 C DO 200 K=1,50
57 C P(K) = 0.
58 C 200 R(K) = 0.
59 C DO 201 J=1,10
60 C 201 C(J) = 0.

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61      DO 500 I5=1,ICALLN
62      C      DOES ONE ITERATION FOR EACH CASE IN ALLNEIGHBORS
63      IF (IROUND .EQ. 1 .AND. E14(I5) .GE. CRITC1 .AND. E14(I5) .LE.
64      1 CRITC2) GO TO 104
65      IF (IROUND .EQ. 2 .AND. E14(I5) .GE. CRITC3 .AND. E14(I5) .LE.
66      1 CRITC4) GO TO 104
67      GO TO 500
68      104 CONTINUE
69      M1 = ICHAR * 8 + 1 - 8
70      M2 = ICHAR * 8 + 2 - 8
71      M3 = ICHAR * 8 + 3 - 8
72      M4 = ICHAR * 8 + 4 - 8
73      M5 = ICHAR * 8 + 5 - 8
74      M6 = ICHAR * 8 + 6 - 8
75      M7 = ICHAR * 8 + 7 - 8
76      M8 = ICHAR * 8 + 8 - 8
77      IF (ICHR .EQ. 1) CV = E4(I5)
78      IF (ICHR .EQ. 1) CV = E15(I5)
79      IF (ICHR .EQ. 2) CV = E5(I5)
80      IF (ICHR .EQ. 2) CV = E16(I5)
81      IF (ICHR .EQ. 3) CV = E6(I5)
82      IF (ICHR .EQ. 3) CV = E17(I5)
83      IF (ICHR .EQ. 4) CV = E7(I5)
84      IF (ICHR .EQ. 4) CV = E18(I5)
85      IF (ICHR .EQ. 5) CV = E8(I5)
86      IF (ICHR .EQ. 5) CV = E19(I5)
87      IF (ICHR .EQ. 6) CV = E9(I5)
88      IF (ICHR .EQ. 6) CV = E20(I5)
89      IF (CV .LT. 0. .OR. DV .LT. 0.) GO TO 500
90      IF (CV .EQ. -0. .OR. CV .EQ. -0.) GO TO 500
91      KC = 0
92      IF (CV .GE. CUTS(M1) .AND. CV .LT. CUTS(M2)) KC = 1
93      IF (CV .GE. CUTS(M2) .AND. CV .LT. CUTS(M3)) KC = 2
94      IF (CV .GE. CUTS(M3) .AND. CV .LT. CUTS(M4)) KC = 3
95      IF (CV .GE. CUTS(M4) .AND. CV .LT. CUTS(M5)) KC = 4
96      IF (CV .GE. CUTS(M5) .AND. CV .LT. CUTS(M6)) KC = 5
97      IF (CV .GE. CUTS(M6) .AND. CV .LT. CUTS(M7)) KC = 6
98      IF (CV .GE. CUTS(M7) .AND. CV .LT. CUTS(M8)) KC = 7
99      IF (KC .EQ. 0) GO TO 500
100     KD1 = KC * 7 - 7 + 1
101     KD2 = KC * 7 - 7 + 2
102     KD3 = KC * 7 - 7 + 3
103     KD4 = KC * 7 - 7 + 4
104     KD5 = KC * 7 - 7 + 5
105     KD6 = KC * 7 - 7 + 6
106     KD7 = KC * 7 - 7 + 7
107     IF (DV .GE. CUTS(M1) .AND. DV .LT. CUTS(M2)) B(KD1) = B(KD1) + 1.
108     IF (DV .GE. CUTS(M2) .AND. DV .LT. CUTS(M3)) B(KD2) = B(KD2) + 1.
109     IF (DV .GE. CUTS(M3) .AND. DV .LT. CUTS(M4)) B(KD3) = B(KD3) + 1.
110     IF (DV .GE. CUTS(M4) .AND. DV .LT. CUTS(M5)) B(KD4) = B(KD4) + 1.
111     IF (DV .GE. CUTS(M5) .AND. DV .LT. CUTS(M6)) B(KD5) = B(KD5) + 1.
112     IF (DV .GE. CUTS(M6) .AND. DV .LT. CUTS(M7)) B(KD6) = B(KD6) + 1.
113     IF (DV .GE. CUTS(M7) .AND. DV .LT. CUTS(M8)) B(KD7) = B(KD7) + 1.
114     C(KC) = C(KC) + 1.
115     500 CONTINUE
116     C      FOLLOWING CALCULATES TRANSITION PROBABILITIES
117     DO 134 I6=1,7
118     DO 135 I7=1,7
119     I8 = I6 * 7 + I7 - 7
120     IF (C(I8) .LE. 0.001) GO TO 136

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121      P(I8) = B(I3) / C(I6)
122      GO TO 135
123      136 P(I3) = 0.
124      135 CONTINUE
125      134 CONTINUE
126      IBEG = ICHAR * 20 - 20 + 1
127      IEND = IBEG + 19
128      WRITE (8, 1011) (THEAD(I), I=IBEG, IEND)
129      1011 FORMAT(1X, / 1X, / 1X, / 1X, / 1X, / 1X, / 20A4)
130      IB = ICHAR * 14 - 14 + 1
131      IE = IB + 13
132      WRITE (8, 1010) (HEAD(I), I=IB, IE)
133      1010 FORMAT(1X, / 1X, / 11X, 7(2A4, 3X), 2X, 'SAMP.SIZE', / 1X)
134      DO 137 I9 = 1, 7
135      I10 = ICHAR * 14 - 14 + I9 * 2 - 2 + 1
136      I11 = I10 + 1
137      I12 = I9 * 7 - 7 + 1
138      I13 = I12 + 1
139      I14 = I12 + 2
140      I15 = I12 + 3
141      I16 = I12 + 4
142      I17 = I12 + 5
143      I18 = I12 + 6
144      WRITE (8, 1012) HEAD(I10), HEAD(I11), P(I12), P(I13), P(I14),
145      1 P(I15), P(I16), P(I17), P(I18), C(I9)
146      1012 FORMAT(2X, 2A4, 3X, 7(F5.2, 6X), 2X, F3.0)
147      137 CONTINUE
148      502 CONTINUE
149      501 CONTINUE
150      C      END OF PROGRAM "ERPRTA9"
151      END
152      701 0. 200. 400. 600. 6 100 500 ICALLN,CRITD1-4,INCHAR,MOVE1,MOVE2
153      COARSE SAND (%) TRANSITION PROBABILITIES
154      FINE SAND (%) TRANSITION PROBABILITIES
155      SILT (%) TRANSITION PROBABILITIES
156      CLAY (%) TRANSITION PROBABILITIES
157      SLOPE (%) TRANSITION PROBABILITIES
158      SOIL DEPTH (CM) TRANSITION PROBABILITIES
159      0-14 15-29 30-44 45-59 60-74 75-89 90-100
160      0-14 15-29 30-44 45-59 60-74 75-89 90-100
161      0-14 15-29 30-44 45-59 60-74 75-89 90-100
162      0-14 15-29 30-44 45-59 60-74 75-89 90-100
163      0-4 5-9 10-19 20-29 30-49 50-69 70-90
164      0-1 2-4 5-9 10-14 15-19 20-49 100 UP
165      0. 15. 30. 45. 60. 75. 90. 100.
166      0. 15. 30. 45. 60. 75. 90. 100.
167      0. 15. 30. 45. 60. 75. 90. 100.
168      0. 15. 30. 45. 60. 75. 90. 100.
169      0. 5. 10. 20. 30. 50. 70. 90.
170      0. 2. 5. 10. 15. 20. 100.9999.

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END OF FILE

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1  C THIS PROGRAM ("EROSIONPROG") SORTS EROSION-RELATED DATA INTO FILES
2  C "EROSIONBYSTAKE" AND "EROSIONBYPLOT" FOR STAKE-BY-STAKE INFORMATION
3  C AND PLOT-WISE SUMMARIES RESPECTIVELY. CALCULATIONS ARE MADE OF
4  C SOIL COMPACTION & EROSION EXPRESSED AS MILLIMETERS ERODED,
5  C METRIC TONS SOIL REMOVED PER HECTARE, MILLIMETERS PER 100 CM
6  C RAINFALL AND AS METRIC TONS
7  C SOIL REMOVED PER 100 CM RAINFALL. STANDARD DEVIATIONS ARE CALCULATED
8  C FOR EACH MEAN WHERE SUFFICIENT DATA EXISTS. DATA WITH SPECIFIED
9  C "SPECIAL CIRCUMSTANCE", "DISTURBANCE", AND "NOTE" CODES ARE EXCLUDED.
10 C LAND USE HISTORY AND RAINFALL WHILE IN EACH LAND USE
11 C ARE GIVEN FOR EACH PLOT.
12 C INPUT UNITS ARE: 5=EPODATA 7=TYPE1 8=TYPE2 9=TYPE17 10=ONE23
13 C 13=DAILYWEATHER 14=TYPE19 15=TYPE30 11=TYPE15 17=TYPE16 19=TYPE14
14 C OUTPUT UNITS ARE: 6=**SINK* 16=EROSIONBYSTAKE 12=EROSIONBYPLOT
15 C 18=EVENTLIST
16 C OUTPUT HAS 4 LINES PER CASE IN EROSIONBYSTAKE AND
17 C 25 LINES PER CASE IN EROSIONBYPLOT
18 C SUBPROGRAMS CALLED ARE WEATBD, USETAB, DA1900 & CURUSE.
19 C THE "CPTRAN MONITOR" "MINUSZERO" FEATURE IS USED, AS IS THE MTS
20 C LOGICAL COMPARISON OF CHARACTERS ("LCOMC") SUBROUTINE.
21 C
22 C
23 C INTEGER VAP002,VAR004,VAP005,VAR006,VAR007,VAR008,VAR009,VAR010,
24 C 1VAP011,VAR012,VAP013,VAR014,VAR015,VAR020
25 C INTEGER VAP023,VAR029,VAR031,VAR040,VAR033,VAR042A
26 C INTEGER VAR245, VAR246, VAR248, VAR249, VAR250, VAR251, VAR252,
27 C 1VAR253, VAR257, VAR258, VAR259, VAR259A, VAR282, VAR283, VAR284,
28 C 2VAR285, VAR286, VAR299, VAR204, VAR205, VAR206, VAR207, VAR208,
29 C 3VAR209, VAR210, VAR211, VAR212, VAR213, VAR214, VAR215, VAR216,
30 C 4VAR217, VAR217A, VAR219, VAR223, VAR226, VAR229, VAR230, VAR232
31 C INTEGER V282, V283, V284, V285, V286, V299
32 C DIMENSION DENS(50), STCSD(15), STE100(15)
33 C ABOVE DIMENSION FOR CARD30 (SOIL DENSITY)
34 C DIMENSION VAR219(50),VAR220(50),VAR221(50),VAR222(50),
35 C 1 VAR223(50),VAR224(50),VAR225(50),VAR226(50),VAR227(50),
36 C 2 VAR228(50),VAR229(50),VAR230(50)
37 C ABOVE DIMENSION FOR CARD TYPE 15
38 C DIMENSION VAR245(16), VAR246(16), VAR247(16), VAR248(16),
39 C 1VAR249(16), VAR250(16), VAR251(16), VAR252(16), VAR253(16)
40 C 2, VAR254(16), VAR255(16), VAR256(16), VAR257(16),
41 C 3VAR258(16), VAR259(16), VAR259A(16)
42 C ABOVE DIMENSION FOR CARD TYPE 17
43 C DIMENSION COMP(10), EBEGIN(705), STCSUM(15), STCSSQ(15),
44 C 1STCAVE(15), SSCSD(15), STEROS(15), STESSQ(15), PRECIP(15)
45 C DIMENSION VAR282(16), VAR283(16), VAR284(16), VAR285(16),
46 C 1VAR286(16), VAR287(16), VAR290(16), VAR291(16), VAR292(110
47 C 20), VAR293(16), VAR294(16), VAR295(16), VAR296(16),
48 C 3VAR297(16), VAR298(16), VAR299(16)
49 C DIMENSION V282(710), V283(710), V284(710), V285(710),
50 C 1 V286(710), V287(710), V290(710), V291(710), V292(710),
51 C 2 V293(710), V294(710), V295(710), V296(710), V297(710),
52 C 3 V298(710), V299(710)
53 C ABOVE DIMENSIONS FOR CARD TYPE 19 (SOIL COMPACTION)
54 C DIMENSION VAR232(550), VAR236(550), VAR237(550), VAR238(550),
55 C 1VAR239(550)
56 C ABOVE DIMENSION FOR CARD TYPE 16
57 C COMMON/C1/ L41(1700),RL46(1700),RL47(1700),RL48(1700)
58 C COMMON/C2/ RAINBD, EVAPBD, SUNBD, MISPRE, MISEVA, MISINS
59 C ABOVE COMMONS "C1" AND "C2" FOR DAILYWEATHER
60 C COMMON VAR002(903), VAR004(903),VAR005(903),VAR006(903),

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61      1VAR007(903),VAR008(903),VAR009(903),VAR010(903),VAR011(903),
62      1VAR012(903),VAR013(903),VAR014(903),VAR015(903),VAR020(903),
63      1VAR021(903)
64      COMMON VAR023(903),VAR025(903),VAR028(903),VAR030(903),VAR031(903)
65      1,VAR032(903),VAR033(903),VAR040(903),VAR042A(903)
66      DATA MINZRC/Z80C0000/
67      CALL FTNMC('SET MINUSZERO=ON',16)
68      DO 200 I=1,705
69      200  EBEGIN(I) = 0.
70      DO 201 II=1,50
71      201  VAP222(II) = -0.
72      READ (5,1000) ICDS19, ICDS15, ICDS16, ICDS17, ICDS14, IWEATH,
73      1ICDS30, ICDS1, ICDS2, ICNE23
74      1000  FORMAT(1X, 10I5)
75      READ (5,1005) ISPEC1, ISPEC2, ISPEC3
76      1005  FORMAT(1X, 3I2)
77      C      ABOVE FORMAT 1005 FOR "SPECIAL CIRCUMSTANCES" (VAR257) TO BE
78      C      EXCLUDED FROM THE ANALYSIS
79      READ (5,1006) IDIST1, IDIST2, IDIST3, IDIST4, IDIST5, IDIST6,
80      1IDIST7, IDIST8, IDIST9
81      1006  FORMAT(1X, 9I2)
82      C      ABOVE 1006 FOR "DISTURBANCE CODES" (VAR258) TO BE EXCLUDED.
83      READ (5,1007) NOTE1, NOTE2, NOTE3, NOTE4, NOTE5, NOTE6, NOTE7,
84      1NOTE8, NOTE9, NOTE10, NOTE11, NOTE12, NOTE13, NOTE14, NOTE15,
85      2NOTE16, NOTE17
86      1007  FORMAT(1X, 17I3)
87      C      ABOVE FORMAT 1007 FOR "EROSION STAKES"NOTES"(VAR259) VALUES TO BE EXCLUDED.
88      ICNE23 = 4259
89      READ (7,9001)(VAR002(I1), VAR004(I1), VAR005(I1), VAR006(I1),
90      1VAR007(I1), VAR008(I1), VAR009(I1), VAR010(I1), VAR011(I1),
91      1VAR012(I1), VAR013(I1), VAR014(I1), VAR015(I1), VAR020(I1),
92      1VAR021(I1), I1=1,ICDS1)
93      9001  FORMAT(3X,15,5X,12,14,13,212,14,15,13,12,15,12,15,20X,13,F5.0)
94      C      ABOVE FORMAT 9001 IS FOR CARD TYPE 1
95      READ (3,9002)(VAR023(I2),VAR025(I2), VAR028(I2), VAR030(I2),
96      1VAR031(I2),VAR032(I2),VAR033(I2),VAR040(I2),VAR042A(I2),I2=1,ICDS2)
97      9002  FORMAT(3X,15,5X,F5.0,8X,12,2X,F5.1,12,F5.1,12,22X,14,6X,12)
98      C      ABOVE FORMAT 9002 IS FOR CARD TYPE 2
99      READ (11,1004)(VAR219(I6), VAR220(I6), VAR221(I6), VAR222(I6),
100      1VAR223(I6), VAR224(I6), VAR225(I6), VAR226(I6), VAR227(I6),
101      2VAP228(I6), VAR229(I6), VAR230(I6), I6=1,ICDS15)
102      1004  FORMAT(3X, 14, 3F4.0, 12, 2F4.0, 12, 2F4.0, 12, 12)
103      C      ABOVE FORMAT 1004 FOR CARD TYPE 15 (EROSION PLOT DESCRIPTION)
104      READ (15,2007)(DENSE(I10), I10=1,ICDS30)
105      2007  FORMAT(6X, F6.5)
106      C      ABOVE FORMAT FOR CARD TYPE 30 (SOIL DENSITY)
107      READ (17,1115)(VAR232(I20),VAR236(I20),VAR237(I20),VAR238(I20),
108      1VAR239(I20), I20=1,ICDS16)
109      1115  FORMAT(3X, 15, 13X, 4F4.0)
110      READ (13,1001)(L41(I),RL46(I),RL47(I),RL48(I), I=1,IWEATH)
111      1001  FORMAT(///2X, 16, 12X, F6.1, 2F5.1)
112      C      ABOVE FORMAT 1001 FOR DAILYWEATHER
113      READ (14,1002)(V282(I5),V283(I5),V284(I5),V285(I5),
114      1V286(I5), V287(I5),
115      1V290(I5),V291(I5),V292(I5),V293(I5),V294(I5),V295(I5),
116      1V296(I5), V297(I5),
117      2V298(I5),V299(I5) , I5=1,ICDS19)
118      1002  FORMAT(3X,14,215,212,10F5.1,12)
119      C      ABOVE FORMAT 1002 FOR CARD TYPE 19 (SOIL COMPACTION)
120      ICOMPL = 0

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121      IPOINT = 0
122      IPOINT2 = 0
123      DO 104 I7 = 1,2
124  C      DOES ONE ITERATION FOR EACH ROUND OF OBSERVATIONS (OBSERV.PERIOD)
125      ISTAKE = 0
126      ISTK2 = 0
127      DO 100 I2=1,ICDS15
128  C      DOES ONE ITERATION FOR EACH PLOT
129      PLCSUM = 0.
130      PLCSSC = 0.
131      PLESUM = 0.
132      PLESSC = 0.
133      PLENUM = 0.
134      STENUM = 0.
135      SEL00N = 0.
136      SUM100 = 0.
137      SSQ100 = 0.
138      NOTEC = 0.
139      READ (13,1003) VAR204, VAR205, VAR206, VAR207, VAR208, VAR209,
140      1VAR210, VAR211, VAR212, VAR213, VAR214, VAR215, VAR216, VAR217,
141      2VAR217A
142  1003 FORMAT(3X, I4, 2I3, I4, 6I5, I3, I4, I2, 2I3)
143  C      ABOVE FORMAT 1003 FOR CARD TYPE 14 (EROSION PLOT REFERENCE)
144      IGRAN = 0
145      ITRY = 1
146  121 CONTINUE
147      DO 120 I15=1,ICDS16
148  C      FINDS CARD 16 DATA WITH GRANULOMETRIC RESULTS
149      IF (ITRY .EQ. 2) GO TO 122
150  C      ITRY IS AN INDEX FOR THE TRY AT FINDING RESULTS (1=FIRST SAMP; 2=SECOND)
151      IF (VAR232(I15) .EQ. VAR208) GO TO 123
152      GO TO 120
153  123 IF (LCOMC(4,MINZRC,VAR238(I15)) .EQ. 0) GO TO 120
154      GO TO 124
155  122 IF (VAR232(I15) .EQ. VAR210) GO TO 123
156  120 CONTINUE
157      ITRY = ITRY + 1
158      IF (ITRY .EQ. 2) GO TO 121
159      GO TO 125
160  124 CONTINUE
161      IGRAN = 1
162  C      IGRAN IS AN INDICATOR THAT GRANULOMETRIC DATA EXISTS
163  125 CONTINUE
164      DO 101 I5=1,15
165  C      DOES ONE ITERATION FOR EACH STAKE WITHIN A PLOT
166      IX = I2 * I5 - 15 + I5
167      VAR282(I5) = V282(IX)
168      VAR283(I5) = V283(IX)
169      VAR284(I5) = V284(IX)
170      VAR285(I5) = V285(IX)
171      VAR286(I5) = V286(IX)
172      VAR287(I5) = V287(IX)
173      VAR288(I5) = V288(IX)
174      VAR289(I5) = V289(IX)
175      VAR290(I5) = V290(IX)
176      VAR291(I5) = V291(IX)
177      VAR292(I5) = V292(IX)
178      VAR293(I5) = V293(IX)
179      VAR294(I5) = V294(IX)
180      VAR295(I5) = V295(IX)
180      VAR296(I5) = V296(IX)
180      VAR297(I5) = V297(IX)

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181      VAR298(I5) = V298(I5)
182      VAR299(I5) = V299(I5)
183      READ (9,2005) VAR245(I5),VAR246(I5),VAR247(I5),VAR248(I5),
184      1 VAR249(I5), VAR250(I5),
185      1VAR251(I5),VAR252(I5),VAR253(I5),VAR254(I5),VAR255(I5),VAR256(I5),
186      1 VAR257(I5), VAR258(I5),
187      2VAR259(I5),VA259A(I5)
188 2005 FORMAT(3X, I4, I5, F4.0, 6I2, 2F4.0, F5.1, I2, I1, 2I2)
189 C      ABOVE FORMAT 1005 FOR CARD TYPE 17 (EROSION STAKES).
190      IDATE1 = KCAYS(VAR248(I5),VAR249(I5),VAR250(I5))
191      IDATE2 = KCAYS(VAR251(I5),VAR252(I5),VAR253(I5))
192      CALL WEATRD(IDATE1,IDATE2)
193      IF (VAR299(I5) .GT. 0) NCTEC = VAR299(I5)
194 C      NCTEC IS NOTE FOR COMPACTION TO BE USED FOR EROSIONBYPLDT
195      IF (VAR282(I5) .NE. 12) GO TO 105
196 C      ABOVE CHECKS FOR MISSING OR UNCRDERED CARD 19 DATA
197      CCMP(1)= 10. **(.07111 * VAR287(I5) - 0.62000)
198      CCMP(2)= 10. **(.07111 * VAR290(I5) - 0.62000)
199      CCMP(3)= 10. **(.07111 * VAR291(I5) - 0.62000)
200      CCMP(4)= 10. **(.07111 * VAR292(I5) - 0.62000)
201      CCMP(5)= 10. **(.07111 * VAR293(I5) - 0.62000)
202      CCMP(6)= 10. **(.07111 * VAR294(I5) - 0.62000)
203      CCMP(7)= 10. **(.07111 * VAR295(I5) - 0.62000)
204      CCMP(8)= 10. **(.07111 * VAR296(I5) - 0.62000)
205      CCMP(9)= 10. **(.07111 * VAR297(I5) - 0.62000)
206      CCMP(10)=10. **(.07111 * VAR298(I5) - 0.62000)
207      STCSUM(I5) = 0.
208      STCSSQ(I5) = 0.
209      DO 102 I4=1,10
210 C      DOES ONE ITERATION FOR EACH COMPACTION MEASUREMENT FOR STAKE
211      STCSUM(I5) = STCSUM(I5) + CCMP(I4)
212      STCSSQ(I5) = STCSSQ(I5) + CCMP(I4) * CCMP(I4)
213 102 CONTINUE
214      PLCSUM = PLCSUM + STCSUM(I5)
215      PLCSSQ = PLCSSQ + STCSSQ(I5)
216      STCAVE(I5) = STCSUM(I5) / 10.
217      STCSD(I5) = SQRT((10. * STCSSQ(I5) - STCSUM(I5)*STCSUM(I5))/90.)
218 C
219 C      BEGINNING OF EROSION CALCULATIONS
220 C
221      ISTAKE = ISTAKE + 1
222 C      ISTAKE IS THE COUNTER FOR STAKES FROM 1-705. THIS IS RE-ZEROED FOR
223 C      THE SECOND OBSERVATION PERIOD. THIS DOES NOT NECESSARILY FOLLOW
224 C      THE "STAKE NUMBERS" ON THE STAKES
225      IPOINT = IPOINT + 1
226 C      "IPOINT" IS A COUNT OF DATA POINTS FROM BOTH OBSERVATION PERIODS,
227 C      INCLUDING MISSING DATA.
228      STEROS(I5) = VAR255(I5) - EBEGIN(ISTAKE)
229 C      STEROS(I5) IS THE EROSION IN MM FOR THE STAKE
230      IF((ISPEC1.NE.-0).AND.(VAR257(I5).EQ.ISPEC1))STEROS(I5)=-0.
231      IF((ISPEC2.NE.-0).AND.(VAR257(I5).EQ.ISPEC2))STEROS(I5)=-0.
232      IF((ISPEC3.NE.-0).AND.(VAR257(I5).EQ.ISPEC3))STEROS(I5)=-0.
233      IF((IDIST1.NE.-0).AND.(VAR258(I5).EQ.IDIST1))STEROS(I5)=-0.
234      IF((IDIST2.NE.-0).AND.(VAR258(I5).EQ.IDIST2))STEROS(I5)=-0.
235      IF((IDIST3.NE.-0).AND.(VAR258(I5).EQ.IDIST3))STEROS(I5)=-0.
236      IF((IDIST4.NE.-0).AND.(VAR258(I5).EQ.IDIST4))STEROS(I5)=-0.
237      IF((IDIST5.NE.-0).AND.(VAR258(I5).EQ.IDIST5))STEROS(I5)=-0.
238      IF((IDIST6.NE.-0).AND.(VAR258(I5).EQ.IDIST6))STEROS(I5)=-0.
239      IF((IDIST7.NE.-0).AND.(VAR258(I5).EQ.IDIST7))STEROS(I5)=-0.
240      IF((IDIST8.NE.-0).AND.(VAR258(I5).EQ.IDIST8))STEROS(I5)=-0.

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241 IF((IDIST9.NE.-0).AND.(VAR258(I5).EQ.IDIST9))STEROS(I5)=-0.
242 IF((NOTE1.NE.-0).AND.(VAR259(I5).EQ.NOTE1))STEROS(I5)=-0.
243 IF((NOTE2.NE.-0).AND.(VAR259(I5).EQ.NOTE2))STEROS(I5)=-0.
244 IF((NOTE3.NE.-0).AND.(VAR259(I5).EQ.NOTE3))STEROS(I5)=-0.
245 IF((NOTE4.NE.-0).AND.(VAR259(I5).EQ.NOTE4))STEROS(I5)=-0.
246 IF((NOTE5.NE.-0).AND.(VAR259(I5).EQ.NOTE5))STEROS(I5)=-0.
247 IF((NOTE6.NE.-0).AND.(VAR259(I5).EQ.NOTE6))STEROS(I5)=-0.
248 IF((NOTE7.NE.-0).AND.(VAR259(I5).EQ.NOTE7))STEROS(I5)=-0.
249 IF((NOTE8.NE.-0).AND.(VAR259(I5).EQ.NOTE8))STEROS(I5)=-0.
250 IF((NOTE9.NE.-0).AND.(VAR259(I5).EQ.NOTE9))STEROS(I5)=-0.
251 IF((NOTE10.NE.-0).AND.(VAR259(I5).EQ.NOTE10))STEROS(I5)=-0.
252 IF((NOTE11.NE.-0).AND.(VAR259(I5).EQ.NOTE11))STEROS(I5)=-0.
253 IF((NOTE12.NE.-0).AND.(VAR259(I5).EQ.NOTE12))STEROS(I5)=-0.
254 IF((NOTE13.NE.-0).AND.(VAR259(I5).EQ.NOTE13))STEROS(I5)=-0.
255 IF((NOTE14.NE.-0).AND.(VAR259(I5).EQ.NOTE14))STEROS(I5)=-0.
256 IF((NOTE15.NE.-0).AND.(VAR259(I5).EQ.NOTE15))STEROS(I5)=-0.
257 IF((NOTE16.NE.-0).AND.(VAR259(I5).EQ.NOTE16))STEROS(I5)=-0.
258 IF((NOTE17.NE.-0).AND.(VAR259(I5).EQ.NOTE17))STEROS(I5)=-0.
259 C ABOVE STATEMENTS EXCLUDE SPECIFIED SPECIAL CIRCUMSTANCE,DISTURBANCE,
260 C AND NOTE CODES FROM ANALYSIS
261 IF (LCOMC(4,MINZRO,STEROS(I5)).EQ. 0) GO TO 101
262 STENUM = STENUM + 1.
263 PLESUM = PLESUM + STEROS(I5)
264 PLESSQ = PLESSQ + STEROS(I5) * STEROS(I5)
265 EBEGIN(ISTAKE) = EBEGIN(ISTAKE) + STEROS(I5)
266 IF (VAR259(I5).EQ. 6) EBEGIN(ISTAKE) = 0.
267 IF ( RAINBD .LT. -9.) GO TO 101
268 IF (LCOMC(4,MINZRC,RAINBD).EQ. 0) GO TO 101
269 PRECIP(I5) = RAINBD
270 STE100(I5) = (STEROS(I5) * 1000.) / RAINBD
271 C STE100(I5) IS STAKE EROSION PER 100 CM RAINFALL
272 SE100N = SE100N + 1.
273 C "SE100N" IS SAMPLE SIZE FOR STAKE EROSION PER 100 CM RAINFALL.
274 SUM100 = SUM100 + STE100(I5)
275 SSG100 = SSG100 + STE100(I5) * STE100(I5)
276 ICCMPL = ICCMPL + 1
277 C "ICCMPL" IS A COUNT OF OBSERVATIONS WITH COMPLETE DATA (FROM BOTH
278 C OBSERVATION PERIODS)
279 101 CONTINUE
280 PLCAVE = PLCSUM / 150.
281 C PLCAVE IS THE AVERAGE COMPACTION (KG/CM**2) FOR THE PLOT
282 PLCSD = SQRT((150. * PLCSSQ - PLCSUM*PLCSUM) / 22350.)
283 C PLCSD IS THE STANDARD DEVIATION OF THE COMPACTION AVERAGE FOR THE PLOT.
284 IF (STENUM .LE. 0.9) GO TO 103
285 PLEAVE = PLESUM / STENUM
286 EROKGM = PLEAVE * DENS(I5) * 10.
287 C "EROKGM" IS M.TONS/HA ERODED (PLEAVE MM ERODED * 10**-1
288 C CM/MM * DENS(I2) G/CM**3 * 10**9 CM**2/HA * 10**-6 M.TONS/G )
289 IF (STENUM .LE. 2.5) GO TO 155
290 PLESQ = SQRT((STENUM * PLESSQ - PLESUM*PLESUM) / STENUM * (STENUM -1.))
291 C PLESQ IS STD. DEV. OF EROSION (MM) IN THE PLOT
292 ERKGSQ = PLESQ * DENS(I2) * 10.
293 C "ERKGSQ" IS THE STD. DEV. OF THE EROSION IN M.TONS/HA.
294 155 CONTINUE
295 IF (SE100N .LE. 0.9) GO TO 103
296 AVE100 = SUM100 / SE100N
297 C AVE100 IS AVERAGE EROSION (MM) PER 100 CM RAINFALL FOR THE PLOT
298 AVK100 = AVE100 * DENS(I2) * 10.
299 C AVK100 IS THE AVE. EROSION IN M.TONS/HA/100 CM RAIN FOR THE PLOT.
300 IF (SE100N .LE. 2.9) GO TO 103

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301      SD100 = SQRT((SE100N * SSQ100 - SUM100*SUM100)/SE100N*(SE100N-1.))
302      "SD100" IS STD. DEV. OF EROSION/100 CM RAIN FOR THE PLOT
303      SDK100 = SD100 * DENS(I2) * 10.
304      C      SDK100 IS THE STD. DEV. OF EROSION AS M.TONS/HA PER 100 CM RAIN
305      103 CONTINUE
306      CC 109 I11=1,15
307      C      OCCS ONE ITERATION FOR EACH STAKE IN PLOT
308      ISTK2 = ISTK2 + 1
309      IPNT2 = IPNT2 + 1
310      C      ISTK2 AND IPNT2 ARE HERE EQUIVALENT TO ISTAKE AND IPOINT
311      C      FOR EACH STAKE OR DATA POINT.
312      IF (LCCMC(4,MINZRO,STERCS(I11)) .EQ. 0) GO TO 111
313      STEKG = STERCS(I11) * DENS(I2) * 10.
314      C      STEKG IS THE EROSION IN M.TONS/HA FOR THE STAKE
315      IF (LCCMC(4,MINZRO,STE100(I11)) .EQ. 0) GO TO 112
316      STK100 = STE100(I11) * DENS(I2) * 10.
317      C      "STK100" IS EROSION IN M.TONS/HA/300 CM RAIN AT STAKE
318      WRITE (15,1008) IPNT2, ISTK2, ICOMPL, VAR245(I11), VAR246(I11),
319      1STCAVE(I11), STCSD(I11), PLCAVE, PLCSD, VAR299(I11), DENS(I2),
320      2PRECIP(I11), STERCS(I11), STE100(I11), STEKG, STK100
321      1008 FORMAT(1X, 15, 14, 15, 13, 14, 4F5.1, 12, F5.2, F7.1, 2F5.1, 2F7.1)
322      C      ABOVE FORMAT 1008 FOR STAKE EROSION DATA WHERE COMPLETE INFO. PRESENT.
323      GO TO 110
324      111 WRITE (16,1009) IPNT2, ISTK2, VAR245(I11), VAR246(I11), STCAVE(I
325      111), STCSD(I11), PLCAVE, PLCSD, VAR299(I11), DENS(I2)
326      1009 FORMAT(1X, 15, 14, 5X, 13, 14, 4F5.1, 12, F5.2)
327      C      ABOVE FORMAT 1009 FOR STAKE EROSION DATA WHERE EROSION MEASURE IS NOT
328      C      USABLE OR MISSING
329      GO TO 110
330      112 WRITE (16,1010) IPNT2, ISTK2, VAR245(I11), VAR246(I11), STCAVE(I1
331      111), STCSD(I11), PLCAVE, PLCSD, VAR299(I11), DENS(I2),
332      2STERCS(I11), STEKG
333      1010 FORMAT(1X, 15, 14, 5X, 13, 14, 4F5.1, 12, F5.2, 7X, F5.1, 5X, F7.1)
334      C      ABOVE FORMAT 1010 IS FOR STAKES WITH EROSION INFO. BUT WITHOUT RAINFALL
335      C      INFORMATION
336      110 CONTINUE
337      WRITE (15, 2010) VAR245(I11), VAR246(I11), VAR247(I11),
338      1 VAR248(I11), VAR249(I11), VAR250(I11), VAR251(I11), VAR252(I11),
339      2 VAR253(I11), VAR254(I11), VAR255(I11), VAR256(I11), VAR257(I11),
340      3 VAR258(I11), VAR259(I11), VAR259A(I11)
341      C      ABOVE WRITE FOR CARD 17 (EROSION STAKES) INFORMATION AS
342      C      ORIGINALLY RECORDED BUT IN A DIFFERENT FORMAT.
343      2010 FORMAT(3X, 14, 15, F4.0, 6I2, 2F6.0, F5.1, 12, 1I, 2I2)
344      C      ABOVE FORMAT 2010 FOR CARD TYPE 17 INFO. OUTPUT. NOTE: DIFFERENT
345      C      FROM CT17 INPUT FORMAT (F6.0 INSTEAD OF F4.0 FOR VAR254 & VAR255)
346      DIST1 = -0.
347      IF (LCCMC(4,MINZRO,VAR222(I2)) .NE. 0) DIST1 = VAR256(I2) + VAR222(I2)
348      C      DIST1 IS THE LENGTH OF THE FIRST SLOPE FOR THE STAKE: THE DISTANCE
349      C      FROM THE MIDROW + THE SLOPE LENGTH MEASURED FROM THE MIDROW
350      WRITE (16,1003) VAR204, VAR205, VAR206, VAR207, VAR208, VAR209,
351      1VAR210, VAR211, VAR212, VAR213, VAR214, VAR215, VAR216, VAR217,
352      2VAR217A
353      C      ABOVE WRITE FOR CARD TYPE 14 (EROSION PLOT REFERENCE)
354      IF (LCCMC(4,MINZRO,DIST1) .EQ. 0) GO TO 329
355      IF (IGRAN .EQ. 0) GO TO 125
356      WRITE (15, 1111) VAR219(I2), VAR220(I2), VAR221(I2), DIST1,
357      1VAR223(I2), VAR224(I2), VAR225(I2), VAR226(I2), VAR227(I2),
358      2VAR228(I2), VAR229(I2), VAR230(I2), VAR232(I15), VAR236(I15),
359      3VAR237(I15), VAR238(I15), VAR239(I15)
360      1111 FORMAT(3X, 14, 3F4.0, 12, 2(2F4.0, 12), 12, 15, 4F4.0)

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361 C ABOVE FORMAT 1111 FOR CARD TYPE 15 (EROSION PLOT DESCRIPTION) AND
362 C GRANULOMETRIC ANALYSIS (FROM CARD 16) WHERE COMPLETE GRAN. INFO. EXISTS
363 GO TO 109
364 126 WRITE (16,1004) VAR219(I2), VAR220(I2), VAR221(I2), DIST1,
365 1VAR223(I2), VAR224(I2), VAR225(I2), VAR226(I2), VAR227(I2),
366 2VAR228(I2), VAR229(I2), VAR230(I2)
367 C ABOVE WRITE FOR CARD TYPE 15 INFO. WHERE GRANULOMETRIC DATA IS MISSING
368 GO TO 109
369 329 IF (IGRAN .EQ. 0) GO TO 326
370 327 WRITE (16, 3111) VAR219(I2), VAR220(I2), VAR221(I2),
371 1VAR223(I2), VAR224(I2), VAR225(I2), VAR226(I2), VAR227(I2),
372 2VAR228(I2), VAR229(I2), VAR230(I2), VAR232(I15),VAR236(I15),
373 3VAR237(I15),VAR238(I15),VAR239(I15)
374 3111 FORMAT(3X, I4, 2F4.0,4X, I2, 2(2F4.0, I2), I2, I5, 4F4.0)
375 C ABOVE FORMAT 3111 FOR CARD TYPE 15 (EROSION PLOT DESCRIPTION) AND
376 C GRANULOMETRIC ANALYSIS (FROM CARD 16) WHERE COMPLETE GRAN. INFO. EXISTS
377 C AND "DIST1" IS MISSING
378 GO TO 109
379 325 WRITE (16,3004) VAR219(I2), VAR220(I2), VAR221(I2),
380 1VAR223(I2), VAR224(I2), VAR225(I2), VAR226(I2), VAR227(I2),
381 2VAR228(I2), VAR229(I2), VAR230(I2)
382 C ABOVE WRITE FOR CARD TYPE 15 INFO. WHERE GRANULOMETRIC DATA IS MISSING
383 C AND "DIST1" IS MISSING
384 3004 FORMAT(3X, I4, 2F4.0,4X, I2, 2F4.0, I2, 2F4.0, I2, I2)
385 109 CONTINUE
386 IF (STENUM .LE. 0.9) GO TO 128
387 IF (STENUM .LE. 2.5) GO TO 129
388 WRITE (12, 1112) VAR204, VA217A, STENUM, PLCAVE, PLCSD, NOTEC,
389 1DENS(I2), PLEAVE, PLESD, AVE100, SD100, EROKKG, ERKGS0, AVK100,
390 2SDK100, SE100N
391 1112 FORMAT(1X, I3, I2, F3.0, 2F5.1, I2, F5.2, 4F5.1, 4F7.1, F3.0)
392 C ABOVE FORMAT 1112 FOR PLOT EROSION SUMMARY WHERE COMPLETE INFO. AVAILABLE
393 GO TO 127
394 128 WRITE (12,1113) VAR204, VA217A, STENUM, PLCAVE, PLCSD, NOTEC,
395 1DENS(I2)
396 1113 FORMAT(1X, I3, I2, F3.0, 2F5.1, I2, F5.2)
397 C ABOVE FORMAT 1113 FOR PLOT SUMMARY WHERE NO USEABLE EROSION DATA EXISTS
398 GO TO 127
399 129 WRITE (12,1114) VAR204, VA217A, STENUM, PLCAVE, PLCSD, NOTEC,
400 1DENS(I2), PLEAVE, AVE100, ERKKG, AVK100, SE100N
401 1114 FORMAT(1X, I3, I2, F3.0, 2F5.1, I2, F5.2, F5.1, 5X, F5.1, 5X,
402 1F7.1, 7X, F7.1, 7X, F3.0)
403 C ABOVE FORMAT 1114 FOR PLOT SUMMARY IN PLOTS WITH 1 OR 2 USEABLE EROSION
404 C MEASUREMENTS
405 127 CONTINUE
406 WRITE (12,1003) VAR204, VAR205, VAR206, VAR207, VAR208, VAR209,
407 1VAR210, VAR211, VAR212, VAR213, VAR214, VAR215, VAR216, VAR217,
408 2VA217A
409 C ABOVE WRITE FOR CARD TYPE 14 IN PLOT SUMMARY
410 IF (IGRAN .EQ. 0) GO TO 130
411 WRITE (12,1111) VAR219(I2), VAR220(I2), VAR221(I2), VAR222(I2),
412 1VAR223(I2), VAR224(I2), VAR225(I2), VAR226(I2), VAR227(I2),
413 2VAR228(I2), VAR229(I2), VAR230(I2), VAR232(I15),VAR236(I15),
414 3VAR237(I15), VAR238(I15), VAR239(I15)
415 C ABOVE WRITE FOR CARD TYPE 15 AND GRANULOMETRIC INFO. WHERE GRAN. INFO.
416 C AVAILABLE
417 GO TO 131
418 130 WRITE (12,1004) VAR219(I2), VAR220(I2), VAR221(I2), VAR222(I2),
419 1VAR223(I2), VAR224(I2), VAR225(I2), VAR226(I2), VAR227(I2),
420 2VAR228(I2), VAR229(I2), VAR230(I2)

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421      C      ABOVE WRITE FOR CARD TYPE 15 WHERE NO GRANULOMETRIC INFO. AVAILABLE
422      131 CONTINUE
423          IBEFFN = VAR209
424          IAFTEF = VAR210
425          IBEF1 = 0
426          IAF1 = 0
427          DO 900 II2=1,ICDS1
428              IF(VAR002(II2) .EQ. IBEFFN) IBEF1=II2
429              IF(VAR002(II2) .EQ. IAFTEF) IAF1=II2
430      900 CONTINUE
431          ICOTYP = 7
432          IDIAGN = 2
433          CALL USETAP(IBEFFN,IAFTEF,IBEF1,IAF1, ICDS1, ICDS2, IONE23,
434      1 ICOTYP, IDIAGN)
435      100 CONTINUE
436      104 CONTINUE
437          GO TO 150
438      105 WRITE (5,2000)
439      2000 FORMAT(IX,'ERROR: MISSING OR UNORDERED DATA IN TYPE 19')
440      150 CONTINUE
441      C      END OF PROGRAM "ERCISIONPROG"
442      END
END OF FILE

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1 C      THIS PROGRAM ("HEPTPROBS") READS DATA FROM VIRGNEIGHBORS
2 C      THESE DATA ARE
3 C      AND PH IS SORTED INTO THE FILE "VIRGNEIGHBORS".  THESE SAME DATA ARE THEN
4 C      USED TO CALCULATE TRANSITION PROBABILITIES FROM ONE LEVEL OF EACH SOIL
5 C      CHARACTER TO ANOTHER GIVEN A MCVE OF 100 METERS AND 500 METERS.  TABLES
6 C      WITH 5 LEVELS FOR C AND N AND 7 LEVELS FOR PH ARE OUTPUT IN THE FILE
7 C      "VIRGINPROBS".  AN ADDITIONAL TABLE IS ALSO OUTPUT FOR PROBABILITIES OF
8 C      JOINT VARIATION OF THE 3 CHARACTERS IN THE 8 POSSIBLE COMBINATIONS OF
9 C      LEVELS ABOVE OR BELOW SPECIFIED CRITICAL VALUES.  DEVICES ARE:
10 C      5=PPDATA: 10=VIRGNEIGHBORS : 9=VIRGPROBS.  NO SUBROUTINES ARE CALLED.
11 C      THE FORTRAN MONITOR "MINUSZERO" FEATURE IS USED, AS IS THE MTS
12 C      LOGICAL COMPARISON OF CHARACTERS ("LCOMC") FUNCTION.
13 C
14 C
15 C      REAL N
16 C      DIMENSION HEAD(75), R(200), C(30), P(200)
17 C      DIMENSION IV1(7000), IV2(7000), IV3(7000), V4(7000), V5(7000),
18 C      IV5(7000), V7(7000), V8(7000), IV9(7000), IV10(7000), V11(7000),
19 C      ZV12(7000), V13(7000), V14(7000)
20 C      ABOVE DIMENSION FOR NO. OF CASES EXPECTED IN VIRGNEIGHBORS
21 C      DATA MINZRO/Z80000000/
22 C      CALL FTNMC('SET MINUSZERO=CN',16)
23 C      READ (5, 1000) ICVIRG, CRITPH, CRITN, CRITC
24 C      1000 FORMAT(1X,15, F5.1, 2F5.2)
25 C      ICVIRG IS NO. OF CASES IN VIRGSOIL : CRITPH IS CRITICAL VALUE
26 C      FOR PH IN JOINT VARIATION TRANSITION PROBABILITY TABULATION :
27 C      CRITN IS CRITICAL VALUE FOR NITROGEN : CRITC IS CRITICAL VALUE FOR CARBON.
28 C      READ (5, 5000)(HEAD(I), I=1,75)
29 C      5000 FORMAT(1X, 3A3, 2X,3A3,2X,3A3,2X,3A3)
30 C      ABOVE FORMAT 5000 FOR TABLE HEADINGS
31 C      READ (5,8000) NCASE
32 C      8000 FORMAT(1X,15)
33 C      "NCASE" IS THE NUMBER OF CASES IN VIRGPROBS
34 C      READ (10, 1003) (IV1(I), IV2(I), IV3(I), V4(I), V5(I),
35 C      V6(I), V7(I), V8(I), IV9(I), IV10(I), V11(I), V12(I),
36 C      V13(I), V14(I), I=1,NCASE)
37 C      1003 FORMAT(1X, 15, 2I4, F5.1, 2F5.2, 2F8.0, 2I4, F8.0, F5.1, 2F5.2)
38 C      ABOVE FORMAT 1003 FOR VIRGNEIGHBORS
39 C      DO 501 IROUND=1,2
40 C      MAKES 1 ITERATION FOR EACH ROUND OF CALCULATIONS (100 M & 500 M)
41 C      DO 200 K=1,163
42 C      P(K) = 0.
43 C      R(K) = 0.
44 C      200 CONTINUE
45 C      DO 201 J=1,25
46 C      201 C(J) = 0.
47 C      DO 500 I4=1,NCASE
48 C      MAKES ONE ITERATION FOR EACH CASE
49 C      IF (IROUND .EQ. 1 .AND. V11(I4) .LE. 200) GO TO 104
50 C      IF (IROUND .EQ. 2 .AND. V11(I4) .GE. 400 .AND. V11(I4) .LE. 600)
51 C      GO TO 104
52 C      GO TO 500
53 C      104 CONTINUE
54 C      FOLLOWING FOR CARBON TALLY OF TRANSITION FREQUENCIES
55 C      IF (LCOMC(4,MINZRO,V6(I4)).EQ.0) GO TO 110
56 C      IF (LCOMC(4,MINZRO,V14(I4)).EQ.0) GO TO 110
57 C      IF (V6(I4) .LT. 0.001 .OR. V14(I4) .LT. 0.001) GO TO 110
58 C      IF (V6(I4) .LT. 0.5) GO TO 105
59 C      IF (V6(I4) .GE. 0.5 .AND. V6(I4) .LT. 1.0) GO TO 106
60 C      IF (V6(I4) .GE. 1.0 .AND. V6(I4) .LT. 1.5) GO TO 107

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61      IF (V6(I4) .GE. 1.5 .AND. V6(I4) .LT. 2.0) GO TO 108
62      IF (V6(I4) .GE. 2.0) GO TO 109
63      GO TO 110
64      105 IF (V14(I4) .LT. 0.5) B(1) = B(1) + 1.
65      IF (V14(I4) .GE. 0.5 .AND. V14(I4) .LT. 1.0) B(2) = B(2) + 1.
66      IF (V14(I4) .GE. 1.0 .AND. V14(I4) .LT. 1.5) B(3) = B(3) + 1.
67      IF (V14(I4) .GE. 1.5 .AND. V14(I4) .LT. 2.0) B(4) = B(4) + 1.
68      IF (V14(I4) .GE. 2.0) B(5) = B(5) + 1.
69      C(1) = C(1) + 1.
70      GO TO 110
71      106 IF (V14(I4) .LT. 0.5) B(6) = B(6) + 1.
72      IF (V14(I4) .GE. 0.5 .AND. V14(I4) .LT. 1.0) B(7) = B(7) + 1.
73      IF (V14(I4) .GE. 1.0 .AND. V14(I4) .LT. 1.5) B(8) = B(8) + 1.
74      IF (V14(I4) .GE. 1.5 .AND. V14(I4) .LT. 2.0) B(9) = B(9) + 1.
75      IF (V14(I4) .GE. 2.0) B(10) = B(10) + 1.
76      C(2) = C(2) + 1.
77      GO TO 110
78      107 IF (V14(I4) .LT. 0.5) B(11) = B(11) + 1.
79      IF (V14(I4) .GE. 0.5 .AND. V14(I4) .LT. 1.0) B(12) = B(12) + 1.
80      IF (V14(I4) .GE. 1.0 .AND. V14(I4) .LT. 1.5) B(13) = B(13) + 1.
81      IF (V14(I4) .GE. 1.5 .AND. V14(I4) .LT. 2.0) B(14) = B(14) + 1.
82      IF (V14(I4) .GE. 2.0) B(15) = B(15) + 1.
83      C(3) = C(3) + 1.
84      GO TO 110
85      108 IF (V14(I4) .LT. 0.5) B(16) = B(16) + 1.
86      IF (V14(I4) .GE. 0.5 .AND. V14(I4) .LT. 1.0) B(17) = B(17) + 1.
87      IF (V14(I4) .GE. 1.0 .AND. V14(I4) .LT. 1.5) B(18) = B(18) + 1.
88      IF (V14(I4) .GE. 1.5 .AND. V14(I4) .LT. 2.0) B(19) = B(19) + 1.
89      IF (V14(I4) .GE. 2.0) B(20) = B(20) + 1.
90      C(4) = C(4) + 1.
91      GO TO 110
92      109 IF (V14(I4) .LT. 0.5) B(21) = B(21) + 1.
93      IF (V14(I4) .GE. 0.5 .AND. V14(I4) .LT. 1.0) B(22) = B(22) + 1.
94      IF (V14(I4) .GE. 1.0 .AND. V14(I4) .LT. 1.5) B(23) = B(23) + 1.
95      IF (V14(I4) .GE. 1.5 .AND. V14(I4) .LT. 2.0) B(24) = B(24) + 1.
96      IF (V14(I4) .GE. 2.0) B(25) = B(25) + 1.
97      C(5) = C(5) + 1.
98      110 CONTINUE
99      C FOLLOWING FOR NITROGEN TRANSITION TALLYS
100      IF (LCOMC(4,MINZFC,V5(I4)).EQ.0) GO TO 116
101      IF (LCOMC(4,MINZFC,V13(I4)).EQ.0) GO TO 116
102      IF (V5(I4) .LT. 0.001 .OR. V13(I4) .LT. 0.001) GO TO 116
103      IF (V5(I4) .LT. 0.05) GO TO 111
104      IF (V5(I4) .GE. 0.05 .AND. V5(I4) .LT. 0.10) GO TO 112
105      IF (V5(I4) .GE. 0.10 .AND. V5(I4) .LT. 0.15) GO TO 113
106      IF (V5(I4) .GE. 0.15 .AND. V5(I4) .LT. 0.20) GO TO 114
107      IF (V5(I4) .GE. 0.20) GO TO 115
108      GO TO 116
109      111 IF (V13(I4) .LT. 0.05) B(26) = B(26) + 1.
110      IF (V13(I4) .GE. 0.05 .AND. V13(I4) .LT. 0.10) B(27) = B(27) + 1.
111      IF (V13(I4) .GE. 0.10 .AND. V13(I4) .LT. 0.15) B(28) = B(28) + 1.
112      IF (V13(I4) .GE. 0.15 .AND. V13(I4) .LT. 0.20) B(29) = B(29) + 1.
113      IF (V13(I4) .GE. 0.20) B(30) = B(30) + 1.
114      C(6) = C(6) + 1.
115      GO TO 116
116      112 IF (V13(I4) .LT. 0.05) B(31) = B(31) + 1.
117      IF (V13(I4) .GE. 0.05 .AND. V13(I4) .LT. 0.10) B(32) = B(32) + 1.
118      IF (V13(I4) .GE. 0.10 .AND. V13(I4) .LT. 0.15) B(33) = B(33) + 1.
119      IF (V13(I4) .GE. 0.15 .AND. V13(I4) .LT. 0.20) B(34) = B(34) + 1.
120      IF (V13(I4) .GE. 0.20) B(35) = B(35) + 1.

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121      C(7) = C(7) + 1.
122      GO TO 116
123 113 IF (V13(I4) .LT. 0.05) B(36) = B(36) + 1.
124     IF (V13(I4) .GE. 0.05 .AND. V13(I4) .LT. 0.10) B(37) = B(37) + 1.
125     IF (V13(I4) .GE. 0.10 .AND. V13(I4) .LT. 0.15) B(38) = B(38) + 1.
126     IF (V13(I4) .GE. 0.15 .AND. V13(I4) .LT. 0.20) B(39) = B(39) + 1.
127     IF (V13(I4) .GE. 0.20) B(40) = B(40) + 1.
128     C(8) = C(8) + 1.
129     GO TO 116
130 114 IF (V13(I4) .LT. 0.05) B(41) = B(41) + 1.
131     IF (V13(I4) .GE. 0.05 .AND. V13(I4) .LT. 0.10) B(42) = B(42) + 1.
132     IF (V13(I4) .GE. 0.10 .AND. V13(I4) .LT. 0.15) B(43) = B(43) + 1.
133     IF (V13(I4) .GE. 0.15 .AND. V13(I4) .LT. 0.20) B(44) = B(44) + 1.
134     IF (V13(I4) .GE. 0.20) B(45) = B(45) + 1.
135     C(9) = C(9) + 1.
136     GO TO 116
137 115 IF (V13(I4) .LT. 0.05) B(46) = B(46) + 1.
138     IF (V13(I4) .GE. 0.05 .AND. V13(I4) .LT. 0.10) B(47) = B(47) + 1.
139     IF (V13(I4) .GE. 0.10 .AND. V13(I4) .LT. 0.15) B(48) = B(48) + 1.
140     IF (V13(I4) .GE. 0.15 .AND. V13(I4) .LT. 0.20) B(49) = B(49) + 1.
141     IF (V13(I4) .GE. 0.20) B(50) = B(50) + 1.
142     C(10) = C(10) + 1.
143 116 CONTINUE
144 C FOLLOWING FOR PH TRANSITION TALLYS
145 IF (LCOMC(4,MINZRC,V4(I4)).EQ.0) GO TO 124
146 IF (LCCMC(4,MINZRC,V12(I4)).EQ.0) GO TO 124
147 IF (V4(I4) .LT. 0.001 .OR. V12(I4) .LT. 0.001) GO TO 124
148 IF (V4(I4) .LT. 4.0) GO TO 117
149 IF (V4(I4) .GE. 4.0 .AND. V4(I4) .LT. 4.5) GO TO 118
150 IF (V4(I4) .GE. 4.5 .AND. V4(I4) .LT. 5.0) GO TO 119
151 IF (V4(I4) .GE. 5.0 .AND. V4(I4) .LT. 5.5) GO TO 120
152 IF (V4(I4) .GE. 5.5 .AND. V4(I4) .LT. 6.0) GO TO 121
153 IF (V4(I4) .GE. 6.0 .AND. V4(I4) .LT. 6.5) GO TO 122
154 IF (V4(I4) .GE. 6.5) GO TO 123
155 GO TO 124
156 117 IF (V12(I4) .LT. 4.0) B(51) = B(51) + 1.
157     IF (V12(I4) .GE. 4.0 .AND. V12(I4) .LT. 4.5) B(52) = B(52) + 1.
158     IF (V12(I4) .GE. 4.5 .AND. V12(I4) .LT. 5.0) B(53) = B(53) + 1.
159     IF (V12(I4) .GE. 5.0 .AND. V12(I4) .LT. 5.5) B(54) = B(54) + 1.
160     IF (V12(I4) .GE. 5.5 .AND. V12(I4) .LT. 6.0) B(55) = B(55) + 1.
161     IF (V12(I4) .GE. 6.0 .AND. V12(I4) .LT. 6.5) B(56) = B(56) + 1.
162     IF (V12(I4) .GE. 6.5) B(57) = B(57) + 1.
163     C(11) = C(11) + 1.
164     GO TO 124
165 118 IF (V12(I4) .LT. 4.0) B(58) = B(58) + 1.
166     IF (V12(I4) .GE. 4.0 .AND. V12(I4) .LT. 4.5) B(59) = B(59) + 1.
167     IF (V12(I4) .GE. 4.5 .AND. V12(I4) .LT. 5.0) B(60) = B(60) + 1.
168     IF (V12(I4) .GE. 5.0 .AND. V12(I4) .LT. 5.5) B(61) = B(61) + 1.
169     IF (V12(I4) .GE. 5.5 .AND. V12(I4) .LT. 6.0) B(62) = B(62) + 1.
170     IF (V12(I4) .GE. 6.0 .AND. V12(I4) .LT. 6.5) B(63) = B(63) + 1.
171     IF (V12(I4) .GE. 6.5) B(64) = B(64) + 1.
172     C(12) = C(12) + 1.
173     GO TO 124
174 119 IF (V12(I4) .LT. 4.0) B(65) = B(65) + 1.
175     IF (V12(I4) .GE. 4.0 .AND. V12(I4) .LT. 4.5) B(66) = B(66) + 1.
176     IF (V12(I4) .GE. 4.5 .AND. V12(I4) .LT. 5.0) B(67) = B(67) + 1.
177     IF (V12(I4) .GE. 5.0 .AND. V12(I4) .LT. 5.5) B(68) = B(68) + 1.
178     IF (V12(I4) .GE. 5.5 .AND. V12(I4) .LT. 6.0) B(69) = B(69) + 1.
179     IF (V12(I4) .GE. 6.0 .AND. V12(I4) .LT. 6.5) B(70) = B(70) + 1.
180     IF (V12(I4) .GE. 6.5) B(71) = B(71) + 1.

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181      C(13) = C(13) + 1.
182      GO TO 124
183 120 IF (V12(I4) .LT. 4.0) B(72) = B(72) + 1.
184     IF (V12(I4) .GE. 4.0 .AND. V12(I4) .LT. 4.5) B(73) = B(73) + 1.
185     IF (V12(I4) .GE. 4.5 .AND. V12(I4) .LT. 5.0) B(74) = B(74) + 1.
186     IF (V12(I4) .GE. 5.0 .AND. V12(I4) .LT. 5.5) B(75) = B(75) + 1.
187     IF (V12(I4) .GE. 5.5 .AND. V12(I4) .LT. 6.0) B(76) = B(76) + 1.
188     IF (V12(I4) .GE. 6.0 .AND. V12(I4) .LT. 6.5) B(77) = B(77) + 1.
189     IF (V12(I4) .GE. 6.5) B(78) = B(78) + 1.
190     C(14) = C(14) + 1.
191     GO TO 124
192 121 IF (V12(I4) .LT. 4.0) B(79) = B(79) + 1.
193     IF (V12(I4) .GE. 4.0 .AND. V12(I4) .LT. 4.5) B(80) = B(80) + 1.
194     IF (V12(I4) .GE. 4.5 .AND. V12(I4) .LT. 5.0) B(81) = B(81) + 1.
195     IF (V12(I4) .GE. 5.0 .AND. V12(I4) .LT. 5.5) B(82) = B(82) + 1.
196     IF (V12(I4) .GE. 5.5 .AND. V12(I4) .LT. 6.0) B(83) = B(83) + 1.
197     IF (V12(I4) .GE. 6.0 .AND. V12(I4) .LT. 6.5) B(84) = B(84) + 1.
198     IF (V12(I4) .GE. 6.5) B(85) = B(85) + 1.
199     C(15) = C(15) + 1.
200     GO TO 124
201 122 IF (V12(I4) .LT. 4.0) B(86) = B(86) + 1.
202     IF (V12(I4) .GE. 4.0 .AND. V12(I4) .LT. 4.5) B(87) = B(87) + 1.
203     IF (V12(I4) .GE. 4.5 .AND. V12(I4) .LT. 5.0) B(88) = B(88) + 1.
204     IF (V12(I4) .GE. 5.0 .AND. V12(I4) .LT. 5.5) B(89) = B(89) + 1.
205     IF (V12(I4) .GE. 5.5 .AND. V12(I4) .LT. 6.0) B(90) = B(90) + 1.
206     IF (V12(I4) .GE. 6.0 .AND. V12(I4) .LT. 6.5) B(91) = B(91) + 1.
207     IF (V12(I4) .GE. 6.5) B(92) = B(92) + 1.
208     C(16) = C(16) + 1.
209     GO TO 124
210 123 IF (V12(I4) .LT. 4.0) B(93) = B(93) + 1.
211     IF (V12(I4) .GE. 4.0 .AND. V12(I4) .LT. 4.5) B(94) = B(94) + 1.
212     IF (V12(I4) .GE. 4.5 .AND. V12(I4) .LT. 5.0) B(95) = B(95) + 1.
213     IF (V12(I4) .GE. 5.0 .AND. V12(I4) .LT. 5.5) B(96) = B(96) + 1.
214     IF (V12(I4) .GE. 5.5 .AND. V12(I4) .LT. 6.0) B(97) = B(97) + 1.
215     IF (V12(I4) .GE. 6.0 .AND. V12(I4) .LT. 6.5) B(98) = B(98) + 1.
216     IF (V12(I4) .GE. 6.5) B(99) = B(99) + 1.
217     C(17) = C(17) + 1.
218 124 CONTINUE
219 C FOLLOWING FOR C, N, & PH JOINT VARIATION TABULATION
220 IF (LCCMC(4,MINZRC,V4(I4)).EQ.0) GO TO 500
221 IF (LCCMC(4,MINZRC,V5(I4)).EQ.0) GO TO 500
222 IF (LCCMC(4,MINZRC,V6(I4)).EQ.0) GO TO 500
223 IF (LCCMC(4,MINZRC,V12(I4)).EQ.0) GO TO 500
224 IF (LCCMC(4,MINZRC,V13(I4)).EQ.0) GO TO 500
225 IF (LCCMC(4,MINZRC,V14(I4)).EQ.0) GO TO 500
226 D = CRITC
227 N = CRITN
228 A = CRITPH
229 IF (V5(I4) .GE. 0 .AND. V5(I4) .GE. N .AND. V4(I4) .GE. A) GO TO 125
230 IF (V5(I4) .LT. 0 .AND. V5(I4) .GE. N .AND. V4(I4) .GE. A) GO TO 125
231 IF (V5(I4) .GE. 0 .AND. V5(I4) .LT. N .AND. V4(I4) .GE. A) GO TO 127
232 IF (V4(I4) .GE. 0 .AND. V5(I4) .GE. N .AND. V4(I4) .LT. A) GO TO 128
233 IF (V5(I4) .LT. 0 .AND. V5(I4) .LT. N .AND. V4(I4) .GE. A) GO TO 129
234 IF (V5(I4) .GE. 0 .AND. V5(I4) .LT. N .AND. V4(I4) .LT. A) GO TO 130
235 IF (V5(I4) .LT. 0 .AND. V5(I4) .GE. N .AND. V4(I4) .LT. A) GO TO 131
236 IF (V5(I4) .LT. 0 .AND. V5(I4) .LT. N .AND. V4(I4) .LT. A) GO TO 132
237 GO TO 500
238 125 IF (V14(I4) .GE. 0 .AND. V13(I4) .GE. N .AND. V12(I4) .GE. A) B(100) = B(100) + 1.
239     IF (V14(I4) .LT. 0 .AND. V13(I4) .GE. N .AND. V12(I4) .GE. A) B(101) = B(101) + 1.
240     IF (V14(I4) .GE. 0 .AND. V13(I4) .LT. N .AND. V12(I4) .GE. A) B(102) = B(102) + 1.

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241 IF(V14(I4).GE.Q.ANC.V13(I4).GE.N.AND.V12(I4).LT.A)8(103)=8(103)+1.
242 IF(V14(I4).LT.Q.ANC.V13(I4).LT.N.AND.V12(I4).GE.A)8(104)=8(104)+1.
243 IF(V14(I4).GE.Q.ANC.V13(I4).LT.N.AND.V12(I4).LT.A)8(105)=8(105)+1.
244 IF(V14(I4).LT.Q.ANC.V13(I4).GE.N.AND.V12(I4).LT.A)8(106)=8(106)+1.
245 IF(V14(I4).LT.Q.ANC.V13(I4).LT.N.AND.V12(I4).LT.A)8(107)=8(107)+1.
246 C(18) = C(18) + 1.
247 GO TO 500
248 126 IF(V14(I4).GE.Q.ANC.V13(I4).GE.N.AND.V12(I4).GE.A)8(108)=8(108)+1.
249 IF(V14(I4).LT.Q.ANC.V13(I4).GE.N.AND.V12(I4).GE.A)8(109)=8(109)+1.
250 IF(V14(I4).GE.Q.ANC.V13(I4).LT.N.AND.V12(I4).GE.A)8(110)=8(110)+1.
251 IF(V14(I4).GE.Q.ANC.V13(I4).GE.N.AND.V12(I4).LT.A)8(111)=8(111)+1.
252 IF(V14(I4).LT.Q.ANC.V13(I4).LT.N.AND.V12(I4).GE.A)8(112)=8(112)+1.
253 IF(V14(I4).GE.Q.ANC.V13(I4).LT.N.AND.V12(I4).LT.A)8(113)=8(113)+1.
254 IF(V14(I4).LT.Q.ANC.V13(I4).GE.N.AND.V12(I4).LT.A)8(114)=8(114)+1.
255 IF(V14(I4).LT.Q.ANC.V13(I4).LT.N.AND.V12(I4).LT.A)8(115)=8(115)+1.
256 C(19) = C(19) + 1.
257 GO TO 500
258 127 IF(V14(I4).GE.Q.ANC.V13(I4).GE.N.AND.V12(I4).GE.A)8(116)=8(116)+1.
259 IF(V14(I4).LT.Q.ANC.V13(I4).GE.N.AND.V12(I4).GE.A)8(117)=8(117)+1.
260 IF(V14(I4).GE.Q.ANC.V13(I4).LT.N.AND.V12(I4).GE.A)8(118)=8(118)+1.
261 IF(V14(I4).GE.Q.ANC.V13(I4).GE.N.AND.V12(I4).LT.A)8(119)=8(119)+1.
262 IF(V14(I4).LT.Q.ANC.V13(I4).LT.N.AND.V12(I4).GE.A)8(120)=8(120)+1.
263 IF(V14(I4).GE.Q.ANC.V13(I4).LT.N.AND.V12(I4).LT.A)8(121)=8(121)+1.
264 IF(V14(I4).LT.Q.ANC.V13(I4).GE.N.AND.V12(I4).LT.A)8(122)=8(122)+1.
265 IF(V14(I4).LT.Q.ANC.V13(I4).LT.N.AND.V12(I4).LT.A)8(123)=8(123)+1.
266 C(20)=C(20) + 1.
267 GO TO 500
268 128 IF(V14(I4).GE.Q.ANC.V13(I4).GE.N.AND.V12(I4).GE.A)8(124)=8(124)+1.
269 IF(V14(I4).LT.Q.ANC.V13(I4).GE.N.AND.V12(I4).GE.A)8(125)=8(125)+1.
270 IF(V14(I4).GE.Q.ANC.V13(I4).LT.N.AND.V12(I4).GE.A)8(126)=8(126)+1.
271 IF(V14(I4).GE.Q.ANC.V13(I4).GE.N.AND.V12(I4).LT.A)8(127)=8(127)+1.
272 IF(V14(I4).LT.Q.ANC.V13(I4).LT.N.AND.V12(I4).GE.A)8(128)=8(128)+1.
273 IF(V14(I4).GE.Q.ANC.V13(I4).LT.N.AND.V12(I4).LT.A)8(129)=8(129)+1.
274 IF(V14(I4).LT.Q.ANC.V13(I4).GE.N.AND.V12(I4).LT.A)8(130)=8(130)+1.
275 IF(V14(I4).LT.Q.ANC.V13(I4).LT.N.AND.V12(I4).LT.A)8(131)=8(131)+1.
276 C(21)=C(21) + 1.
277 GO TO 500
278 129 IF(V14(I4).GE.Q.ANC.V13(I4).GE.N.AND.V12(I4).GE.A)8(132)=8(132)+1.
279 IF(V14(I4).LT.Q.ANC.V13(I4).GE.N.AND.V12(I4).GE.A)8(133)=8(133)+1.
280 IF(V14(I4).GE.Q.ANC.V13(I4).LT.N.AND.V12(I4).GE.A)8(134)=8(134)+1.
281 IF(V14(I4).GE.Q.ANC.V13(I4).GE.N.AND.V12(I4).LT.A)8(135)=8(135)+1.
282 IF(V14(I4).LT.Q.ANC.V13(I4).LT.N.AND.V12(I4).GE.A)8(136)=8(136)+1.
283 IF(V14(I4).GE.Q.ANC.V13(I4).LT.N.AND.V12(I4).LT.A)8(137)=8(137)+1.
284 IF(V14(I4).LT.Q.ANC.V13(I4).GE.N.AND.V12(I4).LT.A)8(138)=8(138)+1.
285 IF(V14(I4).LT.Q.ANC.V13(I4).LT.N.AND.V12(I4).LT.A)8(139)=8(139)+1.
286 C(22) = C(22) + 1.
287 GO TO 500
288 130 IF(V14(I4).GE.Q.ANC.V13(I4).GE.N.AND.V12(I4).GE.A)8(140)=8(140)+1.
289 IF(V14(I4).LT.Q.ANC.V13(I4).GE.N.AND.V12(I4).GE.A)8(141)=8(141)+1.
290 IF(V14(I4).GE.Q.ANC.V13(I4).LT.N.AND.V12(I4).GE.A)8(142)=8(142)+1.
291 IF(V14(I4).GE.Q.ANC.V13(I4).GE.N.AND.V12(I4).LT.A)8(143)=8(143)+1.
292 IF(V14(I4).LT.Q.ANC.V13(I4).LT.N.AND.V12(I4).GE.A)8(144)=8(144)+1.
293 IF(V14(I4).GE.Q.ANC.V13(I4).LT.N.AND.V12(I4).LT.A)8(145)=8(145)+1.
294 IF(V14(I4).LT.Q.ANC.V13(I4).GE.N.AND.V12(I4).LT.A)8(146)=8(146)+1.
295 IF(V14(I4).LT.Q.ANC.V13(I4).LT.N.AND.V12(I4).LT.A)8(147)=8(147)+1.
296 C(23) = C(23) + 1.
297 GO TO 500
298 131 IF(V14(I4).GE.Q.ANC.V13(I4).GE.N.AND.V12(I4).GE.A)8(148)=8(148)+1.
299 IF(V14(I4).LT.Q.ANC.V13(I4).GE.N.AND.V12(I4).GE.A)8(149)=8(149)+1.
300 IF(V14(I4).GE.Q.ANC.V13(I4).LT.N.AND.V12(I4).GE.A)8(150)=8(150)+1.

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301 IF(V14(I4).GE.Q.ANC.V13(I4).GE.N.AND.V12(I4).LT.A)B(151)=B(151)+1.
302 IF(V14(I4).LT.Q.AND.V13(I4).LT.N.AND.V12(I4).GE.A)B(152)=B(152)+1.
303 IF(V14(I4).GE.Q.ANC.V13(I4).LT.N.AND.V12(I4).LT.A)B(153)=B(153)+1.
304 IF(V14(I4).LT.Q.ANC.V13(I4).GE.N.AND.V12(I4).LT.A)B(154)=B(154)+1.
305 IF(V14(I4).LT.Q.AND.V13(I4).LT.N.AND.V12(I4).LT.A)B(155)=B(155)+1.
306 C(24) = C(24) + 1.
307 GO TO 500
308 132 IF(V14(I4).GE.Q.AND.V13(I4).GE.N.AND.V12(I4).GE.A)B(156)=B(156)+1.
309 IF(V14(I4).LT.Q.AND.V13(I4).GE.N.AND.V12(I4).GE.A)B(157)=B(157)+1.
310 IF(V14(I4).GE.Q.ANC.V13(I4).LT.N.AND.V12(I4).GE.A)B(158)=B(158)+1.
311 IF(V14(I4).GE.Q.ANC.V13(I4).GE.N.AND.V12(I4).LT.A)B(159)=B(159)+1.
312 IF(V14(I4).LT.Q.ANC.V13(I4).LT.N.AND.V12(I4).GE.A)B(160)=B(160)+1.
313 IF(V14(I4).GE.Q.AND.V13(I4).LT.N.AND.V12(I4).LT.A)B(161)=B(161)+1.
314 IF(V14(I4).LT.Q.AND.V13(I4).GE.N.AND.V12(I4).LT.A)B(162)=B(162)+1.
315 IF(V14(I4).LT.Q.ANC.V13(I4).LT.N.AND.V12(I4).LT.A)B(163)=B(163)+1.
316 C(25) = C(25) + 1.
317 500 CONTINUE
318 C FOLLOWING 2 LOOPS CALCULATE C & N TRANSITION PROBABILITIES
319 DO 134 I5=1,10
320 DO 133 I5=1,5
321 I7= I6 * 5 + I5 - 5
322 IF (C(I6) .LE. 0.001) GO TO 141
323 P(I7) = B(I7) / C(I6)
324 GO TO 133
325 141 P(I7) = 0.
326 133 CONTINUE
327 134 CONTINUE
328 C FOLLOWING 2 LOOPS CALCULATE PH TRANSITION PROBABILITIES
329 DO 135 I8=1,7
330 DO 136 I9=1,7
331 I10 = I8 * 7 + I9 - 7 + 50
332 I11 = I8 + 10
333 IF(C(I11) .LE. 0.001) GO TO 140
334 P(I10) = B(I10) / C(I11)
335 GO TO 136
336 140 P(I10) = 0.
337 136 CONTINUE
338 135 CONTINUE
339 C FOLLOWING 2 LOOPS CALCULATE C, N & PH JOINT TRANSITION PROBABILITIES
340 DO 137 I12=1,8
341 DO 138 I13=1,8
342 I14 = I12 * 8 + I13 - 8 + 99
343 I15 = I12 + 17
344 IF (C(I15) .LE. 0.001) GO TO 142
345 P(I14) = B(I14) / C(I15)
346 GO TO 138
347 142 P(I14) = 0.
348 138 CONTINUE
349 137 CONTINUE
350 IF (IROUND .EQ. 1) RMET = 100.
351 IF (IROUND .EQ. 2) RMET = 500.
352 WRITE (9, 1004) RMET, RMET
353 1004 FORMAT('1', 'TABLES OF TRANSITION PROBABILITIES FOLLOW FOR A MOVE J
354 1F', F8.0, ' METERS', / 1X, 'CALCULATED FROM SAMPLES WHICH ARE', F8.0,
355 2' METERS FROM EACH REFERENCE SAMPLE + OR - 100 METERS')
356 1005 FORMAT(1X, 'SAMPLES USED IN CALCULATION ARE FROM THE FIRST QUADRANT
357 1 OF EACH REFERENCE SAMPLE', / 1X, 'WITHIN A RANGE FROM', F8.0,
358 2' TO', F8.0, ' METERS'////////)
359 IF (IQUADS .EQ. 1) WRITE(9, 1005) DISMIN, RADIUS
360 IF (IQUADS .EQ. 0) WRITE(9, 1006) DISMIN, RADIUS

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361 1006 FORMAT(1X,'SAMPLES USED IN CALCULATIONS ARE FROM ALL QUADRANTS OF
362 1THE REFERENCE SAMPLE', / 1X, ' WITHIN A RANGE FROM', F8.0, ' TO',
363 2 F8.0, ' METERS'////////)
364 WRITE (9, 1007)(HEAD(I), I=1,15)
365 1007 FORMAT(10X,'CARBON TRANSITION PROBABILITIES', // 11X, 5(3A3, 2X),
366 1 2X, 'SAMP.SIZE'/)
367 DO 143 I17=1,5
368 I18 = I17 * 3 - 2
369 I19 = I18 + 1
370 I20 = I18 + 2
371 I21 = I17 * 5 - 4
372 I22 = I21 + 1
373 I23 = I21 + 2
374 I24 = I21 + 3
375 I25 = I21 + 4
376 WRITE (9, 1008) HEAD(I18), HEAD(I19), HEAD(I20), P(I21), P(I22),
377 1 P(I23), P(I24), P(I25), C(I17)
378 143 CONTINUE
379 1008 FORMAT(1X, 3A3, 3X, 5(F5.2, 6X), 2X, F3.0)
380 C ABOVE FORMAT 1008 FOR CARBON & NITROGEN TRANSITION PROB. TABULATION
381 WRITE (9, 1009) (HEAD(I), I=16,30)
382 1009 FORMAT(//////// 20X,'NITROGEN TRANSITION PROBABILITIES', // 11X,
383 1 5(3A3, 2X), 2X, 'SAMP.SIZE' /)
384 DO 144 I26=1,5
385 I27 = I26 * 3 - 2 + 15
386 I28 = I27 + 1
387 I29 = I27 + 2
388 I30 = I26 * 5 - 4 + 25
389 I31 = I30 + 1
390 I32 = I30 + 2
391 I33 = I30 + 3
392 I34 = I30 + 4
393 I35 = I26 + 5
394 WRITE (9, 1008) HEAD(I27), HEAD(I28), HEAD(I29), P(I30), P(I31),
395 1 P(I32), P(I33), P(I34), C(I35)
396 144 CONTINUE
397 WRITE (9, 1010)(HEAD(I), I=31,51)
398 1010 FORMAT(//////// 20X, 'PH TRANSITION PROBABILITIES', // 11X, 7(3A3,
399 1 2X), 2X, 'SAMP.SIZE'/)
400 DO 145 I36=1,7
401 I37=I36 * 3 - 2 + 30
402 I38 = I37 + 1
403 I39 = I37 + 2
404 I40 = I36 * 7 - 5 + 50
405 I41 = I40 + 1
406 I42 = I40 + 2
407 I43 = I40 + 3
408 I44 = I40 + 4
409 I45 = I40 + 5
410 I46 = I40 + 6
411 I47 = I36 + 10
412 WRITE (9, 1011) HEAD(I37), HEAD(I38), HEAD(I39), P(I40), P(I41),
413 1 P(I42), P(I43), P(I44), P(I45), P(I46), C(I47)
414 1011 FORMAT(1X, 3A3, 3X, 7(F5.2, 6X), 2X, F3.0)
415 C ABOVE FORMAT 1011 FOR PH TRANSITION PROBABILITIES
416 145 CONTINUE
417 WRITE (9, 1012)(HEAD(I), I=52,75)
418 1012 FORMAT(//////// 20X, 'C, N & PH JOINT TRANSITION PROBABILITIES', //
419 1 11X, 8(3A3, 2X), 2X, 'SAMP.SIZE' /)
420 DO 146 I48=1,8

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421      I49 = I48 * 3 - 2 + 51
422      I50 = I49 + 1
423      I51 = I49 + 2
424      I52 = I49 * 8 - 7 + 99
425      I53 = I52 + 1
426      I54 = I52 + 2
427      I55 = I52 + 3
428      I56 = I52 + 4
429      I57 = I52 + 5
430      I58 = I52 + 6
431      I59 = I52 + 7
432      I60 = I48 + 17
433      WRITE (9, 1013) HEAD(I49), HEAD(I50), HEAD(I51), P(I52), P(I53),
434      1 P(I54), P(I55), P(I56), P(I57), P(I58), P(I59), C(I60)
435      1013 FORMAT(1X, 3A3, 3X, 8(F5.2, 6X), 2X, F3.0)
436      C      ABOVE FORMAT 1013 FOR C, N & PH JOINT TRANSITION PROBABILITIES
437      146 CONTINUE
438      501 CONTINUE
439      C      END OF PROGRAM "SOILNEIGHBCPS"
440      END
END OF FILE

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1      FUNCTION KDAY5(IDA, IMQ, IYR)
2      K1 = 365 * IYR + IYR/4
3      C = 30.6 * FLOAT(IMQ) - 32.3
4      IF(IMQ .GE. 3) GO TO 5
5      IF(MOD(IYR, 4) .EQ. 0) K1 = K1-1
6      C = C+ 2.3
7      5 KDAY5 = K1 + INT(C) + IDA .
8      RETURN
9      END
END OF FILE

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1 C THIS PROGRAM ("MASTERSORT") UNITES THE DATA FROM THE VARIOUS FILES
2 C RELATED TO CROP YIELD PREDICTION IN A SINGLE MASTER FILE FOR THE
3 C CROP UNDER CONSIDERATION. THE CUMULATIVE WEATHER DATA FOR THE FIRST
4 C 15 DAYS AFTER PLANTING & THE LAST 15 DAYS BEFORE HARVEST ARE FOUND
5 C AND PRINTED IN THE LAST LINE OF OUTPUT, AS ARE THE ABSOLUTE COORDINATES.
6 C DEVICES ARE (FOR RICE): 7=R19-13-16-28, 8=R1SOILCALCS, 9=RIT810, 13=RIT811,
7 C 11=R11-2-24, 12=R1MASTER, 13=WEATHERCUMLIST, 5=DATAFILE, 14=R122.
8 C SUBROUTINES CALLED ARE: DA1900, CCORD AND PDENS
9 C THE MTS LOGICAL COMPARISON OF CHARACTERS ("LCOMC") FUNCTION IS USED.
10 C THE FORTRAN MONITOR "MINUSZERC" FEATURE IS ALSO USED
11 C
12 C
13 C INTEGER DA1900, CCORD
14 C INTEGER VAR109, VAR110, VAR111, VAR112, VAR114, VAR115, VAR116,
15 C VAR189, VAR192, VAR193
16 C DIMENSION IWC1(2000), IWC5(2000), WC9(2000), WC10(2000), WC11(2000
17 C 1), IWC12(2000), IWC13(2000), IWC14(2000)
18 C ABOVE DIMENSION FOR WEATHERCUMLIST
19 C DIMENSION A(410), P(6)
20 C COMMON/CCORD2/ IXCC, IYCC
21 C COMMON/C4/ PLANTD, METHCD, ICERT
22 C DATA MINZRD/280000000/
23 C CALL FTNCMD('SET MINUSZERC=CN',16)
24 C READ (5, 1000) IWEACU, ICDS9
25 C 1000 FORMAT(1X, 2I5)
26 C IWEACU IS THE NUMBER OF CARDS IN WEATHERCUMLIST
27 C ICDS9 IS THE NUMBER OF CASES FOR THE CROP BEING CONSIDERED (SAME AS TYPE9)
28 C READ (13, 1001)(IWC1(I1), IWC5(I1), WC9(I1), WC10(I1), WC11(I1),
29 C 1 IWC12(I1), IWC13(I1), IWC14(I1), I1=1,IWEACU)
30 C 1001 FORMAT(1X, I6, 5X,I6,9X, F7.1, 2F6.1, 3I3)
31 C ABOVE FORMAT 1001 FOR WEATHERCUMLIST
32 C DO 100 I2=1,ICDS9
33 C DOES ONE ITERATION FOR EACH CROP CASE
34 C MORE22 = 0
35 C IV343B = 0
36 C IV343C = 0
37 C IV341B = 0
38 C IV341C = 0
39 C V358 = 0.
40 C V359 = 0.
41 C V363D2 = 0.
42 C V359 = 0.
43 C V360 = 0.
44 C V361 = 0.
45 C V362 = 0.
46 C V363D1 = 0.
47 C READ (11, 1004)(A(I5), I5=1,80)
48 C ABOVE READ FOR R11-2-24
49 C READ (7,1002) R1, R2, R3, IV1C7, R5, VAR109, VAR110, VAR111, VAR112,
50 C 1 R6, VAR114, VAR115, VAR116, R7, VAR118, IV119, VAR120, IV121,
51 C 2 R8, R9, R10, R11, R12, R13, R14
52 C 1002 FORMAT(1X, A3, A4, A1, I5, A4, 2I3, 2I2, A2, I3, 2I2, A2,
53 C 1 F5.0, I2, F8.0, I2, A1, 6A4)
54 C ABOVE FORMAT 1002 FOR CARD TYPE 9 INFO. IN R19-13-16-28
55 C READ (7, 1003) R18, R19, R20, R21, VAR189, R22, R23, VAR192,
56 C 1 VAR193, R24, R25, R26, R27, R28, R29, R30, R31, R32, R33, R34
57 C 1003 FORMAT(2X, 4A4, I4, 2A3, I4, I5, 11A4)
58 C ABOVE FORMAT 1003 FOR CARD 13 INFORMATION
59 C READ (7, 1004)(A(I3), I3=R1,120)
60 C 1004 FORMAT(1X, A3, 19A4)

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61 C ABOVE FORMAT 1004 FOR CARDS 16 & 28, SOILCALCS, TB10, & TB11
62 REAC (R, 1004)(A(I4), I4=121,140)
63 C ABOVE READ FOR RISCILCALCS
64 READ (9, 1004)(A(I6), I6=141,220)
65 C ABOVE READ FOR RITB10
66 READ (10, 1004)(A(I7), I7=221,400)
67 C ABOVE READ FOR RITB11
68 READ (14, 1006) VX1, VX2, IV341, VX3, IV343, VX4, VX5, VX6,
69 1 VX7, VX8, VX9, VX10, VX11, VX12, VX13, VX14, VX15, VX16, VX17,
70 2 VX18
71 1006 FORMAT(1X, 2A4, I5, A4, I2, 15A4)
72 C ABOVE FORMAT 1006 FOR RI22
73 IF (IV343 .EQ. 0) GO TO 200
74 IONE22 = 1
75 GO TO 205
76 200 IF (IV341 .NE. IV107) GO TO 202
77 IONE22 = 2
78 READ (14, 1007) IV3418, IV3438, V358, V359, V360, V361, V362, V363D1,
79 1 V363C2
80 1007 FORMAT(9X, I5, 4X, I2, 35X, 2A2, A4, 2A2, A3, A2)
81 C ABOVE FORMAT 1007 FOR SECOND CARD22 RECORD FOR A CASE
82 IF (IV3418 .NE. IV107) GO TO 202
83 IF (IV3438 .EQ. 0) GO TO 204
84 GO TO 205
85 202 WRITE (6, 1009) IV107
86 1009 FORMAT(1X, 'MISSING OR UNORDERED CARD22 INFO AT P.C. CASE ', I5)
87 GO TO 201
88 204 DO 203 I5 = 1,4
89 READ (14, 1008) IV341C, IV343C
90 1008 FORMAT(9X, I5, 4X, I2)
91 IF (IV341C .NE. IV107) GO TO 202
92 MORE22 = I50
93 C MORE22 IS AN INDICATOR FOR ADDITIONAL CARD 22 RECORDS WHICH WILL NOT BE
94 C TABULATED IN THE OUTPUT
95 IF (IV343C .EQ. 1) GO TO 205
96 203 CONTINUE
97 205 CONTINUE
98 CALL PDENS(VAR109,VAR113,IV119,VAR120,IV121)
99 WRITE (12, 1004)(A(I8), I8=1,80)
100 C ABOVE WRITE FOR P11-2-24
101 WRITE (12, 1002) 81, 82, 83, IV107, 85, VAR109, VAR110, VAR111,
102 1 VAR112,86,VAR114,VAR115,VAR115,87, VAR118,IV119,PLANTD,IV121,
103 2 88, 89, 910, 811, 812, 813, 814
104 C ABOVE WRITE FOR CARD 9 INFORMATION
105 C NOTE THAT IN THE ABOVE WRITE THE PLANTING DENSITY WRITTEN IN THE
106 C PLACE OF IV120 IS THE CALCULATED ONE FROM PDENS. THE METHOD
107 C OF CALCULATION IS NOT WRITTEN. HOWEVER, DENSITIES CALCULATED FROM
108 C KGS SEEDS/HA CAN BE IDENTIFIED BY THE "0" APPEARING AS A CERTAINTY SINCE
109 C IV121 IS USED RATHER THAN ICERT
110 WRITE (12, 1003) 918, 919, 920, 921, VAR189, 922, 923, VAR192,
111 1 VAR193, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933,934
112 C ABOVE WRITE FOR CARD 13 INFORMATION
113 WRITE (12, 1004)(A(I9), I9=91,400)
114 C ABOVE WRITE FOR CARD 16 , CARD 28, SOILCALCS, TB10 AND TB11
115 WRITE (12, 1005) VX1, VX2, IV341, VX3, IV343, VX4, VX5, VX6,
116 1 VX7, VX8, VX9, VX10, VX11, VX12, VX13, VX14, VX15, VX16, VX17,
117 2 VX18
118 C ABOVE WRITE FOR FIRST CARD22 RECORD FOR CASE
119 IF (IONE22 .EQ. 1) WRITE (12, 1011)
120 1011 FORMAT(2X, '228')

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121 C      ABOVE FORMAT 1011 FOLLOWS SPACE FOR MISSING SECOND CARD22 RECORD FOR CASE
122 IF (ICNE22.EQ. 2) WRITE (12, 1012) V358, V359, V360, V361,
123 1 V362, V36301, V36302, WCRE22
124 1012 FORMAT(55X, 2A2, A4, 2A2, A3, A2, I5)
125 C      ABOVE FORMAT 1012 FOR SECOND CARD22 RECORD FOR CASE
126 IPLANT = DA1900(VAR110, VAR111, VAR112, VAR109, 3)
127 C      IPLANT IS THE PLANTING DATE : IHARV IS HARVEST DATE
128 IOPER = 5
129 IF (VAR109.EQ. 14) IOPER=4
130 C      ABOVE USES DRYING DATE RATHER THAN HARVEST DATE WHEN MAIZE IS PRINCIPAL CR
131 IHARV = DA1900(VAR114, VAR115, VAR116, VAR109, IOPER)
132 RP9 = -0.
133 RP10 = -0.
134 RP11 = -0.
135 IRP12 = -0
136 IRP13 = -0
137 IRP14 = -0
138 RH9 = -0.
139 RH10 = -0.
140 RH11 = -0.
141 IRH12 = -0
142 IRH13 = -0
143 IRH14 = -0
144 DO 101 I10=1,IWEACU
145 C      FINDS WEATHER CUMULATIVE DATA FOR 1ST & LAST 15 DAYS
146 IF (IWC1(I10).EQ. IPLANT) GO TO 102
147 IF (IWC5(I10).EQ. IHARV) GO TO 103
148 GO TO 101
149 102 RP9 = WC9(I10)
150 RP10 = WC10(I10)
151 RP11 = WC11(I10)
152 IRP12 = IWC12(I10)
153 IRP13 = IWC13(I10)
154 IRP14 = IWC14(I10)
155 GO TO 101
156 103 RH9 = WC9(I10)
157 RH10 = WC10(I10)
158 RH11 = WC11(I10)
159 IRH12 = IWC12(I10)
160 IRH13 = IWC13(I10)
161 IRH14 = IWC14(I10)
162 101 CONTINUE
163 DO 104 I11=1,6
164 104 M(I11) = 0
165 IF (LCCMC(RP9, MINZRO).EQ.0 .OR. RP9.LT. -8.) M(1) = 1
166 IF (LCCMC(RP10, MINZRO).EQ.0 .OR. RP10.LT. -8.) M(2) = 1
167 IF (LCCMC(RP11, MINZRO).EQ.0 .OR. RP11.LT. -8.) M(3) = 1
168 IF (LCCMC(RH9, MINZRO).EQ.0 .OR. RH9.LT. -8.) M(4) = 1
169 IF (LCCMC(RH10, MINZRO).EQ.0 .OR. RH10.LT. -8.) M(5) = 1
170 IF (LCCMC(RH11, MINZRO).EQ.0 .OR. RH11.LT. -8.) M(6) = 1
171 CALL CCOORD(VAR189, VAR192, VAR193)
172 WRITE (12, 1005) RP9, RP10, RP11, IRP12, IRP13, IRP14, RH9, RH10,
173 1 RH11, IRH12, IRH13, IRH14, IXCO, IYCO, (M(I), I=1,6)
174 1005 FORMAT(1X, 2(F7.1, 2F6.1, 3I2), 2I8, 6I2)
175 C      ABOVE FORMAT 1005 FOR FIRST AND LAST 15 DAYS WEATHER & ABSOLUTE COORDS.
176 100 CONTINUE
177 201 CONTINUE
178 C      END OF PROGRAM "MASTERSCRT"
179 END

```

END OF FILE

```

1      SUBROUTINE MNINTR(ICCASE, IBEG, IFOLD0, ICAS10, IEND)
2      C      THIS SUBROUTINE (MNINTR) TABULATES INTERPLANTING DATA WHERE MANIOC
3      C      (EITHER BITTER OR SWEET) IS THE PRINCIPAL CROP. ARGUMENTS ARE:
4      C      ICCASE: THE NUMBER OF CARDS FOR THE CASE IN THE "K" ARRAYS;
5      C      IBEG: THE DAYS SINCE 1900 FOR MANIOC PLANTING;
6      C      IFOLD0: THE DAYS SINCE 1900 FOR INTERPLANTED MAIZE FOLDING;
7      C      AND ICAS10: THE NUMBER OF CARDS FOR THE CASE IN RI10.
8      C      THE RIINTR SUBPROGRAM IS CALLED BY THE IPLANT MAIN PROGRAM.
9      C      FUNCTIONS NEEDED ARE: CAL900 AND PDENS
10     C
11     INTEGER CURUSE, CA1900
12     INTEGER VAR107, VAR109, VAR110, VAR111, VAR112, VAR113, VAR114,
13     1VAR115, VAR116, VAR117, VAR128
14     C      ABOVE TYPE DECLARATION FOR CARD 9
15     INTEGER VAR131, VAR133, VAR134, VAR135, VAR136, VAR137, VAR138,
16     1VAR139, VAR140, VAR141, VAR142, VAR143, VAR144, VAR145, VAR146,
17     2VAR148, VAR150, VAR151, VAR152
18     C      ABOVE TYPE DECLARATION FOR CARD 10
19     COMMON/C1/ VAR131(10), VAR133(10), VAR134(10), VAR135(10),
20     1VAR136(10), VAR137(10), VAR138(10), VAR139(10), VAR140(10),
21     2VAR141(10), VAR142(10), VAR143(10), VAR144(10), VAR145(10),
22     3VAR146(10), VAR147(10), VAR148(10), VAR149(10), VAR150(10),
23     4VAR151(10), VAR152(10)
24     COMMON/C2/ VAR107, VAR109, VAR110, VAR111, VAR112, VAR113, VAR114,
25     1VAR115, VAR116, VAR117, VAR128
26     COMMON/C3/ KL1(30), KL2(30), KL3(30), KL4(30), KL5(30), KL6(30),
27     1KL7(30), KCURUS(30)
28     COMMON/C4/ PLANTD, METHCD, ICERT
29     IN240 = 0
30     IN241 = 0
31     IN242 = 0
32     IN243 = 0
33     IN244 = 0
34     IN245 = 0
35     IN246 = 0
36     IN248 = 0
37     IN249 = 0
38     IN250A = 0
39     IN250B = 0
40     IN251 = 0
41     IN252 = 0
42     IN253 = 0
43     IN254 = 0
44     IN255 = 0
45     IN256 = 0
46     IN259 = 0
47     IN259 = 0
48     IN260A = 0
49     IN260B = 0
50     IN261 = 0
51     IN262 = 0
52     IN263 = 0
53     IN264 = 0
54     IN265 = 0
55     IN266 = 0
56     IN267 = 0
57     IN268 = 0
58     IN270 = 0
59     IN271 = 0
60     IN272A = 0

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61      IN272B = 0
62      IN273 = 0
63      IN274 = 0
64      IN275 = 0
65      IN276 = 0
66      IN277 = 0
67      IN278 = 0
68      IN279 = 0
69      IN280 = 0
70      IN281 = 0
71      IN283 = 0
72      IN284 = 0
73      IN285A = 0
74      IN285B = 0
75      IN286A = 0
76      IN286B = 0
77      IN287A = 0
78      IN287B = 0
79      IN289 = 0
80      IN290 = 0
81      IN291 = 0
82      IN292 = 0
83      IN293 = 0
84      IN294 = 0
85      IN295 = 0
86      IN296 = 0
87      IN297 = 0
88      IN298 = 0
89      IN299 = 0
90      IN300 = 0
91      IN301 = 0
92      IN302 = 0
93      RIN247 = 0.
94      PIN257 = 0.
95      RIN259 = 0.
96      PIN292 = 0.
97      ISTART = 0
98      DO 119 I10 = 1, ICCASE
99      C   MAKES TABULATION CALCULATIONS SCANNING "K" ARRAY
100      KPREV = I10 - 1
101      IF (KPREV .LE. 0) KPREV = 1
102      IF (I10 .EQ. 1) IPVUSE = 4
103      IF (I10 .GT. 1) IPVUSE = KCURUS(KPREV)
104      C   IPVUSE IS USE DURING PREVIOUS INTER-EVENT INTERVAL
105      IF (KL6(I10) .GT. IEND) GO TO 119
106      IF (KL6(KPREV) .GE. IEND) GO TO 119
107      IF (ISTART .EQ. 0) IBCATE = IBEG
108      C   ASSIGNS PRINCIPAL CROP PLANTING DATE AS BEGINNING DATE FOR FIRST
109      C   INTER-EVENT INTERVAL
110      IF (KL6(I10) .LE. IBEG) GO TO 119
111      ISTART = ISTART + 1
112      IF (ISTART .GT. 1 .AND. KL6(KPREV) .EQ. KL6(I10)) GO TO 119
113      IF (ISTART .GT. 1) IBCATE = KL6(KPREV)
114      C   CALCULATES BEGINNING DATE FOR EACH INTER-EVENT INTERVAL (IBDATE)
115      IN289 = IEND - IBEG
116      IN290 = MAX0(VAR113, VAR117)
117      IF (IPVUSE .EQ. 28) GO TO 122
118      IF (IPVUSE .EQ. 31 .OR. IPVUSE .EQ. 17) GO TO 123
119      IF (IPVUSE .EQ. 9 .OR. IPVUSE .EQ. 16 .OR. IPVUSE .EQ. 30) GO TO 124
120      IF (IPVUSE .EQ. 10 .OR. IPVUSE .EQ. 29) GO TO 125

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181 C IDATE3 IS BEGINNING DATE FOR INTERPLANTED CROP PRESENCE WITHIN THE
182 C LIFESPAN OF THE PRINCIPAL CROP
183 ICATE4 = ICATE2
184 C IDATE4 IS THE END DATE OF INTERPLANTED CROP PRESENCE WITHIN THE
185 C LIFESPAN OF THE PRINCIPAL CROP
186 IF (ICATE1 .LE. IBEG) IDATE3 = IBEG
187 IF (ICATE2 .GE. IEND) ICATE4 = IEND
188 ISPAN = ICATE4 - IDATE3
189 C ISPAN IS SPAN OF TIME INTERPLANTED CROP WAS PRESENT IN ANY COMB.
190 C WITHIN LIFESPAN OF PRINCIPAL CROP
191 IF (VAR134(I12) .EQ. 0) GO TO 129
192 PLANTD=0.
193 METHOD=0
194 ICERT=0
195 CALL PDENS(VAR134(I12), VAR147(I12), VAR148(I12), VAR149(I12),
196 IVAR150(I12))
197 IF (VAR134(I12) .EQ. 14) GO TO 130
198 IF (VAR134(I12) .EQ. 7) GO TO 131
199 IF (VAR134(I12) .EQ. 21) GO TO 132
200 IOTHER = IOTHER + 1
201 IF (IOther .EQ. 1) GO TO 133
202 IF (IOther .EQ. 2) GO TO 134
203 IF (IOther .EQ. 3) GO TO 135
204 WRITE (9, 1004) VAR131(I12)
205 1004 FORMAT(1X, 'MORE THAN 3 OTHER INTERPLANTED CROPS FOR P.C. CASE ', I5
206 1, 1X, / 1X, / 1X, / 1X)
207 GO TO 138
208 133 CONTINUE
209 C FOR FIRST OTHER INTERPLANTED CROP
210 IN273 = VAR134(I12)
211 IN285A = VAR151(I12)
212 IN285B = VAR152(I12)
213 GO TO 137
214 134 CONTINUE
215 C FOR SECOND OTHER INTERPLANTED CROP
216 IN274 = VAR134(I12)
217 IN286A = VAR151(I12)
218 IN286B = VAR152(I12)
219 GO TO 137
220 135 CONTINUE
221 C FOR THIRD OTHER INTERPLANTED CROP
222 IN275 = VAR134(I12)
223 IN287A = VAR151(I12)
224 IN287B = VAR152(I12)
225 137 CONTINUE
226 C FOR ALL "OTHER" INTERPLANTED CROPS
227 IN275 = MAX0(IN276, ISPAN)
228 IN277 = MAX0(IN277, VAR138(I12), VAR148(I12))
229 IN278 = ICATE1 - IBEG
230 IN279 = MAX0(IN279, VAR138(I12), VAR113)
231 IN280 = IEND - IDATE2
232 IN281 = MAX0(IN281, VAR146(I12), VAR117)
233 PIN282 = PIN282 + PLANTD
234 IN283 = MAX0(IN283, METHOD)
235 IN284 = MAX0(IN284, ICERT)
236 GO TO 136
237 129 CONTINUE
238 C FOR CASE OF NO INTERPLANTED CROPS
239 IN291 = IN299
240 IN292 = IN290

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241      GC TO 136
242      130 CONTINUE
243      C   FOR CASE WHERE INTERPLANTED CROP IS MAIZE
244          IDRY = IDATE1 + 100
245          IF (IFCLOD .EQ. 0 .OR. IFCLOD .EQ. -0) IFOLOD = IDRY + 1
246          IDATE2 = MIN0(ICRY, IFCLOD)
247          ICATE4 = MIN0(IEND, IDATE2)
248          ISPAN = IDATE4 - ICATE3
249          IN251 = ISPAN
250          IN252 = 4
251          IN253 = ICATE1 - IREG
252          IN254 = MAX0(VAR113, VAR138(I12))
253          IN255 = IEND - IDATE2
254          IN256 = 4
255          PIN257 = PLANTD
256          IN259 = METHOD
257          IN259 = ICERT
258          IN260A = VAR151(I12)
259          IN260B = VAR152(I12)
260          IN261 = IFCLOD - IREG
261          IN262 = MAX0(VAR113, VAR142(I12))
262      GC TO 136
263      131 CCNTINUE
264      C   FOR CASE WHERE INTERPLANTED CROP IS RICE
265          IN241 = ISPAN
266          IN242 = MAX0(VAR138(I12), VAR146(I12))
267          IN243 = IDATE1 - IREG
268          IN244 = MAX0(VAR113, VAR138(I12))
269          IN245 = IEND - IDATE2
270          IN246 = MAX0(VAR117, VAR146(I12))
271          PIN247 = PLANTD
272          IN248 = METHOD
273          IN249 = ICERT
274          IN250A = VAR151(I12)
275          IN250B = VAR152(I12)
276      GC TO 136
277      132 CONTINUE
278      C   FOR CASE WHERE INTERPLANTED CROP IS BEANS
279          IN263 = ISPAN
280          IN264 = VAR138(I12)
281          IN265 = IDATE1 - IREG
282          IN266 = MAX0(VAR113, VAR138(I12))
283          PIN269 = PLANTD
284          IN270 = METHOD
285          IN271 = ICERT
286          IN272A = VAR151(I12)
287          IN272B = VAR152(I12)
288      136 CONTINUE
289          WRITE (9, 1008)
290      1008 FORMAT(1X, '(INTERPLANTING TABULATIONS ON FOLLOWING 3 LINES)')
291          WRITE (9, 1005) IN240, IN241, IN242, IN243, IN244, IN245, IN246,
292          1PIN247, IN248, IN249, IN250A, IN250B, IN251, IN252, IN253, IN254,
293          2IN255, IN256, PIN257, IN258, IN259, IN260A, IN260B, IN261, IN262
294      1005 FORMAT(1X, 2I4, 2(I2, I4), I2, F7.0, 3I2, I1, 3(I4, I2), F7.0,
295          1 3I2, I1, I4, I2)
296      C   ABOVE FORMAT 1005 FOR FIRST LINE OF TABULATION OUTPUT: MANIOC WITH
297      C   RICE (ANY COMBINATION), AND MANIOC WITH GREEN MAIZE (ANY COMBINATION)
298          WRITE (9, 1006) IN263, IN264, IN265, IN266, IN267, IN268, PIN269,
299          1IN270, IN271, IN272A, IN272B, IN273, IN274, IN275, IN276, IN277,
300          2IN278, IN279, IN280, IN281, PIN282, IN283, IN284, IN285A, IN285B,

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301      3IN286A, IN286B, IN287A, IN287B
302      1006 FORMAT(1X, 3(I4, I2), F7.0, 3I2, I1, 3I3, 3(I4, I2), F7.0, 2I2,
303      13(I2, I1))
304      C      ABOVE FORMAT 1006 IS FOR SECOND LINE OF TABULATION OUTPUT: MANIOC WITH
305      C      BEANS (EITHER PHASEOLUS OR VIGNA) (ANY INTERPLANTING COMBINATION), AND
306      C      MANIOC WITH OTHER INTERPLANTED CROPS.
307      WRITE (9, 1007) IN289, IN290, IN291, IN292, IN293, IN294, IN295,
308      1IN296, IN297, IN298, IN299, IN300, IN301, IN302
309      1007 FORMAT(1X, 7(I4, I2))
310      C      ABOVE FORMAT 1007 IS FOR THIRD LINE OF TABULATION OUTPUT: INTERPLANTING
311      C      COMBINATIONS
312      138 CONTINUE
313      C      END OF SUBROUTINE "MNINTR"
314      RETURN
315      END
316      SUBROUTINE BEINTR(ICCASE, IBEG, IFOLDD, ICASIO, IEND)
317      C      DUMMY SUBROUTINE "BEINTR"
318      RETURN
319      END
320      SUBROUTINE MZINTR(ICCASE, IBEG, IFOLDD, ICASIO, IEND)
321      C      DUMMY SUBROUTINE "MZINTR"
322      RETURN
323      END
324      SUBROUTINE RIINTR(ICCASE, IBEG, IFOLDD, ICASIO, IEND)
325      C      DUMMY SUBROUTINE "RIINTR"
326      RETURN
327      END
END OF FILE

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1      SUBROUTINE MZINTR(ICCASE, IBEG, IFOLD0, ICAS10, IEND)
2      C      THIS SUBROUTINE (MZINTR) TABULATES INTERPLANTING DATA WHERE MAIZE
3      C      IS THE PRINCIPAL CROP. ARGUMENTS ARE ICASE: THE NUMBER OF CARDS
4      C      FOR THE CASE IN THE "K" ARRAY OF IPLANT; IBEG: THE DAYS SINCE 1900
5      C      FOR PRINCIPAL CROP (MAIZE) PLANTING; IFOLD0: A PLACE HOLDER FOR
6      C      THE DAYS SINCE 1900 FOR INTERPLANTED MAIZE FOLDING (USE 0);
7      C      ICAS10: THE NUMBER OF CARDS FOR THE CASE IN MZ10. & IEND THE END OF PRINC.
8      C      CROP TABULATION INTERVAL
9      C      THE MZINTR SUBROUTINE IS CALLED BY THE IPLANT MAIN PROGRAM.
10     C      SUBROUTINES NEEDED ARE CA1900, PDENS AND CURUSE.
11     INTEGER CURUSE, CA1900
12     INTEGER VAR107, VAR109, VAR110, VAR111, VAR112, VAR113, VAR114,
13     1VAR115,VAR116, VAR117, VAR129
14     C      ABOVE TYPE DECLARATIONS FOR CARD 9
15     INTEGER VAR131, VAR133, VAR134, VAR135, VAR136, VAR137, VAR138,
16     1VAR139, VAR140, VAR141, VAR142, VAR143, VAR144, VAR145, VAR146,
17     2VAR148, VAR150, VAR151, VAR152
18     C      ABOVE TYPE DECLARATION FOR CARD 10
19     COMMON/C1/ VAR131(10), VAR133(10), VAR134(10), VAR135(10),
20     1VAR136(10), VAR137(10), VAR138(10), VAR139(10), VAR140(10),
21     2VAR141(10), VAR142(10), VAR143(10), VAR144(10), VAR145(10),
22     3VAR146(10), VAR147(10), VAR148(10), VAR149(10), VAR150(10),
23     4VAR151(10), VAR152(10)
24     COMMON/C2/ VAR107, VAR109, VAR110, VAR111, VAR112, VAR113, VAR114,
25     1VAR115, VAR116, VAR117, VAR128
26     COMMON/C3/ KL1(30), KL2(30), KL3(30), KL4(30), KL5(30), KL6(30),
27     1KL7(30), KCURUS(30)
28     COMMON/C4/ PLANTD, METHOD, ICERT
29     IN63 = 0
30     IN64 = 0
31     IN65 = 0
32     IN66 = 0
33     IN67 = 0
34     IN68 = 0
35     IN69 = 0
36     IN70 = 0
37     IN71 = 0
38     IN72 = 0
39     IN73A = 0
40     IN73B = 0
41     IN74 = 0
42     IN75 = 0
43     IN76 = 0
44     IN77 = 0
45     IN78 = 0
46     IN79 = 0
47     IN81 = 0
48     IN82 = 0
49     IN83A = 0
50     IN83B = 0
51     IN84 = 0
52     IN85 = 0
53     IN86 = 0
54     IN87 = 0
55     IN88 = 0
56     IN89 = 0
57     IN91 = 0
58     IN92 = 0
59     IN93A = 0
60     IN93B = 0

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61      IN94 = 0
62      IN95 = 0
63      IN96 = 0
64      IN97 = 0
65      IN99 = 0
66      IN100 = 0
67      IN101A = 0
68      IN101B = 0
69      IN102 = 0
70      IN103 = 0
71      IN104 = 0
72      IN105 = 0
73      IN106 = 0
74      IN107 = 0
75      IN108 = 0
76      IN109 = 0
77      IN110 = 0
78      IN112 = 0
79      IN113 = 0
80      IN114A = 0
81      IN114B = 0
82      IN115A = 0
83      IN115B = 0
84      IN116A = 0
85      IN116B = 0
86      IN117 = 0
87      IN118 = 0
88      IN119 = 0
89      IN120 = 0
90      IN121 = 0
91      IN122 = 0
92      IN123 = 0
93      IN124 = 0
94      IN125 = 0
95      IN126 = 0
96      IN127 = 0
97      IN128 = 0
98      IN129 = 0
99      IN130 = 0
100     IN131 = 0
101     IN132 = 0
102     PIN70 = 0.
103     PIN80 = 0.
104     PIN90 = 0.
105     PIN98 = 0.
106     PIN111 = 0.
107     LAST = 0
108     ISTART = 0
109     IEND = IREG + 100
110     C   ASSIGNS INTERVAL END DATE AS MAIZE DRYING DATE RATHER THAN
111     C   THE HARVEST DATE
112     DO 119 I10 = 1, ICCASE
113     C   MAKES TABULATION CALCULATIONS SCANNING "K" ARRAY
114     KPREV = I10 - 1
115     IF (KPREV .LE. 0) KPREV=1
116     IF (I10 .EQ. 1) IPVUSE = 4
117     IF (I10 .GT. 1) IPVUSE = KCURLS(KPREV)
118     C   IPVUSE IS USE DURING PREVIOUS INTER-EVENT INTERVAL
119     IF (KL6(I10) .GT. IENC .OR. LAST.EQ.1) GO TO 119
120     IF (KL6(I10) .EQ. IENC) LAST= 1

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121      IF (ISTART .EQ. 0) IBCATE = IBEG
122      IF (KL6(I10) .LE. IBEG) GO TO 119
123      ISTART = ISTART + 1
124      IF (ISTART .GT. 1 .AND. KL6(KPREV) .EQ. KL6(I10)) GO TO 119
125      IF (ISTART .GT. 1) IBCATE = KL6(KPREV)
126      C      CALCULATES BEGINNING DATE FOR EACH INTER-EVENT INTERVAL
127      IN117 = IEND - IBEG
128      IN118 = MAX0(VAR113, VAR117)
129      IF (IPVUSE .EQ. 14) GO TO 122
130      IF (IPVUSE .EQ. 8 .OR. IPVUSE .EQ. 15) GO TO 123
131      IF (IPVUSE .EQ. 9 .OR. IPVUSE .EQ. 16 .OR. IPVUSE .EQ. 30) GO TO 124
132      IF (IPVUSE .EQ. 17 .OR. IPVUSE .EQ. 31) GO TO 125
133      IF (IPVUSE .EQ. 19 .OR. IPVUSE .EQ. 35) GO TO 126
134      IF (IPVUSE .EQ. 12 .OR. IPVUSE .EQ. 18 .OR. IPVUSE .EQ. 37) GO TO 127
135      IF (IPVUSE .EQ. 20 .OR. IPVUSE .EQ. 13) GO TO 128
136      IF (IPVUSE .EQ. 27 .OR. IPVUSE .EQ. 33) GO TO 128
137      IF (IPVUSE .EQ. 39 .OR. IPVUSE .EQ. 41) GO TO 128
138      IF (IPVUSE .EQ. 50 .OR. IPVUSE .EQ. 54) GO TO 128
139      IF (IPVUSE .EQ. 56 .OR. IPVUSE .EQ. 58) GO TO 128
140      IF (IPVUSE .EQ. 22 .OR. IPVUSE .EQ. 23) GO TO 128
141      IF (IPVUSE .EQ. 25 .OR. IPVUSE .EQ. 26) GO TO 128
142      IF (IPVUSE .EQ. 73 .OR. IPVUSE .EQ. 76) GO TO 128
143      IF (IPVUSE .EQ. 78 .OR. IPVUSE .EQ. 79) GO TO 128
144      IF (IPVUSE .EQ. 81 .OR. IPVUSE .EQ. 82) GO TO 128
145      IF (IPVUSE .EQ. 85 .OR. IPVUSE .EQ. 87) GO TO 128
146      IF (IPVUSE .EQ. 88 .OR. IPVUSE .EQ. 95) GO TO 128
147      IF (IPVUSE .EQ. 97 .OR. IPVUSE .EQ. 99) GO TO 128
148      IF (IPVUSE .EQ. 102 .OR. IPVUSE .EQ. 103) GO TO 128
149      IF (IPVUSE .EQ. 106 .OR. IPVUSE .EQ. 107) GO TO 128
150      IF (IPVUSE .EQ. 110 .OR. IPVUSE .EQ. 113) GO TO 128
151      IF (IPVUSE .EQ. 115 .OR. IPVUSE .EQ. 116) GO TO 128
152      IF (IPVUSE .EQ. 117 .OR. IPVUSE .EQ. 118) GO TO 128
153      WRITE (9,1003) IPVUSE, KL1(I10)
154      1003 FORMAT(1X,'ERROR: PREVIOUS USE ',I3,' NOT RECOGNIZED IN PRINC.CRJP
155      1 CASE ',I3, / 1X, / 1X, / 1X)
156      GO TO 138
157      C      FOLLOWING FOR GREEN MAIZE ALONE
158      122 IN119 = IN119 + KL6(I10) - IBCATE
159      IN120 = MAX0(IN120, KL7(I10))
160      GO TO 119
161      C      FOLLOWING FOR GREEN MAIZE WITH RICE
162      123 IN121 = IN121 + KL6(I10) - IBCATE
163      IN122 = MAX0(IN122, KL7(I10))
164      GO TO 119
165      C      FOLLOWING FOR GREEN MAIZE WITH RICE AND MANIOC
166      124 IN123 = IN123 + KL6(I10) - IBCATE
167      IN124 = MAX0(IN124, KL7(I10))
168      GO TO 119
169      C      FOLLOWING FOR GREEN MAIZE WITH MANIOC
170      125 IN127 = IN127 + KL6(I10) - IBCATE
171      IN128 = MAX0(IN128, KL7(I10))
172      GO TO 119
173      C      FOLLOWING FOR GREEN MAIZE WITH PASTURE
174      126 IN129 = IN129 + KL6(I10) - IBCATE
175      IN130 = MAX0(IN130, KL7(I10))
176      GO TO 119
177      C      FOLLOWING FOR GREEN MAIZE WITH RICE AND PASTURE
178      127 IN125 = IN125 + KL6(I10) - IBCATE
179      IN126 = MAX0(IN126, KL7(I10))
180      GO TO 119

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181 C FOLLOWING FOR GREEN MAIZE WITH OTHER COMBINATIONS OR CROPS
182 128 IN131 = IN131 + KL6(I10) - IBCATE
183 IN132 = MAX0(IN62, KL7(I10))
184 119 CONTINUE
185 IN84 = IN123 + IN127
186 IN63 = VAR107
187 IOTHER = 0
188 DC 136 I12 = 1, ICAS10
189 IDATE1 = CA1900(VAR135(I12), VAR136(I12), VAR137(I12), VAR134(I12), 3)
190 IDATE2 = CA1900(VAR143(I12), VAR144(I12), VAR145(I12), VAR134(I12), 5)
191 IF (VAR145(I12) .EQ. -0 .AND. VAR146(I12) .GT. 0) IDATE2 = IEND
192 IDATE3 = IDATE1
193 C IDATE3 IS THE BEGINNING DATE FOR INTERPLANTED CROP PRESENCE WITHIN
194 C THE LIFESPAN OF THE PRINCIPAL CROP
195 IDATE4 = IDATE2
196 C IDATE4 IS THE END DATE OF INTERPLANTED CROP PRESENCE WITHIN THE
197 C LIFESPAN OF THE PRINCIPAL CROP
198 IF (IDATE1 .LE. IBEG) IDATE3 = IBEG
199 IF (IDATE2 .GE. IEND) IDATE4 = IEND
200 ISPAN = IDATE4 - IDATE3
201 IF (VAR134(I12) .EC. 0) GO TO 129
202 PLANTD = 0.
203 METHOD = 0
204 ICERT = 0
205 CALL PDENS(VAR134(I12), VAR147(I12), VAR148(I12), VAR149(I12),
206 IVAR150(I12))
207 IF (VAR134(I12) .EC. 7) GO TO 130
208 IF (VAR134(I12) .EQ. 29) GO TO 131
209 IF (VAR134(I12) .EC. 34) GO TO 132
210 IF (VAR134(I12) .EC. 21) GO TO 150
211 IOTHER = IOTHER + 1
212 IF (IOther .EQ. 1) GO TO 133
213 IF (IOther .EQ. 2) GO TO 134
214 IF (IOther .EQ. 3) GO TO 135
215 WRITE (9,1004) VAR131(I12)
216 1004 FORMAT(1X, 'MORE THAN 3 OTHER INTERPLANTED CROPS FOR P.C. CASE ', I5
217 1//)
218 GO TO 138
219 133 CONTINUE
220 C FOR FIRST INTERPLANTED CROP
221 IN102 = VAR134(I12)
222 IN114A = VAR151(I12)
223 IN114B = VAR152(I12)
224 GO TO 137
225 134 CONTINUE
226 C FOR SECOND OTHER INTERPLANTED CROP
227 IN103 = VAR134(I12)
228 IN115A = VAR151(I12)
229 IN115B = VAR152(I12)
230 GO TO 137
231 135 CONTINUE
232 C FOR THIRD OTHER INTERPLANTED CROP
233 IN104 = VAR134(I12)
234 IN116A = VAR151(I12)
235 IN116B = VAR152(I12)
236 137 CONTINUE
237 C FOR ALL "OTHER" INTERPLANTED CROPS
238 IN105 = MAX0(IN105, ISPAN)
239 IN106 = MAX0(IN106, VAR138(I12), VAR148(I12))
240 IN107 = IDATE1 - IBEG

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241      IN108 = MAXO(IN108, VAR138(I12), VAR113)
242      IN109 = IEND - ICATE2
243      IN110 = MAXO(IN110, VAR146(I12), VAR117)
244      RIN111 = RIN111 + PLANTD
245      IN112 = MAXO(IN112, METHOD)
246      IN113 = MAXO(IN113, ICERT)
247      GO TO 136
248
249 129 CONTINUE
250 C     FOR CASE OF NO INTERPLANTED CROPS
251      IN119 = IN117
252      IN120 = IN118
253      GO TO 136
254
255 130 CONTINUE
256 C     FOR CASE WHERE INTERPLANTED CROP IS RICE
257      IN64 = ISPAN
258      IN65 = VAR138(I12)
259      IN66 = ICATE1 - IBEG
260      IN67 = MAXO(VAR113, VAR138(I12))
261      IN68 = IEND - ICATE2
262      IN69 = MAXO(VAR117, VAR146(I12))
263      RIN70 = PLANTD
264      IN71 = METHOD
265      IN72 = ICERT
266      IN73A = VAR151(I12)
267      GO TO 136
268
269 150 CONTINUE
270 C     FOR CASE WHERE INTERPLANTED CROP IS BEANS
271      IN74 = ISPAN
272      IN75 = MAXO(VAR138(I12), VAR146(I12))
273      IN76 = ICATE1 - IBEG
274      IN77 = MAXO(VAR113, VAR138(I12))
275      IN78 = IEND - ICATE2
276      IN79 = MAXO(VAR117, VAR146(I12))
277      RIN80 = PLANTD
278      IN81 = METHOD
279      IN82 = ICERT
280      IN83A = VAR151(I12)
281      IN83B = VAR152(I12)
282      GO TO 136
283
284 131 CONTINUE
285 C     FOR CASE WHERE INTERPLANTED CROP IS MANIOC
286      IN84 = ISPAN
287      IN85 = MAXO(VAR138(I12), VAR146(I12))
288      IN86 = ICATE1 - IBEG
289      IN87 = MAXO(VAR113, VAR138(I12))
290      IN88 = IEND - ICATE2
291      IN89 = MAXO(VAR117, VAR146(I12))
292      RIN90 = PLANTD
293      IN91 = METHOD
294      IN92 = ICERT
295      IN93A = VAR151(I12)
296      IN93B = VAR152(I12)
297      GO TO 136
298
299 132 CONTINUE
300 C     FOR CASE WHERE INTERPLANTED CROP IS PASTURE
301      IN94 = ISPAN
302      IN95 = VAR138(I12)
303      IN96 = ICATE1 - IBEG
304      IN97 = MAXO(VAR113, VAR138(I12))
305      RIN98 = PLANTD

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301          IN99 = METHOD
302          IN100 = ICERT
303          IN101A = VAR151(I12)
304          IN102B = VAR152(I12)
305      136 CONTINUE
306          WRITE (9,1008)
307      1008 FORMAT(1X,'INTERPLANTING TABULATIONS ON FOLLOWING 3 LINES')
308          WRITE (9,1005) IN63, IN64, IN65, IN66, IN67, IN68, IN69, RIN70,
309          1IN71, IN72, IN73A, IN73B, IN74, IN75, IN76, IN77, IN78, IN79, RIN80
310          2, IN81, IN82, IN83A, IN83B
311      1005 FORMAT(1X, 2(I4, 2(I2, I4), I2, F7.0, 3I2, I1, 3(I4, I2), F7.0,
312          13I2, I1)
313      C      ABOVE FORMAT 1005 FOR FIRST LINE OF TABULATION OUTPUT: GREEN MAIZE
314      C      WITH RICE (ANY COMBINATION), AND GREEN MAIZE WITH BEANS (PHASEOLUS
315      C      OR VIGNA) (ANY INTERPLANTING COMBINATION).
316          WRITE (9,1006) IN84, IN85, IN86, IN87, IN88, IN89, RIN90, IN91,
317          1IN92, IN93A, IN93B, IN94, IN95, IN96, IN97, RIN98, IN99, IN100,
318          2IN101A, IN101B, IN102, IN103, IN104, IN105, IN106, IN107, IN108
319      1006 FORMAT(1X, 3(I4, I2), F7.0, 3I2, I1, 2(I4, I2), F7.0, 3I2, I1,
320          13I3, 2(I4, I2))
321      C      ABOVE FORMAT 1006 IS FOR SECOND LINE OF OUTPUT: GREEN MAIZE WITH
322      C      MANIOC (BITTER OR SWEET) (ANY COMBINATION), GREEN MAIZE WITH PASTURE
323      C      (ANY COMBINATION) AND GREEN MAIZE WITH OTHER INTERPLANTED CROPS
324          WRITE (9,1007) IN109, IN110, RIN111, IN112, IN113, IN114A, IN114B,
325          1IN115A, IN115B, IN116A, IN116B, IN117, IN118, IN119, IN120,
326          2IN121, IN122, IN123, IN124, IN125, IN126, IN127, IN128, IN129,
327          3IN130, IN131, IN132
328      1007 FORMAT(1X, I4, I2, F7.0, 2I2, 3(I2, I1), 8(I4, I2))
329      C      ABOVE FORMAT 1007 FOR THIRD LINE OF TABULATION OUTPUT: OTHER INTERPLANTED
330      C      CROPS (CONTINUED), INTERPLANTING COMBINATIONS
331      138 CONTINUE
332      C      END OF SUBROUTINE "MZINTR"
333          RETURN
334      END
335      SUBROUTINE BEINTR(ICCASE, IBEG, IFOLDD, ICAS10, IEND)
336      C      DUMMY SUBROUTINE "BEINTR"
337          RETURN
338      END
339      SUBROUTINE RIINTR(ICCASE, IBEG, IFOLDD, ICAS10, IEND)
340      C      DUMMY SUBROUTINE "RIINTR"
341          RETURN
342      END
343      SUBROUTINE MNINTR(ICCASE, IBEG, IFOLDD, ICAS10, IEND)
344      C      DUMMY SUBROUTINE "MNINTR"
345          RETURN
346      END
END OF FILE

```

```

1  $COMPILE
2  C   THIS PROGRAM (CNELINE11) READS DATA FROM CARD TYPE 11 & REFORMATS
3  C   IT WITH ONE ITEM PER RECORD, MAKING THE APPROPRIATE ASSIGNMENTS
4  C   OF LAST CARD VALUES AND NOTES. OUTPUT IS IN TYPE11 FORMAT WITH
5  C   COLUMNS 25-73 BLANK
6  C   INPUT UNITS ARE 7=TYPE11 AND 5=DATAFILE. OUTPUT UNIT IS 3=ONE11.
7  C
8  C   INTEGER NOTE
9  C   INTEGER VAR153,VAR154,VAR155,VAR156,VAR157,VAR158,VAR159,VAR160,
10  C   1VAR161,VAR162,VAR163,VAR164,VAR165,VAR166,VAR167,VAR168,VAR169,
11  C   2VAR170,VAR171,VAR172,VAR173,VAR174,VAR175,VAR176,VAR177,VAR178,
12  C   3VAR179,VAR180,VAR181,VAR182,VAR183
13  C   ABOVE TYPE DECLARATION FOR CARD TYPE 11
14  C   DIMENSION VAR153(20),VAR154(20),VAR155(20),VAR156(20),VAR157(20),
15  C   1VAR158(20),VAR159(20),VAR160(20),VAR161(20),VAR162(20),VAR163(20),
16  C   2VAR164(20),VAR165(20),VAR166(20),VAR167(20),VAR168(20),VAR169(20),
17  C   3VAR170(20),VAR171(20),VAR172(20),VAR173(20),VAR174(20),VAR175(20),
18  C   4VAR176(20),VAR177(20),VAR178(20),VAR179(20),VAR180(20),VAR181(20),
19  C   5VAR182(20),VAR183(20),VAR184(20) , VD1(20), VD2(20)
20  C   READ (5,1071) ICDS11,ICDS9
21  C   1071 FORMAT(1X,I5,I5)
22  C   DO 113 I2=1,ICDS9
23  C   ICDS9 IS THE NUMBER OF CASES (SAME AS NO. OF CARDS OF TYPE 9)
24  C   DOES ONE ITERATION FOR EACH CROP CASE
25  C   DO 100 I1=1,ICDS11
26  C   COUNTS CARDS FOR EACH CASE
27  C   READ (7,1052) VAR153(I1), VD1(I1), VAR154(I1), VD2(I1), VAR155(I1),
28  C   1, VAR156(I1), VAR157(I1), VAR158(I1),VAR159(I1),VAR160(I1),VAR161(I1),VAR162(I1),VAR163(I1),
29  C   21),VAR164(I1),VAR165(I1),VAR166(I1),VAR167(I1),VAR168(I1),
30  C   3VAR169(I1),VAR170(I1),VAR171(I1),VAR172(I1),VAR173(I1),VAR174(I1),
31  C   4VAR175(I1),VAR176(I1),VAR177(I1),VAR178(I1),VAR179(I1),VAR180(I1),
32  C   5VAR181(I1),VAR182(I1),VAR183(I1),VAR184(I1)
33  C   1052 FORMAT(1X,A2, 2(A1, A4), A4, I2, 6(I3, 3A2), 2I2, A3)
34  C   ABOVE FORMAT 1052 FOR CARD TYPE 11
35  C   IF (VAR157(I1) .EQ. 1) GO TO 101
36  C   VAR157 IS THE LAST CARD INDICATOR
37  C   100 CONTINUE
38  C   101 CONTINUE
39  C   ICCASE = I1
40  C   ICCASE IS THE NUMBER OF CARDS FOR THE CASE
41  C   DO 112 I2=1,ICCASE
42  C   DOES ONE ITERATION FOR EACH CARD FOR THE CASE
43  C   IF (VAR162(I2) .GE. 1) GO TO 123
44  C   LASTCD = 1
45  C   GO TO 124
46  C   123 CONTINUE
47  C   LASTCD = 0
48  C   124 CONTINUE
49  C   IF (.NOT.(VAR182(I2) .GE. 2)) GO TO 104
50  C   NOTE = 0
51  C   GO TO 105
52  C   104 CONTINUE
53  C   NOTE = VAR183(I2)
54  C   105 CONTINUE
55  C   WRITE (3,1070) VAR153(I2),VD1(I2),VAR154(I2),VD2(I2),VAR155(I2),
56  C   1VAR156(I2),
57  C   1LASTCD, VAR158(I2),VAR159(I2),VAR160(I2),VAR161(I2),VAR162(I2),
58  C   2NOTE,VAR184(I2)
59  C   1070 FORMAT(2X,A2,2(A1, A4),A4, I2, I3, 3A2, 45X, 2I2, A3)
60

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61      C      ABOVE OUTPUT FORMAT 1070 IS SAME AS CARD 11 WITH COLUMNS 29-73 BLK
62      IF (VAR162(I2) .GE. 1) GO TO 103
63      C      SELECTS ITEMS WITH EXISTING DATA
64      GO TO 102
65      103 CONTINUE
66      IF (VAR166(I2) .GE. 1) GO TO 127
67      LASTCD = 1
68      GO TO 129
69      127 CONTINUE
70      LASTCD = 0
71      129 CONTINUE
72      IF (.NOT.(VAR182(I2) .GE. 3) .AND. VAR182(I2) .NE. 1) GO TO 106
73      C      SELECTS APPROPRIATE NOTES INCLUDING BLANK NOTED ITEM CASES WHERE
74      C      NOTE APPLIES TO ALL ITEMS
75      NOTE = 0
76      GO TO 107
77      106 CONTINUE
78      NOTE = VAR183(I2)
79      107 CONTINUE
80      WRITE (8,1070) VAR153(I2),VD1(I2),VAR154(I2),VD2(I2),VAR155(I2),
81      1VAR156(I2), LASTCD,
82      1VAR162(I2),VAR163(I2),VAR164(I2),VAR165(I2),VAR182(I2),NOTE,
83      2VAR184(I2)
84      IF (VAR166(I2) .GE. 1) GO TO 108
85      GO TO 102
86      108 CONTINUE
87      IF (VAR170(I2) .GE. 1) GO TO 125
88      LASTCD = 1
89      GO TO 126
90      125 CONTINUE
91      LASTCD = 0
92      126 CONTINUE
93      IF (.NOT.(VAR182(I2) .GE. 4) .AND. VAR182(I2) .NE. 2 .AND. VAR182(I
94      12) .NE. 1) GO TO 109
95      NOTE = 0
96      GO TO 110
97      109 CONTINUE
98      NOTE = VAR183(I2)
99      110 CONTINUE
100     WRITE (8,1070) VAR153(I2),VD1(I2),VAR154(I2),VD2(I2),VAR155(I2),
101     1VAR156(I2), LASTCD,
102     1VAR166(I2),VAR167(I2),VAR168(I2),VAR169(I2),VAR182(I2),NOTE,
103     2VAR184(I2)
104     C      WRITES OUT ITEM 3
105     IF (VAR170(I2) .GE. 1) GO TO 111
106     GO TO 102
107     111 CONTINUE
108     IF (VAR174(I2) .GE. 1) GO TO 129
109     LASTCD = 1
110     GO TO 130
111     129 CONTINUE
112     LASTCD = 0
113     130 CONTINUE
114     IF (.NOT.(VAR182(I2) .GE. 5) .AND. VAR182(I2) .NE. 1 .AND. VAR182(
115     1I2) .NE. 2 .AND. VAR182(I2) .NE. 3) GO TO 114
116     NOTE = 0
117     GO TO 115
118     114 CONTINUE
119     NOTE = VAR183(I2)
120     115 CONTINUE

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121      WRITE (8,1070) VAR153(I2),VD1(I2),VAR154(I2),VD2(I2),VAR155(I2),
122      1VAR156(I2), LASTCD,
123      1VAR170(I2),VAR171(I2),VAR172(I2),VAR173(I2),VAR182(I2),NOTE,
124      2VAR184(I2)
125  C      WRITES OUT ITEM 4 INFORMATION
126      IF (VAR174(I2) .GE. 1) GO TO 116
127      GO TO 102
128  116 CONTINUE
129      IF (VAR178(I2) .GE. 1) GO TO 131
130      LASTCD = 1
131      GO TO 132
132  131 CONTINUE
133      LASTCC = 0
134  132 CONTINUE
135      IF (.NOT. (VAR182(I2) .GE. 1 .AND. VAR182(I2) .LE. 4) .AND.
136      1VAR182(I2) .NE. 6) GO TO 117
137      NOTE = 0
138      GO TO 118
139  117 CONTINUE
140      NOTE = VAR183(I2)
141  118 CONTINUE
142      WRITE (8,1070) VAR153(I2),VD1(I2),VAR154(I2),VD2(I2),VAR155(I2),
143      1VAR156(I2), LASTCD,
144      1VAR174(I2),VAR175(I2),VAR176(I2),VAR177(I2),VAR182(I2),NOTE,
145      2VAR184(I2)
146  C      WRITES OUT ITEM 5 INFORMATION
147      IF (VAR178(I2) .GE. 1) GO TO 119
148      GO TO 102
149  119 CONTINUE
150      IF (VAR157(I2) .EQ. 0) GO TO 133
151      LASTCD = 1
152      GO TO 134
153  133 CONTINUE
154      LASTCC = 0
155  134 CONTINUE
156      IF (.NOT. (VAR182(I2) .GE. 1) .AND. VAR182(I2) .LE. 5) GO TO 120
157      NOTE = 0
158      GO TO 121
159  120 CONTINUE
160      NOTE = VAR183(I2)
161  121 CONTINUE
162      WRITE (8,1070) VAR153(I2),VD1(I2),VAR154(I2),VD2(I2),VAR155(I2),
163      1VAR156(I2), LASTCD,
164      1VAR178(I2),VAR179(I2),VAR180(I2),VAR181(I2),VAR182(I2),NOTE,
165      2VAR184(I2)
166  C      WRITES OUT ITEM 6 INFORMATION
167  112 CONTINUE
168  102 CONTINUE
169      DO 122 I4=1,ICCASE
170  C      INITIALIZES ALL CARD11 VARIABLES AT ZERO
171      VAR153(I4) = 0
172      VAR154(I4) = 0
173      VAR155(I4) = 0
174      VAR156(I4) = 0
175      VAR157(I4) = 0
176      VAR158(I4) = 0
177      VAR159(I4) = 0
178      VAR160(I4) = 0
179      VAR161(I4) = 0
180      VAR162(I4) = 0

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```
181          VAR153(I4) = 0
182          VAR164(I4) = 0
183          VAR165(I4) = 0
184          VAR166(I4) = 0
185          VAR167(I4) = 0
186          VAR168(I4) = 0
187          VAR159(I4) = 0
188          VAR170(I4) = 0
189          VAR171(I4) = 0
190          VAR172(I4) = 0
191          VAR173(I4) = 0
192          VAR174(I4) = 0
193          VAR175(I4) = 0
194          VAR176(I4) = 0
195          VAR177(I4) = 0
196          VAR178(I4) = 0
197          VAR179(I4) = 0
198          VAR180(I4) = 0
199          VAR181(I4) = 0
200          VAR182(I4) = 0
201          VAR183(I4) = 0
202          VAR184(I4) = 0
203          122 CCNTINUE
204          113 CCNTINUE
205          RETURN
206          END
207          $DATA
208          $STOP
END OF FILE
```

```

1 C THIS PROGRAM (CNELINE20) REFORMATS DAILY PRECIPITATION DATA (CARD
2 C TYPE 20) WITH ONE CASE (DAY) PERLINE IN THE FILE ONE20. THE FUNCTIO
3 C KDAY5 IS CALLED. NO SPACES ARE HELD FOR MISSING DATA.
4 C INPUT UNITS ARE 5=DATAFILE 6=TYPE20; OUTPUT UNIT IS 7=JNE20
5 C
6 INTEGER VAR301, VAR302, VAR303, VAR304, VAR306, VAR308, VAR310,
7 IVAR312, VAR314, VAR316, VAR318
8 C ABOVE TYPE DECLARATION FOR CARD TYPE 20
9 PEAL*8 VAR305,VAR307,VAR309,VAR311,VAR313,VAR315,
10 I VAR317, PLANKS
11 DATA BLANKS/' '
12 READ (5,1001) ICDS20
13 C ICDS20 IS THE NUMBER OF CARDS OF TYPE 20
14 1001 FORMAT(1X, I5)
15 DO 100 I1=1,ICDS20
16 READ (6,1000) VAR301, VAR302, VAR303, VAR304, VAR305, VAR306,
17 IVAR307, VAR308, VAR309, VAR310, VAR311, VAR312, VAR313, VAR314,
18 IVAR315, VAR316, VAR317, VAR318
19 1000 FORMAT(3X, 3I3, 7(I3, A6), A3)
20 C ABOVE FORMAT 1000 FOR CARD 20
21 IF (VAR305 .EQ. BLANKS) GO TO 9
22 M2 = KDAY5(VAR304, VAR303, VAR302)
23 WRITE (7,1002) VAR301, M2, VAR302, VAR303, VAR304, VAR305, VAR313
24 1002 FORMAT(1X,I3, I6, 3I3, A6, A3)
25 C ABOVE FORMAT 1002 FOR CNE20
26 9 IF (VAR307 .EQ. BLANKS) GO TO 10
27 M2 = KDAY5(VAR306, VAR303, VAR302)
28 WRITE (7,1002) VAR301, M2, VAR302, VAR303, VAR306, VAR307, VAR313
29 10 IF (VAR309 .EQ. BLANKS) GO TO 11
30 M2 = KDAY5(VAR308, VAR303, VAR302)
31 WRITE (7,1002) VAR301, M2, VAR302, VAR303, VAR308, VAR309, VAR313
32 11 IF (VAR311 .EQ. BLANKS) GO TO 12
33 M2 = KDAY5(VAR310, VAR303, VAR302)
34 WRITE (7,1002) VAR301, M2, VAR302, VAR303, VAR310, VAR311, VAR313
35 12 IF (VAR313 .EQ. BLANKS) GO TO 13
36 M2 = KDAY5(VAR312, VAR303, VAR302)
37 WRITE (7,1002) VAR301, M2, VAR302, VAR303, VAR312, VAR313, VAR313
38 13 IF (VAR315 .EQ. BLANKS) GO TO 14
39 M2 = KDAY5(VAR314, VAR303, VAR302)
40 WRITE (7, 1002) VAR301, M2, VAR302, VAR303, VAR314, VAR315, VAR313
41 14 IF (VAR317 .EQ. BLANKS) GO TO 100
42 M2 = KDAY5(VAR316, VAR303, VAR302)
43 WRITE (7, 1002) VAR301, M2, VAR302, VAR303, VAR316, VAR317, VAR318
44 100 CONTINUE
45 END
END OF FILE

```

```

1      C      THIS PROGRAM (ONE21) REFORMATS DAILY EVAPORATION AND INSOLATION
2      C      DATA (CARD TYPE 21) WITH ONE CASE (DAY) PER LINE IN THE FILE ONE21.
3      C      THE FUNCTION KDAY5 IS CALLED. NO SPACES ARE HELD FOR MISSING DATA.
4      C      INPUT UNITS ARE: 5=DATAFILE 6=TYPE21 : OUTPUT UNIT IS 7=ONE21
5      C
6
7      INTEGER VAR320, VAR321, VAR322, VAR323, VAR326, VAR329, VAR332,
8      1VAR335, VAR338
9      C      ABOVE TYPE DECLARATION FOR CARD 21
10     REAL*8 VAR324, VAR327, VAR330, VAR333, VAR336, BLANKS
11     DATA BLANKS/' '
12     READ (5, 2001) ICDS21
13     C      ICDS21 IS THE NUMBER OF CARDS OF TYPE 21
14     2001 FORMAT(1X, I5)
15     DO 200 I1 = 1, ICDS21
16     READ(6, 2000) VAR320, VAR321, VAR322, VAR323, VAR324, VAR325, VAR326,
17     1VAR327, VAR328, VAR329, VAR330, VAR331, VAR332, VAR333, VAR334,
18     2VAR335, VAR336, VAR337, VAR338
19     2000 FORMAT(3X, 3I3, 5(I3, A5, 1X, A4), A3)
20     C      ABOVE FORMAT 2000 FOR CARD TYPE 21
21     IF (VAR324 .EQ. BLANKS) GO TO 20
22     K2 = KDAY5(VAR323, VAR322, VAR321)
23     WRITE (7, 2002) VAR320, K2, VAR321, VAR322, VAR323, VAR324, VAR325,
24     1VAR338
25     2002 FORMAT(1X, I3, I6, 3I3, A5, 1X, A4, A3)
26     C      ABOVE FORMAT 2002 FOR CNE21
27     20 IF (VAR327 .EQ. BLANKS) GO TO 21
28     K2 = KDAY5(VAR326, VAR322, VAR321)
29     WRITE (7, 2002) VAR320, K2, VAR321, VAR322, VAR326, VAR327, VAR323
30     1, VAR333
31     21 IF (VAR330 .EQ. BLANKS) GO TO 22
32     K2 = KDAY5(VAR329, VAR322, VAR321)
33     WRITE (7, 2002) VAR320, K2, VAR321, VAR322, VAR329, VAR330,
34     1VAR331, VAR338
35     22 IF (VAR333 .EQ. BLANKS) GO TO 23
36     K2 = KDAY5(VAR332, VAR322, VAR321)
37     WRITE (7, 2002) VAR320, K2, VAR321, VAR322, VAR332, VAR333,
38     1VAR334, VAR338
39     23 IF (VAR336 .EQ. BLANKS) GO TO 200
40     K2 = KDAY5(VAR335, VAR322, VAR321)
41     WRITE (7, 2002) VAR320, K2, VAR321, VAR322, VAR335, VAR336,
42     1VAR337, VAR338
43     200 CONTINUE
44     END

```

END OF FILE

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1      C      THIS PROGRAM (ONELINE23) READS CARD TYPE 23 DATA AND REFORMATS IT
2      C      WITH ONE ITEM PER RECCRD, MAKING APPROPRIATE ASSIGNMENTS OF LAST
3      C      CARD VALUES. OUTPUT FORMAT IS SAME AS FOR ITEM 1 ONLY OF CARD 23
4      INTEGER VAR366,VAR367,VAR368,VAR369,VAR370,VAR371,VAR372,VAR373,
5      1VAR374,VAR375,VAR376,VAR377,VAR378,VAR379,VAR380,VAR381,VAR382,
6      2VAR383,VAR384,VAR385,VAR386,VAR387,VAR388
7      READ (3,8000) ICDS23
8      8000 FORMAT(1X,I5)
9      DO 900 I2=1,ICDS23
10     READ (7,8001) VAR366,VAR367,VAR368,VAR369,VAR370,VAR371,VAR372,
11     1VAR373,VAR374,VAR375,VAR376,VAR377,VAR378,VAR379,VAR380,VAR381,
12     2VAR382,VAR383,VAR384,VAR385,VAR386,VAR387,VAR388
13     8001 FORMAT(1X, A2, 2(1X,A4), A4, I2, 2(3A3, A2, A3, A2, I2, A2),2A3)
14     IF (VAR385 .GE.1) GO TO 801
15     IF (VAR370 .EQ. 0) GO TO 802
16     LASTCD = 1
17     GO TO 902
18     801 CCNTINUE
19     LASTCD = 0
20     802 CCNTINUE
21     WRITE (8,8002) VAR366,VAR367,VAR368,VAR369,LASTCD, VAR371,
22     1VAR372,VAR373,VAR374,VAR375,VAR376,VAR377,VAR378,VAR387
23     8002 FORMAT(2X, I2,2(1X, A4), A4, I2, 3A3, A2, A3, A2, I2, A2, 20X, A3)
24     IF (LASTCD .EQ. 1) GO TO 800
25     IF (VAR370 .EQ. 1) GO TO 803
26     LASTCD = 0
27     GO TO 804
28     803 CCNTINUE
29     LASTCD = 1
30     804 CCNTINUE
31     WRITE (8,8002) VAR366,VAR367,VAR368,VAR369,LASTCD,VAR379,VAR380,
32     1VAR381,VAR382,VAR383,VAR384,VAR385,VAR386,VAR388
33     800 CCNTINUE
34     RETURN
35     END
36     $DATA
37     $STCP
END OF FILE

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1  $RUN *WATFIV SPRINT=*PRINT* 7=PROFLEDATA 6=*PRINT*
2  $COMPILE LIST
3  C
4  C   THIS PROGRAM ("PROFILEPRINT") WRITES THE INFORMATION FROM THE FILE
5  C   "PROFLEDATA" WITH HEADINGS TO IDENTIFY EACH ITEM. DEVICE REFERENCED IS:
6  C   7=PROFLEDATA. NO SUBROUTINES ARE CALLED
7  C
8  DIMENSION H(20), V194(4), V195(4), V196(4), D24(4), V197(4), D25(4)
9  1), V198(4), D27(4), V200(4), D28(4), V201(4), V202A(4), V202B(4),
10 2 V236(4), V237(4), V238(4), V239(4), D29(4), V240(4), D30(4),
11 3 V241(4), D31(4), V242(4), V243(4), D32(4), V555(4), D26(4),
12 4 V556(4), D33(4), V557(4), D34(4), V558(4), D35(4), V558A(4),
13 5 D36(4), V558B(4), D37(4), V558C(4), D38(4), V558D(4), D39(4),
14 6 V558E(4), V559(4), V560(4), D40(4), C4(4), D41(4), C5(4), C6(4),
15 7 D42(4), C8(4), C9(4), D43(4), C10(4), D44(4), C11(4), C12(4),
16 8 D17(4), V393(4), V394(4), V395(4), V396(4), V404(4)
17 READ (5, 1000) ICDS18
18 FORMAT(1X, 15)
19 C   ICDS18 IS THE NO. OF CASES (= NO. OF CARDS OF TYPE 18)
20 DO 100 I1=1, ICDS18
21 READ (7, 1001) (H(I2), I2=1, 20)
22 1001 FORMAT(20A4)
23 READ (7, 1002) V263, V264, V265, V266, V267, V268, V269, V270,
24 1 V271, V272, V273, V274, V275, V276, V277, V278, V279, V280
25 1002 FORMAT(11X, 2A3, A4, A3, A4, A2, 1X, A4, 3A2, A4, 4(1X, A4), 3A2)
26 C   ABOVE FORMAT 1002 FOR CARD TYPE 18 INFORMATION
27 DO 101 I3=1, 4
28 C   DOES ONE ITERATION FOR EACH POSSIBLE SAMPLE FOR THE PROFILE
29 READ (7, 1003) V194(I3), V195(I3), V196(I3), D24(I3), V197(I3),
30 1 D25(I3), V198(I3),
31 1 D27(I3), V200(I3), D28(I3), V201(I3), V202A(I3), V202B(I3)
32 1003 FORMAT(36X, 3A4, 2(A1, A4), 5X, 2(A1, A4), 2A3)
33 C   ABOVE FORMAT 1003 FOR CARD 13 INFO.
34 READ (7, 1004) V236(I3), V237(I3), V238(I3), V239(I3), D29(I3),
35 1 V240(I3), D30(I3), V241(I3), D31(I3), V242(I3), V243(I3)
36 1004 FORMAT(21X, 4A4, 3(A2, A4), A3)
37 C   ABOVE FORMAT 1004 FOR CARD 16 INFO.
38 READ (7, 1005) D32(I3), V555(I3), D26(I3), V556(I3), D33(I3),
39 1 V557(I3), D34(I3), V558(I3), D35(I3), V558A(I3), D36(I3),
40 2 V558B(I3), D37(I3), V558C(I3), D38(I3), V558D(I3), D39(I3),
41 3 V558E(I3), V559(I3), V560(I3)
42 1005 FORMAT(17X, 9(A1, A4), 12X, 2A3)
43 C   ABOVE FORMAT 1005 FOR CARD 28 INFO.
44 READ (7, 1006) D40(I3), C4(I3), D41(I3), C5(I3), C6(I3), D42(I3),
45 1 C8(I3), C9(I3), D43(I3), C10(I3), D44(I3), C11(I3), C12(I3)
46 1006 FORMAT(17X, 2(A1, A4), A2, 5X, A1, 2A4, A1, A4, A2, 2A4)
47 C   ABOVE FORMAT 1006 FOR SCILCALCS INFO.
48 READ (7, 1007) D17(I3), V393(I3), V394(I3), V395(I3), V396(I3),
49 1 V404(I3)
50 1007 FORMAT(17X, A1, A4, A3, A4, A3, 25X, A3)
51 C   ABOVE FORMAT 1007 FOR CNE24 INFO.
52 101 CONTINUE
53 WRITE (6, 1008) (H(I4), I4=1, 20)
54 1008 FORMAT('1', 20A4)
55 C   ABOVE FORMAT 1008 FOR HEADING
56 WRITE (6, 1009)
57 1009 FORMAT(/ / 1X, 'GLEBA LOT CCLCN- LOCATION CODE USE SOIL SA
58 1MPLE DATE SLOPE ', 4('SAMPLE '), 'NOTES (CT18)', / 1X, 'NO.
59 2 NO. 1ST NO. FRONT DEPTH CODE DEPTH DAY MO YR (8) NO
60 3.(1) NO.(2) NO.(3) NO.(4) (1) (2) (3)')

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61      WRITE (6, 1010) V263, V264, V265, V266, V267, V268, V269, V270,
62      1 V271, V272, V273, V274, V275, V276, V277, V278, V279, V280
63      1010 FORMAT(/ 2X, A3, 3X, A3, 2X, A4, 6X, A3, 3X, A4, 4X, A2, 5X, A4,
64      1 3X, A2, 2(1X, A2), 4X, A4, 5X, 4(A4, 4X), 3(2X, A2))
65      WRITE (6, 1025)
66      1025 FORMAT(/// 1X, 'SAMP.DEPTH PHCS. POTAS. CA++&MG++ NITROGEN A
67      1L+++ PH NOTES CT13 COARSE FINE SILT TOTAL SIO2 AL2O
68      23', / 1X, 'BEGIN END (PPM) (PPM) (ME/100G) (%) (ME/100G
69      3) (1) (2) SAND SAND CLAY')
70      DO 102 I6=1,4
71      WRITE (6, 1026) V194(I6), V195(I6), V196(I6), D24(I6), V197(I6),
72      1025(I6), V198(I6), D26(I6), V556(I6), D27(I6), V200(I6), D28(I6),
73      2V201(I6), V202A(I6), V202B(I6), V236(I6), V237(I6), V238(I6),
74      3 V239(I6), D29(I6), V240(I6), D30(I6), V241(I6)
75      1026 FORMAT(/ 1X, A4, 1X, A4, 3X, A4, 3X, A1, A4, 5X, A1, A4, 6X, A1,
76      1 A4, 5X, A1, A4, 4X, A1, A4, 3X, A3, 2X, A3, 4X, A4, 3X, A4, 2X,
77      2 A4, 2X, A4, 2X, A2, A4, 1X, A2, A4)
78      102 CONTINUE
79      WRITE (6, 1027)
80      1027 FORMAT(/// 2X, 'FE203 NOTE CARBON EXCHANGEABLE BASES(ME/100G)
81      1 H+ AL+++ P205 NOTES CT28 KI KR LATO ORGANIC
82      2', / 9X, 'CT16 (%) NA+ K+ CA++ MG++ (ME/100G)(ME/1
83      300G)(ME/100G) (1) (2) SOL MATTER')
84      DO 103 I7=1,4
85      WRITE(6,1028) D31(I7), V242(I7), V243(I7), D32(I7), V555(I7),
86      1 D33(I7), V557(I7), D34(I7), V558(I7), D35(I7), V558A(I7), D36(I7)
87      2, V558B(I7), D37(I7), V558C(I7), D38(I7), V558D(I7), D39(I7),
88      3 V558E(I7), V559(I7), V560(I7), D40(I7), C4(I7), D41(I7), C5(I7),
89      4 C5(I7), D42(I7), C8(I7)
90      1028 FORMAT(/ 1X, A2, A4, 3X, A2, 3X, A1, A4, 3X, A1, A4, 2X, A1, A4,
91      1 2X, A1, A4, 2X, A1, A4, 4X, A1, A4, 4X, A1, A4, 3X, A1, A4, 6X,
92      2 A3, 2X, A3, 3X, A1, A4, 2X, A1, A4, 4X, A2, 3X, A1, A4)
93      103 CONTINUE
94      WRITE (6, 1029)
95      1029 FORMAT(/// 2X, 'C/N SUM EX. TOT.CAT. PCT. BASE', / 7X, 'BASES
96      1 EXC.CAP. SATURATION')
97      DO 104 I8=1,4
98      WRITE (6, 1030) C9(I8), D43(I8), C10(I8), D44(I8), C11(I8), C12(I8)
99      1)
100     1030 FORMAT(/ 1X, A4, 2X, A1, A4, 4X, A2, A4, 7X, A4)
101     104 CONTINUE
102     100 CONTINUE
103     C      END OF PROGRAM "PRCFLEPRINT"
104     RETURN
105     END
106     $DATA
107     139
108     $STOP
END OF FILE

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1 C
2 C THIS PROGRAM (PRCFILSCRT) SORTS DATA FROM CARD TYPES 18, 13, 16, 28,
3 C AND 24 (ONE CASE PER CARD: ONE24) INTO THE FILE PROFILE DATA ARRANGED
4 $RUN *WATFIV 7=TYPE1 8=TYPE2 9=TYPE6 10=NEW13 PAR=SIZE=40
5 $CCMPFILE
6 CHARACTER*2 VAR492
7 CHARACTER*40 VAR493
8 CHARACTER*37 USE
9 CHARACTER*6 PHCS1, POTAS1, CAMG1, PHOS2, POTAS2, CAMG2
10 INTEGER VAR194, VAR195
11 INTEGER VAR487, VAR490, VAR491, VAR011, VAR006, VAR007,
12 1VAR008, VAR192, VAR193, VAR187, VA202A, VA202B,
13 1VAR002, VAR005, VAR023, VAR186, VAR189, VAR488
14 DIMENSION VAR493(210), VAR490(210), VAR491(210), VAR492(210),
15 1VAR011(1000), VAR006(1000), VAR007(1000), VAR008(1000),
16 2VAR192(1400), VAR193(1400), VAR025(1000), VAR187(1400), VAR194(1400),
17 301, VA202A(1400), VA202B(1400), VAR195(1400), VAR196(1400),
18 1VAR197(1400), VAR198(1400), VAR200(1400), VAR201(1400), VAR002(1000),
19 50), VAR005(1000), VAR023(1000), VAR186(1400), VAR189(1400),
20 5VAR487(210), VAR490(210), IPRNTD(1400)
21 READ (5,8000) ICDS1, ICDS2, ICDS6, ICDS13, ICFOR1
22 8000 FORMAT(1X, 5I5)
23 C ICDS1 IS THE NUMBER OF CARDS OF TYPE1
24 C ICDS2 IS THE NUMBER OF CARDS OF TYPE 2
25 C ICDS6 IS THE NUMBER OF CARDS OF TYPE 6
26 C ICDS13 IS THE NUMBER OF CARDS OF TYPE 13
27 C ICFOR1 IS THE NUMBER OF CARD 13 CARDS WITH FORMAT NO. 1
28 READ (7,100) (VAR002(I), VAR005(I), VAR006(I), VAR007(I), VAR008(I),
29 1VAR011(I), I=1, ICDS1)
30 100 FORMAT(3X, 15, 7X, 14, 13, 12, 10X, 12)
31 C ABOVE FORMAT 100 FOR CARD TYPE 1
32 READ (9,101) (VAR023(I), VAR025(I), I=1, ICDS2)
33 101 FORMAT(3X, 15, 5X, F5.0)
34 C ABOVE FORMAT 101 FOR CARD TYPE 2
35 READ (9,102) (VAR487(I), VAR488(I), VAR490(I), VAR491(I), VAR492(I),
36 1VAR493(I), I=1, ICDS6)
37 102 FORMAT(3X, 14, 12, 2X, 13, 13, A2, 1X, A40)
38 C ABOVE FORMAT 102 FOR CARD TYPE 6
39 IFOR2S = ICFOR1 + 1
40 C IFOR2S IS THE STARTING CARD OF FORMAT 2 IN TYPE13
41 IF (ICFOR1 .EQ. 0) GO TO 900
42 READ(10,103) (VAR186(I), VAR187(I), VAR189(I), VAR192(I), VAR193(I),
43 1VAR194(I), VAR195(I), VAR196(I), VAR197(I), VAR198(I), VAR200(I),
44 1VAR201(I), VA202A(I), VA202B(I), I=1, ICFOR1)
45 103 FORMAT(3X, 15, 14, 5X, 14, 6X, 14, 14, 13, 14, F3.0, F4.0, F4.1, 4X, F4.1, F4.1,
46 112, 12)
47 C ABOVE FORMAT 103 FOR CARD TYPE 13 FORMAT 1
48 900 CONTINUE
49 READ(10,104) (VAR186(I), VAR187(I), VAR189(I), VAR192(I), VAR193(I),
50 1VAR194(I), VAR195(I), VAR196(I), VAR197(I), VAR198(I), VAR200(I), VAR201
51 1(I), VA202A(I), VA202B(I), I=IFOR2S, ICDS13)
52 104 FORMAT(3X, 15, 14, 5X, 14, 5X, 14, 1X, 14, 1X, 13, 14, 1X, F3.0, 1X, F4.0, F5.1
53 1.6X, F4.1, 1X, F4.1, 1X, 12, 1X, 12)
54 C ABOVE FORMAT 104 FOR CARD TYPE 13 FORMAT 2
55 DO 49 IKL = 1, ICDS6
56 IPRNTD(IKL) = 0
57 49 CONTINUE
58 ICOTCT = ICDS6
59 LOCN = 9999
60 DO 22 ICOCNT = 1, ICOTCT

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61      ICUR = 0
62      IHEAD = 0
63      ICT5 =          ICCCNT
64      IF (VAR488(ICT6) .EQ. 1) GO TO 34
65  C    VAR488 IS PROPERTY TYPE, 1 IS SAMPLED COLONIST
66      GO TO 22
67  34  CONTINUE
68      LCCN = VAR437(ICT6)
69  C    VAR437 IS COLONIST NO, LCCN IS LOWEST CN
70      ICUR6 = ICT6
71  C    ICUR6 IS LINE NO WHERE RELEVANT CARD 6 INFO IS LOCATED
72      NOSAMP = 0
73      DO 51 ICHK13 = 1, ICDS13
74  C    CALCULATES NO OF SAMPLES RELEVANT FOR COL BY SCAN OF CARD 13
75      IF (VA202A(ICHK13) .EQ. 5 .OR. VA202B(ICHK13) .EQ. 5) GO TO 51
76  C    SKIPS FAZENAS
77      IF (VA202A(ICHK13) .EQ. 8 .OR. VA202B(ICHK13) .EQ. 9) GO TO 51
78  C    SKIPS REPEATED SERIES
79      IF (VAR149(ICHK13) .NE. LCCN) GO TO 51
80  C    SKIPS ALL COLONISTS OTHER THAN THE LOWEST
81      NOSAMP = NOSAMP + 1
82  51  CONTINUE
83      IF (NOSAMP .EQ. 0) GO TO 600
84      GO TO 601
85  600 CONTINUE
86      GO TO 22
87  601 CONTINUE
88      DO 52 IRUN13 = 1, NOSAMP
89  C    RUNS ITERATIONS FOR EACH SAMPLE RELEVANT TO COLONIST
90      ICURP = 0
91      ICURF = 0
92      LODEPT = 9999
93      LOPRO = 9999
94      IA = 0
95      LOIFN = 9999
96      DO 43 ICT13 = 1, ICDS13
97  C    FINDS LOWEST FN CR PROFILE AND WRITES OUT RESULTS, SCAN CARD 13
98      IF (IPRNTD(ICT13) .EQ. 1) GO TO 364
99  C    SKIPS SAMPLES WITH RESULTS ALREADY PRINTED
100     IF (VA202A(ICT13) .NE. 5 .AND. VA202B(ICT13) .NE. 5) GO TO 44
101  C    SKIPS FAZENAS
102     GO TO 364
103  44  CONTINUE
104     IF (VA202A(ICT13) .EQ. 8 .OR. VA202B(ICT13) .EQ. 9) GO TO 364
105  C    SKIPS REPEATED SERIES SAMPLES
106     IF (VAR189(ICT13) .EQ. LCCN) GO TO 45
107  C    SELECTS CASES FOR LOWEST NUMBERED COLONIST
108     GO TO 364
109  45  CONTINUE
110     IF (VAR186(ICT13) .GE. 1 .AND. VAR186(ICT13) .LE. LOIFN) GO TO 46
111  C    SELECTS LOWEST FN IF IT IS A FIELD
112     IF (VAR187(ICT13) .GE. 1 .AND. VAR187(ICT13) .LE. LOPRO) GO TO 47
113  C    SELECTS LOWEST PROFILE IF IT IS A PROFILE
114     GO TO 364
115  46  CONTINUE
116     LOIFN = VAR186(ICT13)
117     ICURF = ICT13
118  C    SAVES FN AND LINE NO OF LOWEST FIELD
119     GO TO 50
120  47  CONTINUE

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121         IF (VAR187(ICT13) .EQ. LOPRC) GO TO 650
122         LOPRO = VAR187(ICT13)
123     C     SAVES PROFILE NO OF LOWEST PROFILE
124         GO TO 48
125     650 CONTINUE
126         IF (VAR194(ICT13) .LE. LODEPT) GO TO 48
127     C     FINDS PRGFILE SAMPLE WITH SHALLOWEST DEPTH
128         GO TO 50
129     48 CONTINUE
130         ICURP = ICT13
131         LODEPT = VAR194(ICT13)
132     C     SAVES LINE NO AND DEPTH OF SHALLOWEST PROFILE SAMPLE
133         50 CONTINUE
134     364 CONTINUE
135         IF (ICT13 .GE. ICDS13.AND. LOIFN .LT. 9990) GO TO 36
136     C     TRANSFERS TO WRITING IF ALL CARDS READ AND LOWEST FN FOUND
137         IF (ICT13 .GE. ICDS13.AND. LOPRO .LT. 9990 .AND. LODEPT .LT. 9990)
138             GO TO 41
139     C     TRANSFERS TO WRITING IF ALL CARDS READ AND SHALLOWEST SAMPLE OF
140     C     LOWEST PROFILE FOUND
141         GO TO 43
142     36 CONTINUE
143         IA = ICURP
144         LOIFN = 9999
145         GO TO 42
146     41 CONTINUE
147         IA = ICURP
148         LOPRO = 9999
149         LODEPT = 9999
150         ICUR1 = 0
151         ICUR2 = 0
152         GO TO 501
153     42 CONTINUE
154         ICUR1 = 0
155         DO 61 IB = 1, ICDS1
156     C     SCANS CARD TYPE 1
157         IF (VAR002(IB) .EQ. VAR186(IA)) GO TO 62
158         GO TO 61
159     62 ICUR1 = IB
160     C     SAVES LINE NO OF CARD 1 RECCRD FOR THE LOWEST FN
161     61 CONTINUE
162         ICUR2 = 0
163         DO 27 ICT2 = 1, ICDS2
164     C     SCANS CARD TYPE 2
165         IF (VAR023(ICT2) .EQ. VAR186(IA)) GO TO 28
166         GO TO 27
167     28 ICUR2 = ICT2
168     C     SAVES LINE NO OF CARD 2 RECCRD FOR THE LOWEST FN
169     27 CONTINUE
170     501 CONTINUE
171         PHOS1 = ' '
172         POTAS1 = ' '
173         CAMG1 = ' '
174         USE = ' '
175         PHOS2 = ' '
176         POTAS2 = ' '
177         CAMG2 = ' '
178         IF (VAR196(IA) .LE. 10.) GO TO 40
179     C     TESTS FOR LOW PHOSPHORUS
180         GO TO 299

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181      40 PHOS1='BAIXC '
182      299 CONTINUE
183      IF (VAR196(IA) .GT. 10.) GO TO 53
184      C   TESTS FOR MEDIUM-HIGH PHOSPHORUS
185          GO TO 300
186      53 PHOS1='MEDIC-'
187          PHOS2='ALTO'
188      300 CONTINUE
189      IF (VAR197(IA) .LE. 45.) GO TO 54
190      C   TESTS FOR LOW POTASSIUM
191          GO TO 301
192      54 POTAS1='BAIXC '
193      301 CONTINUE
194      IF (VAR197(IA) .GT. 45.) GO TO 55
195      C   TESTS FOR MEDIUM-HIGH POTASSIUM
196          GO TO 302
197      55 PCTAS1='MEDIC-'
198          POTAS2='ALTO'
199      302 CONTINUE
200      IF (VAR198(IA) .LE. 0.9) GO TO 56
201      C   TESTS FOR LOW CALCIUM + MAGNESIUM
202          GO TO 303
203      56 CAMG1='BAIXC '
204      303 CONTINUE
205      IF (VAR198(IA) .GT. 0.9) GO TO 57
206      C   TESTS FOR MEDIUM-HIGH CALCIUM + MAGNESIUM
207          GO TO 304
208      57 CAMG1='MEDIC-'
209          CAMG2='ALTO'
210      304 CONTINUE
211      IF (ICUR1 .EQ. 0) GO TO 362
212      IF (VAR011(ICUR1) .EQ. 1) GO TO 60
213      GO TO 305
214      60 USE='VIRGEM
215      305 CONTINUE
216      IF (VAR011(ICUR1) .EQ. 2) GO TO 63
217      GO TO 306
218      63 USE='RCCADA GL DERRUBADA
219      306 CONTINUE
220      IF (VAR011(ICUR1) .EQ. 3) GO TO 64
221      GO TO 307
222      64 USE='QUEIMADA
223      307 CONTINUE
224      IF (VAR011(ICUR1) .EQ. 4) GO TO 65
225      GO TO 308
226      65 USE='NLA
227      308 CONTINUE
228      IF (VAR011(ICUR1) .EQ. 5) GO TO 66
229      GO TO 309
230      66 USE='CAPOEIRA NOVA
231      309 CONTINUE
232      IF (VAR011(ICUR1) .EQ. 6) GO TO 67
233      GO TO 310
234      67 USE='CAPOEIRA
235      310 CONTINUE
236      IF (VAR011(ICUR1) .EQ. 7) GO TO 68
237      GO TO 311
238      68 USE='APROZ
239      311 CONTINUE
240      IF (VAR011(ICUR1) .EQ. 3 .OR. VAR011(ICUR1) .EQ. 15) GO TO 69

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241      GO TO 312
242      69 USE='ARROZ E MILHO
243      312 CONTINUE
244      IF (VARO11(ICUR1) .EQ. 9 .OR. VARO11(ICUR1) .EQ. 16 .OR. VARO11(ICU
245      191) .EQ. 30) GO TO 70
246      GO TO 313
247      70 USE='ARROZ, MILHO E MANDIOCA
248      313 CONTINUE
249      IF (VARO11(ICUR1) .EQ. 10 .OR. VARO11(ICUR1) .EQ. 29) GO TO 71
250      GO TO 314
251      71 USE='ARROZ E MANDIOCA
252      314 CONTINUE
253      IF (VARO11(ICUR1) .EQ. 11 .OR. VARO11(ICUR1) .EQ. 36) GO TO 72
254      GO TO 315
255      72 USE='ARROZ E CAPIM
256      315 CONTINUE
257      IF (VARO11(ICUR1) .EQ. 12 .OR. VARO11(ICUR1) .EQ. 18 .OR. VARO11(I
258      1CUR1) .EQ. 37) GO TO 73
259      GO TO 316
260      73 USE='ARROZ, MILHO E CAPIM
261      316 CONTINUE
262      IF (VARO11(ICUR1) .EQ. 13) GO TO 74
263      GO TO 317
264      74 USE='ARROZ COM OUTRA CULTURA
265      317 CONTINUE
266      IF (VARO11(ICUR1) .EQ. 14) GO TO 75
267      GO TO 318
268      75 USE='MILHO
269      318 CONTINUE
270      IF (VARO11(ICUR1) .EQ. 17 .OR. VARO11(ICUR1) .EQ. 31) GO TO 76
271      GO TO 319
272      76 USE='MILHO E MANDIOCA
273      319 CONTINUE
274      IF (VARO11(ICUR1) .EQ. 19 .OR. VARO11(ICUR1) .EQ. 35) GO TO 77
275      GO TO 320
276      77 USE='MILHO COM CAPIM
277      320 CONTINUE
278      IF (VARO11(ICUR1) .EQ. 20) GO TO 78
279      GO TO 321
280      78 USE='MILHO COM OUTRA CULTURA
281      321 CONTINUE
282      IF (VARO11(ICUR1) .EQ. 21) GO TO 79
283      GO TO 322
284      79 USE='FEIJAO
285      322 CONTINUE
286      IF (VARO11(ICUR1) .EQ. 22) GO TO 80
287      GO TO 323
288      80 USE='FEIJAO E MILHO SECO
289      323 CONTINUE
290      IF (VARO11(ICUR1) .EQ. 23) GO TO 81
291      GO TO 324
292      81 USE='FEIJAO E MILHO VERDE
293      324 CONTINUE
294      IF (VARO11(ICUR1) .EQ. 24 .OR. VARO11(ICUR1) .EQ. 32) GO TO 82
295      GO TO 325
296      82 USE='FEIJAO E MANDIOCA
297      325 CONTINUE
298      IF (VARO11(ICUR1) .EQ. 25) GO TO 83
299      GO TO 326
300      83 USE='FEIJAO, MILHO SECO, MANDIOCA

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301      326 CONTINUE
302      IF (VAR011(ICUR1) .EQ. 26) GO TO 84
303      GO TO 327
304      84 USE='FEIJAO, MILHO VERDE, MANDIOCA
305      327 CONTINUE
306      IF (VAR011(ICUR1) .EQ. 27) GO TO 85
307      GO TO 328
308      85 USE='FEIJAO COM OUTRO
309      328 CONTINUE
310      IF (VAR011(ICUR1) .EQ. 28) GO TO 86
311      GO TO 329
312      86 USE='MANDIOCA
313      329 CONTINUE
314      IF (VAR011(ICUR1) .EQ. 33) GO TO 87
315      GO TO 330
316      87 USE='MANDIOCA COM OUTRO
317      330 CONTINUE
318      IF (VAR011(ICUR1) .EQ. 34) GO TO 88
319      GO TO 331
320      88 USE='CAPIM SEM GADO
321      331 CONTINUE
322      IF (VAR011(ICUR1) .EQ. 38) GO TO 89
323      GO TO 332
324      89 USE='CAPIM COM CAPOTEIRA
325      332 CONTINUE
326      IF (VAR011(ICUR1) .EQ. 39) GO TO 90
327      GO TO 333
328      90 USE='CAPIM COM OUTRO SEM GADO
329      333 CONTINUE
330      IF (VAR011(ICUR1) .EQ. 40) GO TO 91
331      GO TO 334
332      91 USE='CAPIM COM GADO COM ANIMAL
333      334 CONTINUE
334      IF (VAR011(ICUR1) .EQ. 41) GO TO 92
335      GO TO 335
336      92 USE='CAPIM, OUTRA CULTURA E ANIMAIS
337      335 CONTINUE
338      IF (VAR011(ICUR1) .EQ. 42) GO TO 93
339      GO TO 336
340      93 USE='CANA
341      336 CONTINUE
342      IF (VAR011(ICUR1) .EQ. 43) GO TO 94
343      GO TO 337
344      94 USE='CACAU
345      337 CONTINUE
346      IF (VAR011(ICUR1) .EQ. 44) GO TO 95
347      GO TO 338
348      95 USE='CACAU E BANANA
349      338 CONTINUE
350      IF (VAR011(ICUR1) .EQ. 45) GO TO 96
351      GO TO 339
352      96 USE='CACAU, BANANA E MANDIOCA
353      339 CONTINUE
354      IF (VAR011(ICUR1) .EQ. 46) GO TO 97
355      GO TO 340
356      97 USE='CACAU, BANANA, MANDIOCA, PALHETEIRA
357      340 CONTINUE
358      IF (VAR011(ICUR1) .EQ. 47) GO TO 98
359      GO TO 341
360      98 USE='CACAU, MANDIOCA E PALHETEIRA

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361      341 CONTINUE
362      IF (VAR011(ICUR1) .EQ. 48) GO TO 99
363      GO TO 342
364      99 USE='CACAU COM MANDICCA
365      342 CONTINUE
366      IF (VAR011(ICUR1) .EQ. 49) GO TO 200
367      GO TO 343
368      200 USE='CACAU COM PALHETEIRA
369      343 CONTINUE
370      IF (VAR011(ICUR1) .EQ. 50) GO TO 201
371      GO TO 344
372      201 USE='CACAU COM OUTRA CULTURA
373      344 CONTINUE
374      IF (VAR011(ICUR1) .EQ. 51) GO TO 202
375      GO TO 345
376      202 USE='PIMENTA
377      345 CONTINUE
378      IF (VAR011(ICUR1) .EQ. 52) GO TO 203
379      GO TO 346
380      203 USE='PIMENTA COM OUTRA CULTURA
381      346 CONTINUE
382      IF (VAR011(ICUR1) .EQ. 53) GO TO 204
383      GO TO 347
384      204 USE='CAFE
385      347 CONTINUE
386      IF (VAR011(ICUR1) .EQ. 54) GO TO 205
387      GO TO 348
388      205 USE='CAFE COM OUTRA CULTURA
389      348 CONTINUE
390      IF (VAR011(ICUR1) .EQ. 55) GO TO 206
391      GO TO 349
392      206 USE='FRUTEIRAS
393      349 CONTINUE
394      IF (VAR011(ICUR1) .EQ. 56) GO TO 207
395      GO TO 350
396      207 USE='FRUTEIRAS COM OUTRA CULTURA
397      350 CONTINUE
398      IF (VAR011(ICUR1) .EQ. 57) GO TO 208
399      GO TO 351
400      208 USE='BANANA
401      351 CONTINUE
402      IF (VAR011(ICUR1) .EQ. 58) GO TO 209
403      GO TO 352
404      209 USE='BANANA COM OUTRA CULTURA
405      352 CONTINUE
406      IF (VAR011(ICUR1) .EQ. 59) GO TO 210
407      GO TO 353
408      210 USE='OUTRA CULTURA ANUAL
409      353 CONTINUE
410      IF (VAR011(ICUR1) .EQ. 60) GO TO 211
411      GO TO 354
412      211 USE='OUTRA CULTURA PERENE
413      354 CONTINUE
414      IF (VAR011(ICUR1) .EQ. 61) GO TO 212
415      GO TO 355
416      212 USE='OUTRA PERENE COM ANUAL
417      355 CONTINUE
418      IF (VAR011(ICUR1) .EQ. 62) GO TO 213
419      GO TO 356
420      213 USE='PALHETEIRA

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421      356 CONTINUE
422      IF (VAR011(ICUR1) .EQ. 63) GO TO 214
423      GO TO 357
424      214 USE='ALGODAO'
425      357 CONTINUE
426      IF (VAR011(ICLR1) .EQ. 64) GO TO 215
427      GO TO 358
428      215 USE='ABACAXI'
429      358 CONTINUE
430      IF (VAR011(ICUR1) .EQ. 65) GO TO 216
431      GO TO 359
432      216 USE='SCJA'
433      359 CONTINUE
434      IF (VAR011(ICUR1) .EQ. 66) GO TO 217
435      GO TO 360
436      217 USE='FUMO'
437      360 CONTINUE
438      IF (VAR011(ICUR1) .EQ. 67) GO TO 218
439      GO TO 361
440      218 USE='CURRAL PARA GADC'
441      361 CONTINUE
442      IF (VAR011(ICUR1) .EQ. 68) GO TO 219
443      GO TO 362
444      219 USE='BATATA DOCE'
445      362 CONTINUE
446      43 CONTINUE
447      IF(IHEAD .EQ. 1) GO TO 363
448      WRITE (6,1000)
449      WRITE (6,1001) VAR487(ICUR6),VAR493(ICUR6),VAR490(ICUR6),VAR491(IC
450      IUR6),VAR492(ICUR6)
451      WRITE (6,1002)
452      IHEAD = 1
453      363 CONTINUE
454      IF (VAR186(IA) .GE. 1) GO TO 400
455      GO TO 401
456      400 CONTINUE
457      WRITE (6,1003) USE, VAR194(IA),VAR195(IA),VAR006(ICUR1),
458      LVAP007(ICUR1),VAR008(ICUR1),VAR192(IA),VAR193(IA),VAR025(ICUR2),
459      LVAR196(IA),VAR197(IA),VAR198(IA),VAR200(IA),VAR201(IA),PHOS1,
460      IPOTAS1,CAMG1,PHOS2,PCTAS2,CAMG2
461      GO TO 402
462      401 CONTINUE
463      WRITE (6,1031) VAR187(IA),VAR194(IA),VAR195(IA),VAR192(IA),VAR193(
464      1IA),VAR196(IA),VAR197(IA),VAR198(IA),VAR200(IA),VAR201(IA),PHOS1,
465      IPOTAS1,CAMG1,PHOS2,PCTAS2,CAMG2
466      402 CONTINUE
467      IPRNTD(IA) = 1
468      52 CONTINUE
469      22 CONTINUE
470      1000 FORMAT('1',40X,'RESULTADOS DE AMOSTRAS DE SOLO DA TRANSAMAZONICA'/
471      1//)
472      1001 FORMAT(4X,I4,20X,A40//4X,'GL:',I3,2X,'LT:',I3,A2//)
473      1002 FORMAT(13X,'USC DA TERRA',13X,'PER-',3X,'PROFUN-',3X,'DATA DA',5X,
474      1'CODIGO',6X,'DECL-',2X,'FCS-',4X,'POTAS-',1X,'CALCIO +',1X,
475      1'ALUM-',5X,'PH'/38X,'FIL',4X,'DIDADE',4X,'AMOSTRA',5X,'LOCAL',7X,
476      1'IVE',4X,'FORC',4X,'SIC',4X,'MAGNESIO',1X,'INIO'//)
477      1003 FORMAT(1X,A37,4X,2X,I3,'-',I5,2X,I3,'/',I2,'/',I2,1X,I4,'/',I5,2X,
478      1F4.0,'%',2X,2X,F4.0,4X,F4.0,4X,F4.1,4X,F4.1,4X,F4.1/86X,A6,2X,A6,
479      12X,A6/86X,
480      1A4,4X,A4,4X,A4//)

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481      1031 FORMAT(15X,'(PERFIL)',15X,I4,2X,I3,'-',I5,12X, I4,'/',I5,11X,F4.0,
482      14X,F4.0,4X,F4.1,4X,F4.1,4X,F4.1/ 86X,A6,2X,A6,2X,A6/ 86X,A4,4X,
483      1A4,4X,A4//)
484      RETURN
485      END
486      $CATA
487      903  903  195  170    0      (DATA FOR RESPROG)
488      $STOP
489
END OF FILE

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1 $RUN *WATFIV 7=TYPE1 8=TYPE2 9=TYPE6 10=NEW13 PAR=SIZE=40
2 $CCMPLE
3 CHARACTER*2 VAR492
4 CHARACTER*40 VAR493
5 CHARACTER*37 USE
6 CHARACTER*6 PHOS1, POTAS1, CAMG1, PHOS2, POTAS2, CAMG2
7 INTEGER VAR194, VAR195
8 INTEGER VAR497, VAR490,VAR491, VAR011,VAR006,VAR007,
9 1VAR008,VAR192,VAR193,VAR187,VA202A, VA202B,
10 1VAR002,VAR005,VAR023,VAR186,VAR189,VAR488
11 DIMENSION VAR493(210),VAR490(210),VAR491(210), VAR492(210),
12 1VAR011(1000), VAR006(1000), VAR007(1000), VAR008(1000),
13 2VAR192(1400), VAR193(1400), VAR025(1000), VAR187(1400), VAR194(140
14 30), VA202A(1400), VA202B(1400), VAR195(1400), VAR196(1400),
15 1VAR197(1400), VAR198(1400), VAR200(1400), VAR201(1400), VAR002(100
16 50), VAR005(1000), VAR023(1000), VAR186(1400), VAR189(1400),
17 6VAR437(210), VAR488(210), IPRNTD(1400)
18 READ (5,8000) ICDS1, ICDS2, ICDS6, ICDS13, ICFOR1
19 8000 FORMAT(1X, 5I5)
20 C ICDS1 IS THE NUMBER OF CARDS OF TYPE 1
21 C ICDS2 IS THE NUMBER OF CARDS OF TYPE 2
22 C ICDS6 IS THE NUMBER OF CARDS OF TYPE 6
23 C ICDS13 IS THE NUMBER OF CARDS OF TYPE 13
24 C ICFOR1 IS THE NUMBER OF CARD 13 CARDS WITH FORMAT NO. 1
25 READ (7,100)(VAR002(I),VAR005(I),VAR006(I),VAR007(I),VAR008(I),
26 1VAR011(I), I=1,ICDS1)
27 100 FORMAT(3X,15,7X,14,13,12,12,10X,12)
28 C ABOVE FORMAT 100 FOR CARD TYPE 1
29 READ (8,101)(VAR023(I),VAR025(I), I=1,ICDS2)
30 101 FORMAT(3X,15,5X,F5.0)
31 C ABOVE FORMAT 101 FOR CARD TYPE 2
32 READ (9,102)(VAR487(I),VAR488(I),VAR490(I),VAR491(I),VAR492(I),
33 1VAR493(I), I=1,ICDS6)
34 102 FORMAT(3X,14,12,2X,13,13,A2,1X,A40)
35 C ABOVE FORMAT 102 FOR CARD TYPE 6
36 ICFOR2 = ICFOR1 + 1
37 C ICFOR2 IS THE STARTING CARD OF FORMAT 2 IN TYPE13
38 IF (ICFOR1.EQ. 0) GO TO 900
39 READ(10,103)(VAR186(I),VAR187(I),VAR189(I),VAR192(I),VAR193(I),
40 1VAR194(I),VAR195(I),VAR196(I),VAR197(I),VAR198(I),VAR200(I),
41 1VAR201(I),VA202A(I),VA202B(I),I=1,ICFOR1)
42 103 FORMAT(3X,15,14,5X,14,6X,14,14,13,14,F3.0,F4.0,F4.1,4X,F4.1,F4.1,
43 112,12)
44 C ABOVE FORMAT 103 FOR CARD TYPE 13 FORMAT 1
45 900 CONTINUE
46 READ(10,104)(VAR186(I),VAR187(I),VAR189(I),VAR192(I),VAR193(I),
47 1VAR194(I),VAR195(I),VAR196(I),VAR197(I),VAR198(I),VAR200(I),VAR201
48 1(I),VA202A(I),VA202B(I),I=1,ICFOR2, ICDS13)
49 104 FORMAT(3X,15,14,5X,14,6X,14,1X,14,1X,13,14,1X,F3.0,1X,F4.0, F5.1
50 1,6X,F4.1,1X,F4.1,1X,12,1X,12)
51 C ABOVE FORMAT 104 FOR CARD TYPE 13 FORMAT 2
52 DO 49 IKL = 1,ICDS6
53 IPRNTD(IKL) = 0
54 49 CONTINUE
55 ICOTOT = ICDS6
56 LOCN = 9999
57 DO 22 ICOCNT = 1,ICOTOT
58 ICUR = 0
59 IHEAD = 0
60 ICT6 = ICCCNT

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61      IF(VAR489(ICT6) .EQ. 1) GO TO 34
62      C      VAR489 IS PROPERTY TYPE, 1 IS SAMPLED COLONIST
63      GO TO 22
64      34 CONTINUE
65      LCCN = VAR487(ICT6)
66      C      VAR487 IS COLONIST NC, LCCN IS LOWEST CN
67      ICUR6 = ICT6
68      C      ICUR6 IS LINE NO WHERE RELEVANT CARD 6 INFO IS LOCATED
69      NOSAMP = 0
70      DO 51 ICHK13 = 1, ICDS13
71      C      CALCULATES NO OF SAMPLES RELEVANT FOR COL BY SCAN OF CARD 13
72      IF (VA202A(ICHK13) .EQ. 5 .OR. VA202B(ICHK13) .EQ. 5) GO TO 51
73      C      SKIPS FAZENDAS
74      IF (VA202A(ICHK13) .EQ. 8 .OR. VA202B(ICHK13) .EQ. 8) GO TO 51
75      C      SKIPS REPEATED SERIES
76      IF (VAR189(ICHK13) .NE. LCCN) GO TO 51
77      C      SKIPS ALL COLONISTS OTHER THAN THE LOWEST
78      NOSAMP = NOSAMP + 1
79      51 CONTINUE
80      IF (NCSAMP .EQ. 0) GO TO 600
81      GO TO 601
82      600 CONTINUE
83      GO TO 22
84      601 CONTINUE
85      DO 52 IRUN13 = 1, NCSAMP
86      C      RUNS ITERATIONS FOR EACH SAMPLE RELEVANT TO COLONIST
87      ICURP = 0
88      ICURF = 0
89      LODEPT = 9999
90      LOPRO = 9999
91      IA = 0
92      LOIFN = 9999
93      DO 43 ICT13 = 1, ICDS13
94      C      FINDS LOWEST FN OR PROFILE AND WRITES OUT RESULTS, SCAN CARD 13
95      IF (IPRNTD(ICT13) .EQ. 1) GO TO 364
96      C      SKIPS SAMPLES WITH RESULTS ALREADY PRINTED
97      IF (VA202A(ICT13) .NE. 5 .AND. VA202B(ICT13) .NE. 5) GO TO 44
98      C      SKIPS FAZENDAS
99      GO TO 364
100     44 CONTINUE
101     IF (VA202A(ICT13) .EQ. 8 .OR. VA202B(ICT13) .EQ. 8) GO TO 364
102     C      SKIPS REPEATED SERIES SAMPLES
103     IF (VAR189(ICT13) .EQ. LCCN) GO TO 45
104     C      SELECTS CASES FOR LOWEST NUMBERED COLONIST
105     GO TO 364
106     45 CONTINUE
107     IF (VAR186(ICT13) .GE. 1 .AND. VAR186(ICT13) .LE. LOIFN) GO TO 45
108     C      SELECTS LOWEST FN IF IT IS A FIELD
109     IF (VAR187(ICT13) .GE. 1 .AND. VAR187(ICT13) .LE. LOPRO) GO TO 47
110     C      SELECTS LOWEST PROFILE IF IT IS A PROFILE
111     GO TO 364
112     46 CONTINUE
113     LOIFN = VAR186(ICT13)
114     ICURF = ICT13
115     C      SAVES FN AND LINE NO OF LOWEST FIELD
116     GO TO 50
117     47 CONTINUE
118     IF (VAR187(ICT13) .EQ. LOPRO) GO TO 650
119     LOPRO = VAR187(ICT13)
120     C      SAVES PROFILE NO OF LOWEST PROFILE

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121      GO TO 48
122      650 CONTINUE
123      IF (VAR194(ICT13) .LE. LODEPT) GO TO 48
124      C   FINDS PROFILE SAMPLE WITH SHALLOWEST DEPTH
125      GO TO 50
126      48 CONTINUE
127      ICURP = ICT13
128      LODEPT = VAR194(ICT13)
129      C   SAVES LINE NO AND DEPTH OF SHALLOWEST PROFILE SAMPLE
130      50 CONTINUE
131      364 CONTINUE
132      IF (ICT13 .GE. ICDS13.AND. LOIFN .LT. 9990) GO TO 36
133      C   TRANSFERS TO WRITING IF ALL CARDS READ AND LOWEST FN FOUND
134      IF (ICT13 .GE. ICDS13.AND. LOPRO .LT. 9990 .AND. LODEPT .LT. 9990)
135      1GO TO 41
136      C   TRANSFERS TO WRITING IF ALL CARDS READ AND SHALLOWEST SAMPLE OF
137      C   LOWEST PROFILE FOUND
138      GO TO 43
139      36 CONTINUE
140      IA = ICURP
141      LOIFN = 9999
142      GO TO 42
143      41 CONTINUE
144      IA = ICURP
145      LOPRO = 9999
146      LODEPT = 9999
147      ICUR1 = 0
148      ICUR2 = 0
149      GO TO 501
150      42 CONTINUE
151      ICUR1 = 0
152      DO 61 I8 = 1,ICDS1
153      C   SCANS CARD TYPE 1
154      IF (VAR002(I8) .EQ. VAR186(IA)) GO TO 62
155      GO TO 61
156      62 ICUR1 = I8
157      C   SAVES LINE NO OF CARD 1 RECORD FOR THE LOWEST FN
158      51 CONTINUE
159      ICUR2 = 0
160      DO 27 IICT2 = 1,ICDS2
161      C   SCANS CARD TYPE 2
162      IF (VAR023(IICT2) .EQ. VAR186(IA)) GO TO 28
163      GO TO 27
164      28 ICUR2 = IICT2
165      C   SAVES LINE NO OF CARD 2 RECORD FOR THE LOWEST FN
166      27 CONTINUE
167      501 CONTINUE
168      PHOS1 = '      '
169      POTAS1 = '      '
170      CAMG1 = '      '
171      USE = '      '
172      PHOS2 = '      '
173      POTAS2 = '      '
174      CAMG2 = '      '
175      IF (VAR196(IA) .LE. 10.) GO TO 40
176      C   TESTS FOR LOW PHOSPHORUS
177      GO TO 299
178      40 PHOS1='BAIXC '
179      299 CONTINUE
180      IF (VAR196(IA) .GT. 10.) GO TO 53

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181 C TESTS FOR MEDIUM-HIGH PHOSPHORUS
182 GO TO 300
183 53 PHOS1='MEDIC-'
184 PHOS2='ALTO'
185 300 CONTINUE
186 IF (VAR197(IA) .LE. 45.) GO TO 54
187 C TESTS FOR LOW POTASSIUM
188 GO TO 301
189 54 POTAS1='BAIXO '
190 301 CONTINUE
191 IF (VAR197(IA) .GT. 45.) GO TO 55
192 C TESTS FOR MEDIUM-HIGH POTASSIUM
193 GO TO 302
194 55 POTAS1='MEDIC-'
195 POTAS2='ALTO'
196 302 CONTINUE
197 IF (VAR198(IA) .LE. 0.9) GO TO 56
198 C TESTS FOR LOW CALCIUM + MAGNESIUM
199 GO TO 303
200 56 CAMG1='BAIXO '
201 303 CONTINUE
202 IF (VAR198(IA) .GT. 0.9) GO TO 57
203 C TESTS FOR MEDIUM-HIGH CALCIUM + MAGNESIUM
204 GO TO 304
205 57 CAMG1='MEDIC-'
206 CAMG2='ALTO'
207 304 CONTINUE
208 IF (ICUR1 .EQ. 0) GO TO 362
209 IF (VAR011(ICUR1) .EQ. 1) GO TO 60
210 GO TO 305
211 60 USE='VIRGEM'
212 305 CONTINUE
213 IF (VAR011(ICUR1) .EQ. 2) GO TO 63
214 GO TO 306
215 63 USE='ROCCACA OU DERRUBADA'
216 306 CONTINUE
217 IF (VAR011(ICUR1) .EQ. 3) GO TO 64
218 GO TO 307
219 64 USE='QUEIMADA'
220 307 CONTINUE
221 IF (VAR011(ICUR1) .EQ. 4) GO TO 65
222 GO TO 308
223 65 USE='NUA'
224 308 CONTINUE
225 IF (VAR011(ICUR1) .EQ. 5) GO TO 66
226 GO TO 309
227 66 USE='CAPOEIRA NOVA'
228 309 CONTINUE
229 IF (VAR011(ICUR1) .EQ. 6) GO TO 67
230 GO TO 310
231 67 USE='CAPOEIRA'
232 310 CONTINUE
233 IF (VAR011(ICUR1) .EQ. 7) GO TO 68
234 GO TO 311
235 68 USE='APROZ'
236 311 CONTINUE
237 IF (VAR011(ICUR1) .EQ. 8 .OR. VAR011(ICUR1) .EQ. 15) GO TO 69
238 GO TO 312
239 69 USE='APROZ E MILHO'
240 312 CONTINUE

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241         IF (VAR011(ICUR1) .EQ. 9 .OR. VAR011(ICUR1).EQ. 16 .OR. VAR011(ICJ
242         1R1) .EQ. 30) GO TO 70
243         GO TO 313
244         70 USE='ARROZ, MILHO E MANDICCA
245     313 CONTINUE
246         IF (VAR011(ICUR1) .EQ. 10 .OR. VAR011(ICUR1).EQ. 29) GO TO 71
247         GO TO 314
248         71 USE ='ARRCZ E MANDICCA
249     314 CONTINUE
250         IF (VAR011(ICUR1) .EQ. 11 .OR. VAR011(ICUR1) .EQ. 36) GO TO 72
251         GO TO 315
252         72 USE='ARROZ E CAPIM
253     315 CONTINUE
254         IF (VAR011(ICUR1) .EQ. 12 .OR. VAR011(ICUR1) .EQ. 18 .OR. VAR011(I
255         ICUR1) .EQ. 37) GO TO 73
256         GO TO 316
257         73 USE='ARROZ, MILHO E CAPIM
258     316 CONTINUE
259         IF (VAR011(ICUR1) .EQ. 13) GO TO 74
260         GO TO 317
261         74 USE='ARROZ COM OUTRA CULTURA
262     317 CONTINUE
263         IF (VAR011(ICUR1) .EQ. 14) GO TO 75
264         GO TO 318
265         75 USE='MILHO
266     318 CONTINUE
267         IF (VAR011(ICUR1) .EQ. 17 .OR. VAR011(ICUR1) .EQ. 31) GO TO 76
268         GO TO 319
269         76 USE='MILHO E MANDICCA
270     319 CONTINUE
271         IF (VAR011(ICUR1) .EQ. 19 .OR. VAR011(ICUR1) .EQ. 35) GO TO 77
272         GO TO 320
273         77 USE='MILHO COM CAPIM
274     320 CONTINUE
275         IF (VAR011(ICUR1) .EQ. 20) GO TO 78
276         GO TO 321
277         78 USE='MILHO COM OUTRA CULTURA
278     321 CONTINUE
279         IF (VAR011(ICUR1) .EQ.21) GO TO 79
280         GO TO 322
281         79 USE='FEIJAO
282     322 CONTINUE
283         IF (VAR011(ICUR1) .EQ. 22) GO TO 80
284         GO TO 323
285         80 USE='FEIJAO E MILHO SECC
286     323 CONTINUE
287         IF (VAR011(ICUR1) .EQ. 23) GO TO 81
288         GO TO 324
289         81 USE ='FEIJAO E MILHO VERDE
290     324 CONTINUE
291         IF (VAR011(ICUR1) .EQ. 24 .OR. VAR011(ICUR1) .EQ. 32) GO TO 82
292         GO TO 325
293         82 USE='FEIJAO E MANDICCA
294     325 CONTINUE
295         IF (VAR011(ICUR1) .EQ. 25) GO TO 83
296         GO TO 326
297         83 USE ='FEIJAO, MILHO SECC, MANDICCA
298     326 CONTINUE
299         IF (VAR011(ICUR1) .EQ. 26) GO TO 84
300         GO TO 327

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301      84 USE='FEIJAO, MILHO VERDE, MANDIOCA      '
302 327 CONTINUE
303      IF (VAR011(ICUR1) .EQ. 27) GO TO 85
304      GO TO 328
305      85 USE='FEIJAO COM OUTRO
306 328 CONTINUE
307      IF (VAR011(ICUR1) .EQ. 28) GO TO 86
308      GO TO 329
309      86 USE='MANDIOCA
310 329 CONTINUE
311      IF (VAR011(ICUR1) .EQ. 33) GO TO 87
312      GO TO 330
313      87 USE='MANDIOCA COM OUTRO
314 330 CONTINUE
315      IF (VAR011(ICUR1) .EQ. 34) GO TO 88
316      GO TO 331
317      88 USE='CAPIM SEM GADO
318 331 CONTINUE
319      IF (VAR011(ICUR1) .EQ. 38) GO TO 89
320      GO TO 332
321      89 USE='CAPIM COM CAPCEIRA
322 332 CONTINUE
323      IF (VAR011(ICUR1) .EQ. 39) GO TO 90
324      GO TO 333
325      90 USE='CAPIM COM OUTRO SEM GADO
326 333 CONTINUE
327      IF (VAR011(ICUR1) .EQ. 40) GO TO 91
328      GO TO 334
329      91 USE='CAPIM COM GADO COM ANIMAL
330 334 CONTINUE
331      IF (VAR011(ICUR1) .EQ. 41) GO TO 92
332      GO TO 335
333      92 USE='CAPIM, OUTRA CULTURA E ANIMAIS
334 335 CONTINUE
335      IF (VAR011(ICUR1) .EQ. 42) GO TO 93
336      GO TO 336
337      93 USE='CANA
338 336 CONTINUE
339      IF (VAR011(ICUR1) .EQ. 43) GO TO 94
340      GO TO 337
341      94 USE='CACAU
342 337 CONTINUE
343      IF (VAR011(ICUR1) .EQ. 44) GO TO 95
344      GO TO 338
345      95 USE='CACAU E BANANA
346 338 CONTINUE
347      IF (VAR011(ICUR1) .EQ. 45) GO TO 96
348      GO TO 339
349      96 USE='CACAU, BANANA E MANDIOCA
350 339 CONTINUE
351      IF (VAR011(ICUR1) .EQ. 46) GO TO 97
352      GO TO 340
353      97 USE='CACAU, BANANA, MANDIOCA, PALHETEIRA
354 340 CONTINUE
355      IF (VAR011(ICUR1) .EQ. 47) GO TO 98
356      GO TO 341
357      98 USE='CACAU, MANDIOCA E PALHETEIRA
358 341 CONTINUE
359      IF (VAR011(ICUR1) .EQ. 48) GO TO 99
360      GO TO 342

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361      99 USE='CACAU COM MANDIOCA
362      342 CONTINUE
363      IF (VAR011(ICUR1) .EQ. 49) GO TO 200
364      GO TO 343
365      200 USE='CACAU COM PALHETEIRA
366      343 CONTINUE
367      IF (VAR011(ICUR1) .EQ. 50) GO TO 201
368      GO TO 344
369      201 USE='CACAU COM OUTRA CULTURA
370      344 CONTINUE
371      IF (VAR011(ICUR1) .EQ. 51) GO TO 202
372      GO TO 345
373      202 USE='PIMENTA
374      345 CONTINUE
375      IF (VAR011(ICUR1) .EQ. 52) GO TO 203
376      GO TO 346
377      203 USE='PIMENTA COM OUTRA CULTURA
378      346 CONTINUE
379      IF (VAR011(ICUR1) .EQ. 53) GO TO 204
380      GO TO 347
381      204 USE='CAFE
382      347 CONTINUE
383      IF (VAR011(ICUR1) .EQ. 54) GO TO 205
384      GO TO 348
385      205 USE='CAFE COM OUTRA CULTURA
386      348 CONTINUE
387      IF (VAR011(ICUR1) .EQ. 55) GO TO 206
388      GO TO 349
389      206 USE='FRUTEIRAS
390      349 CONTINUE
391      IF (VAR011(ICUR1) .EQ. 56) GO TO 207
392      GO TO 350
393      207 USE='FRUTEIRAS COM OUTRA CULTURA
394      350 CONTINUE
395      IF (VAR011(ICUR1) .EQ. 57) GO TO 208
396      GO TO 351
397      208 USE='BANANA
398      351 CONTINUE
399      IF (VAR011(ICUR1) .EQ. 58) GO TO 209
400      GO TO 352
401      209 USE='BANANA COM OUTRA CULTURA
402      352 CONTINUE
403      IF (VAR011(ICUR1) .EQ. 59) GO TO 210
404      GO TO 353
405      210 USE='OUTRA CULTURA ANUAL
406      353 CONTINUE
407      IF (VAR011(ICUR1) .EQ. 60) GO TO 211
408      GO TO 354
409      211 USE='OUTRA CULTURA PERENE
410      354 CONTINUE
411      IF (VAR011(ICUR1) .EQ. 61) GO TO 212
412      GO TO 355
413      212 USE='OUTRA PERENE COM ANUAL
414      355 CONTINUE
415      IF (VAR011(ICUR1) .EQ. 62) GO TO 213
416      GO TO 356
417      213 USE='PALHETEIRA
418      356 CONTINUE
419      IF (VAR011(ICUR1) .EQ. 63) GO TO 214
420      GO TO 357

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421      214 USE='ALGODAO
422      357 CONTINUE
423      IF (VAR011(ICUR1) .EQ. 64) GO TO 215
424      GO TO 358
425      215 USE='ABACAXI
426      358 CONTINUE
427      IF (VAR011(ICUR1) .EQ. 65) GO TO 216
428      GO TO 359
429      216 USE='SOJA
430      359 CONTINUE
431      IF (VAR011(ICUR1) .EQ. 66) GO TO 217
432      GO TO 360
433      217 USE='FUMO
434      360 CONTINUE
435      IF (VAR011(ICUR1) .EQ. 67) GO TO 218
436      GO TO 361
437      218 USE='CLRRAL PARA GADC
438      361 CONTINUE
439      IF (VAR011(ICUR1) .EQ. 68) GO TO 219
440      GO TO 362
441      219 USE='PATATA DOCE
442      362 CONTINUE
443      43 CONTINUE
444      IF (IHEAD .EQ. 1) GO TO 363
445      WRITE (6,1000)
446      WRITE (6,1001) VAR487(ICUR6),VAR493(ICUR6),VAR490(ICUR6),VAR491(IC
447      IUR6),VAR492(ICUR6)
448      WRITE (6,1002)
449      IHEAD = 1
450      363 CONTINUE
451      IF (VAR186(IA) .GE. 1) GO TO 400
452      GO TO 401
453      400 CONTINUE
454      WRITE (6,1003) USE, VAR194(IA),VAR195(IA),VAR006(ICUR1),
455      IVAR007(ICUR1),VAR008(ICUR1),VAR192(IA),VAR193(IA),VAR025(ICUR2),
456      IVAR196(IA),VAR197(IA),VAR198(IA),VAR200(IA),VAR201(IA),PHOS1,
457      IPOTAS1,CAMG1,PHOS2,PCTAS2,CAMG2
458      GO TO 402
459      401 CONTINUE
460      WRITE (6,1031) VAR187(IA),VAR194(IA),VAR195(IA),VAR192(IA),VAR193(
461      IA),VAR196(IA),VAR197(IA),VAR198(IA),VAR200(IA),VAR201(IA),PHOS1,
462      IPOTAS1,CAMG1,PHOS2,PCTAS2,CAMG2
463      402 CONTINUE
464      IPRNTC(IA) = 1
465      52 CONTINUE
466      22 CONTINUE
467      1000 FORMAT('1',40X,'RESULTADOS DE AMOSTRAS DE SOLO DA TRANSAMAZONICA'/
468      1//)
469      1001 FORMAT(4X,I4,20X,A40/4X,'GL:',I3,2X,'LT:',I3,A2//)
470      1002 FORMAT(13X,'USO DA TERRA',13X,'PER-',3X,'PROFUN-',3X,'DATA DA',5X,
471      1'CODIGO',6X,'DEGL-',2X,'FCS-',4X,'POTAS-',1X,'CALCIO +',1X,
472      1'ALUM-',5X,'PH'/38X,'FIL',4X,'DIDADE',4X,'AMOSTRA',5X,'LOCAL',7X,
473      1'IVE',4X,'FORC',4X,'SIC',4X,'MAGNESIO',1X,'INIO'//)
474      1003 FORMAT(1X,A37,4X,2X,I3,'-',I5,2X,I3,'/',I2,'/',I2,1X,I4,'/',I5,2X,
475      1F4.0,'%',2X,2X,F4.0,4X,F4.0,4X,F4.1,4X,F4.1,4X,F4.1/86X,A6,2X,A6,
476      12X,A6/86X,
477      1A4,4X,A4,4X,A4//)
478      1031 FORMAT(15X,'(PERFIL)',15X,I4,2X,I3,'-',I5,12X, 14,'/',I5,11X,F4.0,
479      14X,F4.0,4X,F4.1,4X,F4.1,4X,F4.1/ 86X,A6,2X,A6,2X,A6/ 86X,A4,4X,
480      1A4,4X,A4//)

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```
481          RETURN
482          END
483          $DATA
484          903  903  195  170    0      (DATA FOR RESPROG)
485          $STOP
END OF FILE
```

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1      SUBROUTINE RIINTR(ICCASE,IBEG,IFOLDD,ICAS10,IEND)
2      C      THIS SUBROUTINE (RIINTR) TABULATES INTERPLANTING DATA WHERE RICE
3      C      IS THE PRINCIPAL CROP. ARGUMENTS ARE ICCASE: THE NUMBER OF CARDS
4      C      FOR CASE IN "K" ARRAY; IBEG: THE DAYS SINCE 1900 FOR RICE PLANTING;
5      C      IFOLDD: THE DAYS SINCE 1900 FOR INTERPLANTED MAIZE FOLDING;
6      C      AND ICAS10: THE NUMBER OF CARDS FOR THE CASE IN RI10.
7      C      THE RIINTR SUBPROGRAM IS CALLED BY THE IPLANT MAIN PROGRAM.
8      C      FUNCTIONS NEEDED ARE: CA1900 AND PDENS
9      C
10     INTEGER CURUSE, CA1900
11     INTEGER VAR107, VAR109, VAR110, VAR111, VAR112, VAR113, VAR114,
12     IVAR115, VAR116, VAR117, VAR128
13     C      ABOVE TYPE DECLARATION FOR CARD 9
14     INTEGER VAR131, VAR133, VAR134, VAR135, VAR136, VAR137, VAR138,
15     IVAR139, VAR140, VAR141, VAR142, VAR143, VAR144, VAR145, VAR146,
16     2VAR148, VAR150, VAR151, VAR152
17     C      ABOVE TYPE DECLARATION FOR CARD 10
18     COMMON/C1/ VAR131(10), VAR133(10), VAR134(10), VAR135(10),
19     IVAR136(10), VAR137(10), VAR138(10), VAR139(10), VAR140(10),
20     2VAR141(10), VAR142(10), VAR143(10), VAR144(10), VAR145(10),
21     3VAR146(10), VAR147(10), VAR148(10), VAR149(10), VAR150(10),
22     4VAR151(10), VAR152(10)
23     COMMON/C2/ VAR107, VAR109, VAR110, VAR111, VAR112, VAR113, VAR114,
24     IVAR115, VAR116, VAR117, VAR128
25     COMMON/C3/ KL1(30), KL2(30), KL3(30), KL4(30), KL5(30), KL6(30),
26     1KL7(30), KCURUS(30)
27     COMMON/C4/ PLANTE, METHOD, ICERT
28     IN1 = 0
29     IN2 = 0
30     IN3 = 0
31     IN4 = 0
32     IN5 = 0
33     IN6 = 0
34     IN7 = 0
35     PIN9 = 0.
36     IN9 = 0
37     IN10 = 0
38     IN11 = 0
39     IN12 = 0
40     IN13 = 0
41     IN14 = 0
42     IN15 = 0
43     IN16 = 0
44     IN17 = 0
45     IN18 = 0
46     IN19 = 0
47     PIN20 = 0.
48     IN21 = 0
49     IN22 = 0
50     IN23 = 0
51     IN24 = 0
52     IN25 = 0
53     IN26 = 0
54     IN27 = 0
55     PIN28 = 0.
56     IN29 = 0
57     IN30 = 0
58     IN31 = 0
59     IN32 = 0
60     IN33 = 0

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61      IN34 = 0
62      IN35 = 0
63      IN36 = 0
64      IN37 = 0
65      IN38 = 0
66      IN39 = 0
67      IN40 = 0
68      IN41 = 0.
69      IN42 = 0
70      IN43 = 0
71      IN44A = 0
72      IN45A = 0
73      IN46A = 0
74      IN47 = 0
75      IN48 = 0
76      IN49 = 0
77      IN50 = 0
78      IN51 = 0
79      IN52 = 0
80      IN53 = 0
81      IN54 = 0
82      IN55 = 0
83      IN56 = 0
84      IN57 = 0
85      IN58 = 0
86      IN59 = 0
87      IN60 = 0
88      IN61 = 0
89      IN62 = 0
90      IN118 = 0
91      IN238 = 0
92      IN318 = 0
93      IN448 = 0
94      IN458 = 0
95      IN468 = 0
96      ISTART = 0
97      DO 119 I10 = 1, ICCASE
98      C      MAKES TABULATION CALCULATIONS SCANNING "K" ARRAY
99      KPREV = I10 - 1
100     IF (KPREV .LE. 0) KPREV = 1
101     IF (I10 .EQ. 1) IPVUSE = 4
102     IF (I10 .GT. 1) IPVUSE = KCURUS(KPREV)
103     C      IPVUSE IS USE DURING PREVIOUS INTER-EVENT INTERVAL
104     IF (KL6(I10) .GT. IEND) GO TO 119
105     IF (KL6(KPREV) .GE. IEND) GO TO 119
106     C      ABOVE FOR CASE OF MORE THAN ONE EVENT ON THE SAME
107     C      DAY AS IEND. THE P.C. HARVEST EVENT WILL ALWAYS BE FIRST
108     C      DUE TO THE ORDER IN WHICH THE EVENTS FIRST ENTERED THE
109     C      ORIGINAL "J" ARRAYS
110     IF (ISTART .EQ. 0) IBCATE = IBEG
111     C      ASSIGNS PRINCIPAL CROP PLANTING DATE AS BEGINNING DATE FOR FIRST
112     C      INTER-EVENT INTERVAL
113     IF (KL6(I10) .LE. IBEG) GO TO 119
114     ISTART = ISTART + 1
115     IF (ISTART .GT. 1) IBCATE = KL6(KPREV)
116     C      CALCULATES BEGINNING DATE FOR EACH INTER-EVENT INTERVAL (IBDATE)
117     IN47 = IEND - IBEG
118     IN48 = MAX0(VAR113, VAR117)
119     IF (IPVUSE .EQ. 7) GO TO 122
120     IF (IPVUSE .EQ. 8 .OR. IPVUSE .EQ. 15) GO TO 123

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121 IF (IPVUSE .EQ. 9 .OR. IPVUSE .EQ. 16 .OR. IPVUSE.EQ.30) GO TO 124
122 IF (IPVUSE .EQ. 10 .OR. IPVUSE .EQ. 29) GO TO 125
123 IF (IPVUSE .EQ. 11 .OR. IPVUSE .EQ. 36) GO TO 126
124 IF (IPVUSE .EQ. 12 .OR. IPVUSE .EQ. 18 .OR. IPVUSE.EQ.37)GO TO 127
125 IF (IPVUSE .EQ. 13.OR.IPVUSE.EQ.58) GO TO 128
126 IF (IPVUSE .EQ. 50.OR.IPVUSE.EQ.54) GO TO 128
127 IF (IPVUSE .EQ. 56.OR.IPVUSE.EQ.20) GO TO 128
128 IF (IPVUSE .EQ. 27.CR.IPVUSE.EQ.33) GO TO 128
129 IF (IPVUSE .EQ. 70 .CR. IPVUSE .EQ. 78) GO TO 128
130 IF (IPVUSE .EQ. 79 .CR. IPVUSE .EQ. 81) GO TO 128
131 IF (IPVUSE .EQ. 100 .CR. IPVUSE .EQ. 101) GO TO 128
132 IF (IPVUSE .EQ. 103 .CR. IPVUSE .EQ. 104) GO TO 128
133 IF (IPVUSE .EQ. 107 .CR. IPVUSE .EQ. 108) GO TO 128
134 IF (IPVUSE .EQ. 109 .CR. IPVUSE .EQ. 111) GO TO 128
135 IF (IPVUSE .EQ. 112 .CR. IPVUSE .EQ. 114) GO TO 128
136 IF (IPVUSE .EQ. 117 .CR. IPVUSE .EQ. 118) GO TO 128
137 WRITE(9,1003) IPVUSE, KL1(I10)
1003 FORMAT(1X,'ERROR: PREVIOUS USE ',I3,' NOT RECOGNIZED IN PRIN. CROP
139 1 CASE ',I5,' / 1X, / 1X, / 1X)
140 GO TO 138
141 C FOLLOWING FOR RICE ALONE
142 122 IN49 = IN49 + KL6(I10) - IBDATE
143 IN50 = MAX0(IN50, KL7(I10))
144 GO TO 119
145 C FOLLOWING FOR RICE WITH GREEN MAIZE
146 123 IN51 = IN51 + KL6(I10) - IBDATE
147 IN52 = MAX0(IN52, KL7(I10))
148 GO TO 119
149 C FOLLOWING FOR RICE WITH GREEN MAIZE AND MANIOC
150 124 IN53 = IN53 + KL6(I10) - IBDATE
151 IN54 = MAX0(IN54, KL7(I10))
152 GO TO 119
153 C FOLLOWING FOR RICE WITH MANIOC
154 125 IN55 = IN55 + KL6(I10) - IBDATE
155 IN56 = MAX0(IN56, KL7(I10))
156 GO TO 119
157 C FOLLOWING FOR RICE WITH PASTURE
158 126 IN57 = IN57 + KL6(I10) - IBDATE
159 IN58 = MAX0(IN58, KL7(I10))
160 GO TO 119
161 C FOLLOWING FOR RICE WITH GREEN MAIZE AND PASTURE
162 127 IN59 = IN59 + KL6(I10) - IBDATE
163 IN60 = MAX0(IN60, KL7(I10))
164 GO TO 119
165 C FOLLOWING FOR RICE WITH OTHER COMBINATIONS OR CROPS
166 128 IN61 = IN61 + KL6(I10) - IBDATE
167 IN62 = MAX0(IN62, KL7(I10))
168 119 CONTINUE
169 IN14 = IN53 + IN55
170 IN1 = VAR107
171 IOTHER = 0
172 CO 136 I12 = 1,ICAS10
173 C MAKES TABULATIONS OF CROPS IN ANY COMBINATION FROM SCAN OF CARD 13
174 IDATE1 = CA1900(VAR135(I12),VAR136(I12),VAR137(I12),VAR134(I12),3)
175 C IDATE1 IS THE PLANTING DATE OF INTERPLANTED CROP
176 IDATE2 =DA1900(VAR143(I12),VAR144(I12),VAR145(I12),VAR134(I12),5)
177 C IDATE2 IS THE HARVEST DATE OF INTERPLANTED CROP
178 IF(VAR145(I12) .EQ. -0 .AND. VAR146(I12) .GT. 0) IDATE2 = IEND
179 IF (VAR134(I12) .EQ. 14) IDATE2=IDATE1 + 100
180 IDATE3 = IDATE1

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181 C IDATE3 IS BEGINNING DATE FOR INTERPLANTED CROP PRESENCE WITHIN THE
182 C LIFESPAN OF THE PRINCIPAL CROP
183 IDATE4 = IDATE2
184 C IDATE4 IS THE END DATE OF INTERPLANTED CROP PRESENCE WITHIN THE
185 C LIFESPAN OF THE PRINCIPAL CROP
186 IF (ICATE1 .LE. IBEG) IDATE3 = IBEG
187 IF (IDATE2 .GE. IEND) ICATE4 = IEND
188 ISPAN = IDATE4 - ICATE3
189 C ISPAN IS SPAN OF TIME INTERPLANTED CROP WAS PRESENT IN ANY COMB.
190 C WITHIN LIFESPAN OF PRINCIPAL CROP
191 IF (VAR134(I12) .EQ. C) GO TO 129
192 PLANTD=0.
193 METHOD=0
194 ICERT=0
195 CALL PDENS(VAR134(I12), VAR147(I12), VAR148(I12), VAR149(I12),
196 IVAR130(I12))
197 IF (VAR134(I12) .EQ. 14) GO TO 130
198 IF (VAR134(I12) .EQ. 23) GO TO 131
199 IF (VAR134(I12) .EQ. 34) GO TO 132
200 IOTHER = IOTHER + 1
201 IF(IOther .EQ. 1) GO TO 133
202 IF(IOther .EQ. 2) GO TO 134
203 IF(IOther .EQ. 3) GO TO 135
204 WRITE(9,1004) VAR131(I12)
205 1004 FORMAT(1X,'MORE THAN 3 OTHER INTERPLANTED CROPS FOR P.C. CASE ',I5
206 1, 1X, / 1X, / 1X, / 1X)
207 GO TO 138
208 133 CONTINUE
209 C FOR FIRST OTHER INTERPLANTED CROP
210 IN32 = VAR134(I12)
211 IN44A = VAR151(I12)
212 IN44B = VAR152(I12)
213 GO TO 137
214 134 CONTINUE
215 C FOR SECOND OTHER INTERPLANTED CROP
216 IN33 = VAR134(I12)
217 IN45A = VAR151(I12)
218 IN45B = VAR152(I12)
219 GO TO 137
220 135 CONTINUE
221 C FOR THIRD OTHER INTERPLANTED CROP
222 IN34 = VAR134(I12)
223 IN46A = VAR151(I12)
224 IN46B = VAR152(I12)
225 137 CONTINUE
226 C FOR ALL "OTHER" INTERPLANTED CROPS
227 IN35 = MAX0(IN35, ISPAN)
228 IN36 = MAX0(IN36, VAR138(I12), VAR148(I12))
229 IN37 = IDATE1 - IBEG
230 IN38 = MAX0(IN38, VAR139(I12), VAR113)
231 IN39 = IEND - ICATE2
232 IN40 = MAX0(IN40, VAR146(I12), VAR117)
233 RIN41 = RIN41 + PLANTD
234 IN42 = MAX0(IN42, METHOD)
235 IN43 = MAX0(IN43, ICERT)
236 GO TO 136
237 129 CONTINUE
238 C FOR CASE OF NO INTERPLANTED CROPS
239 IN47 = IN47
240 IN50 = IN48

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241      GO TO 136
242 130 CONTINUE
243 C   FOR CASE WHERE INTERPLANTED CROP IS MAIZE
244      IDRY = IDATE1 + 100
245      IF(IFCLDD.EQ.0.OR.IFCLDD.EQ.-0)IFOLDD=IDRY+1
246      IDATE2 = MIN0(IDRY, IFCLDD)
247      ICATE4 = MIN0(IEND, ICATE2)
248      ISPAN = IDATE4 - IDATE3
249      IN2 = ISPAN
250      IF (IN2 .LT. 0) IN2 = 0
251      IN3 = 4
252      IN4 = ICATE1 - IBEG
253      IN5 = MAX0(VAR113, VAR138(I12))
254      IN6 = IEND - ICATE2
255      IN7 = 4
256      RIN8 = PLANTD
257      IN9 = METHODD
258      IN10 = ICERT
259      IN11A = VAR151(I12)
260      IN11B = VAR152(I12)
261      IN12 = IFCLDD - IBEG
262      IN13 = MAX0(VAR113, VAR142(I12))
263      GO TO 136
264 131 CONTINUE
265 C   FOR CASE WHERE INTERPLANTED CROP IS MANIOC
266      IN14 = ISPAN
267      IN15 = MAX0(VAR138(I12), VAR146(I12))
268      IN16 = IDATE1 - IBEG
269      IN17 = MAX0(VAR113, VAR138(I12))
270      IN18 = IEND - ICATE2
271      IN19 = MAX0(VAR117, VAR146(I12))
272      RIN20 = PLANTD
273      IN21 = METHODD
274      IN22 = ICERT
275      IN23A = VAR151(I12)
276      IN23B = VAR152(I12)
277      GO TO 136
278 132 CONTINUE
279 C   FOR CASE WHERE INTERPLANTED CROP IS PASTURE
280      IN24 = ISPAN
281      IN25 = VAR138(I12)
282      IN26 = IDATE1 - IBEG
283      IN27 = MAX0(VAR113, VAR138(I12))
284      RIN28 = PLANTD
285      IN29 = METHODD
286      IN30 = ICERT
287      IN31A = VAR151(I12)
288      IN31B = VAR152(I12)
289 136 CONTINUE
290      WRITE (9,1008)
291 1008 FORMAT(1X,'INTERPLANTING TABULATIONS ON FOLLOWING 3 LINES')
292      WRITE (9,1005) IN1, IN2, IN3, IN4, IN5, IN6, IN7,RIN8, IN9, IN10,
293      IN11A, IN11B, IN12, IN13, IN14, IN15, IN16, IN17, IN18, IN19,RIN20,
294      1, IN21, IN22, IN23A, IN23B
295 1005 FORMAT(1X, 2I4, 2(I2, I4), I2, F7.0, 3I2, I1, 4(I4,I2), F7.0, 3I2,
296      I11)
297 C   ABOVE FORMAT 1005 FOR FIRST LINE OF TABULATION OUTPUT: RICE WITH
298 C   GREEN MAIZE (ANY COMBINATION), AND RICE WITH EITHER BITTER OR
299 C   SWEET MANIOC (ANY COMBINATION).
300      WRITE (9,1006) IN24, IN25, IN26, IN27, RIN28, IN29, IN30, IN31A,

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301      1IN31B, IN32, IN33, IN34, IN35, IN36, IN37, IN38, IN39, IN40, RIN41,
302      2IN42, IN43, IN44A, IN44B, IN45A, IN45B, IN46A, IN46B
303      1006 FORMAT(1X, 2(I4, I2), F7.0, 3I2, I1, 3I3, 3(I4, I2), F7.0, 2I2,
304      13(I2, I1))
305      C      ABOVE FORMAT 1006 IS FOR SECOND LINE OF OUTPUT: RICE WITH PASTURE
306      C      (ANY COMBINATION), AND RICE WITH OTHER INTERPLANTED CROPS
307      WRITE (9,1007) IN47, IN48, IN49, IN50, IN51, IN52, IN53, IN54,
308      1IN55, IN56, IN57, IN58, IN59, IN60, IN61, IN62
309      1007 FORMAT(1X, 9(I4, I2))
310      C      ABOVE FORMAT IS FOR THIRD LINE OF TABULATION OUTPUT: INTERPLANTING
311      C      COMBINATIONS
312      C
313      C
314      C      OUTPUT VARIABLES ARE:
315      C      GREEN MAIZE AS INTERPLANTED CROP (2 - 13)
316      C      IN1 : PRINCIPAL CROP CASE NUMBER
317      C      IN2 : TOTAL DAYS INTERPLANTED WITH GREEN MAIZE (ANY COMB.)
318      C      IN3 : CERTAINTY OF IN2
319      C      IN4 : DAYS AFTER RICE PLANTING THAT INTERPLANTING BEGAN
320      C      IN5 : CERTAINTY OF IN4
321      C      IN6 : DAYS BEFORE RICE HARVEST THAT INTERPLANTING ENDED
322      C      IN7 : CERTAINTY OF IN6
323      C      RIN9: INTERPLANTED CROP (MAIZE) DENSITY (PLANTS/HECTARE)
324      C      IN9 : DENSITY CALCULATION METHOD (1=DIRECT: 2=FROM SEEDS/H4)
325      C      IN10: DENSITY CERTAINTY
326      C      IN11A:NOTE 1
327      C      IN11B:NOTE 2
328      C      IN12 :DAYS AFTER RICE PLANTING WHEN MAIZE FOLDED
329      C      IN13 :CERTAINTY OF IN12
330      C      MANIOC (BITTER OR SWEET) AS INTERPLANTED CROP (ANY COMB):14-23B
331      C      IN14 :TOTAL DAYS INTERPLANTED WITH MANIOC
332      C      IN15 :CERTAINTY OF IN14
333      C      IN16 :DAYS AFTER PRINCIPAL CROP PLANTING BEGUN
334      C      IN17 :CERTAINTY OF IN16
335      C      IN18 :DAYS BEFORE RICE HARVEST WHEN INTERPLANTING ENDED
336      C      IN19 :CERTAINTY OF IN18
337      C      RIN20:INTERPLANTED CROP (MANIOC) DENSITY
338      C      IN21 :DENSITY CALCULATION METHOD
339      C      IN22 :CERTAINTY OF DENSITY
340      C      IN23A:NOTE1
341      C      IN23B:NOTE2
342      C      PASTURE AS INTERPLANTED CROP (ANY COMBINATION) (24 - 31B)
343      C      IN24 :TOTAL DAYS PASTURE AS INTER. CROP
344      C      IN25: CERTAINTY OF IN24
345      C      IN26: DAYS AFTER PRINCIPAL CROP PLANTING BEGUN
346      C      IN27: CERTAINTY OF IN26
347      C      RIN28:DENSITY OF INTERPLANTED CROP (PASTURE)
348      C      IN29: DENSITY CALCULATION METHOD
349      C      IN30: CERTAINTY OF IN29
350      C      IN31A:NOTE 1
351      C      IN31B:NOTE 2
352      C      OTHER INTERPLANTED CROPS (32 - 46B)
353      C      IN32: OTHER INTERPLANTED CROP 1
354      C      IN33: OTHER INTERPLANTED CROP 2
355      C      IN34: OTHER INTERPLANTED CROP 3
356      C      IN35: TOTAL DAYS OTHER INTERPLANTED CROPS PRESENT
357      C      IN36: CERTAINTY OF IN35
358      C      IN37: DAYS AFTER RICE PLANTING BEGUN
359      C      IN38: CERTAINTY OF IN37
360      C      IN39: DAYS BEFORE RICE HARVEST ENDED

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361 C      IN40: CERTAINTY OF IN39
362 C      RIN41: TOTAL DENSITY OF OTHER INTERPLANTED CROPS
363 C      IN42: DENSITY CALCULATION METHOD (MAXIMUM)
364 C      IN43: CERTAINTY OF DENSITY (MAXIMUM)
365 C      IN44A: NCTE 1 FOR INTERPLANTED CROP 1
366 C      IN44B: NCTE 2 FOR INTERPLANTED CROP 1
367 C      IN45A: NCTE 1 FOR INTERPLANTED CROP 2
368 C      IN45B: NCTE 2 FOR INTERPLANTED CROP 2
369 C      IN46A: NCTE 1 FOR INTERPLANTED CROP 3
370 C      IN46B: NCTE 2 FOR INTERPLANTED CROP 3
371 C      COMBINATIONS OF INTERPLANTED CROPS (47 - 62)
372 C      IN47: TOTAL DAYS IN PRINCIPAL CROP (RICE) CYCLE
373 C      IN48: CERTAINTY OF IN47
374 C      IN49: DAYS RICE ALONE (USE=7)
375 C      IN50: CERTAINTY OF IN49
376 C      IN51: DAYS RICE WITH GREEN MAIZE (USE=8)
377 C      IN52: CERTAINTY OF IN51
378 C      IN53: DAYS RICE WITH GREEN MAIZE AND MANIOC (USE=9)
379 C      IN54: CERTAINTY OF IN53
380 C      IN55: DAYS RICE WITH MANIOC (USE=10)
381 C      IN56: CERTAINTY OF IN55
382 C      IN57: DAYS RICE WITH PASTURE (USE=11)
383 C      IN58: CERTAINTY OF IN57
384 C      IN59: DAYS RICE WITH GREEN MAIZE AND PASTURE (USE=59)
385 C      IN60: CERTAINTY OF IN59
386 C      IN61: DAYS RICE WITH OTHER COMBINATIONS OR CROPS (USE=13)
387 C      IN62: CERTAINTY OF IN61
388 C      138 CONTINUE
389 C      END OF SUBROUTINE "RIINTR"
390 C      RETURN
391 C      END
392 C      SUBROUTINE BEINTR(ICCASE, IBEG, IFOLDD, ICAS10, IEND)
393 C      DUMMY SUBROUTINE "BEINTR"
394 C      RETURN
395 C      END
396 C      SUBROUTINE MZINTR(ICCASE, IBEG, IFOLDD, ICAS10, IEND)
397 C      DUMMY SUBROUTINE "MZINTR"
398 C      RETURN
399 C      END
400 C      SUBROUTINE MNINTR(ICCASE, IBEG, IFOLDD, ICAS10, IEND)
401 C      DUMMY SUBROUTINE "MNINTR"
402 C      RETURN
403 C      END
END OF FILE

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1 C
2 C THIS PROGRAM ("SCILNEIGHBORS") CALCULATES DISTANCES FROM EACH SAMPLE
3 C TO ALL OTHER (VIRGIN) SAMPLES IN THE SPECIFIED QUADRANT. FOR THOSE
4 C DISTANCES FALLING WITHIN A SPECIFIED RANGE, SOIL DATA FOR CARBON, NITROGEN,
5 C AND PH IS SORTED INTO THE FILE "VIRGNEIGHBORS". THESE SAME DATA ARE THEN
6 C USED TO CALCULATE TRANSITION PROBABILITIES FROM ONE LEVEL OF EACH SOIL
7 C CHARACTER TO ANOTHER GIVEN A "C"VE OF 100 METERS AND 500 METERS. TABLES
8 C WITH 5 LEVELS FOR C AND N AND 7 LEVELS FOR PH ARE OUTPUT IN THE FILE
9 C "VIRGINPROBS". AN ADDITIONAL TABLE IS ALSO OUTPUT FOR PROBABILITIES OF
10 C JOINT VARIATION OF THE 3 CHARACTERS IN THE 8 POSSIBLE COMBINATIONS OF
11 C LEVELS ABOVE OR BELOW SPECIFIED CRITICAL VALUES. DEVICES ARE:
12 C 7=VIRGSOIL; 8=VIRGNEIGHBORS; 9=VIRGPROBS. NO SUBROUTINES ARE CALLED.
13 C THE FORTRAN MONITOR "MINUSZERC" FEATURE IS USED, AS IS THE
14 C MTS LOGICAL COMPARISON OF CHARACTERS ("LCOMC") SUBROUTINE.
15 C
16 C INTEGER VAR010, VAR011, VAR261, VAR268, VAR002
17 C REAL N
18 C DIMENSION HEAD(75), B(200), C(30), P(200)
19 C DIMENSION IPN(500), IPN(500), X(500), Y(500), RNIT(500), CARB(500)
20 C 1, PH(500)
21 C ABOVE DIMENSION FOR NO. OF CASES IN VIRGSOIL
22 C DIMENSION IV1(7000), IV2(7000), IV3(7000), V4(7000), V5(7000),
23 C IV6(7000), V7(7000), V8(7000), IV9(7000), IV10(7000), V11(7000),
24 C V12(7000), V13(7000), V14(7000)
25 C ABOVE DIMENSION FOR NO. OF CASES EXPECTED IN VIRGNEIGHBORS
26 C DATA MINZRC/280000000/
27 C CALL FTNCMD('SET MINUSZERC=GN',16)
28 C READ (5, 1000) ICVIRG, CRITPH, CRITN, CRITC
29 C 1000 FORMAT(1X, I5, F5.1, 2F5.2)
30 C ICVIRG IS NO. OF CASES IN VIRGSOIL; CRITPH IS CRITICAL VALUE
31 C FOR PH IN JOINT VARIATION TRANSITION PROBABILITY TABULATION;
32 C CRITN IS CRITICAL VALUE FOR NITROGEN; CRITC IS CRITICAL VALUE FOR CARBON.
33 C READ (5, 1001) IQUADS, RADIUS, DISMIN, MAXNOF, IRESAM, IPROFI
34 C 1001 FORMAT(1X, I2, 2F6.0, 3I4)
35 C IQUADS IS THE CODE FOR QUADRANTS WITH RESPECT TO EACH REFERENCE SAMPLE
36 C FROM WHICH COMPARISON SAMPLES ARE TO BE CONSIDERED (1=QUAD. 1 ONLY;
37 C 2=QUADS. 1 & 4; 4=ALL QUADRANTS). "RADIUS" IS THE MAXIMUM DISTANCE FROM
38 C EACH REFERENCE SAMPLE AND "DISMIN" IS THE MINIMUM DISTANCE IN METERS
39 C FOR WHICH COMPARISON SAMPLES ARE TO BE TAKEN FOR USE IN VIRGNEIGHBORS.
40 C "MAXNOF" IS THE MAXIMUM NUMBER OF FIELDS (SAMPLES) TO BE RECORDED IN
41 C VIRGINNEIGHBORS FOR ANY ONE REFERENCE SAMPLE. "IRESAM" IS THE CODE FOR
42 C INCLUSION OR EXCLUSION OF RETURN SAMPLES AT THE SAME LOCATION (1=INCLUDE,
43 C 0=EXCLUDE); "IPROFI" IS THE CODE FOR THE INCLUSION OR EXCLUSION OF THE
44 C UPPERMOST SAMPLE FROM PROFILES (1=INCLUDE; 0=EXCLUDE).
45 C READ (5, 5000) (HEAD(I), I=1,75)
46 C 5000 FORMAT(1X, 3A3, 2X, 3A3, 2X, 3A3, 2X, 3A3, 2X, 3A3)
47 C ABOVE FORMAT 5000 FOR TABLE HEADINGS
48 C I1 = 0
49 C DO 100 I=1, ICVIRG
50 C DOES ONE ITERATION FOR EACH CASE IN VIRGSOIL
51 C READ (7, 1002) XCO, YCO, VAR002, VAR010, VAR011, VAR261, VAR268,
52 C IVAR201, VAP553, VAR556
53 C 1002 FORMAT(54X, F8.0, 1X, F8.0 / 3X, I5, 22X, I5, I3, // 3X, I4, 21X,
54 C I12, / 63X, F5.1, // 17X, 2F5.2 //)
55 C ABOVE FORMAT FOR VIRGSOIL
56 C IF (LCOMC(4, MINZRC, XCC).EQ.0) GO TO 100
57 C IF (LCOMC(4, MINZRC, YCC).EQ.0) GO TO 100
58 C IF (IRESAM.EQ.0 .AND. VAR010.GE.1) GO TO 100
59 C SKIPS RETURN SAMPLES IF SPECIFIED
60 C IF (IPROFI.EQ.0 .AND. VAR261.GE.1) GO TO 100

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61 C      SKIPS PROFILES IF SPECIFIED
62      I1 = I1 + 1
63      IFN(I1) = VAR002
64      IPN(I1) = VAR261
65      X(I1) = XCD
66      Y(I1) = YCC
67      RNIT(I1) = VAR556
68      CARB(I1) = VAR555
69      PH(I1) = VAR201
70      100 CONTINUE
71      READ(5,2000) ITEST
72      2000 FORMAT(IX, I5)
73      MAXREF = I1
74      IF (ITEST .GE. 1) MAXREF = ITEST
75      NCASE = 0
76      DO 101 I2=1,MAXREF
77 C      DOES ONE ITERATION FOR EACH REFERENCE SAMPLE
78      INOF = 0
79      DO 102 I3=1,I1
80 C      DOES ONE ITERATION FOR EACH SAMPLE BEING COMPARED WITH THE REFERENCE SAMP.
81      IF (I3 .EQ. I2) GO TO 102
82 C      FOLLOWING SELECTS SPECIFIED QUADRATS
83      IF (ICUACS .EQ. 4) GO TO 103
84      IF (ICUADS .EQ. 1 .AND. X(I3) .GT. X(I2) .AND. Y(I3) .GT. Y(I2))
85      100 TO 103
86      IF (ICUADS .EQ. 2 .AND. Y(I3) .GT. Y(I2)) GO TO 103
87      GO TO 102
88      103 CONTINUE
89      DIST = SQRT((X(I3)-X(I2))*(X(I3)-X(I2)) + (Y(I3)-Y(I2))*(Y(I3)-Y(I2)))
90      IF (DIST .GT. RADIOS) GO TO 102
91 C      SKIPS FIELDS FURTHER THAN THE SPECIFIED RADIUS
92      IF (DIST .LT. DISMIN) GO TO 102
93 C      SKIPS FIELDS CLOSER THAN THE SPECIFIED MINIMUM DISTANCE
94      INOF = INOF + 1
95      NCASE = NCASE + 1
96      IF (INOF .GT. MAXNCF) GO TO 102
97      WRITE (9, 1003) NCASE, IFN(I2), IPN(I2), PH(I2), RNIT(I2), CARB(I2),
98      1, X(I2), Y(I2), IFN(I3), IPN(I3), DIST, PH(I3), RNIT(I3), CARB(I3)
99      1003 FORMAT(IX, I5, 2I4, F5.1, 2F5.2, 2F9.0, 2I4, F8.0, F5.1, 2F5.2)
100 C      ABOVE FORMAT 1003 FOR VIRGNEIGHBORS
101      IV1(NCASE) = NCASE
102      IV2(NCASE) = IFN(I2)
103      IV3(NCASE) = IPN(I2)
104      IV4(NCASE) = PH(I2)
105      IV5(NCASE) = RNIT(I2)
106      IV6(NCASE) = CARB(I2)
107      IV7(NCASE) = X(I2)
108      IV8(NCASE) = Y(I2)
109      IV9(NCASE) = IFN(I3)
110      IV10(NCASE) = IPN(I3)
111      IV11(NCASE) = DIST
112      IV12(NCASE) = PH(I3)
113      IV13(NCASE) = RNIT(I3)
114      IV14(NCASE) = CARB(I3)
115      102 CONTINUE
116      101 CONTINUE
117      DO 501 IRCUND=1,2
118 C      MAKES 1 ITERATION FOR EACH ROUND OF CALCULATIONS (100 M & 500 M)
119      DO 200 K=1,163
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121      P(K) = 0.
122      R(K) = 0.
123      200 CONTINUE
124      DO 201 J=1,25
125      201 C(J) = 0.
126      DO 500 I4=1,NCASE
127      C      MAKES ONE ITERATION FOR EACH CASE
128      IF (IRCUND .EQ. 1 .AND. V11(I4) .LE. 200) GO TO 104
129      IF (IRCUND .EQ. 2 .AND. V11(I4) .GE. 400 .AND. V11(I4) .LE. 600)
130      1 GO TO 104
131      GO TO 500
132      104 CONTINUE
133      C      FOLLOWING FOR CARBON TALLY OF TRANSITION FREQUENCIES
134      IF (LCCMC(4,MINZRC,V6(I4)).EQ.0) GO TO 110
135      IF (LCCMC(4,MINZRC,V14(I4)).EQ.0) GO TO 110
136      IF (V6(I4) .LT. 0.5) GO TO 105
137      IF (V6(I4) .GE. 0.5 .AND. V6(I4) .LT. 1.0) GO TO 106
138      IF (V6(I4) .GE. 1.0 .AND. V6(I4) .LT. 1.5) GO TO 107
139      IF (V6(I4) .GE. 1.5 .AND. V6(I4) .LT. 2.0) GO TO 108
140      IF (V6(I4) .GE. 2.0) GO TO 109
141      GO TO 110
142      105 IF(V14(I4) .LT. 0.5) B(1)=B(1) + 1.
143      IF(V14(I4) .GE. 0.5 .AND. V14(I4) .LT. 1.0) B(2)=B(2) + 1.
144      IF(V14(I4) .GE. 1.0 .AND. V14(I4) .LT. 1.5) B(3)=B(3) + 1.
145      IF(V14(I4) .GE. 1.5 .AND. V14(I4) .LT. 2.0) B(4)=B(4) + 1.
146      IF(V14(I4) .GE. 2.0) B(5) = B(5) + 1.
147      C(1) = C(1) + 1.
148      GO TO 110
149      106 IF(V14(I4) .LT. 0.5) B(6) = B(6) + 1.
150      IF(V14(I4) .GE. 0.5 .AND. V14(I4) .LT. 1.0) B(7) = B(7) + 1.
151      IF(V14(I4) .GE. 1.0 .AND. V14(I4) .LT. 1.5) B(8) = B(8) + 1.
152      IF(V14(I4) .GE. 1.5 .AND. V14(I4) .LT. 2.0) B(9) = B(9) + 1.
153      IF(V14(I4) .GE. 2.0) B(10) = B(10) + 1.
154      C(2) = C(2) + 1.
155      GO TO 110
156      107 IF (V14(I4) .LT. 0.5) B(11) = B(11) + 1.
157      IF (V14(I4) .GE. 0.5 .AND. V14(I4) .LT. 1.0) B(12) = B(12) + 1.
158      IF (V14(I4) .GE. 1.0 .AND. V14(I4) .LT. 1.5) B(13) = B(13) + 1.
159      IF (V14(I4) .GE. 1.5 .AND. V14(I4) .LT. 2.0) B(14) = B(14) + 1.
160      IF (V14(I4) .GE. 2.0) B(15) = B(15) + 1.
161      C(3) = C(3) + 1.
162      GO TO 110
163      108 IF (V14(I4) .LT. 0.5) B(16) = B(16) + 1.
164      IF (V14(I4) .GE. 0.5 .AND. V14(I4) .LT. 1.0) B(17) = B(17) + 1.
165      IF (V14(I4) .GE. 1.0 .AND. V14(I4) .LT. 1.5) B(18) = B(18) + 1.
166      IF (V14(I4) .GE. 1.5 .AND. V14(I4) .LT. 2.0) B(19) = B(19) + 1.
167      IF (V14(I4) .GE. 2.0) B(20) = B(20) + 1.
168      C(4) = C(4) + 1.
169      GO TO 110
170      109 IF (V14(I4) .LT. 0.5) B(21) = B(21) + 1.
171      IF (V14(I4) .GE. 0.5 .AND. V14(I4) .LT. 1.0) B(22) = B(22) + 1.
172      IF (V14(I4) .GE. 1.0 .AND. V14(I4) .LT. 1.5) B(23) = B(23) + 1.
173      IF (V14(I4) .GE. 1.5 .AND. V14(I4) .LT. 2.0) B(24) = B(24) + 1.
174      IF (V14(I4) .GE. 2.0) B(25) = B(25) + 1.
175      C(5) = C(5) + 1.
176      110 CONTINUE
177      C      FOLLOWING FOR NITROGEN TRANSITION TALLYS
178      IF (LCCMC(4,MINZRC,V5(I4)).EQ.0) GO TO 116
179      IF (LCCMC(4,MINZRC,V13(I4)).EQ.0) GO TO 116
180      IF (V5(I4) .LT. 0.05) GO TO 111

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181      IF (V5(I4) .GE. 0.05 .AND. V5(I4) .LT. 0.10) GO TO 112
182      IF (V5(I4) .GE. 0.10 .AND. V5(I4) .LT. 0.15) GO TO 113
183      IF (V5(I4) .GE. 0.15 .AND. V5(I4) .LT. 0.20) GO TO 114
184      IF (V5(I4) .GE. 0.20) GO TO 115
185      GO TO 116
186  111 IF (V13(I4) .LT. 0.05) B(26) = B(26) + 1.
187      IF (V13(I4) .GE. 0.05 .AND. V13(I4) .LT. 0.10) B(27) = B(27) + 1.
188      IF (V13(I4) .GE. 0.10 .AND. V13(I4) .LT. 0.15) B(28) = B(28) + 1.
189      IF (V13(I4) .GE. 0.15 .AND. V13(I4) .LT. 0.20) B(29) = B(29) + 1.
190      IF (V13(I4) .GE. 0.20) B(30) = B(30) + 1.
191      C(6) = C(6) + 1.
192      GO TO 116
193  112 IF (V13(I4) .LT. 0.05) B(31) = B(31) + 1.
194      IF (V13(I4) .GE. 0.05 .AND. V13(I4) .LT. 0.10) B(32) = B(32) + 1.
195      IF (V13(I4) .GE. 0.10 .AND. V13(I4) .LT. 0.15) B(33) = B(33) + 1.
196      IF (V13(I4) .GE. 0.15 .AND. V13(I4) .LT. 0.20) B(34) = B(34) + 1.
197      IF (V13(I4) .GE. 0.20) B(35) = B(35) + 1.
198      C(7) = C(7) + 1.
199      GO TO 116
200  113 IF (V13(I4) .LT. 0.05) B(36) = B(36) + 1.
201      IF (V13(I4) .GE. 0.05 .AND. V13(I4) .LT. 0.10) B(37) = B(37) + 1.
202      IF (V13(I4) .GE. 0.10 .AND. V13(I4) .LT. 0.15) B(38) = B(38) + 1.
203      IF (V13(I4) .GE. 0.15 .AND. V13(I4) .LT. 0.20) B(39) = B(39) + 1.
204      IF (V13(I4) .GE. 0.20) B(40) = B(40) + 1.
205      C(8) = C(8) + 1.
206      GO TO 116
207  114 IF (V13(I4) .LT. 0.05) B(41) = B(41) + 1.
208      IF (V13(I4) .GE. 0.05 .AND. V13(I4) .LT. 0.10) B(42) = B(42) + 1.
209      IF (V13(I4) .GE. 0.10 .AND. V13(I4) .LT. 0.15) B(43) = B(43) + 1.
210      IF (V13(I4) .GE. 0.15 .AND. V13(I4) .LT. 0.20) B(44) = B(44) + 1.
211      IF (V13(I4) .GE. 0.20) B(45) = B(45) + 1.
212      C(9) = C(9) + 1.
213      GO TO 116
214  115 IF (V13(I4) .LT. 0.05) B(46) = B(46) + 1.
215      IF (V13(I4) .GE. 0.05 .AND. V13(I4) .LT. 0.10) B(47) = B(47) + 1.
216      IF (V13(I4) .GE. 0.10 .AND. V13(I4) .LT. 0.15) B(48) = B(48) + 1.
217      IF (V13(I4) .GE. 0.15 .AND. V13(I4) .LT. 0.20) B(49) = B(49) + 1.
218      IF (V13(I4) .GE. 0.20) B(50) = B(50) + 1.
219      C(10) = C(10) + 1.
220  116 CONTINUE
221  C FOLLOWING FOR PH TRANSITION TALLYS
222      IF (LCCMC(4,MINZRO,V4(I4)).EQ.0) GO TO 124
223      IF (LCCMC(4,MINZRC,V12(I4)).EQ.0) GO TO 124
224      IF (V4(I4) .LT. 4.0) GO TO 117
225      IF (V4(I4) .GE. 4.0 .AND. V4(I4) .LT. 4.5) GO TO 118
226      IF (V4(I4) .GE. 4.5 .AND. V4(I4) .LT. 5.0) GO TO 119
227      IF (V4(I4) .GE. 5.0 .AND. V4(I4) .LT. 5.5) GO TO 120
228      IF (V4(I4) .GE. 5.5 .AND. V4(I4) .LT. 6.0) GO TO 121
229      IF (V4(I4) .GE. 6.0 .AND. V4(I4) .LT. 6.5) GO TO 122
230      IF (V4(I4) .GE. 6.5) GO TO 123
231      GO TO 124
232  117 IF (V12(I4) .LT. 4.0) B(51) = B(51) + 1.
233      IF (V12(I4) .GE. 4.0 .AND. V12(I4) .LT. 4.5) B(52) = B(52) + 1.
234      IF (V12(I4) .GE. 4.5 .AND. V12(I4) .LT. 5.0) B(53) = B(53) + 1.
235      IF (V12(I4) .GE. 5.0 .AND. V12(I4) .LT. 5.5) B(54) = B(54) + 1.
236      IF (V12(I4) .GE. 5.5 .AND. V12(I4) .LT. 6.0) B(55) = B(55) + 1.
237      IF (V12(I4) .GE. 6.0 .AND. V12(I4) .LT. 6.5) B(56) = B(56) + 1.
238      IF (V12(I4) .GE. 6.5) B(57) = B(57) + 1.
239      C(11) = C(11) + 1.
240      GO TO 124

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241      118 IF (V12(I4) .LT. 4.0) B(58) = B(58) + 1.
242      IF (V12(I4) .GE. 4.0 .AND. V12(I4) .LT. 4.5) B(59) = B(59) + 1.
243      IF (V12(I4) .GE. 4.5 .AND. V12(I4) .LT. 5.0) B(60) = B(60) + 1.
244      IF (V12(I4) .GE. 5.0 .AND. V12(I4) .LT. 5.5) B(61) = B(61) + 1.
245      IF (V12(I4) .GE. 5.5 .AND. V12(I4) .LT. 6.0) B(62) = B(62) + 1.
246      IF (V12(I4) .GE. 6.0 .AND. V12(I4) .LT. 6.5) B(63) = B(63) + 1.
247      IF (V12(I4) .GE. 6.5) B(64) = B(64) + 1.
248      C(12) = C(12) + 1.
249      GO TO 124
250      119 IF (V12(I4) .LT. 4.0) B(65) = B(65) + 1.
251      IF (V12(I4) .GE. 4.0 .AND. V12(I4) .LT. 4.5) B(66) = B(66) + 1.
252      IF (V12(I4) .GE. 4.5 .AND. V12(I4) .LT. 5.0) B(67) = B(67) + 1.
253      IF (V12(I4) .GE. 5.0 .AND. V12(I4) .LT. 5.5) B(68) = B(68) + 1.
254      IF (V12(I4) .GE. 5.5 .AND. V12(I4) .LT. 6.0) B(69) = B(69) + 1.
255      IF (V12(I4) .GE. 6.0 .AND. V12(I4) .LT. 6.5) B(70) = B(70) + 1.
256      IF (V12(I4) .GE. 6.5) B(71) = B(71) + 1.
257      C(13) = C(13) + 1.
258      GO TO 124
259      120 IF (V12(I4) .LT. 4.0) B(72) = B(72) + 1.
260      IF (V12(I4) .GE. 4.0 .AND. V12(I4) .LT. 4.5) B(73) = B(73) + 1.
261      IF (V12(I4) .GE. 4.5 .AND. V12(I4) .LT. 5.0) B(74) = B(74) + 1.
262      IF (V12(I4) .GE. 5.0 .AND. V12(I4) .LT. 5.5) B(75) = B(75) + 1.
263      IF (V12(I4) .GE. 5.5 .AND. V12(I4) .LT. 6.0) B(76) = B(76) + 1.
264      IF (V12(I4) .GE. 6.0 .AND. V12(I4) .LT. 6.5) B(77) = B(77) + 1.
265      IF (V12(I4) .GE. 6.5) B(78) = B(78) + 1.
266      C(14) = C(14) + 1.
267      GO TO 124
268      121 IF (V12(I4) .LT. 4.0) B(79) = B(79) + 1.
269      IF (V12(I4) .GE. 4.0 .AND. V12(I4) .LT. 4.5) B(80) = B(80) + 1.
270      IF (V12(I4) .GE. 4.5 .AND. V12(I4) .LT. 5.0) B(81) = B(81) + 1.
271      IF (V12(I4) .GE. 5.0 .AND. V12(I4) .LT. 5.5) B(82) = B(82) + 1.
272      IF (V12(I4) .GE. 5.5 .AND. V12(I4) .LT. 6.0) B(83) = B(83) + 1.
273      IF (V12(I4) .GE. 6.0 .AND. V12(I4) .LT. 6.5) B(84) = B(84) + 1.
274      IF (V12(I4) .GE. 6.5) B(85) = B(85) + 1.
275      C(15) = C(15) + 1.
276      GO TO 124
277      122 IF (V12(I4) .LT. 4.0) B(86) = B(86) + 1.
278      IF (V12(I4) .GE. 4.0 .AND. V12(I4) .LT. 4.5) B(87) = B(87) + 1.
279      IF (V12(I4) .GE. 4.5 .AND. V12(I4) .LT. 5.0) B(88) = B(88) + 1.
280      IF (V12(I4) .GE. 5.0 .AND. V12(I4) .LT. 5.5) B(89) = B(89) + 1.
281      IF (V12(I4) .GE. 5.5 .AND. V12(I4) .LT. 6.0) B(90) = B(90) + 1.
282      IF (V12(I4) .GE. 6.0 .AND. V12(I4) .LT. 6.5) B(91) = B(91) + 1.
283      IF (V12(I4) .GE. 6.5) B(92) = B(92) + 1.
284      C(16) = C(16) + 1.
285      GO TO 124
286      123 IF (V12(I4) .LT. 4.0) B(93) = B(93) + 1.
287      IF (V12(I4) .GE. 4.0 .AND. V12(I4) .LT. 4.5) B(94) = B(94) + 1.
288      IF (V12(I4) .GE. 4.5 .AND. V12(I4) .LT. 5.0) B(95) = B(95) + 1.
289      IF (V12(I4) .GE. 5.0 .AND. V12(I4) .LT. 5.5) B(96) = B(96) + 1.
290      IF (V12(I4) .GE. 5.5 .AND. V12(I4) .LT. 6.0) B(97) = B(97) + 1.
291      IF (V12(I4) .GE. 6.0 .AND. V12(I4) .LT. 6.5) B(98) = B(98) + 1.
292      IF (V12(I4) .GE. 6.5) B(99) = B(99) + 1.
293      C(17) = C(17) + 1.
294      124 CONTINUE
295      C      FOLLOWING FOR C, N, & PH JOINT VARIATION TABULATION
296      IF (LCOMC(4,MINZRC,V4(I4)).EQ.0) GO TO 500
297      IF (LCOMC(4,MINZRC,V5(I4)).EQ.0) GO TO 500
298      IF (LCOMC(4,MINZRC,V6(I4)).EQ.0) GO TO 500
299      IF (LCOMC(4,MINZRC,V12(I4)).EQ.0) GO TO 500
300      IF (LCOMC(4,MINZRC,V13(I4)).EQ.0) GO TO 500

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301 IF (LCCMC(4,MINZRO,V14(I4)).EQ.0) GO TO 500
302 Q= CRITC
303 N = CRITN
304 A = CRITPH
305 IF(V6(I4).GE.Q.AND.V5(I4).GE.N.AND.V4(I4).GE.A) GO TO 125
306 IF(V6(I4).LT.Q.AND.V5(I4).GE.N.AND.V4(I4).GE.A) GO TO 126
307 IF(V6(I4).GE.Q.AND.V5(I4).LT.N.AND.V4(I4).GE.A) GO TO 127
308 IF(V6(I4).GE.Q.AND.V5(I4).GE.N.AND.V4(I4).LT.A) GO TO 128
309 IF(V6(I4).LT.Q.AND.V5(I4).LT.N.AND.V4(I4).GE.A) GO TO 129
310 IF(V6(I4).GE.Q.AND.V5(I4).LT.N.AND.V4(I4).LT.A) GO TO 130
311 IF(V6(I4).LT.Q.AND.V5(I4).GE.N.AND.V4(I4).LT.A) GO TO 131
312 IF(V6(I4).LT.Q.AND.V5(I4).LT.N.AND.V4(I4).LT.A) GO TO 132
313 GO TO 500
314 125 IF(V14(I4).GE.Q.AND.V13(I4).GE.N.AND.V12(I4).GE.A)8(100)=8(100)+1.
315 IF(V14(I4).LT.Q.AND.V13(I4).GE.N.AND.V12(I4).GE.A)8(101)=8(101)+1.
316 IF(V14(I4).GE.Q.AND.V13(I4).LT.N.AND.V12(I4).GE.A)8(102)=8(102)+1.
317 IF(V14(I4).GE.Q.AND.V13(I4).GE.N.AND.V12(I4).LT.A)8(103)=8(103)+1.
318 IF(V14(I4).LT.Q.AND.V13(I4).LT.N.AND.V12(I4).GE.A)8(104)=8(104)+1.
319 IF(V14(I4).GE.Q.AND.V13(I4).LT.N.AND.V12(I4).LT.A)8(105)=8(105)+1.
320 IF(V14(I4).LT.Q.AND.V13(I4).GE.N.AND.V12(I4).LT.A)8(106)=8(106)+1.
321 IF(V14(I4).LT.Q.AND.V13(I4).LT.N.AND.V12(I4).LT.A)8(107)=8(107)+1.
322 C(18) = C(18) + 1.
323 GO TO 500
324 126 IF(V14(I4).GE.Q.AND.V13(I4).GE.N.AND.V12(I4).GE.A)8(108)=8(108)+1.
325 IF(V14(I4).LT.Q.AND.V13(I4).GE.N.AND.V12(I4).GE.A)8(109)=8(109)+1.
326 IF(V14(I4).GE.Q.AND.V13(I4).LT.N.AND.V12(I4).GE.A)8(110)=8(110)+1.
327 IF(V14(I4).GE.Q.AND.V13(I4).GE.N.AND.V12(I4).LT.A)8(111)=8(111)+1.
328 IF(V14(I4).LT.Q.AND.V13(I4).LT.N.AND.V12(I4).GE.A)8(112)=8(112)+1.
329 IF(V14(I4).GE.Q.AND.V13(I4).LT.N.AND.V12(I4).LT.A)8(113)=8(113)+1.
330 IF(V14(I4).LT.Q.AND.V13(I4).GE.N.AND.V12(I4).LT.A)8(114)=8(114)+1.
331 IF(V14(I4).LT.Q.AND.V13(I4).LT.N.AND.V12(I4).LT.A)8(115)=8(115)+1.
332 C(19) = C(19) + 1.
333 GO TO 500
334 127 IF(V14(I4).GE.Q.AND.V13(I4).GE.N.AND.V12(I4).GE.A)8(116)=8(116)+1.
335 IF(V14(I4).LT.Q.AND.V13(I4).GE.N.AND.V12(I4).GE.A)8(117)=8(117)+1.
336 IF(V14(I4).GE.Q.AND.V13(I4).LT.N.AND.V12(I4).GE.A)8(118)=8(118)+1.
337 IF(V14(I4).GE.Q.AND.V13(I4).GE.N.AND.V12(I4).LT.A)8(119)=8(119)+1.
338 IF(V14(I4).LT.Q.AND.V13(I4).LT.N.AND.V12(I4).GE.A)8(120)=8(120)+1.
339 IF(V14(I4).GE.Q.AND.V13(I4).LT.N.AND.V12(I4).LT.A)8(121)=8(121)+1.
340 IF(V14(I4).LT.Q.AND.V13(I4).GE.N.AND.V12(I4).LT.A)8(122)=8(122)+1.
341 IF(V14(I4).LT.Q.AND.V13(I4).LT.N.AND.V12(I4).LT.A)8(123)=8(123)+1.
342 C(20)=C(20) + 1.
343 GO TO 500
344 128 IF(V14(I4).GE.Q.AND.V13(I4).GE.N.AND.V12(I4).GE.A)8(124)=8(124)+1.
345 IF(V14(I4).LT.Q.AND.V13(I4).GE.N.AND.V12(I4).GE.A)8(125)=8(125)+1.
346 IF(V14(I4).GE.Q.AND.V13(I4).LT.N.AND.V12(I4).GE.A)8(126)=8(126)+1.
347 IF(V14(I4).GE.Q.AND.V13(I4).GE.N.AND.V12(I4).LT.A)8(127)=8(127)+1.
348 IF(V14(I4).LT.Q.AND.V13(I4).LT.N.AND.V12(I4).GE.A)8(128)=8(128)+1.
349 IF(V14(I4).GE.Q.AND.V13(I4).LT.N.AND.V12(I4).LT.A)8(129)=8(129)+1.
350 IF(V14(I4).LT.Q.AND.V13(I4).GE.N.AND.V12(I4).LT.A)8(130)=8(130)+1.
351 IF(V14(I4).LT.Q.AND.V13(I4).LT.N.AND.V12(I4).LT.A)8(131)=8(131)+1.
352 C(21)=C(21) + 1.
353 GO TO 500
354 129 IF(V14(I4).GE.Q.AND.V13(I4).GE.N.AND.V12(I4).GE.A)8(132)=8(132)+1.
355 IF(V14(I4).LT.Q.AND.V13(I4).GE.N.AND.V12(I4).GE.A)8(133)=8(133)+1.
356 IF(V14(I4).GE.Q.AND.V13(I4).LT.N.AND.V12(I4).GE.A)8(134)=8(134)+1.
357 IF(V14(I4).GE.Q.AND.V13(I4).GE.N.AND.V12(I4).LT.A)8(135)=8(135)+1.
358 IF(V14(I4).LT.Q.AND.V13(I4).LT.N.AND.V12(I4).GE.A)8(136)=8(136)+1.
359 IF(V14(I4).GE.Q.AND.V13(I4).LT.N.AND.V12(I4).LT.A)8(137)=8(137)+1.
360 IF(V14(I4).LT.Q.AND.V13(I4).GE.N.AND.V12(I4).LT.A)8(138)=8(138)+1.

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361      IF(V14(I4).LT.Q.AND.V13(I4).LT.N.AND.V12(I4).LT.A)8(139)=8(139)+1.
362      C(22) = C(22) + 1.
363      GO TO 500
364 130 IF(V14(I4).GE.Q.AND.V13(I4).GE.N.AND.V12(I4).GE.A)8(140)=8(140)+1.
365      IF(V14(I4).LT.Q.AND.V13(I4).GE.N.AND.V12(I4).GE.A)8(141)=8(141)+1.
366      IF(V14(I4).GE.Q.AND.V13(I4).LT.N.AND.V12(I4).GE.A)8(142)=8(142)+1.
367      IF(V14(I4).GE.Q.AND.V13(I4).GE.N.AND.V12(I4).LT.A)8(143)=8(143)+1.
368      IF(V14(I4).LT.Q.AND.V13(I4).LT.N.AND.V12(I4).GE.A)8(144)=8(144)+1.
369      IF(V14(I4).GE.Q.AND.V13(I4).LT.N.AND.V12(I4).LT.A)8(145)=8(145)+1.
370      IF(V14(I4).LT.Q.AND.V13(I4).GE.N.AND.V12(I4).LT.A)8(146)=8(146)+1.
371      IF(V14(I4).LT.Q.AND.V13(I4).LT.N.AND.V12(I4).LT.A)8(147)=8(147)+1.
372      C(23) = C(23) + 1.
373      GO TO 500
374 131 IF(V14(I4).GE.Q.AND.V13(I4).GE.N.AND.V12(I4).GE.A)8(148)=8(148)+1.
375      IF(V14(I4).LT.Q.AND.V13(I4).GE.N.AND.V12(I4).GE.A)8(149)=8(149)+1.
376      IF(V14(I4).GE.Q.AND.V13(I4).LT.N.AND.V12(I4).GE.A)8(150)=8(150)+1.
377      IF(V14(I4).GE.Q.AND.V13(I4).GE.N.AND.V12(I4).LT.A)8(151)=8(151)+1.
378      IF(V14(I4).LT.Q.AND.V13(I4).LT.N.AND.V12(I4).GE.A)8(152)=8(152)+1.
379      IF(V14(I4).GE.Q.AND.V13(I4).LT.N.AND.V12(I4).LT.A)8(153)=8(153)+1.
380      IF(V14(I4).LT.Q.AND.V13(I4).GE.N.AND.V12(I4).LT.A)8(154)=8(154)+1.
381      IF(V14(I4).LT.Q.AND.V13(I4).LT.N.AND.V12(I4).LT.A)8(155)=8(155)+1.
382      C(24) = C(24) + 1.
383      GO TO 500
384 132 IF(V14(I4).GE.Q.AND.V13(I4).GE.N.AND.V12(I4).GE.A)8(156)=8(156)+1.
385      IF(V14(I4).LT.Q.AND.V13(I4).GE.N.AND.V12(I4).GE.A)8(157)=8(157)+1.
386      IF(V14(I4).GE.Q.AND.V13(I4).LT.N.AND.V12(I4).GE.A)8(158)=8(158)+1.
387      IF(V14(I4).GE.Q.AND.V13(I4).GE.N.AND.V12(I4).LT.A)8(159)=8(159)+1.
388      IF(V14(I4).LT.Q.AND.V13(I4).LT.N.AND.V12(I4).GE.A)8(160)=8(160)+1.
389      IF(V14(I4).GE.Q.AND.V13(I4).LT.N.AND.V12(I4).LT.A)8(161)=8(161)+1.
390      IF(V14(I4).LT.Q.AND.V13(I4).GE.N.AND.V12(I4).LT.A)8(162)=8(162)+1.
391      IF(V14(I4).LT.Q.AND.V13(I4).LT.N.AND.V12(I4).LT.A)8(163)=8(163)+1.
392      C(25) = C(25) + 1.
393 500 CONTINUE
394 C      FOLLOWING 2 LOOPS CALCULATE C & N TRANSITION PROBABILITIES
395      DO 134 I5=1,10
396      DO 133 I5=1,5
397      I7= I6 * 5 + I5 - 5
398      IF (C(I6) .LE. 0.001) GO TO 141
399      P(I7) = 8(I7) / C(I6)
400      GO TO 133
401 141 P(I7) = 0.
402 133 CONTINUE
403 134 CONTINUE
404 C      FOLLOWING 2 LCCPS CALCULATE PH TRANSITION PROBABILITIES
405      DO 135 I9=1,7
406      DO 136 I9=1,7
407      I10 = I8 * 7 + I9 - 7 + 50
408      I11 = I8 + 10
409      IF(C(I11) .LE. 0.001) GO TO 140
410      P(I10) = 8(I10) / C(I11)
411      GO TO 136
412 140 P(I10) = 0.
413 136 CONTINUE
414 135 CONTINUE
415 C      FOLLOWING 2 LCCPS CALCULATE C, N & PH JOINT TRANSITION PROBABILITIES
416      DO 137 I12=1,8
417      DO 138 I13=1,8
418      I14 = I12 * 8 + I13 - 8 + 99
419      I15 = I12 + 17
420      IF (C(I15) .LE. 0.001) GO TO 142

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421      P(I14) = B(I14) / C(I15)
422      GO TO 138
423      142 P(I14) = 0.
424      138 CONTINUE
425      137 CONTINUE
426      IF (IROUND.EQ. 1) RMET = 100.
427      IF (IROUND.EQ. 2) RMET = 500.
428      WRITE (9, 1004) RMET, RMET
429      1004 FORMAT('1', 'TABLES OF TRANSITION PROBABILITIES FOLLOW FOR A MOVE 0
430      1F1.F8.0, ' METERS', / 1X, '(CALCULATED FROM SAMPLES WHICH ARE', F8.0,
431      2' METERS FROM EACH REFERENCE SAMPLE + OR - 100 METERS')
432      1005 FORMAT(1X, 'SAMPLES USED IN CALCULATION ARE FROM THE FIRST QUADRANT
433      1 OF EACH REFERENCE SAMPLE', / 1X, 'WITHIN A RANGE FROM', F8.0,
434      2' TO', F8.0, ' METERS'////////)
435      IF (ICUADS.EQ. 1) WRITE(9, 1005) DISMIN, RADIUS
436      IF (ICUADS.EQ. 0) WRITE(9, 1006) DISMIN, RADIUS
437      1006 FORMAT(1X, 'SAMPLES USED IN CALCULATIONS ARE FROM ALL QUADRANTS OF
438      1THE REFERENCE SAMPLE', / 1X, ' WITHIN A RANGE FROM', F8.0, ' TO',
439      2 F8.0, ' METERS'////////)
440      WRITE (9, 1007)(HEAD(I), I=1,15)
441      1007 FORMAT(10X, 'CARBON TRANSITION PROBABILITIES', // 11X, 5(3A3, 2X),
442      1 2X, 'SAMP.SIZE'//)
443      DO 143 I17=1,5
444      I18 = I17 * 3 - 2
445      I19 = I18 + 1
446      I20 = I18 + 2
447      I21 = I17 * 5 - 4
448      I22 = I21 + 1
449      I23 = I21 + 2
450      I24 = I21 + 3
451      I25 = I21 + 4
452      WRITE (9, 1008) HEAD(I18), HEAD(I19), HEAD(I20), P(I21), P(I22),
453      1 P(I23), P(I24), P(I25), C(I17)
454      143 CONTINUE
455      1008 FORMAT(1X, 3A3, 3X, 5(F5.2, 6X), 2X, F3.0)
456      C ABOVE FORMAT 1008 FOR CARBON & NITROGEN TRANSITION PROB. TABULATION
457      WRITE (9, 1009) (HEAD(I), I=16,30)
458      1009 FORMAT(//////// 20X, 'NITROGEN TRANSITION PROBABILITIES', // 11X,
459      1 5(3A3, 2X), 2X, 'SAMP.SIZE' //)
460      DO 144 I26=1,5
461      I27 = I26 * 3 - 2 + 15
462      I28 = I27 + 1
463      I29 = I27 + 2
464      I30 = I26 * 5 - 4 + 25
465      I31 = I30 + 1
466      I32 = I30 + 2
467      I33 = I30 + 3
468      I34 = I30 + 4
469      I35 = I26 + 5
470      WRITE (9, 1008) HEAD(I27), HEAD(I28), HEAD(I29), P(I30), P(I31),
471      1 P(I32), P(I33), P(I34), C(I35)
472      144 CONTINUE
473      WRITE (9, 1010)(HEAD(I), I=31,51)
474      1010 FORMAT(//////// 20X, 'PH TRANSITION PROBABILITIES', // 11X, 7(3A3,
475      1 2X), 2X, 'SAMP.SIZE'//)
476      DO 145 I36=1,7
477      I37 = I36 * 3 - 2 + 30
478      I38 = I37 + 1
479      I39 = I37 + 2
480      I40 = I36 * 7 - 6 + 50

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481      I41 = I40 + 1
482      I42 = I40 + 2
483      I43 = I40 + 3
484      I44 = I40 + 4
485      I45 = I40 + 5
486      I46 = I40 + 6
487      I47 = I36 + 10
488      WRITE (9, 1011) HEAD(I37), HEAD(I38), HEAD(I39), P(I40), P(I41),
489      1 P(I42), P(I43), P(I44), P(I45), P(I46), C(I47)
490      1011 FORMAT(1X, 3A3, 3X, 7(F5.2, 6X), 2X, F3.0)
491      C      ABOVE FORMAT 1011 FOR PH TRANSITION PROBABILITIES
492      145 CONTINUE
493      WRITE (9, 1012) (HEAD(I), I=52,75)
494      1012 FORMAT(//////// 20X, 'C, N & PH JOINT TRANSITION PROBABILITIES', //
495      1 11X, 3(3A3, 2X), 2X, 'SAMP.SIZE' /)
496      DO 146 I48=1,8
497      I49 = I48 * 3 - 2 + 51
498      I50 = I49 + 1
499      I51 = I49 + 2
500      I52 = I48 * 8 - 7 + 99
501      I53 = I52 + 1
502      I54 = I52 + 2
503      I55 = I52 + 3
504      I56 = I52 + 4
505      I57 = I52 + 5
506      I58 = I52 + 6
507      I59 = I52 + 7
508      I60 = I48 + 17
509      WRITE (9, 1013) HEAD(I49), HEAD(I50), HEAD(I51), P(I52), P(I53),
510      1 P(I54), P(I55), P(I56), P(I57), P(I58), P(I59), C(I60)
511      1013 FORMAT(1X, 3A3, 3X, 3(F5.2, 6X), 2X, F3.0)
512      C      ABOVE FORMAT 1013 FOR C, N & PH JOINT TRANSITION PROBABILITIES
513      146 CONTINUE
514      501 CONTINUE
515      C      END OF PROGRAM "SCILNEIGHBORS"
516      END
END OF FILE

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1 C THIS PROGRAM ("SCILSURVEY") SORTS SOIL DATA BOTH FROM FIELDS WITH
2 C SURFACE SAMPLES AND FROM THE UPPERMOST SAMPLE OF PROFILES INTO "VIRGSOIL"
3 C FOR VIRGIN FOREST SAMPLES AND "NONVIRG" FOR ALL OTHER SAMPLES. SOIL
4 C CALCULATIONS ARE MADE, AND CASES WITH SEVERAL CARD 16 OR 28 RECORDS
5 C ARE ACCOMMODATED. NITROGEN DATA FROM EITHER CARD 13 OR CARD 28 IS OUTPUT
6 C IN THE APPROPRIATE LOCATION IN CARD 28. OUTPUT HAS 9 LINES PER CASE:
7 C A TITLE LINE WITH FIELD OR PROFILE NO AND ABSOLUTE COORDINATES, FOLLOWED
8 C BY CARD 1, CARD 2, CARD 18, CARD 13, CARD 16, CARD 28, SOILCALCS CARD,
9 C AND ONE24. INFORMATION FOR FIELDS IS OUTPUT FIRST, FOLLOWED BY INFORMAT.
10 C FOR PROFILES. SUBROUTINE "CCCRD" IS CALLED.
11 C INPUT UNITS ARE: 5=DATAFILE 7=PROFILEDATA 8=TYPE13
12 C 9=TYPE16 10=TYPE29 11=CNE24 12=TYPE1 13=TYPE2.
13 C OUTPUT UNITS ARE: 14=VIRGSCIL 15=NONVIRGSOIL.
14 C THE FORTRAN MONITOR "MINUSZERO" FEATURE IS USED
15 C THE MTS LOGICAL COMPARISON OF CHARACTERS ("LCOMC") FUNCTION IS USED
16 C
17 C
18 C INTEGER VAR002, VAR003, VAR005, VAR010, VAR011, VAR020, VAR023,
19 C 1VAR024, VAR040, VAR186, VAR187, VAR188, VAR189, VAR191, VAR193,
20 C 2VA202A, VA202B, VAR258, VAR551, VAR552, VAR553, VAR554, VAR559,
21 C 3VAR560, VAR231, VAR232, VAR233, VAR234, VAR235, VAR243, VAR390,
22 C 4VAR331, VAR404
23 C INTEGER D1, D2, D4, D5, D6, D9, D10, VAR192, VAR190,
24 C 1 VAR195, VAR194, D7, D8, D3, VAR185
25 C DIMENSION VAR186(1200), VAR189(1200), VAR192(1200), VAR193(1200)
26 C TRANSFER TO PROFILESORT FOR DIMENSIONS
27 C DIMENSION D1(1200), D2(1200), D3(1200), VAR188(1200), D4(1200)
28 C 1, D5(1200), D7(1200), D8(1200), D9(1200), D10(1200), D11(1200)
29 C 2, D13(1200), D14(1200), VAR199(1200), D15(1200),
30 C 3VA202A(1200), VA202B(1200), C5(1200), D12(1200)
31 C ABOVE DIMENSION FOR CARD TYPE 13
32 C DIMENSION VAR231(550), VAR232(550), VAR233(550), VAR234(550),
33 C 1VAR235(550), VAR236(550), VAR237(550), VAR238(550), VAR239(550),
34 C 2VAR240(550), VAR241(550), VAR242(550), VAR243(550)
35 C ABOVE DIMENSION FOR CARD TYPE 16
36 C DIMENSION VAR551(1300), VAR552(1300), VAR553(1300), VAR554(1300),
37 C 1VAR555(1300), VAR556(1300), VAR557(1300), VAR558(1300), VA558A(1300),
38 C 10), VA558B(1300), VA558C(1300), VA558D(1300), VA558E(1300),
39 C 2VAR559(1300), VAR560(1300)
40 C ABOVE DIMENSION FOR CARD TYPE 28
41 C DIMENSION G1(1400), VAR390(1400), G2(1400), G3(1400), G4(1400),
42 C 1G5(1400), G6(1400), G7(1400), VAR404(1400)
43 C ABOVE DIMENSION FOR ONE24
44 C DIMENSION VAR187(1200), VAR191(1200), VAR195(1200), VAR190(1200),
45 C 1 VAR194(1200), VAR195(1200), VAR196(1200), VAR197(1200),
46 C 2 VAR198(1200), VAR201(1200), VAR200(1200)
47 C COMMON/CCCRD2/IXCD,IYCC
48 C EQUIVALENCE (D2(1), VAR186(1)), (D4(1), VAR189(1)),
49 C 1(D7(1), VAR192(1)), (D9(1), VAR193(1)), (D1(1), VAR189(1)),
50 C 2 (D5(1), VAR190(1)), (D6(1), VAR191(1)), (D9(1), VAR194(1)),
51 C 3 (D10(1), VAR195(1)), (D11(1), VAR196(1)), (D12(1), VAR197(1)),
52 C 4 (D14(1), VAR200(1)), (D15(1), VAR201(1)), (D13(1), VAR198(1)),
53 C 5 (D1(1), VAR185(1)), (D3(1), VAR187(1))
54 C DATA MINZRG/Z80000000/
55 C CALL FNMCMC('SET MINUSZERO=ON',16)
56 C READ (5, 1000) ICDS18, ICDS13, ICDS16, ICDS28, IONE24, ICFOR1,
57 C 1 ICDS1
58 C 1000 FORMAT(IX, 7I5)
59 C ICDS18 IS THE NUMBER OF CARDS OF TYPE 18
60 C ICDS13 IS THE NUMBER OF CARDS OF TYPE 13

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61 C ICDS16 IS THE NUMBER OF CARDS OF TYPE 16
62 C ICDS28 IS THE NUMBER OF CARDS OF TYPE 28
63 C ICNE24 IS THE NUMBER OF RECCROS IN ONE24 (ONE CASE PER CARD OF TYPE 24)
64 C ICFOR1 IS THE NUMBER OF CARD 13 CARDS OF FORMAT 1
65 DO 100 I1=1,ICDS13
66 IF (I1 .GE. ICFOR1)GO TO 300
67 READ (8, 1001) D1(I1), D2(I1), D3(I1), VAR188(I1), D4(I1),
68 D5(I1), D6(I1), D7(I1), D8(I1), D9(I1), D10(I1), D11(I1), D12(I1),
69 D13(I1), VAR199(I1), D14(I1), D15(I1), VA202A(I1
70 3), VA2029(I1)
71 1001 FORMAT(1X, A2, 15, A4, 15, I4, 2A3, 2I4, A3, A4, A3, 2A4, F4.2,
72 12A4, 2I2)
73 C ABOVE FORMAT 1001 FOR CARD TYPE 13 FORMAT 1
74 GO TO 100
75 300 READ (8, 1002) D1(I1), D2(I1), D3(I1), VAR188(I1), D4(I1),
76 D5(I1), D6(I1), D7(I1), D8(I1), D9(I1), D10(I1), D11(I1), D12(I1),
77 D13(I1), VAR199(I1), D14(I1), D15(I1), VA202A(I1),
78 3 VA2028(I1)
79 1002 FORMAT(1X, A2, 15, A4, 15, I4, 2A3, I4, 1X, I4, 1X, A3, A4, 1X,
80 1A3, 2(1X, A4), 1X, F4.2, 2(1X, A4), 2(1X, I2))
81 C ABOVE FORMAT 1002 FOR CARD TYPE 13 FORMAT 2
82 100 CONTINUE
83 READ (9, 1003)(VAR231(I2), VAR232(I2), VAR233(I2), VAR234(I2),
84 1VAR235(I2), VAR236(I2), VAR237(I2), VAR238(I2), VAR239(I2),
85 2VAR240(I2), VAR241(I2),VAR242(I2), VAR243(I2), I2=1,ICDS16)
86 1003 FORMAT(1X, I2, 1X, A4, 15, 2A4, 4F4.0, 3F6.2, I3)
87 C ABOVE FORMAT 1003 FOR CARD TYPE 16
88 READ (10, 1004)(VAR551(I3), VAR552(I3), VAR553(I3), VAR554(I3),
89 1VAR555(I3), VAR556(I3), VAR557(I3), VAR558(I3), VA558A(I3),
90 2VA553B(I3), VA553C(I3), VA558C(I3), VA558E(I3), VAR559(I3),
91 3VAR560(I3), I3=1,ICDS28)
92 1004 FORMAT(1X, I2, 1X, 2A4, 15, 9F5.2, 12X, 2I3)
93 C ABOVE FORMAT 1004 IS FOR CARD 28
94 READ (11, 1005)(G1(I4), VAR390(I4), G2(I4), G3(I4), G4(I4), G5(I4)
95 1, G6(I4), G7(I4), VAR404(I4), I4=1,ICNE24)
96 1005 FORMAT(1X, A2, 15, 6A4, 25X, I3)
97 C ABOVE FORMAT 1005 IS FOR CNE24
98 C RETURN FROM PROFILESCRIPT
99 DO 200 I50=1,ICDS1
100 C DOES CNE ITERATION FOR EACH SAMPLED FIELD
101 READ (12, 6000) VAR001, VAR002, VAR003, VAR004, VAR005, VAR006,
102 1 VAR007, VAR008, VAR009, VAR010, VAR011, VAR012, VAR013, VAR014,
103 2VAR015, VAR016, VAR017, VAR018, VAR019, VAR020, VAR021
104 6000 FORMAT(1X, A2, 2I5, A2, I4, A3, 2A2, A4, 15, I3, A2, 1X, A4, A2,
105 1 5(1X, A4), I3, 1X, A4)
106 C ABOVE FORMAT 6000 FOR CARD TYPE 1
107 ID = 15
108 IF (VAR011 .EQ. 1) ID=14
109 C ID IS THE DEVICE NUMBER: 14=VIRGSCIL ; 15=NONVIRGSOIL
110 READ (13,6001) VAR022,VAR023,VAR024,VAR025,VAR026,VAR026A,VAR027,
111 1VAR028, VAR029, VAR030, VAR031, VAR032, VAR033, VAR034, VAR035,
112 2VAR036, VAR037, VAR038, VAR039, VAR040, VAR041, VAR042, VA042A
113 6001 FORMAT(1X, A2, 2I5, 1X, A4, A2, A1, 1X, A4, 2A2, 1X, A4, A3, A4,
114 1 A2, 2(1X, 2A4, A2), I4, A2, A4, A2)
115 C ABOVE FORMAT 6001 FOR CARD TYPE 2
116 I134IS = 0
117 DO 201 I51=1,ICDS13
118 C FINDS CARD 13 INFORMATION FOR FIELD
119 IF (VAR186(I51) .EQ. VAR002) GO TO 202
120 201 CONTINUE

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121      WRITE (ID, 6004) VAR002
122      6004 FORMAT(1X, 'FIELD:', I4)
123      I13MIS = 1
124      C      "I13MIS=1" INDICATES CARD 13 INFO. FOR FIELD MISSING
125      GO TO 203
126      202 CALL CCORD(VAR189(I51), VAR192(I51), VAR193(I51))
127      WRITE (ID, 6003) VAR186(I51), IXCC, IYCO
128      6003 FORMAT(1X, 'FIELD:', I4, 24X, ' ABSOLUTE COORDS:(', I8, ',', I8,
129      1 ')')
130      203 WRITE (ID, 6000) VAR001, VAR002, VAR003, VAR004, VAR005, VAR006,
131      1VAR007, VAR008, VAR009, VAR010, VAR011, VAR012, VAR013, VAR014,
132      2VAR015, VAR016, VAR017, VAR018, VAR019, VAR020, VAR021
133      C      ABOVE WRITE FOR CARD TYPE 1
134      WRITE (ID, 6001) VAR022, VAR023, VAR024, VAR025, VAR026, VAR027,
135      1 VAR028, VAR029, VAR030, VAR031, VAR032, VAR033, VAR034, VAR035,
136      2 VAR036, VAR037, VAR038, VAR039, VAR040, VAR041, VAR042, VAR043
137      C      ABOVE WRITE FOR CARD TYPE 2
138      WRITE (ID, 6005)
139      6005 FORMAT(1X, '18')
140      IF (I13MIS .EQ. 1) WRITE (ID, 6002)
141      6002 FORMAT(1X, '13')
142      C      ABOVE FORMAT 6002 HOLDS SPACE FOR MISSING CARD 13
143      IF (I13MIS .EQ. 0) WRITE (ID, 1002) VAR185(I51), VAR186(I51),
144      1 VAR187(I51), VAR188(I51), VAR189(I51), VAR190(I51), VAR191(I51),
145      2 VAR192(I51), VAR193(I51), VAR194(I51), VAR195(I51), VAR196(I51),
146      3 VAR197(I51), VAR198(I51), VAR199(I51), VAR200(I51), VAR201(I51),
147      4 VAR202A(I51), VAR202B(I51)
148      C      ABOVE WRITE FOR CARD TYPE 13
149      NOTE = 0
150      IF (VAR020 .EQ. 4) NOTE = 1
151      IF (VAR020 .EQ. 5) NOTE = 2
152      ISAMP = VAR003
153      C      FOLLOWING STATEMENTS FIND AND WRITE INFO. FROM CARDS 16, 28 & 24
154      C      AND DO SOIL CALCULATIONS.
155      IV231 = -0
156      IV232 = -0
157      IV233 = -0
158      IV234 = -0
159      IV235 = -0
160      V236 = -0.
161      V237 = -0.
162      V238 = -0.
163      V239 = -0.
164      V240 = -0.
165      V241 = -0.
166      V242 = -0.
167      IV243 = -0
168      DO 111 I8=1, ICDS16
169      C      FINDS CARD 16 INFO. FOR SAMPLE
170      IF (VAR233(I8) .EQ. ISAMP) GO TO 112
171      GO TO 111
172      112 IF (NOTE .EQ. 1 .AND. .NOT.(VAR243(I8) .EQ. 1)) GO TO 111
173      IF (NOTE .EQ. 2 .AND. .NOT.(VAR243(I8) .EQ. 2)) GO TO 111
174      IF (IV231 .EQ. -0) IV231 = VAR231(I8)
175      IF (IV232 .EQ. -0) IV232 = VAR232(I8)
176      IF (IV233 .EQ. -0) IV233 = VAR233(I8)
177      IF (IV234 .EQ. -0) IV234 = VAR234(I8)
178      IF (IV235 .EQ. -0) IV235 = VAR235(I8)
179      IF (V236 .EQ. -0) V236 = VAR236(I8)
180      IF (V237 .EQ. -0) V237 = VAR237(I8)

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181         IF (V239 .EQ. -0) V238 = VAR238(I8)
182         IF (V239 .EQ. -0) V239 = VAR239(I8)
183         IF (V240 .EQ. -0) V240 = VAR240(I8)
184         IF (V241 .EQ. -0) V241 = VAR241(I8)
185         IF (V242 .EQ. -0) V242 = VAR242(I8)
186         IF (IV243 .EQ. -0) IV243 = VAR243(I8)
187     111 CONTINUE
188         IF (IV231 .GE. 1) GO TO 113
189     125 WRITE (ID, 1009)
190 1009 FORMAT(1X, '16')
191         IF (ISAMP .EQ. 0..CR. ISAMP .EQ. -0) GO TO 126
192         GO TO 114
193     113 WRITE (ID, 1003) IV231, IV232, IV233, IV234, IV235, V236, V237,
194         IV238, V239, V240, V241, V242, IV243
195 C      ABOVE WRITE FOR CARD 16 INFC. FOR SAMPLE
196     114 CONTINUE
197         IV551 = -0
198         IV552 = -0
199         IV553 = -0
200         IV554 = -0
201         V555 = -0.
202         V556 = -0.
203         V557 = -0.
204         V558 = -0.
205         V558A = -0.
206         V558B = -0.
207         V558C = -0.
208         V558D = -0.
209         V558E = -0.
210         IV559 = 0.
211         IV560 = 0.
212         DO 115 I9=1,ICDS28
213 C      FINDS CARD 28 INFORMATION
214         IF (VAR554(I9) .EQ. ISAMP) GO TO 116
215         GO TO 115
216     116 IF (NOTE .EQ. 1 .AND. .NOT.(VAR559(I9) .EQ. 1 .OR. VAR560(I9) .EQ.
217         1 1)) GO TO 115
218         IF (NOTE .EQ. 2 .AND. .NOT.(VAR559(I9) .EQ. 2 .OR. VAR560(I9) .EQ.
219         1 2)) GO TO 115
220         IF (IV551 .EQ. -0) IV551 = VAR551(I9)
221         IF (IV552 .EQ. -0) IV552 = VAR552(I9)
222         IF (IV553 .EQ. -0) IV553 = VAR553(I9)
223         IF (IV554 .EQ. -0) IV554 = VAR554(I9)
224         IF (V555 .EQ. -0) V555 = VAR555(I9)
225         IF (V556 .EQ. -0) V556 = VAR556(I9)
226         IF (V557 .EQ. -0) V557 = VAR557(I9)
227         IF (V558 .EQ. -0) V558 = VAR558(I9)
228         IF (V558A .EQ. -0) V558A = VAR558A(I9)
229         IF (V558B .EQ. -0) V558B = VAR558B(I9)
230         IF (V558C .EQ. -0) V558C = VAR558C(I9)
231         IF (V558D .EQ. -0) V558D = VAR558D(I9)
232         IF (V558E .EQ. -0) V558E = VAR558E(I9)
233         IF (IV559 .EQ. -0) IV559 = VAR559(I9)
234         IF (IV560 .EQ. -0) IV560 = VAR560(I9)
235     115 CONTINUE
236         IF (IV551 .GE. 1) GO TO 118
237     126 WRITE (ID, 1010)
238 1010 FORMAT(1X, '28')
239         IF (ISAMP .EQ. 0 .CR. ISAMP .EQ. -0) GO TO 127
240         GO TO 119

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241      118 CONTINUE
242      IF (LCCMC(4,MINZRC,V556) .EQ. 0) GO TO 120
243      RNITRO = V556
244      GO TO 121
245      120 IF (I51 .GT. ICDS13) GO TO 122
246      IF (LCCMC(4,MINZRC,VARI99(I51)) .EQ. 0) GO TO 122
247      RNITRO = VARI99(I51)
248      GO TO 121
249      122 RNITRO = -0.00
250      121 CONTINUE
251      WRITE (ID, 1004) IV551, IV552, IV553, IV554, V555, RNITRO, V557,
252      IV558, V558A, V558B, V558C, V558D, V558E, IV559, IV560
253      C      ABOVE WRITE FOR CARD 28 INFC.
254      119 CONTINUE
255      C
256      C      SOIL CALCULATIONS FOLLOW
257      C
258      IF (.NOT.(V240 .GE. 0.01 .AND. V241 .GE. 0.01)) GO TO 613
259      RKI = (V240 / V241) * 1.7
260      IF (LCCMC(4,MINZRC,V242) .EQ. 0) GO TO 614
261      RKR = 1.7 * V240 / (V241 + (0.6375 * V242))
262      C      RKR ("KR") AND RKI ("KI") ARE MEASURES OF LIBERATION OF SILICA BY SILICATE
263      LATOS = 0
264      IF (RKI .GE. 1.33 .AND. RKI .LT. 1.82) LATOS = 1
265      IF (RKI .GE. 1.82 .AND. RKI .LT. 2.50) LATOS = 2
266      C      LATOS IS A CODE FOR SEPARATION OF LATOSOLS AND PODSOLS 1=LATOSOL,
267      C      2=PODSOL, 0=DATA AVAILABLE BUT OUT OF RANGE.
268      GO TO 615
269      613 RKI = -0.00
270      LATOS = -0
271      614 RKR = -0.00
272      615 CONTINUE
273      IF (LCCMC(4,MINZRC,V558A) .EQ. 0) GO TO 610
274      IF (LCCMC(4,MINZRC,V558B) .EQ. 0) GO TO 610
275      IF (LCCMC(4,MINZRC,V557) .EQ. 0) GO TO 610
276      IF (LCCMC(4,MINZRC,V558) .EQ. 0) GO TO 610
277      S = V558A + V558B + V557 + V558
278      C      S IS THE SUM OF EXCHANGEABLE BASES
279      GO TO 301
280      610 S = -0.
281      301 CONTINUE
282      IF (LCCMC(4,MINZRC,V558C) .EQ. 0) GO TO 611
283      IF (LCCMC(4,MINZRC,V558D) .EQ. 0) GO TO 611
284      T = V558A + V558B + V557 + V558 + V558C + V558D
285      C      "T" IS THE TOTAL CATION EXCHANGE CAPACITY
286      IF (T .LT. 0.01) GO TO 302
287      V = (S / T) * 100.0
288      C      "V" IS THE POTENTIAL BASE SATURATION
289      GO TO 612
290      611 T = -0.00
291      302 V = -0.
292      612 CONTINUE
293      IF (LCCMC(4,MINZRC,RNITRO) .EQ. 0) GO TO 619
294      GO TO 617
295      619 CN = -0.
296      GO TO 620
297      617 IF (LCCMC(4,MINZRC,V555) .EQ. 0) GO TO 619
298      IF (RNITRO .LT. 0.001) GO TO 619
299      CN = V555 / RNITRO
300      C      CN IS THE CAPBN/NITROGEN RATIO. THE NORMAL RANGE IS 8-14.

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301      620 IF (LCCMC(4,MINZRC,V555) .EQ. 0) GO TO 621
302      CM = 1.7162 * V555
303      C      CM IS ORGANIC MATTER
304      GO TO 622
305      621 CM = -0.00
306      622 CONTINUE
307      WRITE (ID, 1011) IV552, IV553, IV554, RK1, RKR, LATOS, RNITRO,OM,
308      ICN, S, T, V
309      1011 FCRMAT(3X, 1X, A4, A4, I5, 2F5.2, I2, 2F5.2, F4.0, F5.2, F6.2,
310      1F4.0)
311      C      ABOVE FORMAT 1011 FOR SOIL CALCULATIONS
312      GO TO 600
313      127 WRITE (ID, 1013) VAROC2
314      1013 FCRMAT(3X, I5)
315      GO TO 133
316      600 CONTINUE
317      DO 130 I10=1,ICNE24
318      C      FINDS CARD 14 INFO. IN CNEI4
319      IF (VAR39C(I10).EQ. (SAMP) GO TO 131
320      GO TO 130
321      131 IF (NOTE .EQ. 1 .AND. .NOT.(VAR404(I10) .EQ. 1)) GO TO 130
322      IF (NOTE .EQ. 2 .AND. .NOT.(VAR404(I10) .EQ. 2)) GO TO 130
323      GO TO 132
324      130 CONTINUE
325      133 WRITE (ID, 1012)
326      1012 FCRMAT(1X, '24')
327      GO TO 103
328      132 WRITE (ID, 1005) G1(I10), VAR390(I10), G2(I10), G3(I10), G4(I10),
329      IG5(I10), G6(I10), G7(I10), VAR404(I10)
330      C      ABOVE WRITE FOR CARD 24 INFORMATION
331      103 CONTINUE
332      200 CONTINUE
333      DO 204 I52=1,ICDS18
334      C      DOES ONE ITERATION FOR EACH PROFILE
335      READ (7, 6010) P1, P2, P3, P4, P5, P6, P7, P8, P9, P10, P11, P12,
336      1 P13, P14, P15, P16, P17, P18, P19, P20
337      6010 FCRMAT(1X, A3, 19A4 )
338      C      ABOVE FORMAT 6010 FOR READING OF PROFILEDATA TITLE INFO.
339      6006 FCRMAT(1X, A3, 19A4 / 1X, ' 1', / 1X, ' 2')
340      C      ABOVE FORMAT 6006 FOR PROFILEDATA TITLE INFO. AND CARDS 1 & 2 PLACEHOLDERS
341      READ (7, 6007) VAR260, VAR261, VAR262, VAR263, VAR264, VAR265,
342      1 VAR266, VAR267, VAR268, VAR269, VAR270, VAR271, VAR272, VAR273,
343      2 VAR274, VAR275, VAR276, VAR277, VAR278, VAR279, VAR280
344      6007 FCRMAT(1X, A2, 2A4, 2A3, A4, A3, A4, I2, 1X, A4, 3A2, A4, 4(1X,A4)
345      1. 3A2)
346      C      ABOVE FORMAT 6007 FOR CARD 18 INFO. IN PRCFILEDATA
347      ID = 15
348      IF (VAR263 .EQ. 1) ID = 14
349      WRITE (ID, 6006) P1, P2, P3, P4, P5, P6, P7, P8, P9, P10, P11,
350      1 P12, P13, P14, P15, P16, P17, P18, P19, P20
351      C      ABOVE WRITE FOR TITLE AND CARD 1 & 2 PLACEHOLDERS
352      WRITE (ID, 6007) VAR260, VAR261, VAR262, VAR263, VAR264, VAR265,
353      1 VAR266, VAR267, VAR268, VAR269, VAR270, VAR271, VAR272, VAR273,
354      2 VAR274, VAR275, VAR276, VAR277, VAR278, VAR279, VAR280
355      C      ABOVE WRITE FOR CARD 18 INFO. FROM PROFILEDATA
356      DO 205 I54=1,4
357      READ (7, 6008) P21, P22, P23, P24, P25, P26, P27, P28, P29, P30,
358      1P31, P32, P33, P34, P35, P36, P37, P38, P39, P40
359      6008 FCRMAT(1X, A3, 19A4)
360      C      ABOVE FORMAT 6009 FOR CARD TYPES 13, 16, 28, AND SOILCALCS INFO. FROM

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361      C      PROFILEDATA
362          WRITE (ID, 6008) P21, P22, P23, P24, P25, P26, P27, P28, P29, P30,
363          1 P31, P32, P33, P34, P35, P36, P37, P38, P39, P40
364      205 CONTINUE
365          READ (7, 6009) P41, P42, P43, P44, P45, P46, P47, P48, P49, P50,
366          1 P51, P52, P53, P54, P55, P56, P57, P58, P59
367          WRITE (ID, 6008) P41, P42, P43, P44, P45, P46, P47, P48, P49, P50,
368          1 P51, P52, P53, P54, P55, P56, P57, P58, P59
369      C      ABOVE READ AND WRITE FOR ONE24 INFORMATION FROM PROFILEDATA
370      6009 FORMAT(1X, A3, 18A4, 15( / ))
371      204 CONTINUE
372      C      END OF PROGRAM "SOILSURVEY"
373          RETURN
374          END
END OF FILE

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1  $RUN *WATFIV 7=TYPE9 8=TYPE13 9=TYPE28 10=-RI 11=-MZ 12=-BM -
2  13=-PS 14=-OT 15=-SM 16=-VI 17=TYPE16 SPRINT=-PRINT PAR=SIZE=60
3  $CCMPILE LIST
4  C
5  C   THIS PROGRAM (ST9-13-16-28) READS THE DATA FROM CARD TYPES 9, 13,
6  C   16 AND 28 AND SORTS THEM INTO FILES FOR EACH OF 7 CROPS (RICE,
7  C   MAIZE, PHASEOLLS, VIGNA, BITTER MANIOC AND SWEET MANIOC)PLUS A
8  C   CATEGORY FOR OTHER. PLACES ARE HELD FOR MISSING CARD 13, 16 AND 23
9  C   VALUES
10 C
11 C   INTEGER VAR232, VAR233, VAR234, VAR235, VAR243
12 C   ABOVE TYPE DECLARATION FOR CARD 16
13 C   INTEGER VAR106, VAR107, VAR109, VAR122
14 C   FOR CARD TYPE 9
15 C   INTEGER VAR186
16 C   FOR CARD TYPE 13
17 C   INTEGER VAR552
18 C   ABOVE FOR CARD TYPE 28
19 C   DIMENSION VAR232(550), DUM2(550), VAR233(550), VAR234(550),
20 C   1VAR235(550), VAR236(550), VAR237(550), VAR238(550),
21 C   2VAR239(550), DUM3(550), VAR240(550), DUM4(550), VAR241(550),
22 C   3DUM5(550), VAR242(550), VAR243(550)
23 C   ABOVE DIMENSION FOR CARD TYPE 16
24 C   DIMENSION VAR186(1200), VAR187(1200), VAR188(1200), VAR189(1200),
25 C   1VAR190(1200), VAR191(1200), VAR192(1200), VAR193(1200),
26 C   2VAR194(1200), VAR195(1200), VAR196(1200), VAR197(1200),
27 C   3VAR198(1200), VAR199(1200), VAR200(1200), VAR201(1200),
28 C   4VA202A(1200),VA202B(1200), VD1(1200)
29 C   DIMENSION VAR552(1200), VAR553(1200), VAR554(1200), VAR555(1200),
30 C   1VAR556(1200), VAR557(1200), VAR558(1200), VAR559(1200),
31 C   2VAR560(1200), VD2(1200), VD3(1200)
32 C   IFORM1 = 370
33 C   READ (5,1002) ICDS9, ICDS13, ICDS28, ICDS16
34 C   1002 FORMAT(1X, 4I5)
35 C   DO 12 I4=1,ICDS13
36 C   IF (I4 .GE. IFORM1) GO TO 11
37 C   READ (8,1004) VAR186(I4), VAR187(I4), VD1(I4), VAR188(I4),
38 C   1VAR189(I4),
39 C   1VAR190(I4), VAR191(I4), VAR192(I4), VAR193(I4), VAR194(I4), VAR195
40 C   1(I4), VAR196(I4), VAR197(I4), VAR198(I4), VAR199(I4), VAR200(I4),
41 C   3VAR201(I4), VA202A(I4), VA202B(I4)
42 C   GO TO 12
43 C   11 CONTINUE
44 C   READ (9,1005) VAR186(I4), VAR187(I4), VD1(I4), VAR188(I4),
45 C   1VAR189(I4),
46 C   1VAR190(I4), VAR191(I4), VAR192(I4), VAR193(I4), VAR194(I4), VAR195
47 C   1(I4), VAR196(I4), VAR197(I4), VAR198(I4), VAR199(I4), VAR200(I4),
48 C   3VAR201(I4), VA202A(I4), VA202B(I4)
49 C   1004 FORMAT(3X, I5, A4, A1,2A4, 2A3, 2A4, A3, A4, A3, 5A4, 2A2)
50 C   ABOVE FORMAT 1004 FOR CARD TYPE 13 FORMAT NO. 1
51 C   1005 FORMAT(3X, I5, A4, A1,2A4, 2A3, A4, 1X, A4, 1X, A3, A4, 1X, A3,
52 C   15(1X, A4), 2(1X, A2))
53 C   ABOVE FORMAT 1005 FOR CARD TYPE 13 FORMAT NO. 2
54 C   12 CONTINUE
55 C   READ (9,1008)(VAR552(I6), VAR553(I6), VD2(I6), VD3(I6),VAR554(I6),
56 C   1VAR555(I6),
57 C   1VAR556(I6), VAR557(I6), VAR558(I6), VAR559(I6), VAR560(I6), I6 =
58 C   21,ICDS28)
59 C   1008 FORMAT(3X, I5, A1, 7A4, 37X, 2A3)
60 C   ABOVE FORMAT 1008 FOR CARD 28

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61      READ (17,9052)(VAR232(II), CUM2(II), VAR233(II), VAR234(II),
62      1VAR235(II), VAR236(II), VAR237(II), VAR238(II), VAR239(II),
63      2DUM3(II), VAR240(II), DUM4(II), VAR241(II), DUM5(II), VAR242(II),
64      3VAR243(II), II=1,ICDS16)
65      9052 FORMAT(3X, I5, A1, 7A4, A2, A4, A2, A4, A2, A4, A3)
66      C      ABOVE FORMAT 9052 FOR CARD 16
67      DO 24 II=1,ICDS9
68      READ (7,1000) VAR106,VAR107,VAR108,VAR109,VAR110,VAR111,VAR112,
69      1VAR113,VAR114,VAR115,VAR116,VAR117,VD4, VAR118, VAR119, VDS,
70      1VAR120, VAR121,
71      2VAR122,VAR123, VD6, VAR124, VAR125, VD7, VAR126, VAR127, VAR128
72      1000 FORMAT(3X, 2I5, A4, I3, A3, 3A2, A3, 3A2, A1, A4, A2, A4, A4, A2,
73      1I3, 2(A2, A3, A4), 2A2)
74      C      ABOVE FORMAT 1000 FOR CARD TYPE 9
75      IF (VAR109 .EQ. 7) GO TO 20
76      C      SELECTS RICE FIELDS
77      IF (VAR109 .EQ. 14) GO TO 18
78      C      SELECTS MAIZE FIELDS
79      IF (VAR109 .EQ. 29) GO TO 21
80      C      SELECTS MANIOC FIELDS
81      IF (VAR109 .EQ. 21) GO TO 22
82      C      SELECTS BEAN FIELDS
83      GO TO 23
84      C      SELECTS OTHER FIELDS
85      20 CONTINUE
86      IP = 10
87      C      10 IS PSEUDODEVICE FOR RICE
88      GO TO 29
89      18 CONTINUE
90      IP = 11
91      C      11 IS PSEUDODEVICE FOR MAIZE
92      GO TO 29
93      21 CONTINUE
94      IF (VAR122 .EQ. 2) GO TO 300
95      IP = 12
96      C      12 IS PSEUDODEVICE FOR BITTER (OR MIXED OR UNIDENTIFIED) MANIOC
97      C      -(9M9-13-29)
98      GO TO 29
99      300 CONTINUE
100     IP = 15
101     C      15 IS PSEUDODEVICE FOR SWEET MANIOC (SM9-13-28)
102     GO TO 29
103     22 CONTINUE
104     IF (VAR122 .EQ. 1 .OR. VAR122 .EQ. 2 .OR. VAR122 .EQ. 9 .OR.
105     1VAR122 .EQ. 23 .OR. VAR122 .EQ. 24 .OR. VAR122 .EQ. 25 .OR. VAR122
106     2.EQ. 30) GO TO 320
107     IF (VAR122 .EQ. 3 .OR. VAR122 .EQ. 4 .OR. VAR122 .EQ. 5 .OR.
108     1VAR122 .EQ. 6 .OR. VAR122 .EQ. 7 .OR. VAR122 .EQ. 8 .OR. VAR122
109     2.EQ. 10 .OR. VAR122 .EQ. 11 .OR. VAR122 .EQ. 12 .OR. VAR122 .EQ.
110     313 .OR. VAR122 .EQ. 16 .OR. VAR122 .EQ. 17 .OR. VAR122 .EQ. 18
111     4.OR. VAR122 .EQ. 20 .OR. VAR122 .EQ. 21 .OR. VAR122 .EQ. 22 .OR.
112     5VAR122 .EQ. 26 .OR. VAR122 .EQ. 27 .OR. VAR122 .EQ. 29) GO TO 330
113     GO TO 23
114     320 CONTINUE
115     IP = 16
116     C      16 IS PSEUDODEVICE FOR VIGNA (VI9-13-29)
117     GO TO 29
118     330 CONTINUE
119     IP = 13
120     C      13 IS PSEUDODEVICE FOR PHASEOLUS (PS9-13-28)

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121      GO TO 29
122      23 CONTINUE
123      IP = 14
124      C      14 IS PSEUDODEVICE FOR CTER
125      29 CONTINUE
126      WRITE (IP,1009) VAR106,VAR107,VAR108,VAR109,VAR110,VAR111,VAR112,
127      1VAR113,VAR114,VAR115,VAR116,VAR117,VD4, VAR118, VAR119, VD5,
128      1VAR120, VAR121, VAR122, VAR123, VD6, VAR124, VAR125, VD7, VAR126,
129      3VAR127, VAR128
130      1009 FORMAT(2X,' 9', 2I5, A4, I3, 2(A3, 3A2), A1, A4, A2, 2A4, A2, I3,
131      12(A2, A3, A4), 2A2)
132      C      ABOVE FORMAT 1009 FOR CARD TYPE 9
133      DO 10 I2 = 1,ICDS13
134      IF (VAR106 .EQ. VAR186(I2)) GC TO 13
135      10 CONTINUE
136      GO TO 14
137      13 CONTINUE
138      WRITE (IP,1006) VAR186(I2), VAR187(I2), VD1(I2), VAR188(I2),
139      1VAR189(I2),
140      1VAR190(I2), VAR191(I2), VAR192(I2), VAR193(I2), VAR194(I2),
141      2VAR195(I2), VAR196(I2), VAR197(I2), VAR198(I2), VAR199(I2),
142      3VAR200(I2), VAR201(I2), VA202A(I2), VA202B(I2)
143      1006 FORMAT(1X,' 13',I5,A4,A1,2A4,2A3,A4, 1X, A4, 1X, A3, A4, 1X, A3,
144      15(1X, A4), 2(1X, A2))
145      C      RECORDS ALL TYPE 13 INFORMATION AS FORMAT NO. 2
146      GO TO 19
147      14 CONTINUE
148      WRITE (IP,1007)
149      1007 FORMAT(1X,' 13')
150      C      HOLDS SPACE IF CARD 13 MISSING
151      19 CONTINUE
152      DO 100 IK=1,ICDS16
153      IF (VAR232(IK) .EQ. VAR106) GO TO 101
154      100 CONTINUE
155      GO TO 102
156      101 CONTINUE
157      WRITE (IP,1012) VAR232(IK), DUM2(IK), VAR233(IK), VAR234(IK),
158      1VAR235(IK), VAR236(IK), VAR237(IK), VAR238(IK), VAR239(IK),
159      2DUM3(IK), VAR240(IK), DUM4(IK), VAR241(IK), DUM5(IK), VAR242(IK),
160      3VAR243(IK)
161      1012 FORMAT(1X,' 16', I5, A1, 7A4, 3(A2, A4), A3)
162      C      ABOVE FORMAT 1012 FOR CARD 16
163      GO TO 103
164      102 CONTINUE
165      WRITE (IP,1013)
166      1013 FORMAT(1X,' 16')
167      C      SAVES SPACE FOR MISSING CARD 16
168      103 CONTINUE
169      DO 15 I3=1,ICDS28
170      IF (VAR552(I3) .EQ. VAR106) GO TO 16
171      15 CONTINUE
172      GO TO 17
173      16 CONTINUE
174      WRITE (IP,1011) VAR552(I3), VAR553(I3), VD2(I3), VD3(I3), VAR554(
175      1I3), VAR555(I3),
176      1VAR556(I3), VAR557(I3), VAR558(I3), VAR559(I3), VAR560(I3)
177      1011 FORMAT(1X,' 28', I5, A1, 7A4, 37X, 2A3)
178      GO TO 24
179      17 CONTINUE
180      WRITE (IP,1010)

```

```
181      1010 FORMAT(1X,' 28')
182      C      SAVES SPACE FOR MISSING CARD 28
183      24 CONTINUE
184      RETURN
185      END
186      $DATA
187      306 1123 974 531      DATA FOR ST9-13-16-28 ICDS9, 13, 28, 15
188      $STOP
END OF FILE
```

```

1  C
2  C   THIS PROGRAM ("SCRT10") SORTS CARD TYPE 10 (INTERPLANTING)
3  C   INTO FILES FOR EACH OF 7 DIFFERENT PRINCIPAL CROPS: RICE,
4  C   MAIZE, PHASELUS, VIGNA, SWEET MANIOC, BITTER MANIOC AND OTHER
5  C   INPUT UNITS ARE: 5=DATAFILE 12=TYPE9 AND 13=TYPE10.
6  C   OUTPUT UNITS ARE: 6==SINK* 7=RI10 8=MZ10 9=BM10 10=PS10 11=QT10
7  C   14=SM10 AND 15=VI10
8  C   NO SUBPROGRAMS ARE CALLED
9  C
10 C   INTEGER VAR107,VAR109,VAR122
11 C   INTEGER VAR129,VAR130,VAR131,VAR132,VAR133,VAR134,VAR135,VAR136,
12 C   1VAR137,VAR138,VAR139,VAR140,VAR141,VAR142,VAR143,VAR144,VAR145,
13 C   2VAR146,VAR148,VAR150,VAR151,VAR152
14 C   ABOVE TYPE DECLARATION FOR CARD 10
15 C   READ (5,1000) ICDS9
16 C   1000 FORMAT(1X,I5)
17 C   DO 2 I=1,ICDS9
18 C   READ (12,1001)VAR107,VAR109,VAR122
19 C   1001 FORMAT(3X,I5,4X,I3,35X,I3)
20 C   ABOVE FORMAT 1001 FOR CARD 9
21 C   IF (VAR109 .EQ. 7) GO TO 20
22 C   SELECTS RICE FIELDS
23 C   IF (VAR109 .EQ. 14) GO TO 18
24 C   SELECTS MAIZE FIELDS
25 C   IF (VAR109 .EQ. 28) GO TO 21
26 C   SELECTS MANIOC FIELDS
27 C   IF (VAR109 .EQ. 21) GO TO 22
28 C   SELECTS BEAN FIELDS
29 C   GO TO 23
30 C   SELECTS OTHER FIELDS
31 C   20 CONTINUE
32 C   IP= 7
33 C   7 IS PSEUDODEVICE FOR RICE (RI10)
34 C   GO TO 29
35 C   18 CONTINUE
36 C   IP = 8
37 C   8 IS PSEUDODEVICE FOR MAIZE (MZ10)
38 C   GO TO 29
39 C   21 CONTINUE
40 C   IF (VAR122 .EQ. 2) GO TO 30
41 C   IP = 9
42 C   9 IS PSEUDODEVICE FOR BITTER (OR MIXED OR UNIDENTIFIED) MANIOC
43 C   (BM10)
44 C   GO TO 29
45 C   30 CONTINUE
46 C   IP = 14
47 C   14 IS PSEUDODEVICE FOR SWEET MANIOC (SM10)
48 C   GO TO 29
49 C   22 CONTINUE
50 C   IF (VAR122 .EQ. 1 .OR. VAR122 .EQ. 2 .OR. VAR122 .EQ. 9 .OR.
51 C   1VAR122 .EQ. 23 .OR. VAR122 .EQ. 24 .OR. VAR122 .EQ. 25 .OR. VAR122
52 C   2.EQ. 30) GO TO 32
53 C   IF (VAR122 .EQ. 3 .OR. VAR122 .EQ. 4 .OR. VAR122 .EQ. 5 .OR.
54 C   1VAR122 .EQ. 6 .OR. VAR122 .EQ. 7 .OR. VAR122 .EQ. 8 .OR. VAR122
55 C   2.EQ. 10 .OR. VAR122 .EQ. 11 .OR. VAR122 .EQ. 12 .OR. VAR122 .EQ.
56 C   313 .OR. VAR122 .EQ. 16 .OR. VAR122 .EQ. 17 .OR. VAR122 .EQ. 18
57 C   4.OR. VAR122 .EQ. 20 .OR. VAR122 .EQ. 21 .OR. VAR122 .EQ. 22 .OR.
58 C   5VAR122 .EQ. 26 .OR. VAR122 .EQ. 27 .OR. VAR122 .EQ. 29)GO TO 33
59 C   GO TO 23
60 C   32 CONTINUE

```

```

61         IP = 15
62 C       15 IS PSEUDODEVICE FOR VIGNA (VI10)
63         GO TO 29
64       33 CONTINUE
65         IP = 10
66 C       10 IS PSEUDODEVICE FOR PHASEOLUS (PS10)
67         GO TO 29
68       23 CONTINUE
69         IP = 11
70 C       11 IS PSEUDODEVICE FOR CTHEP (CT10)
71       29 CONTINUE
72       1 CONTINUE
73         READ (13,1002)VAR129, VD1, VAR130, VD2, VAR131, VAR132, VAR133,
74         1VAR134, VAR135,
75         1VAR136,VAR137,VAR138,VAR139,VAR140,VAR141,VAR142,VAR143,VAR144,
76         2VAR145,VAR146, VD3, VAR147, VAR148, VD4, VAR149, VAR150,
77         1VAR151, VAR152
78       1002 FORMAT(1X, A2, A1, A4, A1, I4,A4, I2, 2A3, 3A2, A3, 3A2, A3, 3A2,
79         1A1, A4, A2, 2A4, A2, 2A3)
80         IF (VAR131 .NE. VAR107) IP = 6
81         IF (VAR131 .NE. VAR107) WRITE(6, 1005)
82       1005 FORMAT(1X,'EPROR: CATA CARDS OUT OF ORDER OR MISSING LAST CARD -
83         1INDICATOR'. / 1X,'NEXT TYPE 10 CARD IS:')
84         WRITE (19,1003)VAR129, VD1, VAR130, VD2, VAR131, VAR132, VAR133, V
85         1AR134, VAR135,
86         1VAR136,VAR137,VAR138,VAR139,VAR140,VAR141,VAR142,VAR143,VAR144,
87         2VAR145,VAR146, VD3, VAR147, VAR148, VD4, VAR149, VAR150,
88         1VAR151, VAR152
89       1003 FORMAT(2X, A2, A1, A4, A1, I4,A4, I2, 2A3, 3A2, A3, 3A2, A3, 3A2,
90         1A1, A4, A2, 2A4, A2, 2A3)
91         IF (VAR131 .NE. VAR107) GO TO 3
92         IF (VAR133 .LT. 1) GO TO 1
93       2 CONTINUE
94       3 CONTINUE
95       END
END OF FILE

```

```

1 C
2 C THIS PROGRAM ("SORT11") SORTS CARD TYPE 11 (INSECTS AND VERTEBRATES)
3 C INTO FILES FOR 7 DIFFERENT PRINCIPAL CROPS: RICE, MAIZE,
4 C PHASEOLUS, VIGNA, BITTER MANIOC, SWEET MANIOC AND OTHER.
5 C INPUT UNITS ARE: 5=DATAFILE 12=TYPE9 13=ONE11
6 C OUTPUT UNITS ARE: 6=*SINK* 7=R111 8=MZ11 9=BM11 10=PS11 11=OT11
7 C 14=SM11 15=V111
8 C NO SUBPROGRAMS ARE CALLED.
9 C
10 C INTEGER VAR107,VAR109,VAR122
11 C ABOVE TYPE DECLARATION FOR CARD 9
12 C INTEGER VAR153,VAR154,VAR155,VAR156,VAR157,VAR158,VAR159,VAR160,
13 C 1VAR161,VAR162,VAR163,VAR164,VAR165, VAR166,VAR167,VAR168,
14 C 2VAR169,VAR170,VAR171,VAR172,VAR173,VAR174,VAR175,VAR176,VAR177,
15 C 3VAR178,VAR179,VAR180,VAR181,VAR182,VAR183
16 C ABOVE TYPE DECLARATION FOR CARD 11
17 C READ (5,1000) ICDS9
18 C 1000 FORMAT(1X,15)
19 C DO 2 I=1,ICDS9
20 C READ (12,1001)VAR107,VAR109,VAR122
21 C 1001 FORMAT(3X,15,4X,13,35X,13)
22 C ABOVE FORMAT 1001 FOR CARD 9
23 C IF (VAR109 .EQ. 7) GO TO 20
24 C SELECTS RICE FIELDS
25 C IF (VAR109 .EQ. 14) GO TO 18
26 C SELECTS MAIZE FIELDS
27 C IF (VAR109 .EQ. 28) GO TO 21
28 C SELECTS MANIOC FIELDS
29 C IF (VAR109 .EQ. 21) GO TO 22
30 C SELECTS BEAN FIELDS
31 C GO TO 23
32 C SELECTS OTHER FIELDS
33 C 20 CONTINUE
34 C IP = 7
35 C 7 IS PSEUDODEVICE FOR RICE (R111)
36 C GO TO 29
37 C 18 CONTINUE
38 C IP = 8
39 C 8 IS PSEUDODEVICE FOR MAIZE (MZ11)
40 C GO TO 29
41 C 21 CONTINUE
42 C IF (VAR122 .EQ. 2) GO TO 30
43 C IP = 9
44 C 9 IS PSEUDODEVICE FOR BITTER (OR MIXED OR UNIDENTIFIED) MANIOC
45 C (BM11)
46 C GO TO 29
47 C 30 CONTINUE
48 C IP = 14
49 C 14 IS PSEUDODEVICE FOR SWEET MANIOC (SM11)
50 C GO TO 29
51 C 22 CONTINUE
52 C IF (VAR122 .EQ. 1 .OR. VAR122 .EQ. 2 .OR. VAR122 .EQ. 9 .OR.
53 C 1VAR122 .EQ. 23 .OR. VAR122 .EQ. 24 .OR. VAR122 .EQ. 25 .OR. VAR122
54 C 2.EQ. 30) GO TO 32
55 C IF (VAR122 .EQ. 3 .OR. VAR122 .EQ. 4 .OR. VAR122 .EQ. 5 .OR.
56 C 1VAR122 .EQ. 6 .OR. VAR122 .EQ. 7 .OR. VAR122 .EQ. 8 .OR. VAR122
57 C 2.EQ. 10 .OR. VAR122 .EQ. 11 .OR. VAR122 .EQ. 12 .OR. VAR122 .EQ.
58 C 313 .OR. VAR122 .EQ. 16 .OR. VAR122 .EQ. 17 .OR. VAR122 .EQ. 18
59 C 4.OR. VAR122 .EQ. 20 .OR. VAR122 .EQ. 21 .OR. VAR122 .EQ. 22 .OR.
60 C 5VAR122 .EQ. 26 .OR. VAR122 .EQ. 27 .OR. VAR122 .EQ. 29)GO TO 33

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```

61      GO TO 23
62      32 CONTINUE
63      IP = 15
64      C    15 IS PSEUDODEVICE FOR VIGNA (VI11)
65      GO TO 29
66      33 CONTINUE
67      IP = 10
68      C    10 IS PSEUDODEVICE FOR PHASECLUS (PS11)
69      GO TO 29
70      23 CONTINUE
71      IP = 11
72      C    11 IS PSEUDODEVICE FOR CTER (CT11)
73      29 CONTINUE
74      1 CONTINUE
75      READ (13,1052) VAR153,VD1, VAR154, VD2, VAR155, VAR156, VAR157,
76      1VAR158, VAR159,
77      1VAR160,VAR161,VAR162,VAR163,VAR164,VAR165,VAR166,VAR167,VAR168,
78      2VAR169,VAR170,VAR171,VAR172,VAR173,VAR174,VAR175,VAR176,VAR177,
79      3VAR178,VAR179,VAR180,VAR181,VAR182,VAR183,VAR184
80      1052 FORMAT(2X,A2, A1, A4, A1, I4, A4, I2, 6(A3, 3A2), 2A2, A3)
81      IF (VAR155 .NE. VAR107) IP = 5
82      IF (VAR155 .NE. VAR107) WRITE(6, 1005)
83      1005 FORMAT(1X,'ERROR: DATA CARDS OUT OF ORDER OR MISSING LAST CARD -
84      1INDICATOR', / 1X,'NEXT TYPE 11 CARD IS:')
85      C    ABOVE FORMAT 1052 FOR CARD 11
86      WRITE (IP,1053) VAR153, VD1, VAR154, VD2, VAR155, VAR156, VAR157,
87      1VAR158, VAR159,
88      1VAR160,VAR161,VAR162,VAR163,VAR164,VAR165,VAR166,VAR167,VAR168,
89      2VAR169,VAR170,VAR171,VAR172,VAR173,VAR174,VAR175,VAR176,VAR177,
90      3VAR178,VAR179,VAR180,VAR181,VAR182,VAR183,VAR184
91      1053 FORMAT(2X,A2, A1, A4, A1, I4, A4, I2, 6(A3, 3A2), 2A2, A3)
92      IF (VAR155 .NE. VAR107) GO TO 3
93      IF (VAR157 .LT. 1) GO TO 1
94      2 CONTINUE
95      3 CONTINUE
96      END
END OF FILE

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```

1  C
2  C   THIS PROGRAM ("SCPT22") SORTS CARD TYPE 22 (WEEDS DISEASES AND TREATMENTS)
3  C   INTO FILES FOR EACH OF 7 PRINCIPAL CROPS: RICE, MAIZE,
4  C   PHASELUS, VIGNA, SEWEEET MANICC, BITTER MANIOC AND OTHER.
5  C   INPUT UNITS ARE 5=CATAFILE 12=TYPE9 AND 13=TYPE22
6  C   OUTPUT UNITS ARE 6=SINK* 7=R122 8=MZ22 9=BM22 10=PS22
7  C   11=OT22 14=SM22 15=VI22
8  C   NO SUBPROGRAMS ARE CALLED.
9  C
10 C   INTEGER VAR107,VAR109,VAR122
11 C   ABOVE TYPE DECLARATION FOR CARD 9
12 C   INTEGER VAR339,VAR340,VAR341,VAR342,VAR343,VAR344,VAR346,VAR348,
13 C   1VAR349,VAR350,VAR351,VAR352,VAR353,VAR354,VAR356,VAR357,VAR358,
14 C   2VAR359,VAR361,VAR362,VAR365
15 C   ABOVE TYPE DECLARATION FOR CARD 22
16 C   READ (5,1000) ICDS9
17 C   1000 FORMAT(1X,I5)
18 C   DO 2 I=1,ICDS9
19 C   READ (12,1001)VAR107,VAR109,VAR122
20 C   1001 FORMAT(9X,I5,4X,I3,35X,I3)
21 C   ABOVE FORMAT 1001 FOR CARD 9
22 C   IF (VAR109 .EQ. 7) GO TO 20
23 C   SELECTS RICE FIELDS
24 C   IF (VAR109 .EQ. 14) GO TO 18
25 C   SELECTS MAIZE FIELDS
26 C   IF (VAR109 .EQ. 28) GO TO 21
27 C   SELECTS MANICC FIELDS
28 C   IF (VAR109 .EQ. 21) GO TO 22
29 C   SELECTS BEAN FIELDS
30 C   GO TO 23
31 C   SELECTS OTHER FIELDS
32 C   20 CONTINUE
33 C   IP = 7
34 C   7 IS PSEUDODEVICE FOR RICE (R110)
35 C   GO TO 29
36 C   18 CONTINUE
37 C   IP = 8
38 C   8 IS PSEUDODEVICE FOR MAIZE (MZ22)
39 C   GO TO 29
40 C   21 CONTINUE
41 C   IF (VAR122 .EQ. 2) GO TO 30
42 C   IP = 9
43 C   9 IS PSEUDODEVICE FOR BITTER (OR MIXED OR UNIDENTIFIED) MANIOC
44 C   (BM22)
45 C   GO TO 29
46 C   30 CONTINUE
47 C   IP = 14
48 C   14 IS PSEUDODEVICE FOR SWEET MANICC (SM22)
49 C   GO TO 29
50 C   22 CONTINUE
51 C   IF (VAR122 .EQ. 1 .OR. VAR122 .EQ. 2 .OR. VAR122 .EQ. 9 .OR.
52 C   1VAR122 .EQ. 23 .OR. VAR122 .EQ. 24 .OR. VAR122 .EQ. 25 .OR. VAR122
53 C   2.EQ. 30) GO TO 32
54 C   IF (VAR122 .EQ. 3 .OR. VAR122 .EQ. 4 .OR. VAR122 .EQ. 5 .OR.
55 C   1VAR122 .EQ. 6 .OR. VAR122 .EQ. 7 .OR. VAR122 .EQ. 8 .OR. VAR122
56 C   2.EQ. 10 .OR. VAR122 .EQ. 11 .OR. VAR122 .EQ. 12 .OR. VAR122 .EQ. 18
57 C   313 .OR. VAR122 .EQ. 16 .OR. VAR122 .EQ. 17 .OR. VAR122 .EQ. 18
58 C   4.OR. VAR122 .EQ. 20 .OR. VAR122 .EQ. 21 .OR. VAR122 .EQ. 22 .OR.
59 C   5VAR122 .EQ. 26 .OR. VAR122 .EQ. 27 .OR. VAR122 .EQ. 29)GO TO 33
60 C   GO TO 23

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61      32 CONTINUE
62      IP = 15
63      C    15 IS PSEUDODEVICE FOR VIGNA (VI22)
64      GO TO 29
65      33 CONTINUE
66      IP = 10
67      C    10 IS PSEUDODEVICE FOR PHASEQLLS (PS22)
68      GO TO 29
69      23 CONTINUE
70      IP = 11
71      C    11 IS PSEUDODEVICE FOR CTER (CT22)
72      29 CONTINUE
73      1 CONTINUE
74      READ (13,1062) VAR339, VD1, VAR340, VAR341, VAR342, VAR343,
75      1VAR344, VAR345, VAR346, VD2,
76      2    VAR347,VAR348,VAR349,VAR350,VAR351,VAR352,VAR353,VAR354,
77      2VAR355,VAR356,VAR357,VAR358,VAR359,VAR360,VAR361,VAR362, VD3,
78      4VAR363,
79      3VAR364,VAR365
80      1062 FORMAT(1X,A2,A1,A4,I5,A4,I2,A2,A4,A2,A1,A4,7A2,A4,4A2,A4,2A2,A1,
81      1A4, A4, A3)
82      C    ABOVE FORMAT 1062 FOR CARD 22
83      IF (VAR341 .NE. VAR107) IP = 6
84      IF (VAR341 .NE. VAR107) WRITE(6, 1005)
85      1005 FORMAT(1X,'ERROR: DATA CARDS OUT OF ORDER OR MISSING LAST CARD -
86      1INDICATOR', / 1X,'NEXT TYPE 22 CARD IS:')
87      WRITE (IP,1063) VAR339, VD1, VAR340, VAR341, VAR342, VAR343,
88      1VAR344, VAR345, VAR346, VD2,
89      2    VAR347,VAR348,VAR349,VAR350,VAR351,VAR352,VAR353,VAR354,
90      2VAR355,VAR356,VAR357,VAR358,VAR359,VAR360,VAR361,VAR362, VD3,
91      4VAR363, VAR364, VAR365
92      1063 FORMAT(2X,A2,A1,A4,I5,A4,I2,A2,A4,A2,A1,A4,7A2,A4,4A2,A4,2A2,A1,
93      1A4, A4, A3)
94      IF (VAR341 .NE. VAR107) GO TO 3
95      IF (VAR343 .LT. 1) GO TO 1
96      2 CONTINUE
97      3 CONTINUE
98      END

```

END OF FILE

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1  C
2  C   THIS PROGRAM (TAB11) TABULATES INSECT AND VERTEBRATE PEST INFORMATION
3  C   FOR EACH CROP CASE. THERE ARE 9 LINES OF OUTPUT INCLUDING ONE LINE
4  C   OF TITLE INFORMATION. TABULATED RESULTS ARE GROUPED BY STAGE IN THE
5  C   CROP'S LIFE CYCLE. GENERAL STATEMENTS APPLYING TO ALL CROP STAGES
6  C   ARE IDENTIFIED AS SUCH FOR EACH ITEM IN THE OUTPUT
7  C   INPUT UNITS FOR RICE ARE: 5=DATAFILE 6=RIONE11
8  C   OUTPUT UNIT FOR RICE IS: 7=RTAB11
9  C   THE INTENSITY "0" IS OUTPUT AS "5", AND "0" IS USED FOR MISSING VALUES
10 C   FOR INTENSITY DATA. THE FORTRAN MONITOR "MINUSZERO" FEATURE IS USED, AS
11 C   IS THE MTS LOGICAL COMPARISON OF CHARACTERS (LQCMC) FUNCTION.
12 C
13   INTEGER VAR155, VAR157, VAR158, VAR159, VAR160, VAR161, VAR183
14 C   ABOVE TYPE DECLARATION FOR CARD 11 (ONE LINE)
15   DATA MINZFC/Z80000000/
16   CALL FTNCMD('SET MINUSZERO=CN',16)
17   READ (5,1001) ICDS9
18 1001 FORMAT(1X, I5)
19 C   ICDS9 IS THE NUMBER OF CRCP CASES (SAME AS CARD TYPE 9 FOR CROP)
20   DO 110 I2=1,ICDS9
21 C   DOES ONE ITERATION FOR EACH CASE
22     K1 = 0
23     K2 = 0
24     K3 = 0
25     K4 = 0
26     K5 = 0
27     K6 = 0
28     K7 = 0
29     K8 = 0
30     K9 = 0
31     K10 = 0
32     K11 = 0
33     K12 = 0
34     K13 = 0
35     K14 = 0
36     K15 = 0
37     K16 = 0
38     K17 = 0
39     K18 = 0
40     K19 = 0
41     K20 = 0
42     K21 = 0
43     K22 = 0
44     K23 = 0
45     K24 = 0
46     K25 = 0
47     K26 = 0
48     K27 = 0
49     K28 = 0
50     K29 = 0
51     K30 = 0
52     K31 = 0
53     K32 = 0
54     K33 = 0
55     K34 = 0
56     K35 = 0
57     K36 = 0
58     K37 = 0
59     K38 = 0
60     K39 = 0

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61	K40 = 0
62	K41 = 0
63	K42 = 0
64	K43 = 0
65	K44 = 0
66	K45 = 0
67	K46 = 0
68	K47 = 0
69	K48 = 0
70	K49 = 0
71	K50 = 0
72	K51 = 0
73	K52 = 0
74	K53 = 0
75	K54 = 0
76	K55 = C
77	K56 = 0
78	K57 = 0
79	K58 = 0
80	K59 = 0
81	K60 = 0
82	K61 = 0
83	K62 = 0
84	K63 = 0
85	K64 = 0
86	K65 = 0
87	K66 = 0
88	K67 = 0
89	K68 = 0
90	K69 = 0
91	K70 = 0
92	K71 = 0
93	K72 = 0
94	K73 = 0
95	K74 = 0
96	K75 = 0
97	K76 = 0
98	K77 = 0
99	K78 = 0
100	K79 = 0
101	K80 = 0
102	K81 = 0
103	K82 = 0
104	K83 = 0
105	K84 = 0
106	K85 = 0
107	K86 = 0
108	K87 = 0
109	K88 = 0
110	K89 = 0
111	K90 = 0
112	K91 = 0
113	K92 = 0
114	K93 = 0
115	K94 = 0
116	K95 = 0
117	K96 = 0
118	K97 = 0
119	K98 = 0
120	K99 = 0

121	K100 = 0
122	K101 = 0
123	K102 = 0
124	K103 = 0
125	K104 = 0
126	K105 = 0
127	K106 = 0
128	K107 = 0
129	K108 = 0
130	K109 = 0
131	K110 = 0
132	K111 = 0
133	K112 = 0
134	K113 = 0
135	K114 = 0
136	K115 = 0
137	K116 = 0
138	K117 = 0
139	K118 = 0
140	K119 = 0
141	K120 = 0
142	K121 = 0
143	K122 = 0
144	K123 = 0
145	K124 = 0
146	K125 = 0
147	K126 = 0
148	K127 = 0
149	K128 = 0
150	K129 = 0
151	K130 = 0
152	K131 = 0
153	K132 = 0
154	K133 = 0
155	K134 = 0
156	K135 = 0
157	K136 = 0
158	K137 = 0
159	K138 = 0
160	K139 = 0
161	K140 = 0
162	K141 = 0
163	K142 = 0
164	K143 = 0
165	K144 = 0
166	K145 = 0
167	K146 = 0
168	K147 = 0
169	K148 = 0
170	RK149 = -0.
171	K150 = 0
172	K151 = 0
173	K152 = 0
174	K153 = 0
175	K154 = 0
176	K155 = 0
177	K156 = 0
178	K157 = 0
179	K158 = 0
180	K159 = 0

181	K160 = 0
182	K161 = 0
183	K162 = 0
184	K163 = 0
185	K164 = 0
186	K165 = 0
187	K166 = 0
188	K167 = 0
189	K168 = 0
190	K169 = 0
191	K170 = 0
192	K171 = 0
193	K172 = 0
194	K173 = 0
195	K174 = 0
196	K175 = 0
197	K176 = 0
198	K177 = 0
199	K178 = 0
200	K179 = 0
201	K180 = 0
202	K181 = 0
203	K182 = 0
204	K183 = 0
205	K184 = 0
206	K185 = 0
207	K186 = 0
208	K187 = 0
209	K188 = 0
210	K189 = 0
211	K190 = 0
212	K191 = 0
213	K192 = 0
214	K193 = 0
215	K194 = 0
216	K195 = 0
217	K196 = 0
218	K197 = 0
219	K198 = 0
220	K199 = 0
221	K200 = 0
222	K201 = 0
223	K202 = 0
224	K203 = 0
225	K204 = 0
226	K205 = 0
227	K206 = 0
228	K207 = 0
229	K208 = 0
230	K209 = 0
231	K210 = 0
232	K211 = 0
233	K212 = 0
234	K213 = 0
235	K214 = 0
236	K215 = 0
237	K216 = 0
238	K217 = 0
239	K218 = 0
240	K219 = 0

241	K220 = 0
242	K221 = 0
243	K222 = 0
244	K223 = 0
245	K224 = 0
246	K225 = 0
247	K226 = 0
248	K227 = 0
249	K228 = 0
250	K229 = 0
251	K230 = 0
252	K231 = 0
253	K232 = 0
254	K233 = 0
255	K234 = 0
256	K235 = 0
257	K236 = 0
258	K237 = 0
259	K238 = 0
260	K239 = 0
261	K240 = 0
262	K241 = 0
263	K242 = 0
264	K243 = 0
265	K244 = 0
266	K245 = 0
267	K246 = 0
268	K247 = 0
269	K248 = 0
270	K249 = 0
271	K250 = 0
272	K251 = 0
273	K252 = 0
274	K253 = 0
275	K254 = 0
276	K255 = 0
277	K256 = 0
278	K257 = 0
279	K258 = 0
280	K259 = 0
281	K260 = 0
282	K261 = 0
283	K262 = 0
284	K263 = 0
285	K264 = 0
286	K265 = 0
287	K266 = 0
288	K267 = 0
289	K268 = 0
290	K269 = 0
291	K270 = 0
292	K271 = 0
293	K272 = 0
294	K273 = 0
295	K274 = 0
296	K275 = 0
297	K276 = 0
298	K277 = 0
299	K278 = 0
300	K279 = 0

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301      K280 = 0
302      K281 = 0
303      K282 = 0
304      K283 = 0
305      K284 = 0
306      K285 = 0
307      K286 = 0
308      K287 = 0
309      K288 = 0
310      K289 = 0
311      K290 = 0
312      K291 = 0
313      K292 = 0
314      K293 = 0
315      K294 = 0
316      K295 = 0
317      K296 = 0
318      K297 = 0
319      K298 = 0
320      K299 = 0
321      K300 = 0
322      K301 = 0
323      K302 = 0
324      DD ID I1 = 1.200
325      C      DOES ONE ITERATION FOR EACH ITEM FOR THE CASE UNDER CONSIDERATION
326      IAS = 0
327      Istage = 0
328      READ (5,1000) VAR155, VAR157, VAR158, VAR159, VAR160, VAR161,
329      VAR133, VAR184
330      IF (LCCMC(4,MINZFC,VAR184).NE.0) RK149 = VAR184
331      IF (VAR159.EQ. 1) GC TO 11
332      IF (VAR159.EQ. 2) GC TO 12
333      IF (VAR159.EQ. 3) GC TO 13
334      IF (VAR159.EQ. 4) GC TO 14
335      IF (VAR159.EQ. 6) GC TO 16
336      GO TO 17
337      1000 FORMAT(9X, I5, 4X, I2, I3, 3I2, 47X, I2, F3.1)
338      C      ABOVE FORMAT 1000 FOR CARD 11 (ONLINE)
339      11 CONTINUE
340      C      FOR SEED STAGE (STAGE = 1)
341      IF (VAR158.EQ. 1) GC TO 19
342      IF (VAR158.EQ. 2) GC TO 20
343      IF (VAR158.EQ. 3) GC TO 21
344      IF (VAR158.EQ. 4) GC TO 22
345      IF (VAR158.EQ. 5) GC TO 23
346      IF (VAR158.EQ.17) GC TO 24
347      IF (VAR158.EQ.18) GC TO 25
348      IF (VAR158.EQ.20) GC TO 26
349      IF (VAR158.EQ.21) GC TO 27
350      IF (VAR158.EQ.23) GC TO 28
351      IF (VAR158.EQ.37) GC TO 29
352      IF (K34.GT. 0) GC TO 30
353      K34 = VAR158
354      K35 = VAR160
355      K36 = VAR161
356      K37 = IAS
357      GO TO 17
358      30 IF (K33.GT. 0) GC TO 17
359      K38 = VAR158
360      K39 = VAR160

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361          K40 = VAP161
362          K41 = IAS
363          GO TO 17
364      19 K1 = VAR160
365          K2 = VAP161
366          K3 = IAS
367          GO TO 17
368      20 K4 = VAR160
369          K5 = VAR161
370          K6 = IAS
371          GO TO 17
372      21 K7 = VAP160
373          K8 = VAR161
374          K9 = IAS
375          GO TO 17
376      22 K10 = VAP160
377          K11 = VAP161
378          K12 = IAS
379          GO TO 17
380      23 K13 = VAP160
381          K14 = VAR161
382          K15 = IAS
383          GO TO 17
384      24 K16 = VAR160
385          K17 = VAR161
386          K18 = IAS
387          GO TO 17
388      25 K19 = VAR160
389          K20 = VAR161
390          K21 = IAS
391          GO TO 17
392      26 K22 = VAR160
393          K23 = VAR161
394          K24 = IAS
395          GO TO 17
396      27 K25 = VAR160
397          K26 = VAR161
398          K27 = IAS
399          GO TO 17
400      28 K28 = VAR160
401          K29 = VAR161
402          K30 = IAS
403          GO TO 17
404      29 K31 = VAR160
405          K32 = VAR161
406          K33 = IAS
407          GO TO 17
408      12 CONTINUE
409  C      FOR ABOVE-GROUND VEGETATIVE PARTS (STAGE = 2)
410          IF (VAR158 .EQ. 13 .OR. VAR158 .EQ. 24 .OR. VAR158 .EQ. 28) GO TO
411      116
412          IF (VAR158 .EQ. 3) GO TO 31
413          IF (VAR158 .EQ. 5) GO TO 32
414          IF (VAR158 .EQ. 6) GO TO 33
415          IF (VAR158 .EQ. 7) GO TO 34
416          IF (VAR158 .EQ. 8) GO TO 35
417          IF (VAR158 .EQ. 9) GO TO 36
418          IF (VAR158 .EQ. 10) GO TO 37
419          IF (VAR158 .EQ. 11) GO TO 38
420          IF (VAR158 .EQ. 12) GO TO 39

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421      IF (VAR158 .EQ. 14) GC TO 40
422      IF (VAR158 .EQ. 15) GC TO 41
423      IF (VAR158 .EQ. 16) GC TO 42
424      IF (VAR158 .EQ. 17) GC TO 43
425      IF (VAR158 .EQ. 18) GC TO 44
426      IF (VAR158 .EQ. 19) GC TO 45
427      IF (VAR158 .EQ. 20) GC TO 46
428      IF (VAR158 .EQ. 21) GC TO 47
429      IF (VAR158 .EQ. 23) GC TO 48
430      IF (VAR158 .EQ. 25) GC TO 49
431      IF (VAR158 .EQ. 29) GC TO 50
432      IF (VAR158 .EQ. 30) GC TO 51
433      IF (VAR158 .EQ. 31) GC TO 52
434      IF (VAR158 .EQ. 32) GC TO 53
435      IF (VAR158 .EQ. 33) GC TO 54
436      IF (VAR158 .EQ. 34) GC TO 55
437      IF (VAR158 .EQ. 35) GC TO 56
438      IF (VAR158 .EQ. 36) GC TO 57
439      IF (VAR158 .EQ. 37) GC TO 58
440      IF (VAR158 .EQ. 38) GC TO 59
441      IF (VAR158 .EQ. 39) GC TO 60
442      IF (VAR158 .EQ. 40) GC TO 61
443      IF (VAR158 .EQ. 41) GC TO 62
444      IF (VAR158 .EQ. 45) GC TO 63
445      IF (K141 .GT. 0) GC TO 501
446      K141 = VAR158
447      K142 = VAR160
448      K143 = VAR161
449      K144 = IAS
450      GO TO 17
451 501 IF (K145 .GT. 0) GC TO 17
452      K145 = VAR158
453      K146 = VAR160
454      K147 = VAR161
455      K148 = IAS
456      GO TO 17
457 31 K42 = VAR160
458      K43 = VAR161
459      K44 = IAS
460      GO TO 17
461 32 K45 = VAR160
462      K46 = VAR161
463      K47 = IAS
464      GO TO 17
465 33 K48 = VAR 160
466      K49 = VAR 161
467      K50 = IAS
468      GO TO 17
469 34 K51 = VAR160
470      K52 = VAR161
471      K53 = IAS
472      GO TO 17
473 35 K54 = VAR160
474      K55 = VAR161
475      K56 = IAS
476      GO TO 17
477 36 K57 = VAR160
478      K58 = VAR161
479      K59 = IAS
480      GO TO 17

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481	37	K60 = VAR160
482		K61 = VAR161
483		K62 = IAS
484		GO TO 17
485	38	K63 = VAR160
486		K64 = VAR161
487		K65 = IAS
488		GO TO 17
489	39	K66 = VAR160
490		K67 = VAR161
491		K68 = IAS
492		GO TO 17
493	40	K69 = VAR160
494		K70 = VAR161
495		K71 = IAS
496		GO TO 17
497	41	K72 = VAR160
498		K73 = VAR161
499		K74 = IAS
500		GO TO 17
501	42	K75 = VAR160
502		K76 = VAR161
503		K77 = IAS
504		GO TO 17
505	43	K78 = VAR160
506		K79 = VAR161
507		K80 = IAS
508		GO TO 17
509	44	K81 = VAR160
510		K82 = VAR161
511		K83 = IAS
512		GO TO 17
513	45	K84 = VAR160
514		K85 = VAR161
515		K86 = IAS
516		GO TO 17
517	46	K87 = VAR160
518		K88 = VAR161
519		K89 = IAS
520		GO TO 17
521	47	K90 = VAR160
522		K91 = VAR161
523		K92 = IAS
524		GO TO 17
525	48	K93 = VAR160
526		K94 = VAR161
527		K95 = IAS
528		GO TO 17
529	49	K96 = VAR160
530		K97 = VAR161
531		K98 = IAS
532		GO TO 17
533	50	K99 = VAR160
534		K100 = VAR161
535		K101 = IAS
536		GO TO 17
537	51	K102 = VAR160
538		K103 = VAR161
539		K104 = IAS
540		GO TO 17

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541      52 K105 = VAR160
542      K106 = VAR161
543      K107 = IAS
544      GO TO 17
545      53 K108 = VAR160
546      K109 = VAR161
547      K110 = IAS
548      GO TO 17
549      54 K111 = VAR160
550      K112 = VAR161
551      K113 = IAS
552      GO TO 17
553      55 K114 = VAR160
554      K115 = VAR161
555      K116 = IAS
556      GO TO 17
557      56 K117 = VAR160
558      K118 = VAR161
559      K119 = IAS
560      GO TO 17
561      57 K120 = VAR160
562      K121 = VAR161
563      K122 = IAS
564      GO TO 17
565      58 K123 = VAR160
566      K124 = VAR161
567      K125 = IAS
568      GO TO 17
569      59 K126 = VAR160
570      K127 = VAR161
571      K128 = IAS
572      GO TO 17
573      60 K129 = VAR160
574      K130 = VAR161
575      K131 = IAS
576      GO TO 17
577      61 K132 = VAR160
578      K133 = VAR161
579      K134 = IAS
580      GO TO 17
581      62 K135 = VAR160
582      K136 = VAR161
583      K137 = IAS
584      GO TO 17
585      63 K138 = VAR160
586      K139 = VAR161
587      K140 = IAS
588      GO TO 17
589      13 CONTINUE
590      C   FOR FRUITS (STAGE = 3)
591      IF (VAR158 .EQ. 3) GO TO 64
592      IF (VAR158 .EQ. 4) GO TO 65
593      IF (VAR158 .EQ. 6) GO TO 66
594      IF (VAR158 .EQ. 7) GO TO 67
595      IF (VAR158 .EQ.10) GO TO 68
596      IF (VAR158 .EQ.11) GO TO 69
597      IF (VAR158 .EQ.12) GO TO 70
598      IF (VAR158 .EQ.14) GO TO 71
599      IF (VAR158 .EQ.17) GO TO 72
600      IF (VAR158 .EQ.18) GO TO 73

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601      IF (VAR158 .EQ.21) GO TO 74
602      IF (VAR158 .EQ.23) GO TO 75
603      IF (VAR158 .EQ.25) GO TO 76
604      IF (VAR158 .EQ.26) GO TO 77
605      IF (VAR158 .EQ.29) GO TO 78
606      IF (VAR158 .EQ.32) GO TO 79
607      IF (VAR158 .EQ.37) GO TO 80
608      IF (K201 .GT. 0) GO TO 81
609      K201 = VAR158
610      K202 = VAR160
611      K203 = VAR161
612      K204 = IAS
613      GO TO 17
614      81 IF (K205 .GT. 0) GO TO 17
615      K205 = VAR158
616      K206 = VAR160
617      K207 = VAR161
618      K208 = IAS
619      GO TO 17
620      54 K150 = VAR160
621      K151 = VAR161
622      K152 = IAS
623      GO TO 17
624      65 K153 = VAR160
625      K154 = VAR161
626      K155 = IAS
627      GO TO 17
628      66 K156 = VAR160
629      K157 = VAR161
630      K158 = IAS
631      GO TO 17
632      67 K159 = VAR160
633      K160 = VAR161
634      K161 = IAS
635      GO TO 17
636      68 K162 = VAR160
637      K163 = VAR161
638      K164 = IAS
639      GO TO 17
640      69 K165 = VAR160
641      K166 = VAR161
642      K167 = IAS
643      GO TO 17
644      70 K168 = VAR160
645      K169 = VAR161
646      K170 = IAS
647      GO TO 17
648      71 K171 = VAR160
649      K172 = VAR161
650      K173 = IAS
651      GO TO 17
652      72 K174 = VAR160
653      K175 = VAR161
654      K176 = IAS
655      GO TO 17
656      73 K177 = VAR160
657      K178 = VAR161
658      K179 = IAS
659      GO TO 17
660      74 K180 = VAR160

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661          K181 = VAR161
662          K182 = IAS
663          GO TO 17
664      75 K183 = VAR160
665          K184 = VAR161
666          K185 = IAS
667          GO TO 17
668      76 K186 = VAR160
669          K187 = VAR161
670          K188 = IAS
671          GO TO 17
672      77 K189 = VAR160
673          K190 = VAR161
674          K191 = IAS
675          GO TO 17
676      78 K192 = VAR160
677          K193 = VAR161
678          K194 = IAS
679          GO TO 17
680      79 K195 = VAR160
681          K196 = VAR161
682          K197 = IAS
683          GO TO 17
684      80 K198 = VAR160
685          K199 = VAR161
686          K200 = IAS
687          GO TO 17
688      14 CONTINUE
689  C      FOR PILHA STAGE (STAGE = 4)
690          IF (VAR158 .EQ. 3) GO TO 82
691          IF (VAR158 .EQ. 4) GO TO 83
692          IF (VAR158 .EQ. 7) GO TO 84
693          IF (VAR158 .EQ.10) GO TO 85
694          IF (VAR158 .EQ.11) GO TO 86
695          IF (VAR158 .EQ.14) GO TO 87
696          IF (VAR158 .EQ.17) GO TO 88
697          IF (VAR158 .EQ.18) GO TO 89
698          IF (K233 .GT. 0) GO TO 90
699          K233 = VAR158
700          K234 = VAR160
701          K235 = VAR161
702          K236 = IAS
703          GO TO 17
704      90 IF (K237 .GT. 0) GO TO 17
705          K237 = VAR158
706          K238 = VAR160
707          K239 = VAR161
708          K240 = IAS
709          GO TO 17
710      92 K209 = VAR160
711          K210 = VAR161
712          K211 = IAS
713          GO TO 17
714      93 K212 = VAR160
715          K213 = VAR161
716          K214 = IAS
717          GO TO 17
718      84 K215 = VAR160
719          K216 = VAR161
720          K217 = IAS

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721      GO TO 17
722      85 K218 = VAP160
723      K219 = VAR161
724      K220 = IAS
725      GO TO 17
726      86 K221 = VAR160
727      K222 = VAP161
728      K223 = IAS
729      GO TO 17
730      87 K224 = VAR160
731      K225 = VAR161
732      K226 = IAS
733      GO TO 17
734      88 K227 = VAP160
735      K228 = VAR161
736      K229 = IAS
737      GO TO 17
738      89 K230 = VAR160
739      K231 = VAR161
740      K232 = IAS
741      GO TO 17
742      16 CONTINUE
743      C   FOR ROOTS OR TUBERS (STAGE = 6)
744      IF (VAR158 .EQ. 3) GC TO 91
745      IF (VAR158 .EQ. 5) GC TO 92
746      IF (VAR158 .EQ. 6) GC TO 93
747      IF (VAR158 .EQ. 7) GC TO 94
748      IF (VAR158 .EQ. 10) GC TO 95
749      IF (VAR158 .EQ. 11) GC TO 96
750      IF (VAR158 .EQ. 13) GC TO 97
751      IF (VAR158 .EQ. 14) GC TO 98
752      IF (VAR158 .EQ. 17) GC TO 99
753      IF (VAR158 .EQ. 18) GC TO 100
754      IF (VAR158 .EQ. 21) GC TO 101
755      IF (VAR158 .EQ. 24) GC TO 102
756      IF (VAR158 .EQ. 28) GC TO 103
757      IF (VAR158 .EQ. 29) GC TO 104
758      IF (VAR158 .EQ. 32) GC TO 105
759      IF (VAR158 .EQ. 35) GC TO 106
760      IF (K289 .GT. 0) GC TO 107
761      K289 = VAR158
762      K290 = VAP160
763      K291 = VAR161
764      K292 = IAS
765      GO TO 17
766      107 IF (K293 .GT. 0) GC TO 17
767      K293 = VAR158
768      K294 = VAP160
769      K295 = VAR161
770      K296 = IAS
771      GO TO 17
772      91 K241 = VAR160
773      K242 = VAR161
774      K243 = IAS
775      GO TO 17
776      92 K244 = VAR160
777      K245 = VAR161
778      K246 = IAS
779      GO TO 17
780      93 K247 = VAR160

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781          K248 = VAR161
782          K249 = IAS
783          GO TO 17
784          94 K250 = VAR160
785          K251 = VAR161
786          K252 = IAS
787          GO TO 17
788          95 K253 = VAR160
789          K254 = VAR161
790          K255 = IAS
791          GO TO 17
792          96 K256 = VAR160
793          K257 = VAR161
794          K258 = IAS
795          GO TO 17
796          97 K259 = VAR160
797          K260 = VAR161
798          K261 = IAS
799          GO TO 17
800          98 K262 = VAR160
801          K263 = VAR161
802          K264 = IAS
803          GO TO 17
804          99 K265 = VAR160
805          K266 = VAR161
806          K267 = IAS
807          GO TO 17
808          100 K268 = VAR160
809          K269 = VAR161
810          K270 = IAS
811          GO TO 17
812          101 K271 = VAR160
813          K272 = VAR161
814          K273 = IAS
815          GO TO 17
816          102 K274 = VAR160
817          K275 = VAR161
818          K276 = IAS
819          GO TO 17
820          103 K277 = VAR160
821          K278 = VAR161
822          K279 = IAS
823          GO TO 17
824          104 K280 = VAR160
825          K281 = VAR161
826          K282 = IAS
827          GO TO 17
828          105 K283 = VAR160
829          K284 = VAR161
830          K285 = IAS
831          GO TO 17
832          106 K286 = VAR160
833          K287 = VAR161
834          K288 = IAS
835          17 CONTINUE
836          IF (VAR159 .NE. 5) GO TO 500
837          IAS = 1
838          Istage = Istage + 1
839          IF (Istage .EQ. 1) GO TO 11
840          IF (Istage .EQ. 2) GO TO 12

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841         IF (ISTAGE .EQ. 3) GO TO 13
842         IF (ISTAGE .EQ. 4) GO TO 14
843     500 CONTINUE
844         IF (VAR183 .GT. 0) GO TO 109
845         GO TO 108
846     109 IF (K297 .GT. 0) GO TO 207
847         K297 = VAR158
848         K298 = VAR159
849         K299 = VAR183
850         GO TO 108
851     207 IF (K300 .GT. 0) GO TO 108
852         K300 = VAR158
853         K301 = VAR159
854         K302 = VAR183
855     108 CONTINUE
856         IF (VAR157 .GE. 1) GO TO 111
857 C         SELECTS LAST CARD FOR CASE
858     10 CONTINUE
859     111 CONTINUE
860 C     FOLLOWING RECCODES "0" INTENSITY AS "5", LEAVING "0" FOR MISSING VALUES
861         IF (K1 .EQ. 0 .AND. K2 .GE. 1) K1 = 5
862         IF (K4 .EQ. 0 .AND. K5 .GE. 1) K4 = 5
863         IF (K7 .EQ. 0 .AND. K8 .GE. 1) K7 = 5
864         IF (K10 .EQ. 0 .AND. K11 .GE. 1) K10 = 5
865         IF (K13 .EQ. 0 .AND. K14 .GE. 1) K13 = 5
866         IF (K16 .EQ. 0 .AND. K17 .GE. 1) K16 = 5
867         IF (K19 .EQ. 0 .AND. K20 .GE. 1) K19 = 5
868         IF (K22 .EQ. 0 .AND. K23 .GE. 1) K22 = 5
869         IF (K25 .EQ. 0 .AND. K26 .GE. 1) K25 = 5
870         IF (K28 .EQ. 0 .AND. K29 .GE. 1) K28 = 5
871         IF (K31 .EQ. 0 .AND. K32 .GE. 1) K31 = 5
872         IF (K35 .EQ. 0 .AND. K36 .GE. 1) K35 = 5
873         IF (K39 .EQ. 0 .AND. K40 .GE. 1) K39 = 5
874         IF (K42 .EQ. 0 .AND. K43 .GE. 1) K42 = 5
875         IF (K45 .EQ. 0 .AND. K46 .GE. 1) K45 = 5
876         IF (K48 .EQ. 0 .AND. K49 .GE. 1) K48 = 5
877         IF (K51 .EQ. 0 .AND. K52 .GE. 1) K51 = 5
878         IF (K57 .EQ. 0 .AND. K58 .GE. 1) K57 = 5
879         IF (K60 .EQ. 0 .AND. K61 .GE. 1) K60 = 5
880         IF (K63 .EQ. 0 .AND. K64 .GE. 1) K63 = 5
881         IF (K66 .EQ. 0 .AND. K67 .GE. 1) K66 = 5
882         IF (K69 .EQ. 0 .AND. K70 .GE. 1) K69 = 5
883         IF (K72 .EQ. 0 .AND. K73 .GE. 1) K72 = 5
884         IF (K75 .EQ. 0 .AND. K76 .GE. 1) K75 = 5
885         IF (K78 .EQ. 0 .AND. K79 .GE. 1) K78 = 5
886         IF (K81 .EQ. 0 .AND. K82 .GE. 1) K81 = 5
887         IF (K84 .EQ. 0 .AND. K85 .GE. 1) K84 = 5
888         IF (K87 .EQ. 0 .AND. K88 .GE. 1) K87 = 5
889         IF (K90 .EQ. 0 .AND. K91 .GE. 1) K90 = 5
890         IF (K93 .EQ. 0 .AND. K94 .GE. 1) K93 = 5
891         IF (K96 .EQ. 0 .AND. K97 .GE. 1) K96 = 5
892         IF (K99 .EQ. 0 .AND. K100 .GE. 1) K99 = 5
893         IF (K105 .EQ. 0 .AND. K106 .GE. 1) K105 = 5
894         IF (K108 .EQ. 0 .AND. K109 .GE. 1) K108 = 5
895         IF (K111 .EQ. 0 .AND. K112 .GE. 1) K111 = 5
896         IF (K114 .EQ. 0 .AND. K115 .GE. 1) K114 = 5
897         IF (K117 .EQ. 0 .AND. K118 .GE. 1) K117 = 5
898         IF (K120 .EQ. 0 .AND. K121 .GE. 1) K120 = 5
899         IF (K123 .EQ. 0 .AND. K124 .GE. 1) K123 = 5
900         IF (K126 .EQ. 0 .AND. K127 .GE. 1) K126 = 5

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901 IF (K129 .EQ. 0 .AND. K130 .GE. 1) K129 = 5
902 IF (K132 .EQ. 0 .AND. K133 .GE. 1) K132 = 5
903 IF (K135 .EQ. 0 .AND. K136 .GE. 1) K135 = 5
904 IF (K138 .EQ. 0 .AND. K139 .GE. 1) K1 = 5
905 IF (K142 .EQ. 0 .AND. K143 .GE. 1) K142 = 5
906 IF (K146 .EQ. 0 .AND. K147 .GE. 1) K146 = 5
907 IF (K150 .EQ. 0 .AND. K151 .GE. 1) K150 = 5
908 IF (K153 .EQ. 0 .AND. K154 .GE. 1) K153 = 5
909 IF (K156 .EQ. 0 .AND. K157 .GE. 1) K156 = 5
910 IF (K159 .EQ. 0 .AND. K160 .GE. 1) K159 = 5
911 IF (K162 .EQ. 0 .AND. K163 .GE. 1) K162 = 5
912 IF (K165 .EQ. 0 .AND. K166 .GE. 1) K165 = 5
913 IF (K168 .EQ. 0 .AND. K169 .GE. 1) K168 = 5
914 IF (K171 .EQ. 0 .AND. K172 .GE. 1) K171 = 5
915 IF (K174 .EQ. 0 .AND. K175 .GE. 1) K174 = 5
916 IF (K177 .EQ. 0 .AND. K178 .GE. 1) K177 = 5
917 IF (K180 .EQ. 0 .AND. K181 .GE. 1) K180 = 5
918 IF (K183 .EQ. 0 .AND. K184 .GE. 1) K183 = 5
919 IF (K186 .EQ. 0 .AND. K187 .GE. 1) K186 = 5
920 IF (K189 .EQ. 0 .AND. K190 .GE. 1) K189 = 5
921 IF (K192 .EQ. 0 .AND. K193 .GE. 1) K192 = 5
922 IF (K195 .EQ. 0 .AND. K196 .GE. 1) K195 = 5
923 IF (K202 .EQ. 0 .AND. K203 .GE. 1) K202 = 5
924 IF (K206 .EQ. 0 .AND. K207 .GE. 1) K206 = 5
925 IF (K209 .EQ. 0 .AND. K210 .GE. 1) K209 = 5
926 IF (K212 .EQ. 0 .AND. K213 .GE. 1) K212 = 5
927 IF (K215 .EQ. 0 .AND. K216 .GE. 1) K215 = 5
928 IF (K218 .EQ. 0 .AND. K219 .GE. 1) K218 = 5
929 IF (K221 .EQ. 0 .AND. K222 .GE. 1) K221 = 5
930 IF (K224 .EQ. 0 .AND. K225 .GE. 1) K224 = 5
931 IF (K227 .EQ. 0 .AND. K228 .GE. 1) K227 = 5
932 IF (K230 .EQ. 0 .AND. K231 .GE. 1) K230 = 5
933 IF (K234 .EQ. 0 .AND. K235 .GE. 1) K234 = 5
934 IF (K238 .EQ. 0 .AND. K239 .GE. 1) K238 = 5
935 IF (K241 .EQ. 0 .AND. K242 .GE. 1) K241 = 5
936 IF (K244 .EQ. 0 .AND. K245 .GE. 1) K244 = 5
937 IF (K247 .EQ. 0 .AND. K248 .GE. 1) K247 = 5
938 IF (K250 .EQ. 0 .AND. K251 .GE. 1) K250 = 5
939 IF (K253 .EQ. 0 .AND. K254 .GE. 1) K253 = 5
940 IF (K256 .EQ. 0 .AND. K257 .GE. 1) K256 = 5
941 IF (K259 .EQ. 0 .AND. K260 .GE. 1) K259 = 5
942 IF (K262 .EQ. 0 .AND. K263 .GE. 1) K262 = 5
943 IF (K265 .EQ. 0 .AND. K266 .GE. 1) K265 = 5
944 IF (K271 .EQ. 0 .AND. K272 .GE. 1) K271 = 5
945 IF (K277 .EQ. 0 .AND. K278 .GE. 1) K277 = 5
946 IF (K280 .EQ. 0 .AND. K281 .GE. 1) K280 = 5
947 IF (K283 .EQ. 0 .AND. K284 .GE. 1) K283 = 5
948 IF (K286 .EQ. 0 .AND. K287 .GE. 1) K286 = 5
949 IF (K290 .EQ. 0 .AND. K291 .GE. 1) K290 = 5
950 IF (K294 .EQ. 0 .AND. K295 .GE. 1) K294 = 5
951 WRITE (7,1002) VAR155
952 WRITE (7,1003) K1, K2, K3, K4, K5, K6, K7, K8, K9, K10, K11, K12,
953 1K13, K14, K15, K16, K17, K18, K19, K20, K21, K22, K23, K24, K25,
954 2K26, K27, K28, K29, K30, K31, K32, K33, K34, K35, K36, K37, K38,
955 3K39, K40, K41, K42, K43, K44, K45, K46, K47, K48, K49, K50, K51,
956 4K52, K53, K54, K55, K56, K57, K58, K59, K60, K61, K62, K63, K64,
957 5K65, K66, K67, K68, K69, K70, K71, K72, K73, K74
958 WRITE (7,1004) K75, K76, K77, K78, K79, K80, K81, K82, K83, K84,
959 1K85, K86, K87, K88, K89, K90, K91, K92, K93, K94, K95, K96, K97,
960 2K98, K99, K100, K101, K102, K103, K104, K105, K106, K107, K108,

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961      3K109, K110, K111, K112, K113, K114, K115, K116, K117, K118, K119,
962      4K120, K121, K122, K123, K124, K125, K126, K127, K128, K129, K130,
963      5K131, K132, K133, K134, K135, K136, K137, K138, K139, K140, K141,
964      6K142, K143, K144, K145, K146, K147, K148, RK149
965      WRITE (7,1005) K150, K151, K152, K153, K154, K155, K156, K157,
966      1K159, K159, K160, K161, K162, K163, K164, K165, K166, K167, K168,
967      2K169, K170, K171, K172, K173, K174, K175, K176, K177, K178, K179,
968      3K180, K181, K182, K183, K184, K185, K186, K187, K188, K189, K190,
969      4K191, K192, K193, K194, K195, K196, K197, K198, K199, K200, K201,
970      5K202, K203, K204, K205, K206, K207, K208, K209, K210, K211, K212,
971      6K213, K214, K215, K216, K217, K218, K219, K220, K221, K222, K223,
972      7K224, K225, K226
973      WRITE (7,1006) K227, K228, K229, K230, K231, K232, K233, K234,
974      1K235, K236, K237, K238, K239, K240, K241, K242, K243, K244, K245,
975      2K246, K247, K248, K249, K250, K251, K252, K253, K254, K255, K256,
976      3K257, K258, K259, K260, K261, K262, K263, K264, K265, K266, K267,
977      4K268, K269, K270, K271, K272, K273, K274, K275, K276, K277, K278,
978      5K279, K280, K281, K282, K283, K284, K285, K286, K287, K288, K289,
979      6K290, K291, K292, K293, K294, K295, K296, K297, K298, K299, K300,
980      7K301, K302
981      1002 FORMAT(1X, 'CASE ', I5, ' INSECTS AND VERTEBRATES')
982      1003 FORMAT(1X, 3I2, I3, 3I2 / 1X, I3, 36I2)
983      1004 FORMAT(1X, 39I2 / 1X, 27I2, 2(I3, 3I2), 1X, F3.1)
984      1005 FORMAT(1X, 39I2 / 1X, 12I2, 2(I3, 3I2), 18I2)
985      1006 FORMAT(1X, 6I2, 2(I3, 3I2), 24I2 / 1X, 24I2, 2(I3, 3I2), 6I2)
986      110 CONTINUE
987      END
END OF FILE

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1 C      THIS PROGRAM ("VIRGBURNTAB") TABULATES VIRGIN BURN INFORMATION.
2 C      WEATHER INFO. BETWEEN FELLING AND BURNING AND IN THE 15 DAYS PRIOR
3 C      TO BURNING IS TABULATED. AS IS INFORMATION ON OTHER BURN QUALITIES
4 C      OBTAINED DURING THE SAME BURNING. THREE LINES OF OUTPUT ARE GENERATED
5 C      PER CASE. SUBROUTINES CALLED ARE WEATHBD AND DA1900.
6 C      INPUT UNITS ARE: 5=DATAFILE 7=TYPE3 8=WEATHCUMLIST
7 C      9=DAILYWEATHER. OUTPUT UNIT IS 10=VIRGBURNDATA
8 C      THE FORTRAN MONITOR "MINUSZERC" FEATURE IS USED, AS IS THE
9 C      MTS LOGICAL COMPARISON OF CHARACTERS ("LCOMC") FUNCTION.
10 C
11 C
12 C      INTEGER DA1900
13 C      INTEGER VAR044, VAR045, VAR046, VAR047, VAR048, VAR049, VAR050,
14 C      1VAR051, VAR052, VAR053, VAR054, VAR055, VAR056, VAR057, VAR060,
15 C      2VAR062, VAR063, VAR065, VAR066, VAR067, VAR068
16 C      DIMENSION VAR044(370), VAR045(370), VAR046(370), VAR047(370),
17 C      1VAR048(370), VAR049(370), VAR050(370), VAR051(370), VAR052(370),
18 C      2VAR053(370), VAR054(370), VAR055(370), VAR056(370), VAR057(370),
19 C      3VAR058(370), VAR059(370), VAR060(370), VAR061(370), VAR062(370),
20 C      4VAR063(370), VAR064(370), VAR065(370), VAR066(370), VAR067(370),
21 C      5VAR068(370)
22 C      DIMENSION IVB23(400)
23 C      DIMENSION IWC1(1700), IWC2(1700), IWC3(1700), IWC4(1700),
24 C      1IWC5(1700), IWC7(1700), IWC8(1700), IWC9(1700), IWC10(1700),
25 C      2IWC11(1700), IWC12(1700), IWC13(1700), IWC14(1700), IWC5(1700)
26 C      ABOVE DIMENSION FOR WEATHCUMLIST INFO.
27 C      COMMON/C1/ L41(1700), RL46(1700), RL47(1700), RL48(1700)
28 C      COMMON/C2/ RAIN8C, EVAP8D, SUN8D, MISPRE, MISEVA, MISINS
29 C      DATA MINZRO/Z80CC0000/
30 C      CALL FTNCMC('SET MINUSZERO=ON',16)
31 C      ABOVE COMMONS FOR WEATHBD
32 C      DO 200 I=1,370
33 C      200 IVB23(I) = 0
34 C      READ (5,1000) ICDS3, IWCUM, IDAWEA
35 C      1000 FORMAT(1X, 3I5)
36 C      ICDS3 IS NO. OF CARDS IN TYPE3 : IWCUM IS NO. OF CARDS IN WEATHCUMLIST:
37 C      IDAWEA IS NO. OF CARDS IN DAILYWEATHER
38 C      READ (7,1001)(VAR044(I1), VAR045(I1), VAR046(I1), VAR047(I1),
39 C      1VAR048(I1), VAR049(I1), VAR050(I1), VAR051(I1), VAR052(I1),
40 C      2VAR053(I1), VAR054(I1), VAR055(I1), VAR056(I1), VAR057(I1),
41 C      3VAR058(I1), VAR059(I1), VAR060(I1), VAR061(I1), VAR062(I1),
42 C      4VAR063(I1), VAR064(I1), VAR065(I1), VAR066(I1), VAR067(I1),
43 C      5VAR068(I1), I1=1,ICDS3)
44 C      1001 FORMAT(3X, I5, I2, I5, I4, I3, 3I2, I3, 3I2, 2I2, F4.0, F5.1, I2,
45 C      1F5.1, I2, I3, F5.1, 2I2, I5, I3)
46 C      ABOVE FORMAT 1001 FOR CARD TYPE 3
47 C      READ (9, 1002)(L41(I2), RL46(I2), RL47(I2), RL48(I2), I2=1, IDAWEA)
48 C      1002 FORMAT(///2X, I6, I2X, F5.1, 2F5.1)
49 C      ABOVE FORMAT 1002 FOR DAILYWEATHER
50 C      READ (8,1003)(IWC1(I3), IWC2(I3), IWC3(I3), IWC4(I3), IWC5(I3),
51 C      1IWC6(I3), IWC7(I3), IWC8(I3), IWC9(I3), IWC10(I3), IWC11(I3),
52 C      2IWC12(I3), IWC13(I3), IWC14(I3), I3=1,IWCUM)
53 C      1003 FORMAT(1X, I6, 3I3, I6, 3I3, F7.1, 2F6.1, 3I3)
54 C      ABOVE FORMAT 1003 IS FOR WEATHCUMLIST
55 C      DO 100 I4=1,ICDS3
56 C      DOES ONE ITERATION FOR EACH VIRGIN BURN CASE
57 C      IVB14 = 0
58 C      VB15=0.
59 C      VB16=0.
60 C      IVB17 = 9

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61      IVR18 = 0
62      VR19 = 0.
63      IVR20 = 0
64      C      NOTE: ALL MISSING DATA ON BURN QUALITIES WILL BE ASSIGNED THE VALUE "9"
65      IVR21 = 0
66      VR22 = 0.
67      MENT1 = 0
68      MENT2 = 0
69      IFELL = DA1900(VAR048(I4), VAR049(I4), VAR050(I4), 1, 1)
70      IF (VAR054(I4) .EQ. -0) GO TO 104
71      IBURN = DA1900(VAR052(I4), VAR053(I4), VAR054(I4), 1, 2)
72      IVB1 = IBURN - IFELL
73      DO 101 I5=1, IWCUM
74      C      FINDS CUMULATIVE WEATHER INFO. FOR 15 DAYS PRIOR TO BURN DATE
75      IF (IWC5(I5) .EQ. IBURN) GO TO 102
76      101 CONTINUE
77      VR8 = -0.
78      VR9 = -0.
79      VR10 = -0.
80      IVB11 = -0
81      IVR12 = -0
82      IVR13 = -0
83      GO TO 103
84      104 CONTINUE
85      C      FOLLOWING FOR CASE OF NO BURN DATE (B9 = "NONE")
86      IVB1 = 150
87      C      NOTE: BURN DATE ARBITRARILY ASSIGNED AS 150 DAYS AFTER FELLING
88      IBURN = IFELL + 150
89      ISTART = IFELL + 15
90      C      FOR RC="ONE", THE "15 DAYS PRIOR TO BURNING" FIGURES FOR WEATHER
91      C      INFO. ARE FOR THE DAY WITH THE LOWEST 15 DAY PRIOR RAINFALL IN THE
92      C      PERIOD FROM 15 DAYS AFTER FELLING ("ISTART") UNTIL 150 DAYS AFTER
93      C      FELLING (THE ARBITRARILY ASSIGNED "BURN DATE").
94      VR8 = 9999.
95      DO 111 I10=1, IWCUM
96      C      FINDS DATE WITH LOWEST 15-DAY PRIOR RAINFALL TOTAL
97      IF (IWC5(I10) .GE. ISTART .AND. IWC5(I10) .LE. IBURN) GO TO 112
98      GO TO 111
99      112 IF (IWC5(I10) .LE. VR8) GO TO 113
100      GO TO 111
101      113 VR8 = IWC5(I10)
102      VR9 = IWC10(I10)
103      VR10 = IWC11(I10)
104      IVB11 = IWC12(I10)
105      IVR12 = IWC13(I10)
106      IVR13 = IWC14(I10)
107      111 CONTINUE
108      GO TO 103
109      102 VR8 = IWC5(I5)
110      VR9 = IWC10(I5)
111      VR10 = IWC11(I5)
112      IVB11 = IWC12(I5)
113      IVR12 = IWC13(I5)
114      IVR13 = IWC14(I5)
115      103 CONTINUE
116      CALL WEATBD(IFELL, IBURN)
117      VR2 = RAINBD
118      VR3 = EVAPBD
119      VR4 = SUNBD
120      IVR5 = MISPRE

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121      IV96 = MISEVA
122      IV97 = MISINS
123      IF (VAR068(I4) .EQ. -0) IVB14 = 1
124      IF(LCGMC(4,MINZRC,VAR064(I4)).NE.0 .AND. LCOMC(4,MINZRO,VAR059(I4)
125      1 ).NE.0) VB15 =VAR064(I4)/VAR059(I4)
126      IF(LCCMC(4,MINZRC,VAR054(I4)).NE.0 .AND. LCOMC(4,MINZRO,VAR059(I4)
127      1) .NE. 0.AND. VAR068(I4)
128      1 .NE. 1 .AND. VAR068(I4) .NE. 9) VB16 = (VAR059(I4) - VAR064(I4))/
129      2 VAR059(I4)
130      IF (VAR067(I4) .GE. 1) GO TO 105
131      GO TO 106
132      105 CONTINUE
133      C FOLLOWING FOR SECOND BURN QUALITY
134      IXX67 = VAR067(I4)
135      IV823(IX67) = 1
136      IF(LCCMC(4,MINZRO,VAR059(IX67)).NE.0 .AND. LCOMC(4,MINZRO,
137      1 VAR064(IX67)) .NE. 0)
138      1 VB16 = VAR064(IX67) / VAR059(IX67)
139      IF (VAR067(IX67) .GE. 1 .AND. VAR067(IX67) .NE. I4
140      1 .AND. VAR067(IX67) .NE. MENT1 .AND. VAR067(IX67) .NE.
141      2 MENT2) GO TO 107
142      IF (VAR068(I4) .NE. 1 .AND. VAR068(I4) .NE. 9) IVB14 = 2
143      GO TO 106
144      107 CONTINUE
145      C FOLLOWING FOR THIRD BURN QUALITY
146      IXX67 = VAR067(IX67)
147      IF(LCCMC(4,MINZRC,VAR059(IX67)).NE.0 .AND. LCOMC(4,MINZRO,
148      1 VAR064(IX67)) .NE. 0)
149      1 VB19 = VAR064(IX67)/ VAR059(IX67)
150      IVB14 = 3
151      IV818 = IXX67
152      IV817 = VAR066(IX67)
153      IV923(IV818) = 1
154      IF (VAR067(IV818) .GE. 1 .AND. VAR067(IV818) .NE. I4 .AND.
155      1 VAR067(IV818) .NE. MENT1 .AND. VAR067(IV818) .NE. MENT2)GO TO 103
156      GO TO 106
157      108 CONTINUE
158      C FOLLOWING FOR FOURTH BURN QUALITY
159      IV821 = VAR067(IV818)
160      IVB14 = 4
161      IV820 = VAR056(IV821)
162      IV823(IV821) = 1
163      IF(LCCMC(4,MINZRO,VAR059(IV821)).NE.0 .AND. LCOMC(4,MINZRO,
164      1 VAR064(IV821)) .NE. 0) VB22 =
165      1 VAR064(IV821) / VAR059(IV821)
166      IF (VAR067(IV821) .GE. 1 .AND. VAR067(IV821) .NE. I4 .AND. VAR067(
167      1 IV821) .NE. MENT1 .AND. VAR067(IV821) .NE. MENT2) IVB14 = 5
168      C NOTE THAT ANY NUMBER OF BURN QUALS MORE THAN 4 ARE ASSIGNED VALUE OF "5"
169      106 CONTINUE
170      WRITE (10, 1001) VAR044(I4), VAR045(I4), VAR046(I4), VAR047(I4),
171      1VAR048(I4), VAR049(I4), VAR050(I4), VAR051(I4), VAR052(I4),
172      2VAR053(I4), VAR054(I4), VAR055(I4), VAR056(I4), VAR057(I4),
173      3VAR058(I4), VAR059(I4), VAR060(I4), VAR061(I4), VAR062(I4),
174      4VAR063(I4), VAR064(I4), VAR065(I4), VAR066(I4), VAR067(I4),
175      5VAR068(I4)
176      C ABOVE WRITE FOR CARD TYPE 3 INFORMATION
177      WRITE (10, 1005) IVB1, VB2, VB3, VB4, IVB5, IVB6, IVB7, VB8, VB9,
178      1VB10, IVB11, IVB12, IVB13
179      1005 FORMAT(IX, I4, F7.1, 2F6.1, 3I3, F7.1, 2F6.1, 3I3)
180      C ABOVE FORMAT 1005 FOR RAINFALL INFO.

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181      WRITE (10, 1006) IV814, V815, V816, IV817, IV818, V819, IV820,
182      IIV821, VR22, IV923(I4)
183      1006 FORMAT(1X, I2, 2F5.2, I2, I4, F5.2, I2, I4, F5.2, I2)
184      C      ABOVE FORMAT 1006 FOR INFO. ON OTHER BURN QUALITIES AT SAME TIME AS CASE
185      100 CONTINUE
186      C      END OF PROGRAM "VIRGBURATAB"
187      END
END OF FILE

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1      BLOCK DATA
2      C   FOR MINUS ZERO INFORMATION IN WEATBD, USETAB, SORTSOILPRD, AND OTHER
3      C   SUBROUTINES
4      COMMON/MZ/MINZRO
5      DATA MINZRO/Z800000000/
6      END
7      SUBROUTINE WEATBD(IDATE1, IDATE2)
8
9      C   THIS SUBROUTINE (WEATBD) GIVES THE SUMMED WEATHER CHARACTERISTICS
10     C   BETWEEN ANY TWO DATES WITHIN THE RANGE OF WEATHER DATA (JAN 72 -
11     C   AUG 76) WHEN DAILY DATA IS AVAILABLE. DATA IS TAKEN FROM THE
12     C   WEATHER STATION NEAREST THE STUDY AREA WHICH HAS DATA AVAILABLE FOR
13     C   EACH ITEM AND DAY. IF NO DATA IS AVAILABLE FOR A GIVEN DAY, BUT AT
14     C   LEAST TWO DAYS HAVE DATA AVAILABLE WITHIN + OR - 7 DAYS, THEN THE
15     C   VALUE IS ESTIMATED AS THE AVERAGE FOR THE DAYS WITH DATA WITHIN
16     C   THAT RANGE. THE NUMBER OF MISSING DAYS FOR EACH ITEM FOR WHICH
17     C   SUCH ESTIMATIONS HAD TO BE MADE IS RETURNED AS "MISPRE" FOR PRECIPITATION
18     C   "MISEVA" FOR EVAPORATION, AND "MISINS" FOR INSOLATION. THE TOTAL MM OF RAIN
19     C   BETWEEN DATES (INCLUDING THE BEFORE DATE BUT NOT THE AFTER DATE)
20     C   IS RETURNED AS "RAINBD", MM EVAPORATION IS "EVAPBD",
21     C   HOURS OF INSOLATION IS "SUNBD" THE MAXIMUM MM RAINFALL IN
22     C   24 HOURS IS "RMAX24", AND "MRDATE" IS THE DATE OF THE
23     C   MAXIMUM RAINFALL IN 24 HOURS. MISSING (-9) VALUES ARE RETURNED
24     C   FOR DATES OUT OF THE DATA RANGE OR WHEN DATA IS MISSING AND NO ESTIMATION
25     C   CAN BE MADE. ALL DATES ARE EXPRESSED AS DAYS SINCE 1900. ARGUMENTS ARE:
26     C   IDATE1= BEGINNING DATE; IDATE2 = ENDING DATE OF INTERVAL. THE MAIN PROGRAM
27     C   MUST SLOPPY DATA FROM "DAILYWEATHER" FILE: L41, RL46, RL47, RL48.
28     C   USES FORTRAN MONITOR "MINUSZERO" FEATURE AND MTS LOGICAL COMPARISON
29     C   OF CHARACTERS ("LCCMC") SUBROUTINE.
30
31     COMMON/MZ/MINZRO
32     C   ABOVE COMMON MZ FOR MINUS ZERO BLOCK DATA SECTION
33     COMMON/C1/ L41(1700), RL46(1700), RL47(1700), RL48(1700)
34     COMMON/C2/ RAINBD, EVAPBD, SUNBD, MISPRE, MISEVA, MISINS
35     COMMON/MAX24/RMAX24, MRDATE
36     CALL FTNMCB('SET MINUSZERO=CN',16)
37     ICASES = 1697
38     C   ICASES IS THE NUMBER OF DAYS IN THE RANGE OF WEATHER DATA AVAILABLE
39     IPANGE = 0
40     RAINBD = 0.0
41     EVAPBD = 0.0
42     SUNBD = 0.0
43     MISPRE = 0
44     MISEVA = 0
45     MISINS = 0
46     IPRUSE = 1
47     IEVUSE = 1
48     IINUSE = 1
49     RMAX24 = 0.
50     MRDATE = -9
51     DO 100 IZ = 1, ICASES
52     C   SCANS DATA SET FOR DAYS IN SPECIFIED INTERVAL
53     IF (L41(IZ) .GE. IDATE1 .AND. L41(IZ) .LT. IDATE2) GO TO 10
54     GO TO 100
55     10  IRANGE = 1
56     IF (IPRUSE .EQ. 0) GO TO 14
57     IF (LCCMC(4, MINZRO, RL46(IZ)) .EQ. 0) GO TO 11
58     RAINBD = RAINBD + RL46(IZ)
59     IF (RMAX24 .LT. -8.) GO TO 120
60     IF (RL46(IZ) .LT. RMAX24) GO TO 120

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61      RMAX24 = RL46(I2)
62      C      "RMAX24" IS THE MAXIMUM RAINFALL IN 24 HOURS
63      MRDATE = L41(I2)
64      C      "MRDATE" IS THE DATE OF THE MAXIMUM RAINFALL IN 24 HOURS
65      120 CONTINUE
66      14 IF (IEVUSE .EQ. 0) GO TO 15
67      IF (LCCMC(4,MINZRC,RL47(I2)) .EQ. 0) GO TO 12
68      EVAP80 = EVAP80 + RL47(I2)
69      15 IF (IINUSE .EQ. 0) GO TO 100
70      IF (LCCMC(4,MINZRC,RL48(I2)) .EQ. 0) GO TO 13
71      SUN80 = SUN80 + RL48(I2)
72      GO TO 100
73      11 CONTINUE
74      C      FOLLOWING STATEMENTS CALCULATE APPROXIMATE VALUES FOR MISSING
75      C      PRECIPITATION DATA IF AT LEAST 2 DAYS WITHIN + OR - 7 DAYS HAVE DATA.
76      RAMISS = 0.
77      ISAMP1 = 0
78      RMAX24 = -9.0
79      ISTART = I2 - 7
80      IEND = I2 + 7
81      IF (ISTART .LT. 1) ISTART = 1
82      IF (IEND .GT. ICASES) IEND = ICASES
83      DO 101 I2 = ISTART, IEND
84      IF (LCCMC(4,MINZRC,RL46(I2)) .EQ. 0) GO TO 101
85      RAMISS = RAMISS + RL46(I2)
86      ISAMP1 = ISAMP1 + 1
87      101 CONTINUE
88      IF (ISAMP1 .LT. 2) GO TO 102
89      SAMP1 = FLOAT(ISAMP1)
90      RAIN80 = RAIN80 + (RAMISS / SAMP1)
91      MISPRE = MISPRE + 1
92      GO TO 14
93      102 MISPRE = -9
94      RAIN80 = -9.0
95      IPRUSE = 0
96      C      IPRUSE SET AT ZERO INDICATES PRECIPITATION DATA FOR INTERVAL NOT USEABLE
97      GO TO 14
98      12 CONTINUE
99      C      FOLLOWING STATEMENTS CALCULATE APPROXIMATE EVAPORATION IF DATA MISSING
100      C      BUT AT LEAST 2 DAYS WITHIN + OR - 7 DAYS HAVE DATA AVAILABLE
101      EVMISS = 0.
102      ISAMP2 = 0
103      ISTART = I2 - 7
104      IEND = I2 + 7
105      IF (ISTART .LT. 1) ISTART = 1
106      IF (IEND .GT. ICASES) IEND = ICASES
107      DO 103 I3 = ISTART, IEND
108      IF (LCCMC(4,MINZRC,RL47(I3)) .EQ. 0) GO TO 103
109      EVMISS = EVMISS + RL47(I3)
110      ISAMP2 = ISAMP2 + 1
111      103 CONTINUE
112      IF (ISAMP2 .LT. 2) GO TO 104
113      SAMP2 = FLOAT(ISAMP2)
114      EVAP80 = EVAP80 + (EVMISS / SAMP2)
115      MISEVA = MISEVA + 1
116      GO TO 15
117      104 MISEVA = -9
118      EVAP80 = -9.0
119      IEVUSE = 0
120      C      IEVUSE SET AT ZERO INDICATES EVAPORATION DATA FOR INTERVAL NOT USEABLE

```

```

121      GO TO 15
122  13 CONTINUE
123  C      FOLLOWING STATEMENTS CALCULATE APPROXIMATE INSOLATION IF DATA MISSING BUT
124  C      AT LEAST 2 DAYS WITHIN + OR - 7 DAYS HAVE DATA AVAILABLE
125      SUNMIS = 0.
126      ISAMP3 = 0
127      ISTART = IZ - 7
128      IEND = IZ + 7
129      IF (ISTART .LT. 1) ISTART = 1
130      IF (IEND .GT. ICASES) IEND = ICASES
131      DO 105 I4=ISTART, IEND
132      IF (LCCMC(4,MINZRO,RL48(I4)) .EQ. 0) GO TO 105
133      SUNMIS = SUNMIS + RL48(I4)
134      ISAMP3 = ISAMP3 + 1
135  105 CONTINUE
136      IF (ISAMP3 .LT. 2) GO TO 106
137      SAMP3 = FLOAT(ISAMP3)
138      SUNRD = SUNRD + (SUNMIS / SAMP3)
139      MISINS = MISINS + 1
140      GO TO 100
141  106 MISINS = -9
142      SUNRD = -9.0
143      IINUSE = 0
144  C      IINUSE SET AT ZERO INDICATES INSOLATION DATA FOR INTERVAL NOT USEABLE
145  100 CONTINUE
146      IF (IRANGE .EQ. 0) GO TO 107
147      GO TO 108
148  107 CONTINUE
149  C      FOLLOWING FOR DATES OUT OF DATA RANGE
150      RAINBD = -9.0
151      EVAPRD = -9.0
152      SUNRD = -9.0
153      MISPRE = -9
154      MISEVA = -9
155      MISINS = -9
156      RMAX24 = -9.0
157  108 CONTINUE
158  C      END OF SUBROUTINE WEATRD
159      RETURN
160      END
END OF FILE

```

```

1      C      THIS PROGRAM ("WEATHERBOTEST") IS USED FOR TESTING THE WEATBD
2      C      SUBROUTINE AND FOR OBTAINING RAIN, EVAPORATION AND INSOLUTION
3      C      BETWEEN DATES INTERACTIVELY FOR OTHER USES.
4      C      THE FORTRAN MONITOR "MINUSZERO" FEATURE IS USED.
5      C      INPUT UNITS ARE: 5**SCURCE* 7=DAILYWEATHER; OUTPUT UNIT IS
6      C      6**SINK*
7      C
8
9      COMMON/C1/L41(1700),RL46(1700),RL47(1700),RL48(1700)
10     COMMON/C2/RAINBD,EVAPBD,SUNBD,MISPRE,MISEVA,MISINS
11     CALL FTNCMC('SET MINUSZERO=CN',16)
12     ICASES = 1697
13     5002 READ (7,5002)(L41(I1),RL46(I1),RL47(I1),RL48(I1),I1=1,ICASES)
14     11 CONTINUE
15     WRITE (6,1000)
16     1000 FORMAT(1X,'ENTER BEFORE DAYS SINCE 1900 (FORMAT=15)')
17     READ (5,1001) ID1
18     1001 FORMAT(15)
19     WRITE (6,1002)
20     1002 FORMAT(1X,'ENTER AFTER DAYS SINCE 1900 (FORMAT=15)')
21     READ (5,1001) ID2
22     CALL WEATBD(ID1, ID2)
23     WRITE (6,5001) ID1, ID2, RAINBD, EVAPBD, SUNBD
24     5001 FORMAT(1X, 'IC1= ', I6, ' IC2= ', I6, ' RAINBD= ', F7.1,
25     1 ' EVAPBD= ', F6.1, ' INSCBD= ', F6.1)
26     WRITE (6,1003)
27     1003 FORMAT(1X,'ENTER CONTINUATION CODE: 1=CONTINUE RUN, 2=END RUN;
28     1 (FORMAT=11)')
29     READ (5,1004) ICCAT
29     1004 FORMAT(11)
30     IF (ICAT .EQ. 1) GO TO 11
31     END
32
END OF FILE

```

```

1 C      THIS PROGRAM (WEATHERCUM) CALCULATES ROLLING CUMULATIVE WEATHER DATA
2 C      SUMS FOR ALL DAYS WITHIN THE RANGE OF DAILY WEATHER DATA (JAN. 72 -
3 C      AUG 76). THE SUMS FOR MM PRECIPITATION, MM EVAPORATION, AND HOURS
4 C      INSOLATION (RAINBD, EVAPBD, AND SUNBD) ARE CALCULATED FOR THE 15
5 C      DAYS FOLLOWING ONE DATE (L41(IPREVI)) AND 15 DAYS PREVIOUS TO ONE
6 C      DATE (L41(I2)). THE NUMBER OF DAYS FOR WHICH APPROXIMATE VALUES HAD
7 C      TO BE CALCULATED ARE RECORDED FOR EACH ITEM (MISPRI, MISEVA, AND
8 C      MISINS). ALL DATES ARE GIVEN BOTH AS DAYS SINCE 1900 AND AS DAY,
9 C      MONTH AND YEAR IN THE OUTPUT FILE "WEATHCUMLIST". THE SUBROUTINE
10 C      WEATBC IS CALLED.
11 C
12 C      DIMENSION L42(1700), L43(1700), L44(1700)
13 C      COMMON/C1/ L41(1700), RL46(1700), RL47(1700), RL48(1700)
14 C      NOTE THAT ABOVE COMMON DOES NOT INCLUDE DAY, MONTH AND YEAR
15 C      THE DIMENSIONS OF ABOVE COMMON ARE THE SAME AS "ICASES"
16 C      COMMON/C2/ RAINBD, EVAPBD, SUNBD, MISPRI, MISEVA, MISINS
17 C      CALL FTNCMD('SET MINUSZERO=CN',16)
18 C      ICASES = 1697
19 C      READ (7, 5002)(L41(I1), L42(I1), L43(I1), L44(I1), RL46(I1),
20 C      RL47(I1), RL48(I1), I1=1, ICASES)
21 C      5002 FORMAT(//// 2X, I6, 3I3, 3X, F6.1, 2F5.1)
22 C      ABOVE FORMAT FOR DAILYWEATHER (FOR STATION NEAREST STUDY AREA WITH DATA)
23 C      DO 500 I2= 15, ICASES
24 C      IPREVI = I2 - 14
25 C      CALL WEATBC(L41(IPREVI), L41(I2))
26 C      WRITE (6, 5003) L41(IPREVI), L42(IPREVI), L43(IPREVI), L44(IPREVI)
27 C      L41(I2), L42(I2), L43(I2), L44(I2), RAINBD, EVAPBD, SUNBD,
28 C      2MISPRI, MISEVA, MISINS
29 C      5003 FORMAT(1X, 2(I6, 3I3), F7.1, 2F6.1, 3I3)
30 C      ABOVE FORMAT FOR WEATHCUMLIST
31 C      500 CONTINUE
32 C      END OF WEATHERCUM MAIN PROGRAM
33 C      RETURN
34 C      END
35
END OF FILE

```

```

1      C
2      C   THIS PROGRAM (WEATHERCATA) SORTS AND REFORMATS DAILY PRECIPITATION
3      C   DATA FROM ONE20 AND DAILY EVAPORATION AND INSOLATION DATA FROM
4      C   ONE21 WITH DATA ARRANGED BY DAY IN THE FILE DAILYWEATHER. A SET OF
5      C   DATA IS ALSO EXTRACTED TAKING VALUES FROM WHICHEVER ONE OF THE
6      C   FOUR WEATHER STATIONS IS NEAREST THE STUDY AREA AND HAS DATA
7      C   AVAILABLE FOR THAT DAY. THE STATIONS ARE:ALTAMIRA, KM23, KML01,
8      C   AND KMG0 (NOT IN ORDER OF DISTANCE). SPACES ARE HELD FOR MISSING
9      C   DATA. THERE ARE FIVE LINES OF OUTPUT FOR EACH DAY. THE FUNCTION
10     C   KCAYS IS CALLED
11     C   INPUT UNITS ARE: 5=DATAFILE 6=CNE20 7=ONE21
12     C   OUTPUT UNIT IS: 9=DAILYWEATHER
13     C   THE FORTRAN MONITOR "MINUSZERC" FEATURE IS USED
14     C
15     C   INTEGER MISS2,MISS3,MISS4
16     C   DIMENSION M1(5000), M2(5000), M3(5000), M4(5000), M5(5000),
17     C   VDM1(5000), RM6(5000), M7(5000)
18     C   ABOVE DIMENSION FOR CNELINE PRECIPITATION ARRAYS
19     C   DIMENSION K1(2000), K2(2000), K3(2000), K4(2000), K5(2000),
20     C   RK6(2000), RK7(2000), K8(2000)
21     C   ABOVE DIMENSION FOR CNELINE EVAPORATION AND INSOLATION ARRAYS
22     C   DATA MISS2/'  '
23     C   DATA MISS3/'  '
24     C   DATA MISS4/'  '
25     C   CALL FTNCMD('SET MINUSZERC=GN',16)
26     C   READ (5,1000) MCDS1, MCDS2
27     C   MCDS1 IS NO. OF CARDS IN CNE20 : MCDS2 IS NO. OF CARDS IN ONE21
28     C   1000 FORMAT(1X, 2I5)
29     C   READ(6,1010)(M1(I),M2(I),M3(I),M4(I),M5(I),VDM1(I),RM6(I),M7(I),
30     C   I=1,MCDS1)
31     C   1010 FORMAT(1X, I3, I6, 3I3, A2, A4, A3)
32     C   ABOVE FORMAT 1010 FOR CNE20 PRECIPITATION DATA
33     C   READ (7,1011)(K1(I), K2(I), K3(I), K4(I), K5(I), RK6(I), RK7(I),
34     C   LK8(I), I=1,MCDS2)
35     C   1011 FORMAT(1X, I3, I6, 3I3, 1X, A4, 1X, A4, A3)
36     C   ABOVE FORMAT 1011 FOR CNE21 EVAPORATION AND INSOLATION DATA
37     C   MSTART = KCAYS(1, 1, 72)
38     C   MEND = KCAYS(24, 8, 76)
39     C   MCDAYS = MEND - MSTART
40     C   DATA STARTS JAN 1, 1972 AND ENDS AUG 24, 1976
41     C   DO 10 I1 = 1,MCDAYS
42     C   DOES CNE ITERATION FOR EACH DAY IN RANGE OF DATA
43     C   I2 = I1 + MSTART - 1
44     C   I2 IS DAYS SINCE 1900 FOR DAY CONSIDERED.
45     C   L2 = 0
46     C   L12 = 0
47     C   L22 = 0
48     C   L32 = 0
49     C   L42 = 0
50     C   L3=0
51     C   L13 = 0
52     C   L23 = 0
53     C   L33 = 0
54     C   L43 = 0
55     C   L4 = 0
56     C   L14 = 0
57     C   L24 = 0
58     C   L34 = 0
59     C   L44 = 0
60     C   L5 = 0

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61      L15 = 0
62      L25 = 0
63      L35 = 0
64      L45 = 0
65      VDL1 = MISS2
66      VDL2 = MISS2
67      VDL3 = MISS2
68      VDL4 = MISS2
69      VDL5 = MISS2
70      RL6 = MISS4
71      RL6 = MISS4
72      RL16 = MISS4
73      RL26 = MISS4
74      RL36 = MISS4
75      RL46 = MISS4
76      RL7 = MISS4
77      RL17 = MISS4
78      RL27 = MISS4
79      RL37 = MISS4
80      RL47 = MISS4
81      RL8 = MISS4
82      RL18 = MISS4
83      RL28 = MISS4
84      RL38 = MISS4
85      RL48 = MISS4
86      L9 = MISS3
87      L19 = MISS3
88      L29 = MISS3
89      L39 = MISS3
90      L49 = MISS3
91      L10 = MISS3
92      L20 = MISS3
93      L30 = MISS3
94      L40 = MISS3
95      L50 = MISS3
96      DO 100 I3=1,4
97      C      DOES ONE ITERATION FOR EACH WEATHER STATION
98      DO 101 I4=1,MCD51
99      C      SCANS PRECIPITATION ARRAYS FOR DAY
100      IF (M1(I4) .NE. I3) GO TO 101
101      IF (M2(I4) .NE. I2) GO TO 101
102      IF (M1(I4) .EQ. 1) GO TO 11
103      GO TO 12
104      11 L1 = M2(I4)
105      L2 = M3(I4)
106      L3 = M4(I4)
107      L4 = M5(I4)
108      L5 = M1(I4)
109      VDL1 = VDM1(I4)
110      RL6 = RM6(I4)
111      L9 = M7(I4)
112      GO TO 100
113      12 IF (M1(I4) .EQ. 2) GO TO 13
114      GO TO 14
115      13 L11 = M2(I4)
116      L12 = M3(I4)
117      L13 = M4(I4)
118      L14 = M5(I4)
119      L15 = M1(I4)
120      VDL2 = VDM1(I4)

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121         RL16 = RM6(I4)
122         L13 = M7(I4)
123         GO TO 100
124     14 IF (M1(I4) .EQ. 3) GO TO 15
125         GO TO 16
126     15 L21 = M2(I4)
127         L22 = M3(I4)
128         L23 = M4(I4)
129         L24 = M5(I4)
130         L25 = M1(I4)
131         VDL3 = VDM1(I4)
132         RL26 = RM6(I4)
133         L29 = M7(I4)
134         GO TO 100
135     16 IF (M1(I4) .EQ. 4) GO TO 17
136         GO TO 101
137     17 L31 = M2(I4)
138         L32 = M3(I4)
139         L33 = M4(I4)
140         L34 = M5(I4)
141         L35 = M1(I4)
142         VDL4 = VDM1(I4)
143         RL36 = RM6(I4)
144         L39 = M7(I4)
145     101 CONTINUE
146     100 CONTINUE
147         DO 102 I5=1,4
148 C         DOES ONE ITERATION FOR EACH WEATHER STATION
149         DO 103 I6=1,MCDS2
150 C         SCANS EVAP. AND INSOL. ARRAYS FOR FINDING DAY
151         IF (K1(I6) .NE. I5) GO TO 103
152         IF (K2(I6) .NE. I2) GO TO 103
153         IF (K1(I6) .EQ. 1) GO TO 18
154         GO TO 19
155     18 RL7 = RK6(I6)
156         RL8 = RK7(I6)
157         L10 = K9(I6)
158         GO TO 102
159     19 IF (K1(I6) .EQ. 2) GO TO 20
160         GO TO 21
161     20 RL17 = RK6(I6)
162         RL18 = RK7(I6)
163         L20 = K9(I6)
164         GO TO 102
165     21 IF (K1(I6) .EQ. 3) GO TO 22
166         GO TO 23
167     22 RL27 = RK6(I6)
168         RL28 = RK7(I6)
169         L30 = K9(I6)
170         GO TO 102
171     23 IF (K1(I6) .EQ. 4) GO TO 24
172         GO TO 103
173     24 RL37 = RK6(I6)
174         RL38 = RK7(I6)
175         L40 = K9(I6)
176     103 CONTINUE
177     102 CONTINUE
178 C     FOLLOWING STATEMENTS FIND NEAREST STATION WITH DATA
179         IF (L12 .GT. 0) GO TO 25
180         IF (L32 .GT. 0) GO TO 25

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181         IF (L22 .GT. 0) GO TO 27
182         IF (L2 .GT. 0) GO TO 28
183     C      ORDER OF STATIONS SELECTED: KM23, KM90, KM101, ALTAMIRA
184         GO TO 290
185     25     L41 = L11
186         L42 = L12
187         L43 = L13
188         L44 = L14
189         L45 = L15
190         VDL5 = VDL2
191         RL46 = RL16
192         L49 = L19
193         GO TO 29
194     26     L41 = L31
195         L42 = L32
196         L43 = L33
197         L44 = L34
198         L45 = L35
199         VDL5 = VDL4
200         RL46 = RL36
201         L49 = L19
202         GO TO 29
203     27     L41 = L21
204         L42 = L22
205         L43 = L23
206         L44 = L24
207         L45 = L25
208         VDL5 = VDL3
209         RL46 = RL26
210         L49 = L29
211         GO TO 29
212     28     L41 = L1
213         L42 = L2
214         L43 = L3
215         L44 = L4
216         L45 = L5
217         VDL5 = VDL1
218         RL46 = RL6
219         L49 = L9
220     29     CONTINUE
221         RL47 = RL7
222         RL48 = RL8
223         L50 = L10
224     C      NOTE THAT EVAPORATION AND INSCLATION ONLY COMES FROM STATION 1 (ALTAMIRA)
225     C      REGARDLESS OF "NEAREST" STATION INDICATED (L45) FOR PRECIPITATION DATA
226     290    CONTINUE
227         IF (L2 .GT. 0) GO TO 30
228         GO TO 32
229     30     WRITE (8,1001) L1, L2, L3, L4, L5, VDL1, RL6, RL7, RL8, L9, L10
230     1001    FORMAT(2X, I6, 4I3, A2, A4, 2(1X, A4), 2A3)
231     C      ABOVE FORMAT 1001 FOR ALL STATIONS WHERE THERE IS DATA
232         GO TO 31
233     32     WRITE (8,1002) I2
234     1002    FORMAT(2X, I6, 11X, 'I')
235     C      ABOVE FORMAT 1002 FOLLOWS SPACE FOR MISSING STATION 1 (ATM) DATA
236     31     IF (L12 .GT. 0) GO TO 33
237         GO TO 34
238     33     WRITE (8,1001) L11, L12, L13, L14, L15, VDL2, RL16, RL17, RL18,
239         L19, L20
240         GO TO 35

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```

241      34 WRITE (8,1003) I2
242      1003 FORMAT(2X, I6, 11X, '2')
243      C      ABOVE FORMAT 1003 HOLDS SPACE FOR MISSING STATION 2 (KM23) DATA
244      35 IF (L22 .GT. 0) GO TO 36
245      GO TO 37
246      36 WRITE (8,1001) L21, L22, L23, L24, L25, VDL3, RL26, RL27, RL28,
247      IL29, L30
248      GO TO 38
249      37 WRITE (8, 1004) I2
250      1004 FORMAT(2X, I6, 11X, '3')
251      C      ABOVE FORMAT 1004 HOLDS SPACE FOR MISSING STATION 3 (KM101) DATA
252      38 IF (L32 .GT. 0) GO TO 39
253      GO TO 40
254      39 WRITE (8, 1001) L31, L32, L33, L34, L35, VDL4, RL36, RL37, RL38,
255      IL39, L40
256      GO TO 41
257      40 WRITE (8, 1005) I2
258      1005 FORMAT(2X, I6, 11X, '4')
259      C      ABOVE FORMAT 1005 HOLDS SPACE FOR MISSING STATION 4 (KM90) DATA
260      41 IF (L42 .GT. 0) GO TO 42
261      GO TO 43
262      42 WRITE (8,1001) L41, L42, L43, L44, L45, VDL5, RL46, RL47, RL48,
263      IL49, L50
264      GO TO 44
265      43 WRITE (8, 1006) I2
266      1006 FORMAT(2X, I6)
267      C      ABOVE FORMAT 1006 HOLDS SPACE FOR MISSING NEAREST STATION DATA
268      44 CONTINUE
269      10 CONTINUE
270      RETURN
271      END
END OF FILE

```

```

1      INTEGER FUNCTION DA1900(IDA, IMO, IYR, ICROP, IOPER)
2      C      THIS FUNCTION RETURNS THE NUMBER OF DAYS SINCE JAN. 1, 1900.
3      C      APPROPRIATE DEFAULT VALUES ARE ASSIGNED FOR RICE, MAIZE AND BEAN
4      C      PLANTING FOLDING AND HARVESTING PLUS FOREST OR SECOND GROWTH
5      C      CUTTING AND BURNING IF MONTH OR DAY VALUES ARE MISSING.
6      C      ARGUMENTS ARE: IDA = NO. OF DAYS, IMO = NO. OF MONTHS, IYR = YEAR
7      C      ICROP = CROP OR LAND USE ITEM CODE, IOPER = OPERATION OR EVENT
8      C      USE "0" FOR ITEM AND EVENT TO BYPASS DEFAULT PART OF PROGRAM
9      C
10     DA1900 = -0
11     IF (IYR .EQ. -0) GO TO 10
12     IF (IMO .EQ. -0) GO TO 7002
13     GO TO 7003
14     7002 CONTINUE
15     IF (ICROP .EQ. 7) GO TO 7004
16     IF (ICROP .EQ. 14) GO TO 7005
17     IF (ICROP .EQ. 21) GO TO 7006
18     IF (ICROP .EQ. 1.OR.ICROP .EQ. 5 .OR. ICROP .EQ. 6) GO TO 7007
19     GO TO 7008
20     7004 CONTINUE
21     IF (IOPER .EQ. 3) GO TO 7009
22     IF (IOPER .EQ. 5) GO TO 7010
23     IF (IOPER .EQ. 9) GO TO 7010
24     GO TO 7003
25     7009 CONTINUE
26     IMO = 1
27     GO TO 7003
28     7010 CONTINUE
29     IMO = 6
30     GO TO 7003
31     7005 CONTINUE
32     IF (IOPER .EQ. 3) GO TO 7011
33     IF (IOPER .EQ. 4) GO TO 7012
34     IF (IOPER .EQ. 5) GO TO 7013
35     GO TO 7003
36     7011 CONTINUE
37     IMO = 12
38     GO TO 7003
39     7012 CONTINUE
40     IF (IYR .GT.0) GO TO 7014
41     GO TO 7003
42     7014 CONTINUE
43     IMO = 3
44     GO TO 7003
45     7013 CONTINUE
46     IMO = 9
47     GO TO 7003
48     7006 CONTINUE
49     IF (IOPER .EQ. 3) GO TO 7015
50     IF (IOPER .EQ. 5) GO TO 7016
51     IF (IOPER .EQ. 8) GO TO 7017
52     GO TO 7003
53     7015 CONTINUE
54     IMO = 5
55     GO TO 7003
56     7016 CONTINUE
57     IMO = 8
58     GO TO 7003
59     7017 CONTINUE
60     IMO = 7

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```

61      GO TO 7003
62      7007 CONTINUE
63          IF (IOPER .EQ. 1) GO TO 7018
64          IF (IOPER .EQ. 2) GO TO 7019
65          GO TO 7003
66      7018 CONTINUE
67          IMO = 9
68          GO TO 7003
69      7019 CONTINUE
70          IMO = 10
71          GO TO 7003
72      7008 CONTINUE
73          IMO = 0
74          ICAY = 0
75      7003 CONTINUE
76          IF (ICA .EQ. -0) GO TO 7000
77          GO TO 7001
78      7000 CONTINUE
79          IDA = 15
80      7001 CONTINUE
81          DA1900 = KDAY$(IDA, IMO, IYR)
82      10 CONTINUE
83          RETURN
84      END
85      FUNCTION KDAY$(IDA, IMO, IYR)
86          K1 = 365 * IYR + IYR/4
87          C = 30.6 * FLOCAT(IMO) - 32.3
88          IF(IMO .GE. 3) GO TO 5
89          IF(MOD(IYR, 4) .EQ. 0) K1 = K1-1
90          C = C+ 2.3
91      5 KDAY$ = K1 + INT(C) + IDA
92          RETURN
93      END
END OF FILE

```

```

1      C
2      C      THIS PROGRAM (ONLINE24) REFORMATS SOIL COLOR DATA FROM CARD TYPE 24
3      C      WITH ONE CASE PER LINE IN OUTPUT FILE ONE14. THE OUTPUT FORMAT IS
4      C      THE SAME AS FOR THE FIRST CASE ON CARD TYPE 24.
5      C      INPUT UNITS ARE 5=CATAFILE AND 7=TYPE24. OUTPUT UNIT IS 6=ONE24
6      C
7      C      INTEGER VAR390, VAR391, VAR392, VAR396, VAR397, VAR398, VAR399,
8      C      1VAR403, VAR404, VAR405
9      C      ABOVE TYPE DECLARATION FOR CARD TYPE 24
10     C      READ (5, 1000) ICDS24
11     C      ICDS24 IS THE NUMBER OF CARDS OF TYPE 24
12     C      1000 FORMAT(1X, I5)
13     C      DO 100 I1 = 1, ICDS24
14     C      READ (7, 1001) VAR390, VAR391, VAR392, VAR393, VAR394, VAR395,
15     C      1VAR396, VAR397, VAR398, VAR399, VAR400, VAR401, VAR402, VAR403,
16     C      2VAR404, VAR405
17     C      1001 FORMAT(3X, 2(I5, 1X, 2A4, 1X, A4, A3, A4, A3), 2A3)
18     C      ABOVE FORMAT 1001 FOR CARD TYPE 24
19     C      WRITE (6, 1002) VAR390, VAR391, VAR392, VAR393, VAR394, VAR395,
20     C      1VAR396, VAR404
21     C      1002 FORMAT(3X, I5, 1X, 2A4, 1X, A4, A3, A4, A3, 29X, A3)
22     C      ABOVE FORMAT FOR ONE24
23     C      IF (.NOT.(VAR397 .GT. 0)) GO TO 100
24     C      WRITE (6, 1002) VAR398, VAR399, VAR400, VAR401, VAR402, VAR403,
25     C      1VAR405
26     C      100 CONTINUE
27     C      END

```

END OF FILE

```

1      BLOCK DATA
2      COMMON/COORD1/IX1(177),IY1(177),IX2(177),IY2(177)
3      DATA IX1(1),IY1(1),IX2(1),IY2(1)/-0,-0,-0,-0/
4      DATA IX1(2),IY1(2),IX2(2),IY2(2)/-0,-0,-0,-0/
5      DATA IX1(3),IY1(3),IX2(3),IY2(3)/-0,-0,-0,-0/
6      DATA IX1(4),IY1(4),IX2(4),IY2(4)/-0,-0,-0,-0/
7      DATA IX1(66),IY1(66),IX2(66),IY2(66)/-0,-0,-0,-0/
8      DATA IX1(157),IY1(157),IX2(157),IY2(157)/-0,-0,-0,-0/
9      DATA IX1(158),IY1(158),IX2(158),IY2(158)/-0,-0,-0,-0/
10     DATA IX1(159),IY1(159),IX2(159),IY2(159)/-0,-0,-0,-0/
11     DATA IX1(160),IY1(160),IX2(160),IY2(160)/-0,-0,-0,-0/
12     DATA IX1(177),IY1(177),IX2(177),IY2(177)/-0,-0,-0,-0/
13     DATA IX1(69),IY1(69),IX2(69),IY2(69)/ 5495, 3600, 2800, 3500/
14     DATA IX1(68),IY1(68),IX2(68),IY2(68)/ 5495, 4000, 2800, 3900/
15     DATA IX1(71),IY1(71),IX2(71),IY2(71)/ 5495, 4400, 2800, 4310/
16     DATA IX1(138),IY1(138),IX2(138),IY2(138)/ 5495, 5600, 2800, 5510/
17     DATA IX1(74),IY1(74),IX2(74),IY2(74)/ 5495, 6000, 2800, 5910/
18     DATA IX1(139),IY1(139),IX2(139),IY2(139)/ 5495, 6400, 2800, 6310/
19     DATA IX1(116),IY1(116),IX2(116),IY2(116)/ 5495, 7600, 2800, 7510/
20     DATA IX1(23),IY1(23),IX2(23),IY2(23)/ 5495, 8000, 2800, 7900/
21     DATA IX1(24),IY1(24),IX2(24),IY2(24)/ 5495, 8400, 2800, 8300/
22     DATA IX1(12),IY1(12),IX2(12),IY2(12)/ 5495, 8800, 2800, 8700/
23     DATA IX1(75),IY1(75),IX2(75),IY2(75)/ 5495, 9200, 2800, 9100/
24     DATA IX1(93),IY1(93),IX2(93),IY2(93)/ 5495, 9600, 2800, 9500/
25     DATA IX1(89),IY1(89),IX2(89),IY2(89)/ 5495,10400, 2800,10300/
26     DATA IX1(92),IY1(92),IX2(92),IY2(92)/ 5495,10800, 2800,10700/
27     DATA IX1(13),IY1(13),IX2(13),IY2(13)/ 5495,12400, 2800,12200/
28     DATA IX1(73),IY1(73),IX2(73),IY2(73)/ 5505, 4000, 8200, 4100/
29     DATA IX1(70),IY1(70),IX2(70),IY2(70)/ 5505, 4400, 8200, 4450/
30     DATA IX1(72),IY1(72),IX2(72),IY2(72)/ 5505, 4800, 8200, 4850/
31     DATA IX1(136),IY1(136),IX2(136),IY2(136)/ 5505, 6400, 8195, 6450/
32     DATA IX1(137),IY1(137),IX2(137),IY2(137)/ 5505, 6800, 8190, 6850/
33     DATA IX1(10),IY1(10),IX2(10),IY2(10)/ 5505, 7200, 8180, 7250/
34     DATA IX1(67),IY1(67),IX2(67),IY2(67)/ 5505, 8000, 8160, 8050/
35     DATA IX1(22),IY1(22),IX2(22),IY2(22)/ 5505, 8400, 8150, 8450/
36     DATA IX1(64),IY1(64),IX2(64),IY2(64)/ 5505,11200, 8100,11220/
37     DATA IX1(94),IY1(94),IX2(94),IY2(94)/ 5505,11600, 8100,11600/
38     DATA IX1(26),IY1(26),IX2(26),IY2(26)/ 5505,12000, 8100,12020/
39     DATA IX1(122),IY1(122),IX2(122),IY2(122)/11000, 3250, 8200, 3200/
40     DATA IX1(124),IY1(124),IX2(124),IY2(124)/10982, 3700, 8200, 3650/
41     DATA IX1(126),IY1(126),IX2(126),IY2(126)/10964, 4100, 8200, 4100/
42     DATA IX1(142),IY1(142),IX2(142),IY2(142)/10946, 4500, 8200, 4450/
43     DATA IX1(141),IY1(141),IX2(141),IY2(141)/10929, 4900, 8200, 4850/
44     DATA IX1(44),IY1(44),IX2(44),IY2(44)/10857, 6500, 8195, 6450/
45     DATA IX1(42),IY1(42),IX2(42),IY2(42)/10839, 6900, 8190, 6850/
46     DATA IX1(45),IY1(45),IX2(45),IY2(45)/10821, 7300, 8180, 7250/
47     DATA IX1(108),IY1(108),IX2(108),IY2(108)/10803, 7700, 8170, 7650/
48     DATA IX1(107),IY1(107),IX2(107),IY2(107)/10786, 8100, 8160, 8050/
49     DATA IX1(46),IY1(46),IX2(46),IY2(46)/10768, 8500, 8150, 8450/
50     DATA IX1(103),IY1(103),IX2(103),IY2(103)/10750, 8900, 8140, 8850/
51     DATA IX1(135),IY1(135),IX2(135),IY2(135)/10732, 9300, 8130, 9250/
52     DATA IX1(38),IY1(38),IX2(38),IY2(38)/10714, 9700, 8120, 9650/
53     DATA IX1(59),IY1(59),IX2(59),IY2(59)/10643,11300, 8100,11220/
54     DATA IX1(61),IY1(61),IX2(61),IY2(61)/10625,11700, 8100,11600/
55     DATA IX1(58),IY1(58),IX2(58),IY2(58)/10607,12100, 8100,12020/
56     DATA IX1(146),IY1(146),IX2(146),IY2(146)/10589,12500, 8100,12350/
57     DATA IX1(153),IY1(153),IX2(153),IY2(153)/10571,12900, 8100,12650/
58     DATA IX1(34),IY1(34),IX2(34),IY2(34)/10553,13250, 8100,12950/
59     DATA IX1(36),IY1(36),IX2(36),IY2(36)/10536,13650, 8100,13250/
60     DATA IX1(152),IY1(152),IX2(152),IY2(152)/10517,14050, 8100,13520/

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61 DATA IX1(123),IY1(123),IX2(123),IY2(123)/10992, 3700,13234, 3750/
62 DATA IX1(125),IY1(125),IX2(125),IY2(125)/10974, 4100,13218, 4150/
63 DATA IX1(127),IY1(127),IX2(127),IY2(127)/10956, 4500,13202, 4550/
64 DATA IX1(128),IY1(128),IX2(128),IY2(128)/10939, 4900,13186, 4920/
65 DATA IX1(140),IY1(140),IX2(140),IY2(140)/10921, 5300,13170, 5320/
66 DATA IX1(106),IY1(106),IX2(106),IY2(106)/10849, 6900,13105, 6950/
67 DATA IX1(104),IY1(104),IX2(104),IY2(104)/10831, 7300,13089, 7350/
68 DATA IX1(105),IY1(105),IX2(105),IY2(105)/10813, 7700,13073, 7750/
69 DATA IX1(41),IY1(41),IX2(41),IY2(41)/10796, 8100,13057, 8150/
70 DATA IX1(43),IY1(43),IX2(43),IY2(43)/10778, 8500,13041, 8550/
71 DATA IX1(40),IY1(40),IX2(40),IY2(40)/10760, 8900,13025, 8970/
72 DATA IX1(39),IY1(39),IX2(39),IY2(39)/10742, 9300,13009, 9390/
73 DATA IX1(109),IY1(109),IX2(109),IY2(109)/10724, 9700,12993, 9795/
74 DATA IX1(156),IY1(156),IX2(156),IY2(156)/10706,10100,12977,10195/
75 DATA IX1(164),IY1(164),IX2(164),IY2(164)/10653,11300,12929,11400/
76 DATA IX1(60),IY1(60),IX2(60),IY2(60)/10635,11700,12913,11800/
77 DATA IX1(33),IY1(33),IX2(33),IY2(33)/10617,12100,12896,12200/
78 DATA IX1(100),IY1(100),IX2(100),IY2(100)/10599,12500,12880,12600/
79 DATA IX1(99),IY1(99),IX2(99),IY2(99)/10581,12900,12864,13000/
80 DATA IX1(112),IY1(112),IX2(112),IY2(112)/10546,13650,12832,14150/
81 DATA IX1(35),IY1(35),IX2(35),IY2(35)/10527,14050,12816,14800/
82 DATA IX1(9),IY1(9),IX2(9),IY2(9)/10500,14400,12800,15300/
83 DATA IX1(80),IY1(80),IX2(80),IY2(80)/10309,30500, 7834,30250/
84 DATA IX1(81),IY1(81),IX2(81),IY2(81)/10318,30100, 7843,29854/
85 DATA IX1(82),IY1(82),IX2(82),IY2(82)/10327,29700, 7852,29458/
86 DATA IX1(54),IY1(54),IX2(54),IY2(54)/10335,29300, 7860,29062/
87 DATA IX1(37),IY1(37),IX2(37),IY2(37)/10344,28900, 7869,28666/
88 DATA IX1(7),IY1(7),IX2(7),IY2(7)/10353,28500, 7878,28270/
89 DATA IX1(91),IY1(91),IX2(91),IY2(91)/10362,28100, 7887,27874/
90 DATA IX1(78),IY1(78),IX2(78),IY2(78)/10371,27700, 7896,27478/
91 DATA IX1(31),IY1(31),IX2(31),IY2(31)/10380,27300, 7905,27082/
92 DATA IX1(19),IY1(19),IX2(19),IY2(19)/10389,26900, 7914,26686/
93 DATA IX1(20),IY1(20),IX2(20),IY2(20)/10398,26500, 7923,26290/
94 DATA IX1(121),IY1(121),IX2(121),IY2(121)/10406,26100, 7931,25894/
95 DATA IX1(5),IY1(5),IX2(5),IY2(5)/10415,25700, 7940,25498/
96 DATA IX1(8),IY1(8),IX2(8),IY2(8)/10424,25300, 7949,25102/
97 DATA IX1(120),IY1(120),IX2(120),IY2(120)/10442,24550, 7967,24310/
98 DATA IX1(55),IY1(55),IX2(55),IY2(55)/10451,24175, 7976,23914/
99 DATA IX1(32),IY1(32),IX2(32),IY2(32)/10460,23750, 7985,23518/
100 DATA IX1(56),IY1(56),IX2(56),IY2(56)/10469,23390, 7994,23122/
101 DATA IX1(132),IY1(132),IX2(132),IY2(132)/10477,22990, 8002,22725/
102 DATA IX1(85),IY1(85),IX2(85),IY2(85)/10495,22180, 8020,21934/
103 DATA IX1(62),IY1(62),IX2(62),IY2(62)/10504,21780, 8029,21538/
104 DATA IX1(134),IY1(134),IX2(134),IY2(134)/10513,21380, 8038,21142/
105 DATA IX1(57),IY1(57),IX2(57),IY2(57)/10521,20980, 8047,20746/
106 DATA IX1(96),IY1(96),IX2(96),IY2(96)/10531,20600, 8056,20350/
107 DATA IX1(86),IY1(86),IX2(86),IY2(86)/10539,20200, 8065,19875/
108 DATA IX1(149),IY1(149),IX2(149),IY2(149)/10548,19800, 8073,19400/
109 DATA IX1(145),IY1(145),IX2(145),IY2(145)/10557,19400, 8082,18900/
110 DATA IX1(174),IY1(174),IX2(174),IY2(174)/10566,18900, 8091,18400/
111 DATA IX1(51),IY1(51),IX2(51),IY2(51)/10575,18500, 8100,17850/
112 DATA IX1(29),IY1(29),IX2(29),IY2(29)/10310,30900,12700,31200/
113 DATA IX1(27),IY1(27),IX2(27),IY2(27)/10319,30500,12706,30800/
114 DATA IX1(28),IY1(28),IX2(28),IY2(28)/10328,30100,12711,30400/
115 DATA IX1(6),IY1(6),IX2(6),IY2(6)/10337,29700,12717,30000/
116 DATA IX1(19),IY1(18),IX2(18),IY2(18)/10345,29300,12723,29600/
117 DATA IX1(17),IY1(17),IX2(17),IY2(17)/10354,28900,12728,29200/
118 DATA IX1(15),IY1(15),IX2(15),IY2(15)/10363,28500,12734,28800/
119 DATA IX1(16),IY1(16),IX2(16),IY2(16)/10372,28100,12740,28400/
120 DATA IX1(30),IY1(30),IX2(30),IY2(30)/10381,27700,12745,28000/

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121 DATA IX1(77),IY1(77),IX2(77),IY2(77)/10408,26500,12762,26800/
122 DATA IX1(79),IY1(79),IX2(79),IY2(79)/10416,26100,12768,26400/
123 DATA IX1(90),IY1(90),IX2(90),IY2(90)/10461,24550,12791,24800/
124 DATA IX1(83),IY1(83),IX2(83),IY2(83)/10470,24175,12796,24400/
125 DATA IX1(76),IY1(76),IX2(76),IY2(76)/10479,23750,12802,24000/
126 DATA IX1(131),IY1(131),IX2(131),IY2(131)/10487,23390,12807,23700/
127 DATA IX1(84),IY1(84),IX2(84),IY2(84)/10514,22180,12825,22700/
128 DATA IX1(147),IY1(147),IX2(147),IY2(147)/10523,21780,12830,22375/
129 DATA IX1(95),IY1(95),IX2(95),IY2(95)/10531,21380,12836,22000/
130 DATA IX1(97),IY1(97),IX2(97),IY2(97)/10541,20980,12842,21625/
131 DATA IX1(110),IY1(110),IX2(110),IY2(110)/10549,20600,12847,21275/
132 DATA IX1(98),IY1(98),IX2(98),IY2(98)/10558,20200,12853,20975/
133 DATA IX1(166),IY1(166),IX2(166),IY2(166)/10567,19800,12859,20600/
134 DATA IX1(88),IY1(88),IX2(88),IY2(88)/10576,19400,12864,20250/
135 DATA IX1(52),IY1(52),IX2(52),IY2(52)/10585,18900,12870,19900/
136 DATA IX1(143),IY1(143),IX2(143),IY2(143)/ 3600,14900, 3650,12950/
137 DATA IX1(163),IY1(163),IX2(163),IY2(163)/ 5150,15100, 5150,13100/
138 DATA IX1(165),IY1(165),IX2(165),IY2(165)/ 6600,15350, 6650,13400/
139 DATA IX1(25),IY1(25),IX2(25),IY2(25)/ 7600,15550, 7625,13625/
140 DATA IX1(173),IY1(173),IX2(173),IY2(173)/ 8600,15800, 8600,13900/
141 DATA IX1(172),IY1(172),IX2(172),IY2(172)/ 9100,16000, 9050,14050/
142 DATA IX1(111),IY1(111),IX2(111),IY2(111)/10100,16275,10050,14300/
143 DATA IX1(47),IY1(47),IX2(47),IY2(47)/10545,16350,10495,14400/
144 DATA IX1(11),IY1(11),IX2(11),IY2(11)/11050,16550,11000,14700/
145 DATA IX1(21),IY1(21),IX2(21),IY2(21)/11500,16750,11450,14850/
146 DATA IX1(87),IY1(87),IX2(87),IY2(87)/11900,16900,11900,15050/
147 DATA IX1(119),IY1(119),IX2(119),IY2(119)/12500,17200,12350,15300/
148 DATA IX1(118),IY1(118),IX2(118),IY2(118)/12950,17200,12800,15300/
149 DATA IX1(117),IY1(117),IX2(117),IY2(117)/13500,17350,13300,15350/
150 DATA IX1(114),IY1(114),IX2(114),IY2(114)/14450,17300,14400,15400/
151 DATA IX1(115),IY1(115),IX2(115),IY2(115)/14950,17400,14850,15425/
152 DATA IX1(113),IY1(113),IX2(113),IY2(113)/15395,17400,15445,15450/
153 DATA IX1(150),IY1(150),IX2(150),IY2(150)/ 3600,14950, 3525,17300/
154 DATA IX1(151),IY1(151),IX2(151),IY2(151)/ 4600,15100, 4550,17250/
155 DATA IX1(133),IY1(133),IX2(133),IY2(133)/ 5150,15150, 5100,17225/
156 DATA IX1(175),IY1(175),IX2(175),IY2(175)/ 7100,15525, 7200,17600/
157 DATA IX1(65),IY1(65),IX2(65),IY2(65)/ 8100,15750, 8100,17850/
158 DATA IX1(49),IY1(49),IX2(49),IY2(49)/ 8600,15850, 8600,18000/
159 DATA IX1(48),IY1(48),IX2(48),IY2(48)/ 9100,16050, 9100,18100/
160 DATA IX1(14),IY1(14),IX2(14),IY2(14)/ 9600,16150, 9600,18250/
161 DATA IX1(102),IY1(102),IX2(102),IY2(102)/10100,16325,10100,18400/
162 DATA IX1(50),IY1(50),IX2(50),IY2(50)/10555,16375,10599,18500/
163 DATA IX1(53),IY1(53),IX2(53),IY2(53)/11050,16600,11000,18650/
164 DATA IX1(101),IY1(101),IX2(101),IY2(101)/11500,16800,11500,18900/
165 DATA IX1(167),IY1(167),IX2(167),IY2(167)/11900,16950,11975,19150/
166 DATA IX1(155),IY1(155),IX2(155),IY2(155)/12500,17250,12475,19350/
167 DATA IX1(148),IY1(148),IX2(148),IY2(148)/12950,17250,12876,19350/
168 DATA IX1(162),IY1(162),IX2(162),IY2(162)/13500,17400,13425,19375/
169 DATA IX1(129),IY1(129),IX2(129),IY2(129)/14450,17350,14475,19400/
170 DATA IX1(130),IY1(130),IX2(130),IY2(130)/14950,17450,15000,17450/
171 DATA IX1(161),IY1(161),IX2(161),IY2(161)/ 3100,14900, 3300,12900/
172 DATA IX1(168),IY1(168),IX2(168),IY2(168)/15445,15050,12800,14925/
173 DATA IX1(169),IY1(169),IX2(169),IY2(169)/15445,14700,12825,14500/
174 DATA IX1(170),IY1(170),IX2(170),IY2(170)/15445,13450,12900,13375/
175 DATA IX1(176),IY1(176),IX2(176),IY2(176)/15455,15450,18500,17400/
176 DATA IX1(171),IY1(171),IX2(171),IY2(171)/15455,15050,18500,16150/
177 DATA IX1(154),IY1(154),IX2(154),IY2(154)/15395,19425,12876,19350/
178 DATA IX1(144),IY1(144),IX2(144),IY2(144)/17750,18900,17500,16800/
179 DATA IX1(63),IY1(63),IX2(63),IY2(63)/16900,18500,16700,20200/
180 END

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181      SUBROUTINE CCOORD(ICN, IFRONT, IDEPTH)
182      C
183      C      THIS SUBROUTINE ("COORD") CALCULATES ABSOLUTE COORDINATES FOR ANY
184      C      POINT IN THE INTENSIVE STUDY AREA GIVEN THE COLONIST NUMBER (ICN)
185      C      AND THE LOCATION CODE DESCRIBING THE COORDINATES OF THE POINT WITHIN
186      C      THE LOT (IFRONT & IDEPTH). THE VALUES "IXCO" AND "IYCO" RETURNED
187      C      BY THE SUBROUTINE REPRESENT DISTANCES EAST AND NORTH RESPECTIVELY
188      C      (IN METERS) FROM AN ARBITRARY REFERENCE POINT LOCATED OUTSIDE THE
189      C      STUDY AREA AT A POINT 15.3 KMS DUE SOUTH OF THE MOUTH OF TRAVESSAD
190      C      19/21. ALL DIRECTIONS ARE FROM MAGNETIC NORTH, WHICH IS 13 DEGREES
191      C      WEST OF TRUE NORTH. IF A COLONIST IS LOCATED OUTSIDE OF THE INTENSIVE
192      C      STUDY AREA, VALUES OF "0" ARE RETURNED FOR THE COORDINATES.
193      C
194      COMMON/COORD1/ IX1(177), IY1(177), IX2(177), IY2(177)
195      COMMON/COORD2/ IXCO, IYCO
196      IXCO = -0
197      IYCO = -0
198      IF (ICN .EQ. 0 .OR. ICN .EQ. -0) GO TO 100
199      IF (IX1(ICN) .EQ. -0 .OR. IY1(ICN) .EQ. -0) GO TO 100
200      DEPTH = FLOAT(IDEPTH)
201      FRONT = FLOAT(IFRONT)
202      XREF1 = FLOAT(IX1(ICN))
203      YREF1 = FLOAT(IY1(ICN))
204      XREF2 = FLOAT(IX2(ICN))
205      YREF2 = FLOAT(IY2(ICN))
206      C = 0.017453
207      C      ABOVE CONVERSION FACTOR FOR DEGREES TO RADIAN
208      Z = 1.
209      IF (IX1(ICN) .EQ. IX2(ICN)) GO TO 300
210      C      ABOVE FOR VERTICAL LOTS
211      IF (IX1(ICN) .LT. IX2(ICN)) GO TO 301
212      C      ABOVE FOR QUADRANTS 1 AND 4
213      Z = -1.
214      C      ABOVE FOR QUADRANTS 2 AND 3
215      GO TO 301
216      300 IF (IY1(ICN) .GT. IY2(ICN)) PHI = 270. * C
217      IF (IY1(ICN) .LT. IY2(ICN)) PHI = 90. * C
218      GO TO 302
219      301 CONTINUE
220      PHI = ATAN((YREF2 - YREF1)/(XREF2 - XREF1))
221      302 CONTINUE
222      IF (FRONT .LT. 0.01) GO TO 303
223      IF (DEPTH .LT. 0.01) GO TO 305
224      THETA = ATAN(FRONT / DEPTH)
225      GO TO 304
226      303 THETA = 0.
227      GO TO 304
228      305 THETA = 180. * C
229      304 GAMMA = PHI - THETA
230      P = SQRT(FRONT*FRONT + DEPTH*DEPTH)
231      XCO = XREF1 + Z * P * COS(GAMMA)
232      YCO = YREF1 + Z * P * SIN(GAMMA)
233      IXCO = IFIX(XCO)
234      IYCO = IFIX(YCO)
235      100 CONTINUE
236      C      END OF SUBROUTINE "CCORD"
237      RETURN
238      END

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END OF FILE

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1 C
2 C THIS PROGRAM ("SOILMAP") GENERATES INFORMATION FOR A SOIL MAP OF
3 C THE INTENSIVE STUDY AREA. EACH LOT IS DIVIDED INTO FIVE 20-HECTARE
4 C QUADRATS, AND SOIL INFORMATION IS ASSIGNED TO THE QUADRAT CORRESPONDING
5 C TO THE SAMPLE NEAREST THE MIDPOINT OF THE QUADRAT FOR WHICH
6 C THE RELEVANT INFORMATION IS AVAILABLE. SEPARATE SEARCHES ARE MADE
7 C FOR EACH OF 5 CLASSES OF INFORMATION TO ACCOMMODATE INCOMPLETE DATA
8 C SETS. FERTILITY INFORMATION IS TAKEN ONLY FROM VIRGIN FOREST
9 C SAMPLES. GRANULOMETRIC INFORMATION AND SLOPE COME FROM EITHER
10 C VIRGIN OR NON-VIRGIN SAMPLES. THERE ARE 12 LINES OF OUTPUT PER
11 C QUADRAT. COORDINATES OF EACH QUADRAT ARE GIVEN, TOGETHER WITH THE
12 C COORDINATES OF THE SAMPLE FROM WHICH THE INFO. WAS TAKEN, THE
13 C DISTANCE FROM THE MIDPOINT OF THE QUADRAT TO THE SAMPLE, THE
14 C COORDINATES OF A BOX AROUND THE SAMPLE, AND AN INDICATOR OF
15 C WHETHER THE SAMPLE HAS BEEN USED BEFORE FOR THE PERTINANT CLASS OF
16 C INFORMATION. INPUT DEVICES ARE: 5=SOURCE*, 7=VIRGSOIL,
17 C 8=NONVIRGSOIL, 9=TYPE29. OUTPUT DEVICE IS: 10=SOILQUADS. NO
18 C SUBPROGRAMS ARE CALLED
19 C THE FORTRAN MONITOR "MINUSZERO" FEATURE IS USED, AS IS THE MTS
20 C LOGICAL COMPARISON OF CHARACTERS ("LCCMC") SUBROUTINE.
21 C
22 C PEAL NITRO
23 C INTEGER V186, V187
24 C DIMENSION V025(1100), ACX(1100), ACY(1100), V186(1100), V187(1100)
25 C 1, V196(1100), V197(1100), V198(1100), V200(1100), V201(1100),
26 C 2 V236(1100), V237(1100), V238(1100), V239(1100), V555(1100),
27 C 3 V556(1100), IPVSBF(1100), IPVSN(1100), IPVSC(1100), IPVSGR(1100),
28 C 4 IPVSSL(1100)
29 C DATA MINZERO/Z80000000/
30 C CALL FTNCMC('SET MINUSZERO=ON',16)
31 C DO 200 K=1,1100
32 C IPVSBF(K) = 0
33 C IPVSN(K) = 0
34 C IPVSC(K) = 0
35 C IPVSGR(K) = 0
36 C 200 IPVSSL(K) = 0
37 C READ (5,1000) ICDS29, ICVIRG, ICNVIR
38 C 1000 FORMAT(1X, 3I5)
39 C ICDS29 IS THE NUMBER OF CARDS OF TYPE 29
40 C ICVIRG IS THE NUMBER OF VIRGIN SAMPLE CASES (RECORDS IN VIRGSOIL/9)
41 C ICNVIR IS THE NUMBER OF NONVIRGIN SAMPLE CASES (RECORDS IN
42 C NONVIRGSOIL / 9)
43 C ICTOT = ICVIRG + ICNVIR
44 C ID = 7
45 C DO 100 I1=1,ICTOT
46 C IF (I1.GT. ICVIRG) ID = 8
47 C READ (ID, 1001) ACX(I1), ACY(I1), V025(I1), V186(I1), V187(I1),
48 C 1 V196(I1), V197(I1), V198(I1), V200(I1), V201(I1), V236(I1),
49 C 2 V237(I1), V238(I1), V239(I1), V555(I1), V556(I1)
50 C 1001 FORMAT(54X, F8.0, 1X, F8.0, // 13X, F5.0, // 4X, 2A4, 32X, F4.0,
51 C 1 F5.0, F5.1, 5X, 2F5.1, / 21X, 4F4.0, / 17X, 2F5.2 //)
52 C ABOVE FORMAT 1001 FOR VIRGSOIL AND NONVIRGSOIL
53 C 100 CONTINUE
54 C DO 101 I2=1,ICDS29
55 C DOES ONE ITERATION FOR EACH PARCEL
56 C READ (9, 1002) V562, X1, Y1, X2, Y2, X3, Y3, X4, Y4
57 C 1002 FORMAT(3X, 44, 12X, 8F6.0)
58 C ABOVE FORMAT 1002 IS FOR CARD TYPE 29
59 C X5 = (X2 - X1) / 5. + X1
60 C Y5 = (Y2 - Y1) / 5. + Y1

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61      X6 = (X3 - X4) / 5. + X4
62      Y6 = (Y3 - Y4) / 5. + Y4
63      X7 = 2 * ((X2 - X1) / 5.) + X1
64      Y7 = 2 * ((Y2 - Y1) / 5.) + Y1
65      X8 = 2 * ((X3 - X4) / 5.) + X4
66      Y8 = 2 * ((Y3 - Y4) / 5.) + Y4
67      X9 = 3 * ((X2 - X1) / 5.) + X1
68      Y9 = 3 * ((Y2 - Y1) / 5.) + Y1
69      X10 = 3 * ((X3 - X4) / 5.) + X4
70      Y10 = 3 * ((Y3 - Y4) / 5.) + Y4
71      X11 = 4 * ((X2 - X1) / 5.) + X1
72      Y11 = 4 * ((Y2 - Y1) / 5.) + Y1
73      X12 = 4 * ((X3 - X4) / 5.) + X4
74      Y12 = 4 * ((Y3 - Y4) / 5.) + Y4
75      X13 = (X6 + X1) / 2.
76      Y13 = (Y6 + Y1) / 2.
77      X14 = (X5 + X8) / 2.
78      Y14 = (Y5 + Y8) / 2.
79      X15 = (X7 + X10) / 2.
80      Y15 = (Y7 + Y10) / 2.
81      X16 = (X9 + X12) / 2.
82      Y16 = (Y9 + Y12) / 2.
83      X17 = (X11 + X3) / 2.
84      Y17 = (Y11 + Y3) / 2.
85      DO 102 I3=1,5
86      C      DOES ONE ITERATION FOR EACH QUADRAT IN THE PARCEL
87      WRITE (10, 1003) V562, I3
88      1003 FORMAT(1X, 'PARCEL NO:'. A4, '    QUADRAT NO:', I2)
89      GO TO(105, 106, 107, 108, 109), I3
90      GO TO 102
91      105 WRITE (10, 1004) X1, Y1, X5, Y5, X6, Y6, X4, Y4, X13, Y13
92      QUADIX = X13
93      QUADY = Y13
94      C      QUADIX AND QUADY ARE THE COORDINATES OF THE CENTER POINT OF THE
95      C      QUADRAT
96      1004 FORMAT(10F8.0)
97      C      ABOVE FORMAT 1004 FOR COORDS OF CORNERS AND MIDPOINT OF QUADRAT
98      GO TO 110
99      106 WRITE (10, 1004) X5, Y5, X7, Y7, X8, Y8, X6, Y6, X14, Y14
100     QUADIX = X14
101     QUADY = Y14
102     GO TO 110
103     107 WRITE (10, 1004) X7, Y7, X9, Y9, X10, Y10, X8, Y8, X15, Y15
104     QUADIX = X15
105     QUADY = Y15
106     GO TO 110
107     108 WRITE (10, 1004) X9, Y9, X11, Y11, X12, Y12, X10, Y10, X16, Y16
108     QUADIX = X16
109     QUADY = Y16
110     GO TO 110
111     109 WRITE (10, 1004) X11, Y11, X2, Y2, X3, Y3, X12, Y12, X17, Y17
112     QUADIX = X17
113     QUADY = Y17
114     110 CONTINUE
115     DO 104 I5=1,5
116     C      DOES ONE ITERATION FOR EACH CLASS OF ITEMS TO BE LOCATED
117     ICMAX = ICVIRG
118     IF (I5 .GT. 3) ICMAX = ICVIRG + ICNVIR
119     DISMIN = 99999.
120     DO 103 I4= 1,ICMAX

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121 C FINDS NEAREST SAMPLE WITH DATA FOR ITEM CLASS
122 IF (.NOT.(ACX(I4) .GE. 1.)) GO TO 103
123 C SKIPS SAMPLES OUTSIDE OF INTENSIVE STUDY AREA
124 DIST = SQRT((ACX(I4) - QUADX)**2 + (ACY(I4) - QUADY)**2)
125 IF (DIST .LE. DISMIN) GO TO 111
126 GO TO 103
127 111 CONTINUE
128 GO TO (112, 113, 114, 115, 116), 15
129 GO TO 103
130 112 IF(LCCMC(4,MINZRC,V201(I4)).EQ.0) GO TO 103
131 PH = V201(I4)
132 POTAS = V197(I4)
133 PHOS = V196(I4)
134 CAMG = V198(I4)
135 ALUM = V200(I4)
136 GO TO 117
137 113 IF(LCCMC(4,MINZRC,V556(I4)).EQ.0) GO TO 103
138 NITRO = V556(I4)
139 GO TO 117
140 114 IF(LCCMC(4,MINZRC,V555(I4)).EQ.0) GO TO 103
141 CARB = V555(I4)
142 GO TO 117
143 115 IF(LCCMC(4,MINZRC,V236(I4)).EQ.0) GO TO 103
144 IF(LCCMC(4,MINZRC,V239(I4)).EQ.0) GO TO 103
145 CSAND = V236(I4)
146 FSAND = V237(I4)
147 SILT = V238(I4)
148 CLAY = V239(I4)
149 GO TO 117
150 116 IF(LCCMC(4,MINZRC,V025(I4)).EQ.0) GO TO 103
151 SLOPE = V025(I4)
152 117 DISMIN = DIST
153 SAMPX = ACX(I4)
154 SAMPY = ACY(I4)
155 IFN = V186(I4)
156 IPN = V187(I4)
157 INDEX = I4
158 103 CONTINUE
159 BCXX1 = SAMPX - 50.
160 BOXY1 = SAMPY - 50.
161 BOXX2 = SAMPX - 50.
162 BCXY2 = SAMPY + 50.
163 BOXX3 = SAMPX + 50.
164 BOXY3 = SAMPY + 50.
165 BOXX4 = SAMPX + 50.
166 BOXY4 = SAMPY - 50.
167 IF (I5 .EQ. 1) WRITE (10, 1005) PHOS, POTAS, CAMG, ALUM, PH, IFN,
168 1 IPN, SAMPX, SAMPY, DISMIN, BCXX1, BOXY1, BOXX2, BOXY2, BOXX3,
169 2 BOXY3, BOXX4, BCXY4, IPVSBF(INDEX)
170 1005 FORMAT(1X, F4.0, F5.0, 3F5.1, 2A4, 2F8.0, F6.0, / 1X, 8F8.0, I2)
171 IF (I5 .EQ. 2) WRITE (10, 1006) NITRO, IFN, IPN, SAMPX, SAMPY,
172 1 DISMIN, BOXX1, BOXY1, BOXX2, BOXY2, BOXX3, BOXY3, BOXX4, BOXY4,
173 2 IPVSN(INDEX)
174 1006 FORMAT(1X, F5.2, 2A4, 2F8.0, F6.0, / 1X, 8F8.0, I2)
175 IF (I5 .EQ. 3) WRITE (10, 1006) CARB, IFN, IPN, SAMPX, SAMPY,
176 1 DISMIN, BOXX1, BOXY1, BOXX2, BOXY2, BOXX3, BOXY3, BOXX4, BOXY4,
177 2 IPVSC(INDEX)
178 IF (I5 .EQ. 4) WRITE (10, 1007) CSAND, FSAND, SILT, CLAY, IFN,
179 1 IPN, SAMPX, SAMPY, DISMIN, BOXX1, BOXY1, BOXX2, BOXY2, BOXX3,
180 2 BOXY3, BOXX4, BCXY4, IPVSGR(INDEX)

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181      1007 FORMAT(1X, 4F4.0, 2A4, 2F8.0, F6.0, / 1X, 8F8.0, I2)
182      IF (I5 .EQ. 5) WRITE (10, 1008) SLOPE, IPN, IPN, SAMPX, SAMPY,
183      1 DISMIN, BOXX1, BOXY1, BOXX2, BOXY2, BOXX3, BOXY3, BOXX4, BOXY4,
184      2 IPVSSL(INDEX)
185      1008 FORMAT(1X, F5.0, 2A4, 2F8.0, F6.0, / 1X, 8F8.0, I2)
186      IF (I5 .EQ. 1) IPVSBF(INDEX) = 1
187      C "IPVSBF" IS THE INDICATOR THAT THE SAMPLE HAS BEEN PREVIOUSLY USED
188      C FOR "BASIC FERTILITY" INFORMATION. 0=NOT PREVIOUSLY USED, 1=USED
189      IF (I5 .EQ. 2) IPVSN(INDEX) = 1
190      C "IPVSN" IS THE INDICATOR FOR PREVIOUS NITROGEN INFO. USE
191      IF (I5 .EQ. 3) IPVSC(INDEX) = 1
192      C "IPVSC" IS THE INDICATOR FOR PREVIOUS CARBON INFO. USE
193      IF (I5 .EQ. 4) IPVSGR(INDEX) = 1
194      C "IPVSGR" IS THE INDICATOR FOR PREVIOUS GRANULOMETRIC INFO. USE
195      IF (I5 .EQ. 5) IPVSSL(INDEX) = 1
196      C "IPVSSL" IS THE INDICATOR FOR PREVIOUS SLOPE INFORMATION USE
197      104 CONTINUE
198      102 CONTINUE
199      101 CONTINUE
200      C END OF PROGRAM "SGILMAP"
201      RETURN
202      END
END OF FILE

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1 C
2 C THIS PROGRAM (SORT1-2-24) SORTS INFORMATION FROM CARDS 1, 2, AND 24
3 C (ONE24 WITH ONE CASE PER CARD) INTO SEPARATE FILES FOR EACH OF THE
4 C SIX ANNUAL CROPS PLUS A CATEGORY FOR "OTHER". OUTPUT HAS 4 LINES
5 C INCLUDING 1 LINE OF TITLE INFORMATION. OUTPUT FORMATS ARE THE SAME
6 C AS THE ORIGINAL FORMATS FOR EACH CARD TYPE.
7 C INPUT UNITS ARE: 13=TYPE9 14=TYPE1 15=TYPE2 16=ONE24 5=DATAFILE.
8 C OUTPUT UNITS ARE 6=RICE 7=MAIZE 8=PHASEOLUS 9=VIGNA 10=BITTERMANIOC
9 C 11=SWEETMANIOC 12=CTHER.
10 C
11 C INTEGER VAR106, VAR107, VAR109, VAR122, VAR002, VAR023, VAR391,
12 C 1VAR404
13 C DIMENSION D1(910), VAR002(910), D2(910), D3(910), D4(910), D5(910)
14 C 1, D6(910), D7(910), D8(910), D9(910), D10(910), D11(910), D12(910)
15 C 2, D13(910), D14(910), D15(910), D16(910), D17(910),
16 C 3D18(910), D19(910), D20(910), D21(910)
17 C ABOVE DIMENSION FOR CARD TYPE 1
18 C DIMENSION E1(910), VAR023(910), E2(910), E3(910), E4(910),
19 C 1E5(910), E6(910), E7(910), E8(910), E9(910), E10(910), E11(910),
20 C 2E12(910), E13(910), E14(910), E15(910), E16(910), E17(910),
21 C 3E18(910), E19(910), E20(910), E21(910)
22 C ABOVE DIMENSION FOR CARD TYPE 2
23 C DIMENSION F1(1400), F2(1400), VAR391(1400), F3(1400), F4(1400),
24 C 1F5(1400), F6(1400), F7(1400), VAR404(1400)
25 C ABOVE DIMENSION FOR CARD TYPE 24
26 C READ (5, 1000) ICDS1, ICDS2, ICNE24, ICDS9
27 C 1000 FORMAT(1X,4I5)
28 C ICDS1 IS THE NUMBER OF CARDS OF TYPE 1
29 C ICDS2 IS THE NUMBER OF CARDS OF TYPE 2
30 C ICDS9 IS THE NUMBER OF CARDS OF TYPE 9
31 C ICDS24 IS THE NUMBER OF CARDS IN CNE24 (CARD 24, ONE CASE PER CARD)
32 C READ (14, 1001)(D1(I2), VAR002(I2), D2(I2), D3(I2), D4(I2), D5(I2)
33 C 1, D6(I2), D7(I2), D8(I2), D9(I2), D10(I2), D11(I2), D12(I2),
34 C 2D13(I2), D14(I2), D15(I2), D16(I2), D17(I2), D18(I2), D19(I2),
35 C 3 I2=1,ICDS1)
36 C 1001 FORMAT(A3, I5, 18A4)
37 C ABOVE FORMAT 1001 FOR CARD TYPE 1
38 C READ (15, 1002)(E1(I3), VAR023(I3), E2(I3), E3(I3), E4(I3), E5(I3)
39 C 1, E6(I3), E7(I3), E8(I3), E9(I3), E10(I3), E11(I3), E12(I3),
40 C 2E13(I3), E14(I3), E15(I3), E16(I3), E17(I3), E18(I3),
41 C 3E19(I3), I3=1,ICDS2)
42 C 1002 FORMAT(A3, I5, 18A4)
43 C ABOVE FORMAT 1002 FOR CARD TYPE 2
44 C READ (16, 1003)(F1(I4), F2(I4), VAR391(I4), F3(I4), F4(I4), F5(I4)
45 C 1, F6(I4), F7(I4), VAR404(I4), I4=1,ICNE24)
46 C 1003 FORMAT(2A4, I5, 5A4, 29X, I3)
47 C ABOVE FORMAT 1003 FOR CNE14
48 C DO 100 I1=1,ICDS9
49 C DOES ONE ITERATION FOR EACH CROP CASE
50 C IP = 12
51 C READ (13, 1004) VAR106, VAR107, VAR109, VAR122
52 C 1004 FORMAT(3X, 2I5, 4X, I3, 35X, I3)
53 C ABOVE FORMAT 1004 FOR CARD TYPE 9
54 C IF (VAR109 .EQ. 7) IP = 6
55 C 6 IS PSEUDODEVICE FOR RICE (R11-2-24)
56 C IF (VAR109 .EQ. 14) IP = 7
57 C 7 IS PSEUDODEVICE FOR MAIZE (M21-2-24)
58 C IF (VAR109 .EQ. 21) GO TO 101
59 C IF (VAR109 .EQ. 28) GO TO 102
60 C IF (VAR109 .EQ. 7 .OR. VAR109 .EQ. 14) GO TO 104

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61      GO TO 103
62 101 IP = 0
63      IF (VAR122 .EQ. 1 .OR. VAR122 .EQ. 2 .OR. VAR122 .EQ. 9 .OR.
64      1VAR122 .EQ. 23 .OR. VAR122 .EQ. 24 .OR. VAR122 .EQ. 25 .OR. VAR122
65      2.EQ. 30) IP=9
66 C      9 IS PSEUDODEVICE FOR VIGNA (V11-2-24)
67      IF (VAR122 .EQ. 3 .OR. VAR122 .EQ. 4 .OR. VAR122 .EQ. 5 .OR.
68      1 VAR122 .EQ. 6 .OR.
69      1VAR122 .EQ. 7 .OR. VAR122 .EQ. 8 .OR. (VAR122 .GE. 10 .AND. VAR122
70      2.LE.13).OR. (VAR122 .GE.16 .AND. VAR122 .LE.18).OR. (VAR122 .GE.
71      320 .AND. VAR122 .LE. 22) .OR. VAR122 .EQ. 26 .OR. VAR122 .EQ. 27
72      4.OR. VAR122 .EQ. 29) IP=8
73 C      9 IS PSEUDODEVICE FOR P-ASECLUS (PS1-2-24)
74      IF (IP .EQ. 0) GO TO 103
75      GO TO 104
76      102 IF (VAR122 .EQ. 2) IP = 11
77 C      11 IS PSEUDODEVICE FOR SWEET MANIOC (SM1-2-24)
78      IF (VAR122 .NE. 2) IP = 10
79 C      10 IS PSEUDODEVICE FOR BITTER (CR MIXED OR UNIDENTIFIED) MANIOC(341-2-24)
80      GO TO 104
81      103 IP = 12
82 C      12 IS PSEUDODEVICE FOR "CTHER" (OT1-2-24)
83      104 CONTINUE
84      WRITE (IP, 1006) VAR107, VAR106, VAR109, VAR122
85      1006 FORMAT(1X, ' PRINC. CRCP CASE= ', I5, ' FN: ', I5, ' P.C.= ', I3, ' VARIE
86      1TY= ', I3)
87      DO 105 I5=1, ICDS1
88      IF (VAR002(I5) .EQ. VAR106) GO TO 106
89      105 CONTINUE
90      WRITE (IP, 1005)
91      1005 FORMAT(2X, '1')
92 C      ABOVE FORMAT 1005 HOLDS SPACE FOR MISSING CARD 1 INFORMATION
93      GO TO 107
94      106 WRITE (IP, 1001) D1(I5), VAR002(I5), D2(I5), D3(I5), D4(I5),
95      1D5(I5), D6(I5), D7(I5), D8(I5), D9(I5), D10(I5), D11(I5), D12(I5),
96      2D13(I5), D14(I5), C15(I5), D16(I5), D17(I5), D18(I5),
97      3D19(I5)
98 C      ABOVE WRITE FOR CARD TYPE 1 INFORMATION
99      107 CONTINUE
100      DO 108 I6=1, ICDS2
101      IF (VAR023(I6) .EQ. VAR106) GO TO 109
102      108 CONTINUE
103      WRITE (IP, 1007)
104      1007 FORMAT(2X, '2')
105      GO TO 110
106      109 WRITE (IP, 1002) E1(I6), VAR023(I6), E2(I6), E3(I6), E4(I6), E5(I6
107      1), E6(I6), E7(I6), E8(I6), E9(I6), E10(I6), E11(I6), E12(I6),
108      2E13(I6), E14(I6), E15(I6), E16(I6), E17(I6), E18(I6), E19(I6)
109 C      ABOVE WRITE FOR CARD 2 INFORMATION
110      110 CONTINUE
111      DO 111 I7=1, IONE24
112      IF (VAR391(I7) .EQ. VAR106 .AND. VAR404(I7) .NE. 4) GO TO 112
113      111 CONTINUE
114      WRITE (IP, 1008)
115      1008 FORMAT(1X, '24')
116      GO TO 100
117      112 WRITE (IP, 1003) F1(I7), F2(I7), VAR391(I7), F3(I7), F4(I7), F5(I7
118      1), F6(I7), F7(I7), VAR404(I7)
119 C      ABOVE WRITE FOR CARD TYPE 24 INFORMATION
120      100 CONTINUE

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121      C      END OF PROGRAM "SORT1-2-24"  
122          END  
123      903  903 1286  806 (DATA FOR SCRT1-2-24: ICDS1,ICDS2,IONE24,ICDS9)  
END OF FILE
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1      INTEGER FUNCTION CURUSE(IPREUV, IPRESI, IPRESE, IPRESQ, IPRESC)
2      C      THIS FUNCTION (CURUSE) RETURNS THE CURRENT LAND USE CODE (SAME AS
3      C      VAR011), GIVEN AS ARGUMENTS THE PREVIOUS USE ((IPREUV), THE
4      C      PRESENT ITEM (IPRESI), THE PRESENT EVENT (IPRESE), THE PRESENT
5      C      QUALITY (IPRESQ), AND THE PRESENT EVENT OR QUALITY CERTAINTY
6      C      (IPRESC). THE LAST 2 ARGUMENTS CAN BE DEFAULTED TO ZERO. THE
7      C      FUNCTION IS CALLED BY THE SUBROUTINE USETAB IN THE SORTSOILPR
8      C      PROGRAM
9      C
10     IF (IPRESE .EQ. -2) GO TO 73
11     C      TRANSFER FOR SAMPLING PSEUCCEVENTS IN USETAB
12     IF (IPREUV .EQ. -1) GO TO 71
13     C      A VALUE OF "-1" IS RETURNED FOR PREVIOUS BAD DATA
14     CURUSE = 0
15     C      A VALUE OF "0" IS RETURNED FOR BAD DATA (NOT FITTING ANY CATEGORY)
16     IF (IPRESI .EQ. 0) GO TO 73
17     IF (IPRESE .EQ. 15) GO TO 73
18     IF (IPRESI .EQ. 1 .AND. IPRESE .EQ. 1) IPREUV = 1
19     IF ((IPRESI .EQ. 6 .OR. IPRESI .EQ. 5) .AND. IPRESE .EQ. 1 .AND.
20     I IPREUV .GE. 2 .AND. IPREUV .LE. 6) GO TO 73
21     IF (IPRESE .EQ. 10) GO TO 301
22     IF (IPREUV .EQ. -3) GO TO 300
23     IF (IPRESE .EQ. 11) GO TO 125
24     IF (IPREUV .EQ. 125) GO TO 124
25     IF (IPREUV .EQ. 0) GO TO 71
26     IF (IPREUV .GE. 70) GO TO 500
27     GO TO (1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,
28     123,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,
29     245,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63,64,65,66,
30     367,68,69), IPREUV
31     500 IF (IPREUV .EQ. 70) GO TO 200
32     IF (IPREUV .EQ. 71) GO TO 201
33     IF (IPREUV .EQ. 72) GO TO 202
34     IF (IPREUV .EQ. 73) GO TO 203
35     IF (IPREUV .EQ. 74) GO TO 74
36     IF (IPREUV .EQ. 75) GO TO 75
37     IF (IPREUV .EQ. 76) GO TO 76
38     IF (IPREUV .EQ. 77) GO TO 77
39     IF (IPREUV .EQ. 78) GO TO 78
40     IF (IPREUV .EQ. 79) GO TO 79
41     IF (IPREUV .EQ. 80) GO TO 80
42     IF (IPREUV .EQ. 81) GO TO 81
43     IF (IPREUV .EQ. 82) GO TO 82
44     IF (IPREUV .EQ. 83) GO TO 83
45     IF (IPREUV .EQ. 84) GO TO 84
46     IF (IPREUV .EQ. 85) GO TO 85
47     IF (IPREUV .EQ. 86) GO TO 86
48     IF (IPREUV .EQ. 87) GO TO 87
49     IF (IPREUV .EQ. 88) GO TO 88
50     IF (IPREUV .EQ. 89) GO TO 89
51     IF (IPREUV .EQ. 90) GO TO 90
52     IF (IPREUV .EQ. 91) GO TO 91
53     IF (IPREUV .EQ. 92) GO TO 92
54     IF (IPREUV .EQ. 93) GO TO 93
55     IF (IPREUV .EQ. 95) GO TO 95
56     IF (IPREUV .EQ. 96) GO TO 96
57     IF (IPREUV .EQ. 97) GO TO 97
58     IF (IPREUV .EQ. 98) GO TO 98
59     IF (IPREUV .EQ. 99) GO TO 99
60     IF (IPREUV .EQ. 100) GO TO 204

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61 IF (IPREVV .EQ. 101) GO TO 205
62 IF (IPREVV .EQ. 102) GO TO 206
63 IF (IPREVV .EQ. 103) GO TO 207
64 IF (IPREVV .EQ. 104) GO TO 204
65 IF (IPREVV .EQ. 105) GO TO 105
66 IF (IPREVV .EQ. 106) GO TO 106
67 IF (IPREVV .EQ. 107) GO TO 107
68 IF (IPREVV .EQ. 108) GO TO 108
69 IF (IPREVV .EQ. 109) GO TO 109
70 IF (IPREVV .EQ. 110) GO TO 110
71 IF (IPREVV .EQ. 111) GO TO 111
72 IF (IPREVV .EQ. 112) GO TO 112
73 IF (IPREVV .EQ. 113) GO TO 113
74 IF (IPREVV .EQ. 114) GO TO 114
75 IF (IPREVV .EQ. 115) GO TO 115
76 IF (IPREVV .EQ. 116) GO TO 116
77 IF (IPREVV .EQ. 117) GO TO 117
78 IF (IPREVV .EQ. 118) GO TO 118
79 IF (IPREVV .EQ. 119) GO TO 119
80 IF (IPREVV .EQ. 120) GO TO 120
81 IF (IPREVV .EQ. 121) GO TO 121
82 IF (IPREVV .EQ. 122) GO TO 122
83 IF (IPREVV .EQ. 123) GO TO 123
84 IF (IPREVV .EQ. 124) GO TO 124
85 IF (IPREVV .EQ. 125) GO TO 125
86 IF (IPREVV .EQ. 126) GO TO 126
87 IF (IPREVV .EQ. 127) GO TO 127
88 IF (IPREVV .EQ. 128) GO TO 128
89 IF (IPREVV .EQ. 129) GO TO 129
90 IF (IPREVV .EQ. 130) GO TO 130
91 IF (IPREVV .EQ. 131) GO TO 131
92 IF (IPREVV .EQ. 132) GO TO 132
93 IF (IPREVV .EQ. 133) GO TO 133
94 IF (IPREVV .EQ. 134) GO TO 134
95 IF (IPREVV .EQ. 135) GO TO 135
96 IF (IPREVV .EQ. 136) GO TO 136
97 IF (IPREVV .EQ. 137) GO TO 137
98 IF (IPREVV .EQ. 138) GO TO 138
99 IF (IPREVV .EQ. 139) GO TO 139
100 IF (IPREVV .EQ. 140) GO TO 140
101 IF (IPREVV .EQ. 141) GO TO 141
102 IF (IPREVV .EQ. 142) GO TO 142
103 IF (IPREVV .EQ. 143) GO TO 143
104 IF (IPREVV .EQ. 144) GO TO 144
105 IF (IPREVV .EQ. 145) GO TO 145
106 IF (IPREVV .EQ. 146) GO TO 146
107 IF (IPREVV .EQ. 147) GO TO 147
108 IF (IPREVV .EQ. 148) GO TO 148
109 IF (IPREVV .EQ. 149) GO TO 149
110 IF (IPREVV .EQ. 150) GO TO 150
111 IF (IPREVV .EQ. 151) GO TO 151
112 IF (IPREVV .EQ. 152) GO TO 152
113 GO TO 70
114 1 IF (IPRESE .EQ. 1) CURUSE = 2
115 IF (IPRESE .EQ. 2) CURUSE = 3
116 GO TO 72
117 2 IF (IPRESE .EQ. 2) GO TO 100
118 IF (IPRES1.EQ.14.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8.OR.IPRESE.EQ.4))
119 1 GO TO 73
120 IF (.NOT.(IPRESE .EQ. 7 .OR. IPRESE .EQ. 3 .OR. IPRESE .EQ. 12))

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121      100 TO 70
122      GO TO 101
123      100 CURUSE = 3
124      GO TO 72
125      101 CURUSE = IPRESI
126      GO TO 72
127      3 IF (IPRESE .EQ. 1) CURUSE = 3
128      IF (IPRESE .EQ. 2) CURUSE = 3
129      IF (IPRESE .EQ. 3 .OR. IPRESE .EQ. 7 .OR. IPRESE .EQ. 9) CURUSE =
130      1IPRESI
131      GO TO 72
132      4 IF (IPRESE .EQ. 1) CURUSE = 2
133      IF (IPRESE .EQ. 2) CURUSE = 3
134      IF (IPRESE .EQ. 3 .OR. IPRESE .EQ. 7 .OR. IPRESE .EQ. 9) CURUSE =
135      1IPRESI
136      IF(IPRESI .EQ. 14 .AND. IPRESE .GE. 4) CURUSE=4
137      IF(IPRESI .EQ. 14 .AND.(IPRESE .EQ. 5 .OR. IPRESE .EQ.
138      1 8 .OR. IPRESE .EQ. 4)) GO TO 73
139      GO TO 72
140      5 IF (IPRESE .EQ. 1) CURUSE = 2
141      IF (IPRESE .EQ. 2) CURUSE = 3
142      IF (IPRESE .EQ. 3 .OR. IPRESE .EQ. 7 .OR. IPRESE .EQ. 9) CURUSE =
143      1IPRESI
144      IF(IPRESI .EQ. 14 .AND. IPRESE .GE. 4) CURUSE=5
145      GO TO 72
146      6 IF (IPRESE .EQ. 1) CURUSE = 2
147      IF (IPRESE .EQ. 2) CURUSE = 3
148      IF (IPRESE .EQ. 3 .OR. IPRESE .EQ. 7 .OR. IPRESE .EQ. 9) CURUSE =
149      1IPRESI
150      IF(IPRESI .EQ. 14 .AND.(IPRESE .EQ. 5 .OR. IPRESE .EQ.
151      1 8 .OR. IPRESE .EQ. 4)) GO TO 73
152      GO TO 72
153      7 IF (IPRESI .EQ. 7) GO TO 102
154      GO TO 103
155      102 IF (IPRESE .EQ. 5 .OR. IPRESE .EQ. 8) CURUSE = 4
156      IF (IPRESE .EQ. 3) CURUSE = 7
157      GO TO 72
158      103 IF (IPRESI .EQ. 14 .AND. IPRESE .EQ. 3) CURUSE = 8
159      IF(IPRESI .EQ. 14 .AND. IPRESE .GE. 4) CURUSE = 7
160      C ABOVE FOR CASE OF DEFAULT CRIED MAIZE WITH RECORDED FOLDING,
161      C DRYING, HARVESTING OR DEATH
162      IF (IPRESI .EQ. 28 .AND. IPRESE .EQ. 3) CURUSE = 10
163      IF (IPRESI .EQ. 34 .AND. IPRESE .EQ. 3) CURUSE = 11
164      IF (IPRESI .EQ. 21 .AND. IPRESE .EQ. 3) CURUSE = 70
165      IF (IPRESI .EQ. 57 .AND. IPRESE .EQ. 3) CURUSE = 101
166      IF (IPRESI .EQ. 43 .AND. IPRESE .EQ. 3) CURUSE = 108
167      IF (IPRESI .EQ. 59 .AND. IPRESE .EQ. 3) CURUSE = 114
168      IF (IPRESI .EQ. 55 .AND. IPRESE .EQ. 3) CURUSE = 126
169      IF (IPRESI .EQ. 63 .AND. IPRESE .EQ. 3) CURUSE = 129
170      IF (CURUSE .EQ. 0 .AND. IPRESE .EQ. 3) CURUSE = 13
171      IF(IPRESI .EQ. 14 .AND.(IPRESE .EQ. 5 .OR. IPRESE .EQ.
172      1 8 .OR. IPRESE .EQ. 4)) GO TO 73
173      GO TO 72
174      8 IF (IPRESI .EQ. 7 .AND.(IPRESE .EQ. 5 .OR. IPRESE .EQ. 8)) CURUSE=
175      114
176      IF(IPRESI.EQ.14.AND.(IPRESE.EQ.5 .OR. IPRESE .EQ.8))CURUSE = 7
177      IF(IPRESI.EQ.14.AND.(IPRESE.EQ.4 .OR. IPRESE .EQ.6))CURUSE = 7
178      C HERE RICE WITH DRY OR FOLDED MAIZE IS CONSIDERED EQUIVALENT TO
179      C RICE ALONE
180      IF (IPRESI .EQ. 57 .AND. IPRESE .EQ. 3) CURUSE = 103

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181 IF (IPRESI.EQ.43.AND. IPRESE.EQ.3) CURUSE = 107
182 IF (IPRESI.EQ.34.AND.(IPRESE.EQ.3.OR.IPRESE.EQ.7)) CURUSE = 12
183 IF (IPRESI.EQ.23.AND. IPRESE.EQ.3) CURUSE = 9
184 IF (IPRESI.EQ.55.AND. IPRESE.EQ.3) CURUSE = 128
185 IF (CURUSE.EQ.0.AND. IPRESE.EQ.3) CURUSE = 13
186 GO TO 72
187 9 IF (IPRESI.EQ.7.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8)) CURUSE = 17
188 IF (IPRESI.EQ.14.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8)) CURUSE = 10
189 IF (IPRESI.EQ.14.AND.(IPRESE.EQ.4.OR.IPRESE.EQ.6)) CURUSE = 10
190 IF (IPRESI.EQ.28.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8)) CURUSE = 8
191 IF (IPRESI.EQ.57.AND. IPRESE.EQ.3) CURUSE = 78
192 IF (IPRESI.EQ.34.AND. IPRESE.EQ.3) CURUSE = 79
193 IF (IPRESI.EQ.43.AND. IPRESE.EQ.3) CURUSE = 118
194 IF (CURUSE.EQ.0.AND. IPRESE.EQ.3) CURUSE = 13
195 GO TO 72
196 10 IF (IPRESI.EQ.7.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8)) CURUSE = 28
197 IF (IPRESI.EQ.28.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8)) CURUSE = 7
198 IF (IPRESI.EQ.14.AND. IPRESE.EQ.3) CURUSE = 9
199 IF (CURUSE.EQ.0.AND. IPRESE.EQ.3) CURUSE = 13
200 IF (IPRESI.EQ.14.AND. IPRESE.EQ.6) GO TO 73
201 IF (IPRESI.EQ.34.AND. IPRESE.EQ.3) CURUSE = 100
202 IF (IPRESI.EQ.57.AND. IPRESE.EQ.3) CURUSE = 104
203 IF (IPRESI.EQ.43.AND. IPRESE.EQ.3) CURUSE = 109
204 IF (IPRESI.EQ.21.AND. IPRESE.EQ.3) CURUSE = 146
205 IF (IPRESI.EQ.14.AND.(IPRESE.EQ.5.OR. IPRESE.EQ.
206 18.OR. IPRESE.EQ.4)) GO TO 73
207 GO TO 72
208 11 IF (IPRESI.EQ.7.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8)) CURUSE = 34
209 IF (IPRESI.EQ.34.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8)) CURUSE = 7
210 IF (IPRESI.EQ.40.AND. IPRESE.EQ.3) CURUSE = 41
211 IF (IPRESI.EQ.28.AND. IPRESE.EQ.3) CURUSE = 100
212 IF (CURUSE.EQ.0.AND. IPRESE.EQ.3) CURUSE = 13
213 IF (IPRESE.EQ.1.OR. IPRESE.EQ.2) CURUSE = 34
214 IF (IPRESI.EQ.6.AND. IPRESE.EQ.7) CURUSE = 38
215 IF (IPRESI.EQ.34.AND. IPRESE.EQ.1) CURUSE = 11
216 IF (IPRESI.EQ.14.AND.(IPRESE.EQ.5.OR. IPRESE.EQ.
217 18.OR. IPRESE.EQ.4)) GO TO 73
218 GO TO 72
219 12 IF (IPRESI.EQ.7.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8)) CURUSE = 19
220 IF (IPRESI.EQ.14.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8)) CURUSE = 11
221 IF (IPRESI.EQ.14.AND.(IPRESE.EQ.4.OR.IPRESE.EQ.6)) CURUSE = 11
222 IF (IPRESI.EQ.34.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8)) CURUSE = 8
223 IF (IPRESI.EQ.28.AND. IPRESE.EQ.3) CURUSE = 79
224 IF (CURUSE.EQ.0.AND. IPRESE.EQ.3) CURUSE = 13
225 IF (IPRESE.EQ.1.OR. IPRESE.EQ.2) CURUSE = 34
226 GO TO 72
227 13 CURUSE = 69
228 GO TO 72
229 14 IF (IPRESI.EQ.14.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8)) CURUSE = 4
230 IF (IPRESI.EQ.14.AND.(IPRESE.EQ.4.OR.IPRESE.EQ.6)) CURUSE = 4
231 IF (IPRESI.EQ.7.AND. IPRESE.EQ.3) CURUSE = 8
232 IF (IPRESI.EQ.28.AND. IPRESE.EQ.3) CURUSE = 17
233 IF (IPRESI.EQ.34.AND. IPRESE.EQ.3) CURUSE = 19
234 IF (IPRESI.EQ.21.AND. IPRESE.EQ.3) CURUSE = 23
235 IF (IPRESI.EQ.60.AND. IPRESE.EQ.3) CURUSE = 61
236 IF (IPRESI.EQ.57.AND. IPRESE.EQ.3) CURUSE = 88
237 IF (IPRESI.EQ.55.AND. IPRESE.EQ.3) CURUSE = 127
238 IF (IPRESI.EQ.53.AND. IPRESE.EQ.3) CURUSE = 54
239 IF (IPRESI.EQ.51.AND. IPRESE.EQ.3) CURUSE = 87
240 IF (IPRESI.EQ.43.AND. IPRESE.EQ.3) CURUSE = 73

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241 IF (IPRESI .EQ. 42 .AND. IPRESE .EQ. 3) CURUSE = 97
242 IF (IPRESI .EQ. 59 .AND. IPRESE .EQ. 3) CURUSE = 99
243 IF (IPRESE .EQ. 1) CURUSE = 2
244 GO TO 72
245 15 GO TO 8
246 16 GO TO 9
247 17 IF (IPRESI .EQ. 14 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ. 8)) CURUSE = 23
248 IF (IPRESI .EQ. 14 .AND. (IPRESE .EQ. 4 .OR. IPRESE .EQ. 6)) CURUSE = 29
249 IF (IPRESI .EQ. 28 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ. 8)) CURUSE = 14
250 IF (IPRESI .EQ. 7 .AND. IPRESE .EQ. 3) CURUSE = 9
251 IF (IPRESI .EQ. 14 .AND. IPRESE .EQ. 3) CURUSE = 17
252 IF (IPRESI .EQ. 21 .AND. IPRESE .EQ. 3) CURUSE = 26
253 IF (IPRESI .EQ. 57 .AND. IPRESE .EQ. 3) CURUSE = 102
254 IF (IPRESI .EQ. 34 .AND. IPRESE .EQ. 3) CURUSE = 106
255 IF (IPRESI .EQ. 43 .AND. IPRESE .EQ. 3) CURUSE = 110
256 IF (IPRESI .EQ. 59 .AND. IPRESE .EQ. 3) CURUSE = 115
257 IF (IPRESI .EQ. 28 .AND. IPRESE .EQ. 3) CURUSE = 17
258 IF (CURUSE .EQ. 0 .AND. IPRESE .EQ. 3) CURUSE = 20
259 GO TO 72
260 18 GO TO 12
261 19 IF (IPRESI .EQ. 14 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ. 8)) CURUSE = 34
262 IF (IPRESI .EQ. 14 .AND. (IPRESE .EQ. 4 .OR. IPRESE .EQ. 6)) CURUSE = 34
263 IF (IPRESI .EQ. 34 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ. 8)) CURUSE = 14
264 IF (IPRESE .EQ. 1 .OR. IPRESE .EQ. 2) CURUSE = 34
265 IF (IPRESI .EQ. 21 .AND. IPRESE .EQ. 3) CURUSE = 95
266 IF (IPRESI .EQ. 28 .AND. IPRESE .EQ. 3) CURUSE = 106
267 IF (IPRESI .EQ. 40 .AND. IPRESE .EQ. 3) CURUSE = 41
268 IF (IPRESI .EQ. 6 .AND. (IPRESE .EQ. 7 .OR. IPRESE .EQ. 9)) CURUSE = 38
269 IF (IPRESI .EQ. 7 .AND. IPRESE .EQ. 3) CURUSE = 12
270 IF (CURUSE .EQ. 0 .AND. IPRESE .EQ. 3) CURUSE = 20
271 GO TO 72
272 20 GO TO 69
273 21 IF (IPRESI .EQ. 21 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ. 8)) CURUSE = 4
274 IF (IPRESI .EQ. 21 .AND. IPRESE .EQ. 3) CURUSE = 21
275 IF (IPRESI .EQ. 14 .AND. IPRESE .EQ. 3) CURUSE = 23
276 IF (IPRESI .EQ. 28 .AND. IPRESE .EQ. 3) CURUSE = 24
277 IF (IPRESI .EQ. 7 .AND. IPRESE .EQ. 3) CURUSE = 70
278 IF (IPRESI .EQ. 34 .AND. IPRESE .EQ. 3) CURUSE = 71
279 IF (IPRESI .EQ. 14 .AND. IPRESE .EQ. 6) GO TO 73
280 IF (IPRESI .EQ. 51 .AND. IPRESE .EQ. 3) CURUSE = 86
281 IF (IPRESI .EQ. 57 .AND. IPRESE .EQ. 3) CURUSE = 84
282 IF (IPRESI .EQ. 7 .AND. IPRESE .EQ. 3) CURUSE = 70
283 IF (IPRESI .EQ. 53 .AND. IPRESE .EQ. 3) CURUSE = 80
284 IF (IPRESI .EQ. 43 .AND. IPRESE .EQ. 3) CURUSE = 98
285 IF (IPRESI .EQ. 59 .AND. IPRESE .EQ. 3) CURUSE = 119
286 IF (IPRESI .EQ. 66 .AND. IPRESE .EQ. 3) CURUSE = 144
287 IF (IPRESI .EQ. 53 .AND. IPRESE .EQ. 3) CURUSE = 151
288 IF (CURUSE .EQ. 0 .AND. IPRESE .EQ. 3) CURUSE = 27
289 IF (IPRESI .EQ. 14 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ.
290 1 8 .OR. IPRESE .EQ. 4)) GO TO 73
291 GO TO 72
292 22 GO TO 21
293 23 IF (IPRESI .EQ. 21 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ. 8)) CURUSE = 14
294 IF (IPRESI .EQ. 14 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ. 8)) CURUSE = 21
295 IF (IPRESI .EQ. 14 .AND. (IPRESE .EQ. 4 .OR. IPRESE .EQ. 6)) CURUSE = 22
296 IF (IPRESI .EQ. 28 .AND. IPRESE .EQ. 3) CURUSE = 26
297 IF (IPRESI .EQ. 59 .AND. IPRESE .EQ. 3) CURUSE = 116
298 IF (IPRESI .EQ. 51 .AND. IPRESE .EQ. 3) CURUSE = 85
299 IF (IPRESI .EQ. 34 .AND. IPRESE .EQ. 3) CURUSE = 95
300 IF (CURUSE .EQ. 0 .AND. IPRESE .EQ. 3) CURUSE = 27

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301      GO TO 72
302 24 IF (IPRESI.EQ.21 .AND. (IPRESE.EQ.5 .OR. IPRESE.EQ.8)) CURUSE = 28
303    IF (IPRESI.EQ.28 .AND. (IPRESE.EQ.5 .OR. IPRESE.EQ.8)) CURUSE = 21
304    IF (IPRESI.EQ.14 .AND. IPRESE.EQ.3) CURUSE = 26
305    IF (IPRESI.EQ. 57 .AND. IPRESE.EQ. 3) CURUSE = 72
306    IF (IPRESI.EQ. 59 .AND. IPRESE.EQ. 3) CURUSE = 83
307    IF (IPRESI.EQ. 34 .AND. IPRESE.EQ. 3) CURUSE = 96
308    IF (IPRESI.EQ. 57 .AND. IPRESE.EQ. 3) CURUSE = 131
309    IF (IPRESI.EQ. 53 .AND. IPRESE.EQ. 3) CURUSE = 132
310    IF (IPRESI.EQ. 66 .AND. IPRESE.EQ. 3) CURUSE = 145
311    IF (IPRESI.EQ. 7 .AND. IPRESE.EQ. 3) CURUSE = 146
312    IF (CURUSE.EQ. 0 .AND. IPRESE.EQ.3) CURUSE = 27
313    IF (IPRESI.EQ. 14 .AND. (IPRESE.EQ. 5 .OR. IPRESE.EQ.
314      1 8 .OR. IPRESE.EQ. 4)) GO TO 73
315      GO TO 72
316 25 IF (IPRESI.EQ.14 .AND. (IPRESE.EQ.5 .OR. IPRESE.EQ.8)) CURUSE = 24
317    IF (IPRESI.EQ.14 .AND. IPRESE.EQ.3) CURUSE = 26
318    IF (IPRESI.EQ.21 .AND. (IPRESE.EQ.5 .OR. IPRESE.EQ.8)) CURUSE = 28
319    IF (IPRESI.EQ.29 .AND. (IPRESE.EQ.5 .OR. IPRESE.EQ.8)) CURUSE = 22
320    IF (IPRESI.EQ. 57 .AND. IPRESE.EQ. 3) CURUSE = 72
321    IF (IPRESI.EQ. 59 .AND. IPRESE.EQ. 3) CURUSE = 83
322    IF (IPRESI.EQ. 34 .AND. IPRESE.EQ. 3) CURUSE = 96
323    IF (CURUSE.EQ. 0 .AND. (IPRESE.EQ.3 .OR. IPRESE.EQ.7)) CURUSE = 27
324      GO TO 72
325 26 IF (IPRESI.EQ.14 .AND. (IPRESE.EQ.4 .OR. IPRESE.EQ.6)) CURUSE = 25
326    IF (IPRESI.EQ.14 .AND. (IPRESE.EQ.5 .OR. IPRESE.EQ.8)) CURUSE = 24
327    IF (IPRESI.EQ.21 .AND. (IPRESE.EQ.5 .OR. IPRESE.EQ.8)) CURUSE = 17
328    IF (IPRESI.EQ.29 .AND. (IPRESE.EQ.5 .OR. IPRESE.EQ.8)) CURUSE = 23
329    IF (IPRESI.EQ. 59 .AND. IPRESE.EQ. 3) CURUSE = 82
330    IF (CURUSE.EQ. 0 .AND. IPRESE.EQ.3) CURUSE = 27
331      GO TO 72
332 27 CURUSE = 69
333      GO TO 72
334 28 IF (IPRESI.EQ.29 .AND. (IPRESE.EQ.5 .OR. IPRESE.EQ. 8)) CURUSE = 4
335    IF (IPRESI.EQ. 7 .AND. IPRESE.EQ.3) CURUSE = 10
336    IF (IPRESI.EQ.21 .AND. IPRESE.EQ.3) CURUSE = 24
337    IF (IPRESI.EQ.14 .AND. IPRESE.EQ.3) CURUSE = 17
338    IF (IPRESI.EQ.43 .AND. IPRESE.EQ.3) CURUSE = 48
339    IF (IPRESI.EQ.57 .AND. IPRESE.EQ.3) CURUSE = 92
340    IF (IPRESI.EQ.49 .AND. IPRESE.EQ.3) CURUSE = 48
341    IF (IPRESI.EQ.34 .AND. IPRESE.EQ.3) CURUSE = 105
342    IF (IPRESI.EQ.51 .AND. IPRESE.EQ.3) CURUSE = 52
343    IF (IPRESI.EQ.53 .AND. IPRESE.EQ.3) CURUSE = 93
344    IF (IPRESI.EQ.55 .AND. IPRESE.EQ.3) CURUSE = 91
345    IF (IPRESI.EQ. 64 .AND. IPRESE.EQ. 3) CURUSE = 90
346    IF (IPRESI.EQ. 59 .AND. IPRESE.EQ. 3) CURUSE = 89
347    IF (IPRESI.EQ. 66 .AND. IPRESE.EQ. 3) CURUSE = 143
348    IF (IPRESI.EQ. 42 .AND. IPRESE.EQ. 3) CURUSE = 150
349    IF (CURUSE.EQ. 0 .AND. IPRESE.EQ. 3) CURUSE = 33
350    IF (IPRESI.EQ. 14 .AND. IPRESE.EQ. 6) GO TO 73
351    IF (IPRESI.EQ. 14 .AND. (IPRESE.EQ. 5 .OR. IPRESE.EQ.
352      1 8 .OR. IPRESE.EQ. 4)) GO TO 73
353      GO TO 72
354 29 GO TO 10
355 30 GO TO 9
356 31 GO TO 17
357 32 GO TO 24
358 33 CURUSE = 69
359      GO TO 72
360 34 IF (IPRESI.EQ.40 .AND. IPRESE.EQ.3) CURUSE = 40

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361 IF(IPRESI.EQ. 5 .AND. IPRESE.EQ.3 .OR. IPRESE.EQ.7) CURUSE = 38
362 IF(IPRESI.EQ. 7 .AND. IPRESE .EQ. 3) CURUSE = 11
363 IF(IPRESI.EQ.14 .AND. IPRESE .EQ. 3) CURUSE = 19
364 IF(IPRESE.EQ. 1.CR. IPRESE .EC. 2) CURUSE = 34
365 IF (IPRESI .EQ. 21 .AND. IPRESE .EQ. 3) CURUSE = 71
366 IF (IPRESI .EQ. 28 .AND. IPRESE .EQ. 3) CURUSE = 105
367 IF (IPRESI.EQ.34.AND.(IPRESE.EQ.3.OR.IPRESE.EQ.8)) CURUSE = 4
368 IF (IPRESI .EQ. 14 .AND. IPRESE .EQ. 6) GO TO 73
369 IF (IPRESI .EQ. 53 .AND. IPRESE .EQ. 3) CURUSE = 138
370 IF (IPRESE .EQ. 13) CURUSE = 34
371 IF (IPRESE .EQ. 14) CURUSE = 34
372 IF(CURUSE .EQ. 0 .AND. IPRESE .EQ. 3) CURUSE = 39
373 IF(IPRESI .EQ. 14 .AND.(IPRESE .EQ. 5 .OR. IPRESE .EQ.
374 1 8 .OR. IPRESE .EQ. 4)) GO TO 73
375 GO TO 72
376 35 GO TO 19
377 36 GO TO 11
378 37 GO TO 12
379 38 IF(IPRESI.EQ.34 .AND.(IPRESE.EQ.8 .OR. IPRESE .EQ. 5))CURUSE = 6
380 IF(IPRESE.EQ.1 .OR. IPRESE .EQ. 2)CURUSE =34
381 IF((IPRESI.EQ.5.OR.IPRESI.EQ.6).AND.IPRESE.EQ.7)CURUSE=38
382 IF(IPRESI.EQ.40 .AND. IPRESE .EQ. 3) CURUSE = 40
383 IF(CURUSE .EQ.0 .AND. IPRESE .EQ. 3) CURUSE = 39
384 IF(IPRESI .EQ. 14 .AND.(IPRESE .EQ. 5 .OR. IPRESE .EQ.
385 1 8 .OR. IPRESE .EQ. 4)) GO TO 73
386 GO TO 72
387 39 IF(IPRESI .NE. 34 .AND.(IPRESE.EQ.5 .OR. IPRESE.EQ.8)) CURUSE = 34
388 IF(IPRESE .EQ. 1 .CR. IPRESE .EQ. 2) CURUSE = 34
389 IF(CURUSE .EQ. 0) CURUSE = 69
390 GO TO 72
391 40 IF(IPRESI .EQ. 40 .AND. IPRESE .EQ. 5) CURUSE = 34
392 IF(IPRESI .EQ. 40 .AND. IPRESE .EQ. 8) CURUSE = 6
393 IF(IPRESI .EQ. 34 .AND. IPRESE .EQ. 8) CURUSE = 6
394 IF (IPRESE .EQ. 14) CURUSE = 40
395 IF(IPRESI .EQ. 34 .AND. IPRESE .EQ. 3) CURUSE = 34
396 IF(IPRESI .NE. 34 .AND. IPRESE .EQ. 3) CURUSE = 41
397 IF(IPRESI .EQ. 14 .AND.(IPRESE .EQ. 5 .OR. IPRESE .EQ.
398 1 8 .OR. IPRESE .EQ. 4)) GO TO 73
399 IF((IPRESI .EQ. 5 .OR. IPRESI .EQ.6).AND.IPRESE .EQ. 7)CURUSE=40
400 IF (IPRESE.EQ.2 .OR. IPRESE.EQ.1) CURUSE=40
401 IF (IPRESE .EQ. 13) CURUSE = 40
402 IF (IPRESE .EQ. 14) CURUSE = 40
403 GO TO 72
404 41 IF(IPRESI .EQ. 40 .AND. IPRESE .EQ. 5) CURUSE = 39
405 IF(IPRESI .EQ. 34 .AND. IPRESE .EQ. 3) CURUSE = 39
406 IF(IPRESI .EQ. 0 .AND. IPRESE .EQ. 3) CURUSE = 69
407 GO TO 72
408 42 IF(IPRESI .EQ. 14 .AND. IPRESE .EQ. 3) CURUSE = 97
409 IF(IPRESI.EQ.42.AND.(IPRESE.EQ.3.OR.IPRESE.EQ.7))CURUSE=42
410 IF(IPRESI .EQ. 42 .AND.(IPRESE .EQ. 5 .OR.IPRESE.EQ.8))CURUSE= 6
411 IF(IPRESI .EQ. 6 .AND. IPRESE .EQ. 7) CURUSE = 6
412 IF (IPRESI .EQ. 28 .AND. IPRESE .EQ. 3) CURUSE = 150
413 IF(IPRESI .EQ. 42 .AND.(IPRESE .EQ. 1 .OR. IPRESE.EQ.2))CURUSE=42
414 IF (IPRESI .EQ. 14 .AND. IPRESE .GE. 4) GO TO 73
415 IF (CLPUSE .EQ. 0 .AND. IPRESE .EQ. 3) CURUSE = 69
416 GO TO 72
417 43 IF(IPRESI.EQ.43.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8.OR.IPRESE.EQ.1))
418 1CURUSE = 4
419 IF(IPRESI .EQ. 57 .AND. IPRESE .EQ. 3) CURUSE = 44
420 IF(IPRESI .EQ. 28 .AND. IPRESE .EQ. 3) CURUSE = 48

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481      IF(IPRESI .EQ. 28 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ. 8)) CURUSE = 49
482      IF(IPRESI .EQ. 62 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ. 8 .OR. IPRESE
483      1 .EQ. 1)) CURUSE = 48
484      IF(IPRESI .EQ. 43 .AND. IPRESE .EQ. 3) CURUSE = 47
485      IF(IPRESI .EQ. 28 .AND. IPRESE .EQ. 3) CURUSE = 47
486      IF(IPRESI .EQ. 62 .AND. IPRESE .EQ. 3) CURUSE = 47
487      IF(IPRESI .EQ. 57 .AND. IPRESE .EQ. 3) CURUSE = 46
488      IF(CURUSE .EQ. 0 .AND. IPRESE .EQ. 3) CURUSE = 50
489      IF(IPRESI .EQ. 14 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ.
490      1 8 .OR. IPRESE .EQ. 4)) GO TO 73
491      GO TO 72
492  48 IF(IPRESI .EQ. 43 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ. 8 .OR.
493      1 IPRESE .EQ. 1)) CURUSE = 29
494      IF(IPRESI .EQ. 28 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ. 8)) CURUSE = 43
495      IF(IPRESI .EQ. 62 .AND. IPRESE .EQ. 3) CURUSE = 47
496      IF(IPRESI .EQ. 57 .AND. IPRESE .EQ. 3) CURUSE = 45
497      IF(IPRESI .EQ. 43 .AND. IPRESE .EQ. 3) CURUSE = 48
498      IF(IPRESI .EQ. 28 .AND. IPRESE .EQ. 3) CURUSE = 48
499      IF (IPRESI .EQ. 53 .AND. IPRESE .EQ. 3) CURUSE = 74
500      IF (IPRESI .EQ. 7 .AND. IPRESE .EQ. 3) CURUSE = 109
501      IF (IPRESI .EQ. 14 .AND. IPRESE .EQ. 3) CURUSE = 110
502      IF (IPRESI .EQ. 55 .AND. IPRESE .EQ. 3) CURUSE = 147
503      IF(CURUSE .EQ. 0 .AND. IPRESE .EQ. 3) CURUSE = 50
504      IF(IPRESI .EQ. 14 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ.
505      1 8 .OR. IPRESE .EQ. 4)) GO TO 73
506      GO TO 72
507  49 IF(IPRESI .EQ. 43 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ. 8 .OR.
508      1 IPRESE .EQ. 1)) CURUSE = 62
509      IF(IPRESI .EQ. 62 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ. 8 .OR.
510      1 IPRESE .EQ. 1)) CURUSE = 43
511      IF(IPRESI .EQ. 57 .AND. IPRESE .EQ. 3) CURUSE = 50
512      IF(IPRESI .EQ. 28 .AND. IPRESE .EQ. 3) CURUSE = 47
513      IF(IPRESI .EQ. 28 .AND. IPRESE .EQ. 7) CURUSE = 47
514      IF(IPRESI .EQ. 43 .AND. IPRESE .EQ. 3) CURUSE = 49
515      IF(IPRESI .EQ. 61 .AND. IPRESE .EQ. 3) CURUSE = 49
516      IF(CURUSE .EQ. 0 .AND. IPRESE .EQ. 3) CURUSE = 50
517      IF(IPRESI .EQ. 14 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ.
518      1 8 .OR. IPRESE .EQ. 4)) GO TO 73
519      GO TO 72
520  50 CURUSE = 69
521      GO TO 72
522  51 IF(IPRESI .EQ. 51 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ. 8 .OR.
523      1 IPRESE .EQ. 1)) CURUSE = 4
524      IF(IPRESI .EQ. 51 .AND. IPRESE .EQ. 3) CURUSE = 51
525      IF (IPRESI .EQ. 21 .AND. IPRESE .EQ. 3) CURUSE = 86
526      IF (IPRESI .EQ. 14 .AND. IPRESE .EQ. 3) CURUSE = 87
527      IF(CURUSE .EQ. 0 .AND. IPRESE .EQ. 3) CURUSE = 52
528      IF(IPRESI .EQ. 14 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ.
529      1 8 .OR. IPRESE .EQ. 4)) GO TO 73
530      GO TO 72
531  52 IF(IPRESI .NE. 51 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ. 8)) CURUSE = 51
532      IF(CURUSE .EQ. 0) CURUSE = 69
533      IF(IPRESI .EQ. 14 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ.
534      1 8 .OR. IPRESE .EQ. 4)) GO TO 73
535      GO TO 72
536  53 IF(IPRESI .EQ. 53 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ. 8 .OR.
537      1 IPRESE .EQ. 1)) CURUSE = 4
538      IF(IPRESI .EQ. 53 .AND. IPRESE .EQ. 3) CURUSE = 53
539      IF (IPRESI .EQ. 43 .AND. IPRESE .EQ. 3) CURUSE = 75
540      IF (IPRESI .EQ. 28 .AND. (IPRESE .EQ. 3 .OR. IPRESE

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541      1 .EQ. 7)) CURUSE = 93
542      IF (IPRESI .EQ. 57 .AND. IPRESE .EQ. 3) CURUSE = 122
543      IF (IPRESI .EQ. 6 .AND. IPRESE .EQ. 7) CURUSE = 6
544      IF (IPRESI .EQ. 59 .AND. IPRESE .EQ. 3) CURUSE = 134
545      IF (IPRESI .EQ. 34 .AND. IPRESE .EQ. 3) CURUSE = 138
546      IF (IPRESI .EQ. 55 .AND. IPRESE .EQ. 3) CURUSE = 139
547      IF (IPRESI .EQ. 21 .AND. IPRESE .EQ. 3) CURUSE = 151
548      IF (IPRESI .EQ. 64 .AND. IPRESE .EQ. 3) CURUSE = 136
549      IF (CURUSE .EQ. 0 .AND. IPRESE .EQ. 3) CURUSE = 54
550      IF (IPRESI .EQ. 14 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ.
551      1 8 .OR. IPRESE .EQ. 4)) GO TO 73
552      GO TO 72
553  54 IF (IPRESI .EQ. 6 .AND. IPRESE .EQ. 7) CURUSE = 6
554      IF (IPRESI .EQ. 53 .AND. IPRESE .EQ. 3) CURUSE = 54
555      IF (IPRESI .EQ. 53 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ. 8 .OR. IPRESE
556      1 .EQ. 1)) CURUSE = 69
557      IF (CURUSE .EQ. 0 .AND. IPRESE .EQ. 3) CURUSE = 69
558      IF (IPRESI .EQ. 14 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ.
559      1 8 .OR. IPRESE .EQ. 4)) GO TO 73
560      GO TO 72
561  55 IF (IPRESI .EQ. 6 .AND. IPRESE .EQ. 7) CURUSE = 6
562      IF (IPRESI .EQ. 55 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ. 8 .OR.
563      1 IPRESE .EQ. 1)) CURUSE = 4
564      IF (IPRESI .EQ. 55 .AND. IPRESE .EQ. 3) CURUSE = 55
565      IF (IPRESI .EQ. 28 .AND. IPRESE .EQ. 3) CURUSE = 91
566      IF (IPRESI .EQ. 7 .AND. IPRESE .EQ. 3) CURUSE = 126
567      IF (IPRESI .EQ. 14 .AND. IPRESE .EQ. 3) CURUSE = 127
568      IF (IPRESI .EQ. 53 .AND. IPRESE .EQ. 3) CURUSE = 139
569      IF (IPRESI .EQ. 57 .AND. IPRESE .EQ. 3) CURUSE = 140
570      IF (IPRESI .EQ. 5 .OR. IPRESI .EQ. 6) CURUSE = 55
571      IF (CURUSE .EQ. 0 .AND. IPRESE .EQ. 3) CURUSE = 56
572      IF (IPRESI .EQ. 14 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ.
573      1 8 .OR. IPRESE .EQ. 4)) GO TO 73
574      GO TO 72
575  56 IF (IPRESI .EQ. 55 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ. 8 .OR.
576      1 IPRESE .EQ. 1)) CURUSE = 69
577      IF (IPRESI .EQ. 55 .AND. IPRESE .EQ. 3) CURUSE = 56
578      IF (IPRESI .EQ. 6 .AND. IPRESE .EQ. 7) CURUSE = 6
579      IF (CURUSE .EQ. 0 .AND. IPRESE .EQ. 3) CURUSE = 56
580      IF (CURUSE .EQ. 0 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ. 8 .OR.
581      1 IPRESE .EQ. 1)) CURUSE = 69
582      IF (IPRESI .EQ. 14 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ.
583      1 8 .OR. IPRESE .EQ. 4)) GO TO 73
584      GO TO 72
585  57 IF (IPRESI .EQ. 57 .AND. (IPRESE .EQ. 8 .OR. IPRESE .EQ. 5 .OR.
586      1 IPRESE .EQ. 1)) CURUSE = 4
587      IF (IPRESI .EQ. 57 .AND. IPRESE .EQ. 3) CURUSE = 57
588      IF (IPRESI .EQ. 43 .AND. IPRESE .EQ. 3) CURUSE = 44
589      IF (IPRESI .EQ. 28 .AND. IPRESE .EQ. 3) CURUSE = 33
590      IF (IPRESI .EQ. 14 .AND. IPRESE .EQ. 3) CURUSE = 88
591      IF (IPRESI .EQ. 21 .AND. IPRESE .EQ. 3) CURUSE = 84
592      IF (IPRESI .EQ. 28 .AND. IPRESE .EQ. 3) CURUSE = 92
593      IF (IPRESI .EQ. 7 .AND. IPRESE .EQ. 3) CURUSE = 101
594      IF (IPRESI .EQ. 53 .AND. IPRESE .EQ. 3) CURUSE = 122
595      IF (IPRESI .EQ. 63 .AND. IPRESE .EQ. 3) CURUSE = 137
596      IF (IPRESI .EQ. 55 .AND. IPRESE .EQ. 3) CURUSE = 140
597      IF (IPRESI .EQ. 5 .OR. IPRESI .EQ. 6) CURUSE = 57
598      IF (CURUSE .EQ. 0 .AND. IPRESE .EQ. 3) CURUSE = 58
599      IF (IPRESI .EQ. 14 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ.
600      1 8 .OR. IPRESE .EQ. 4)) GO TO 73

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601      GO TO 72
602 58 IF(IPRESI .EQ. 57 .AND. IPRESE .EQ. 3) CURUSE = 58
603   IF(IPRESI .NE. 57 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ. 8)) CURUSE = 57
604   IF(IPRESI .EQ. 6 .AND. IPRESE .EQ. 7) CURUSE = 6
605   IF(CURUSE .EQ. 0 .AND. IPRESE .EQ. 3) CURUSE = 58
606   IF(CURUSE .EQ. 0 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ. 8)) CURUSE = 59
607   IF(IPRESI .EQ. 14 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ.
608     1 8 .OR. IPRESE .EQ. 4)) GO TO 73
609   GO TO 72
610 59 IF(IPRESE .EQ. 5 .OR. IPRESE .EQ. 8) CURUSE = 4
611   IF (IPRESI .EQ. 28 .AND. IPRESE .EQ. 3) CURUSE = 89
612   IF (IPRESI .EQ. 21 .AND. IPRESE .EQ. 3) CURUSE = 119
613   IF (IPRESI .EQ. 7 .AND. IPRESE .EQ. 3) CURUSE = 114
614   IF (IPRESI .EQ. 14 .AND. IPRESE .EQ. 3) CURUSE = 99
615   IF(IPRESI .EQ. 60 .AND. IPRESE .EQ. 3) CURUSE = 61
616   IF(IPRESI .EQ. 59 .AND. IPRESE .EQ. 3) CURUSE = 59
617   IF(IPRESI .EQ. 53 .AND. IPRESE .EQ. 3) CURUSE = 134
618   IF(IPRESI .EQ. 64 .AND. IPRESE .EQ. 3) CURUSE = 135
619   IF(CURUSE .EQ. 0 .AND. IPRESE .EQ. 3) CURUSE = 69
620   IF(IPRESI .EQ. 14 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ.
621     1 8 .OR. IPRESE .EQ. 4)) GO TO 73
622   GO TO 72
623 60 IF(IPRESI .EQ. 60 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ. 8 .OR.
624     1 IPRESE .EQ. 1)) CURUSE = 4
625   IF(IPRESI .EQ. 59 .AND. IPRESE .EQ. 3) CURUSE = 61
626   IF(IPRESI .EQ. 60 .AND. IPRESE .EQ. 3) CURUSE = 60
627   IF(CURUSE .EQ. 0) CURUSE = 69
628   GO TO 72
629 61 IF(IPRESI .EQ. 60 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ. 8 .OR.
630     1 IPRESE .EQ. 1)) CURUSE = 59
631   IF(IPRESI .EQ. 59 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ. 8 .OR.
632     1 IPRESE .EQ. 1)) CURUSE = 60
633   IF(CURUSE .EQ. 0) CURUSE = 69
634   GO TO 72
635 62 IF(IPRESI .EQ. 43 .AND. IPRESE .EQ. 3) CURUSE = 49
636   IF(IPRESI .EQ. 62 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ. 8 .OR.
637     1 IPRESE .EQ. 1)) CURUSE = 4
638   IF(IPRESI .EQ. 6 .AND. IPRESE .EQ. 7) CURUSE = 6
639   IF(IPRESI .NE. 62 .AND. IPRESE .EQ. 3) CURUSE = 69
640   IF(IPRESI .EQ. 14 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ.
641     1 9 .OR. IPRESE .EQ. 4)) GO TO 73
642   GO TO 72
643 63 IF(IPRESI .EQ. 63 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ. 8)) CURUSE = 4
644   IF (IPRESI .EQ. 21 .AND. IPRESE .EQ. 3) CURUSE = 80
645   IF (IPRESI .EQ. 7 .AND. IPRESE .EQ. 3) CURUSE = 129
646   IF (IPRESI .EQ. 57 .AND. IPRESE .EQ. 3) CURUSE = 137
647   IF (CURUSE .EQ. 0 .AND. IPRESE .EQ. 3) CURUSE = 69
648   IF(IPRESI .EQ. 14 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ.
649     1 8 .OR. IPRESE .EQ. 4)) GO TO 73
650   GO TO 72
651 64 IF(IPRESI .EQ. 64 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ. 8)) CURUSE = 4
652   IF (IPRESI .EQ. 28 .AND. IPRESE .EQ. 3) CURUSE = 90
653   IF (IPRESI .EQ. 59 .AND. IPRESE .EQ. 3) CURUSE = 135
654   IF (CURUSE .EQ. 0 .AND. IPRESE .EQ. 3) CURUSE = 69
655   IF(IPRESI .EQ. 14 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ.
656     1 8 .OR. IPRESE .EQ. 4)) GO TO 73
657   GO TO 72
658 65 IF(IPRESI .EQ. 65 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ. 8)) CURUSE = 4
659   IF(IPRESI .NE. 65 .AND. IPRESE .EQ. 3) CURUSE = 69
660   IF(IPRESI .EQ. 14 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ.

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661      1 8 .OR. IPRESE .EQ. 4)) GO TO 73
662      GO TO 72
663      66 IF(IPRESI .EQ. 66 .AND.(IPRESE.EQ.5 .OR. IPRESE.EQ.8)) CURUSE=4
664      IF (IPRESI .EQ. 28 .AND. IPRESE .EQ. 3) CURUSE = 143
665      IF (IPRESI .EQ. 21 .AND. IPRESE .EQ. 3) CURUSE = 144
666      IF (CURUSE .EQ. 0 .AND. IPRESE .EQ. 3) CURUSE = 69
667      IF(IPRESI .EQ. 14 .AND.(IPRESE .EQ. 5 .OR. IPRESE .EQ.
668      1 8 .OR. IPRESE .EQ. 4)) GO TO 73
669      GO TO 72
670      67 IF(IPRESI .EQ. 67 .AND.(IPRESE.EQ.5 .OR. IPRESE.EQ.8)) CURUSE = 4
671      GO TO 72
672      68 IF(IPRESI .EQ. 68 .AND.(IPRESE.EQ.5 .OR. IPRESE .EQ.8)) CURUSE = 4
673      IF(IPRESI .NE. 69 .AND. IPRESE .EQ. 3) CURUSE = 69
674      IF(IPRESI .EQ. 14 .AND.(IPRESE .EQ. 5 .OR. IPRESE .EQ.
675      1 8 .OR. IPRESE .EQ. 4)) GO TO 73
676      GO TO 72
677      200 CONTINUE
678      C FOLLOWING FOR USE 70 (RICE-BEANS)
679      IF (IPRESI.EQ.7.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=21
680      IF (IPRESI.EQ.21.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=7
681      IF (IPRESI .EQ. 28 .AND. IPRESE .EQ. 3) CURUSE = 146
682      IF (IPRESI .EQ. 14 .AND. IPRESE .GE. 4) GO TO 73
683      IF (CURUSE .EQ. 0 .AND. IPRESE .EQ. 3) CURUSE=13
684      GO TO 72
685      201 CONTINUE
686      C FOLLOWING FOR USE 71 (BEANS-PASTURE)
687      IF (IPRESI.EQ.21.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=34
688      IF (IPRESI.EQ.34.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=21
689      IF (IPRESI .EQ. 28 .AND. IPRESE .EQ. 3) CURUSE = 96
690      IF (IPRESI .EQ. 14 .AND. IPRESE .EQ. 3) CURUSE = 95
691      IF (CURUSE .EQ. 0 .AND. IPRESE .EQ. 3) CURUSE = 27
692      IF (IPRESI .EQ. 14 .AND. IPRESE .GE. 4) GO TO 73
693      GO TO 72
694      202 CONTINUE
695      C FOLLOWING FOR USE 72 (BEANS-MANTOC-BANANA)
696      IF (IPRESI.EQ.21.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=92
697      IF (IPRESI.EQ.28.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=84
698      IF (IPRESI.EQ.57.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=24
699      IF (IPRESI .EQ. 14 .AND. IPRESE .GE. 4) GO TO 73
700      IF (CURUSE .EQ. 0 .AND. IPRESE .EQ. 3) CURUSE = 27
701      GO TO 72
702      203 CONTINUE
703      C FOLLOWING FOR USE 73 (MAIZE CACAO)
704      IF (IPRESI .EQ. 14 .AND. IPRESE .GE. 4) CURUSE = 43
705      IF (IPRESI .EQ. 43 .AND. IPRESE .GE. 5) CURUSE = 14
706      IF (CURUSE .EQ. 0 .AND. IPRESE .EQ. 3) CURUSE = 20
707      GO TO 72
708      74 IF (IPRESI.EQ.43.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=93
709      IF (IPRESI.EQ.53.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=48
710      IF (IPRESI.EQ.28.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=75
711      IF (IPRESI .EQ. 14 .AND. IPRESE .GE. 4) GO TO 73
712      IF (IPRESI .EQ. 57 .AND. IPRESE .EQ. 3) CURUSE = 120
713      IF (CURUSE .EQ. 0 .AND. IPRESE .EQ. 3) CURUSE = 50
714      GO TO 72
715      75 IF (IPRESI.EQ.43.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=53
716      IF (IPRESI.EQ.53.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=43
717      IF (IPRESI.EQ.28.AND.(IPRESE.EQ.3.OR.IPRESE.EQ.7))CURUSE=74
718      IF (IPRESI.EQ.57.AND.(IPRESE.EQ.3.OR.IPRESE.EQ.7))CURUSE=121
719      IF (CURUSE .EQ. 0 .AND. IPRESE .EQ. 3) CURUSE = 33
720      IF (IPRESI .EQ. 14 .AND. IPRESE .GE. 4) GO TO 73

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721 GO TO 72
722 76 IF (IPRESI.EQ.43.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=88
723 IF (IPRESI.EQ.57.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=73
724 IF (IPRESI.EQ.14.AND.IPRESE.GE.4) CURUSE = 44
725 IF (IPRESI.EQ.28.AND.IPRESE.EQ.3) CURUSE = 113
726 IF (IPRESI.EQ.7.AND.IPRESE.EQ.3) CURUSE = 117
727 IF (CURUSE.EQ.0.AND.IPRESE.EQ.3) CURUSE = 50
728 GO TO 72
729 77 IF (IPRESI.EQ.21.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=44
730 IF (IPRESI.EQ.57.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=98
731 IF (IPRESI.EQ.43.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=85
732 IF (IPRESI.EQ.14.AND.IPRESE.GE.4) GO TO 73
733 GO TO 72
734 79 IF (IPRESI.EQ.7.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=102
735 IF (IPRESI.EQ.57.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=9
736 IF (IPRESI.EQ.14.AND.IPRESE.GE.4) CURUSE = 104
737 IF (IPRESI.EQ.28.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=103
738 IF (IPRESI.EQ.43.AND.IPRESE.EQ.3) CURUSE = 81
739 IF (CURUSE.EQ.0.AND.IPRESE.EQ.3) CURUSE = 13
740 GO TO 72
741 79 IF (IPRESI.EQ.7.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=106
742 IF (IPRESI.EQ.14.AND.IPRESE.GE.4) CURUSE = 100
743 IF (IPRESI.EQ.28.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=12
744 IF (IPRESI.EQ.34.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=9
745 IF (CURUSE.EQ.0.AND.IPRESE.EQ.3) CURUSE = 13
746 GO TO 72
747 80 IF (IPRESI.EQ.21.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=63
748 IF (IPRESI.EQ.63.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=21
749 IF (IPRESI.EQ.14.AND.IPRESE.GE.4) GO TO 73
750 IF (CURUSE.EQ.0.AND.IPRESE.EQ.3) CURUSE = 27
751 GO TO 72
752 81 IF (IPRESI.EQ.7.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=113
753 IF (IPRESI.EQ.14.AND.IPRESE.GE.4) CURUSE = 111
754 IF (IPRESI.EQ.57.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=118
755 IF (IPRESI.EQ.28.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=117
756 IF (IPRESI.EQ.43.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=78
757 IF (CURUSE.EQ.0.AND.IPRESE.EQ.3) CURUSE = 50
758 GO TO 72
759 32 IF (IPRESI.EQ.21.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=115
760 IF (IPRESI.EQ.29.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=116
761 IF (IPRESI.EQ.14.AND.IPRESE.GE.4) CURUSE = 83
762 IF (IPRESI.EQ.59.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=26
763 IF (CURUSE.EQ.0.AND.IPRESE.EQ.3) CURUSE = 20
764 GO TO 72
765 93 IF (IPRESI.EQ.21.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=89
766 IF (IPRESI.EQ.28.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=119
767 IF (IPRESI.EQ.59.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=24
768 IF (IPRESI.EQ.14.AND.IPRESE.EQ.3) CURUSE = 82
769 IF (IPRESI.EQ.14.AND.IPRESE.GE.4) GO TO 73
770 IF (CURUSE.EQ.0.AND.IPRESE.EQ.3) CURUSE = 27
771 GO TO 72
772 84 IF (IPRESI.EQ.21.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=57
773 IF (IPRESI.EQ.57.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=21
774 IF (IPRESI.EQ.29.AND.IPRESE.EQ.3) CURUSE = 72
775 IF (IPRESI.EQ.43.AND.IPRESE.EQ.3) CURUSE = 77
776 IF (IPRESI.EQ.28.AND.IPRESE.EQ.3) CURUSE = 131
777 IF (IPRESI.EQ.14.AND.IPRESE.GE.4) GO TO 73
778 IF (CURUSE.EQ.0.AND.IPRESE.EQ.3) CURUSE = 27
779 GO TO 72
780 95 IF (IPRESI.EQ.14.AND.IPRESE.GE.4) CURUSE = 86

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781      IF (IPRESI.EQ.21.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=87
782      IF (CURUSE.EQ.0.AND.IPRESE.EQ.3) CURUSE = 52
783      GO TO 72
784 86 IF (IPRESI.EQ.21.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=51
785      IF (IPRESI.EQ.51.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=21
786      IF (IPRESI.EQ.14.AND.IPRESE.EQ.3) CURUSE = 85
787      IF (IPRESI.EQ.14.AND.IPRESE.GE.4) GO TO 73
788      IF (CURUSE.EQ.0.AND.IPRESE.EQ.3) CURUSE = 52
789      GO TO 72
790 87 IF (IPRESI.EQ.14.AND.IPRESE.GE.4) CURUSE = 51
791      IF (IPRESI.EQ.51.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=14
792      IF (IPRESI.EQ.21.AND.IPRESE.EQ.3) CURUSE = 85
793      IF (CURUSE.EQ.0.AND.IPRESE.EQ.3) CURUSE = 52
794      GO TO 72
795 98 IF (IPRESI.EQ.14.AND.IPRESE.GE.4) CURUSE = 57
796      IF (IPRESI.EQ.57.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=14
797      IF (IPRESI.EQ.7.AND.IPRESE.EQ.3) CURUSE = 103
798      IF (IPRESI.EQ.28.AND.IPRESE.EQ.3) CURUSE = 102
799      IF (IPRESI.EQ.21.AND.IPRESE.EQ.3) CURUSE = 131
800      IF (IPRESI.EQ.43.AND.IPRESE.EQ.3) CURUSE = 76
801      IF (CURUSE.EQ.0.AND.IPRESE.EQ.3) CURUSE = 58
802      GO TO 72
803 89 IF (IPRESI.EQ.23.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=59
804      IF (IPRESI.EQ.59.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=28
805      IF (IPRESI.EQ.21.AND.IPRESE.EQ.3) CURUSE = 83
806      IF (IPRESI.EQ.14.AND.IPRESE.EQ.3) CURUSE = 115
807      IF (IPRESI.EQ.14.AND.IPRESE.GE.4) GO TO 73
808      IF (CURUSE.EQ.0.AND.IPRESE.EQ.3) CURUSE = 33
809      GO TO 72
810 90 IF (IPRESI.EQ.28.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=64
811      IF (IPRESI.EQ.64.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=28
812      IF (IPRESI.EQ.14.AND.IPRESE.GE.4) GO TO 73
813      IF (CURUSE.EQ.0.AND.IPRESE.EQ.3) CURUSE = 33
814      GO TO 72
815 91 IF (IPRESI.EQ.28.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=55
816      IF (IPRESI.EQ.55.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=28
817      IF (IPRESI.EQ.43.AND.IPRESE.EQ.3) CURUSE = 147
818      IF (IPRESI.EQ.14.AND.IPRESE.GE.4) GO TO 73
819      IF (CURUSE.EQ.0.AND.IPRESE.EQ.3) CURUSE = 33
820      GO TO 72
821 92 IF (IPRESI.EQ.28.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=57
822      IF (IPRESI.EQ.57.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=28
823      IF (IPRESI.EQ.21.AND.IPRESE.EQ.3) CURUSE = 72
824      IF (IPRESI.EQ.14.AND.IPRESE.EQ.3) CURUSE = 102
825      IF (IPRESI.EQ.7.AND.IPRESE.EQ.3) CURUSE = 104
826      IF (IPRESI.EQ.43.AND.IPRESE.EQ.3) CURUSE = 45
827      IF (IPRESI.EQ.53.AND.IPRESE.EQ.3) CURUSE = 123
828      IF (IPRESI.EQ.14.AND.IPRESE.GE.4) GO TO 73
829      IF (CURUSE.EQ.0.AND.IPRESE.EQ.3) CURUSE = 33
830      GO TO 72
831 93 IF (IPRESI.EQ.29.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=53
832      IF (IPRESI.EQ.53.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=28
833      IF (IPRESI.EQ.43.AND.IPRESE.EQ.3) CURUSE = 74
834      IF (IPRESI.EQ.57.AND.IPRESE.EQ.3) CURUSE = 123
835      IF (IPRESI.EQ.21.AND.IPRESE.EQ.3) CURUSE = 132
836      IF (IPRESI.EQ.14.AND.IPRESE.GE.4) GO TO 73
837      IF (CURUSE.EQ.0.AND.IPRESE.EQ.3) CURUSE = 33
838      GO TO 72
839 95 IF (IPRESI.EQ.21.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=19
840      IF (IPRESI.EQ.34.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=23

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841      IF (IPRESI.EQ.14.AND. IPRESE.GE.4) CURUSE = 71
842      IF (CURUSE.EQ.0.AND. IPRESE.EQ.3) CURUSE = 20
843      GO TO 72
844      96 IF (IPRESI.EQ.21.AND.(IPRESE.EQ.5.OR. IPRESE.EQ.8))CURUSE=105
845      IF (IPRESI.EQ.28.AND.(IPRESE.EQ.5.OR. IPRESE.EQ.8))CURUSE=71
846      IF (IPRESI.EQ.34.AND.(IPRESE.EQ.5.OR. IPRESE.EQ.8))CURUSE=24
847      IF (IPRESI.EQ.14.AND. IPRESE.GE.4) GO TO 73
848      IF (CURUSE.EQ.0.AND. IPRESE.EQ.3) CURUSE = 27
849      GO TO 72
850      97 IF (IPRESI.EQ.14.AND. IPRESE.GE.4) CURUSE = 42
851      IF (IPRESI.EQ.42.AND.(IPRESE.EQ.5.OR. IPRESE.EQ.8))CURUSE=14
852      IF (CURUSE.EQ.0.AND. IPRESE.EQ.3) CURUSE = 20
853      GO TO 72
854      98 IF (IPRESI.EQ.21.AND.(IPRESE.EQ.5.OR. IPRESE.EQ.8))CURUSE=43
855      IF (IPRESI.EQ.43.AND.(IPRESE.EQ.5.OR. IPRESE.EQ.8))CURUSE=21
856      IF (IPRESI.EQ.57.AND. IPRESE.EQ.3) CURUSE = 77
857      IF (IPRESI.EQ.14.AND. IPRESE.GE.4) GO TO 73
858      IF (CURUSE.EQ.0.AND. IPRESE.EQ.3) CURUSE = 27
859      GO TO 72
860      99 IF (IPRESI.EQ.14.AND. IPRESE.GE.4) CURUSE = 59
861      IF (IPRESI.EQ.59.AND.(IPRESE.EQ.5.OR. IPRESE.EQ.8))CURUSE=14
862      IF (IPRESI.EQ.28.AND. IPRESE.EQ.3) CURUSE = 115
863      IF (IPRESI.EQ.21.AND. IPRESE.EQ.3) CURUSE = 116
864      IF (CURUSE.EQ.0.AND. IPRESE.EQ.3) CURUSE = 33
865      GO TO 72
866      204 CONTINUE
867      C FOLLOWING FOR USE 100 (RICE-MANIOC-PASTURE)
868      IF (IPRESI.EQ.7.AND.(IPRESE.EQ.5.OR. IPRESE.EQ.8))CURUSE=105
869      IF (IPRESI.EQ.29.AND.(IPRESE.EQ.5.OR. IPRESE.EQ.8))CURUSE=11
870      IF (IPRESI.EQ.34.AND.(IPRESE.EQ.5.OR. IPRESE.EQ.8))CURUSE=10
871      IF (IPRESI.EQ.14.AND. IPRESE.EQ.3) CURUSE = 79
872      IF (IPRESI.EQ.14.AND. IPRESE.GE.4) GO TO 73
873      IF (CURUSE.EQ.0.AND. IPRESE.EQ.3) CURUSE = 13
874      GO TO 72
875      205 CONTINUE
876      C FOLLOWING FOR USE 101 (RICE-BANANA)
877      IF (IPRESI.EQ.7.AND.(IPRESE.EQ.5.OR. IPRESE.EQ.8))CURUSE=57
878      IF (IPRESI.EQ.57.AND.(IPRESE.EQ.5.OR. IPRESE.EQ.8))CURUSE=7
879      IF (IPRESI.EQ.14.AND. IPRESE.EQ.3) CURUSE = 103
880      IF (IPRESI.EQ.28.AND. IPRESE.EQ.3) CURUSE = 104
881      IF (IPRESI.EQ.43.AND. IPRESE.EQ.3) CURUSE = 112
882      IF (IPRESI.EQ.14.AND. IPRESE.GE.4) GO TO 73
883      IF (CURUSE.EQ.0.AND. IPRESE.EQ.3) CURUSE = 13
884      GO TO 72
885      206 CONTINUE
886      C FOLLOWING FOR USE 102 (MAIZE-MANIOC-BANANA)
887      IF (IPRESI.EQ.14.AND. IPRESE.GE.4) CURUSE = 92
888      IF (IPRESI.EQ.28.AND.(IPRESE.EQ.5.OR. IPRESE.EQ.8))CURUSE=88
889      IF (IPRESI.EQ.57.AND.(IPRESE.EQ.5.OR. IPRESE.EQ.8))CURUSE=17
890      IF (IPRESI.EQ.43.AND. IPRESE.EQ.3) CURUSE = 113
891      IF (IPRESI.EQ.7.AND. IPRESE.EQ.3) CURUSE = 78
892      IF (CURUSE.EQ.0.AND. IPRESE.EQ.3) CURUSE = 20
893      GO TO 72
894      207 CONTINUE
895      C FOR USE 103 (RICE-MAIZE-BANANA)
896      IF (IPRESI.EQ.7.AND.(IPRESE.EQ.5.OR. IPRESE.EQ.8))CURUSE=92
897      IF (IPRESI.EQ.57.AND.(IPRESE.EQ.5.OR. IPRESE.EQ.8))CURUSE=8
898      IF (IPRESI.EQ.14.AND. IPRESE.GE.4) CURUSE = 101
899      IF (IPRESI.EQ.43.AND. IPRESE.EQ.3) CURUSE = 117
900      IF (IPRESI.EQ.28.AND. IPRESE.EQ.3) CURUSE = 78

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901     IF (CURUSE .EQ. 0 .AND. IPRESE .EQ. 3) CURUSE = 13
902     GO TO 72
903 104 IF (IPRESI.EQ.7.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=92
904     IF (IPRESI.EQ.23.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=101
905     IF (IPRESI.EQ.57.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=10
906     IF (IPRESI .EQ. 43 .AND. IPRESE .EQ. 3) CURUSE = 111
907     IF (IPRESI .EQ. 14 .AND. IPRESE .EQ. 3) CURUSE = 78
908     IF (IPRESI .EQ. 14 .AND. IPRESE .GE. 4) GO TO 73
909     IF (CURUSE .EQ. 0 .AND. IPRESE .EQ. 3) CURUSE = 13
910     GO TO 72
911 105 IF (IPRESI.EQ.28.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=34
912     IF (IPRESI.EQ.34.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=28
913     IF (IPRESI .EQ. 14 .AND. IPRESE .EQ. 3) CURUSE = 106
914     IF (IPRESI .EQ. 7 .AND. IPRESE .EQ. 3) CURUSE = 100
915     IF (IPRESI .EQ. 21 .AND. IPRESE .EQ. 3) CURUSE = 96
916     IF (IPRESI .EQ. 14 .AND. IPRESE .GE. 4) GO TO 73
917     IF (CURUSE .EQ. 0 .AND. IPRESE .EQ. 3) CURUSE = 33
918     GO TO 72
919 106 IF (IPRESI .EQ. 14 .AND. IPRESE .GE. 4) CURUSE = 105
920     IF (IPRESI.EQ.28.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=19
921     IF (IPRESI.EQ.34.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=17
922     IF (IPRESI .EQ. 28 .AND. IPRESE .EQ. 3) CURUSE = 79
923     IF (CURUSE .EQ. 0 .AND. IPRESE .EQ. 3) CURUSE = 20
924     GO TO 72
925 107 IF (IPRESI.EQ.7.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=73
926     IF (IPRESI.EQ.43.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=8
927     IF (IPRESI .EQ. 14 .AND. IPRESE .GE. 4) CURUSE = 108
928     IF (IPRESI .EQ. 28 .AND. IPRESE .EQ. 3) CURUSE = 118
929     IF (CURUSE .EQ. 0 .AND. IPRESE .EQ. 3) CURUSE = 13
930     GO TO 72
931 108 IF (IPRESI.EQ.7.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=43
932     IF (IPRESI.EQ.43.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=7
933     IF (IPRESI .EQ. 14 .AND. IPRESE .EQ. 3) CURUSE = 107
934     IF (IPRESI .EQ. 28 .AND. IPRESE .EQ. 3) CURUSE = 109
935     IF (IPRESI .EQ. 57 .AND. IPRESE .EQ. 3) CURUSE = 112
936     IF (IPRESI .EQ. 14 .AND. IPRESE .GE. 4) GO TO 73
937     IF (CURUSE .EQ. 0 .AND. IPRESE .EQ. 3) CURUSE = 13
938     GO TO 72
939 109 IF (IPRESI.EQ.7.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=48
940     IF (IPRESI.EQ.28.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=108
941     IF (IPRESI.EQ.43.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=10
942     IF (IPRESI .EQ. 14 .AND. IPRESE .EQ. 3) CURUSE = 118
943     IF (IPRESI .EQ. 57 .AND. IPRESE .EQ. 3) CURUSE = 111
944     IF (IPRESI .EQ. 14 .AND. IPRESE .GE. 4) GO TO 73
945     IF (CURUSE .EQ. 0 .AND. IPRESE .EQ. 3) CURUSE = 13
946     GO TO 72
947 110 IF (IPRESI .EQ. 14 .AND. IPRESE .GE. 4) CURUSE = 48
948     IF (IPRESI.EQ.23.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=73
949     IF (IPRESI.EQ.43.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=17
950     IF (IPRESI .EQ. 7 .AND. IPRESE .EQ. 3) CURUSE = 118
951     IF (IPRESI .EQ. 57 .AND. IPRESE .EQ. 3) CURUSE = 113
952     IF (CURUSE .EQ. 0 .AND. IPRESE .EQ. 3) CURUSE = 20
953     GO TO 72
954 111 IF (IPRESI.EQ.7.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=45
955     IF (IPRESI.EQ.28.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=112
956     IF (IPRESI.EQ.57.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=109
957     IF (IPRESI.EQ.43.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=104
958     IF (IPRESI .EQ. 14 .AND. IPRESE .EQ. 3) CURUSE = 81
959     IF (IPRESI .EQ. 14 .AND. IPRESE .GE. 4) GO TO 73
960     IF (CURUSE .EQ. 0 .AND. IPRESE .EQ. 3) CURUSE = 13

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961      GO TO 72
962 112 IF (IPRESI.EQ.7.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=44
963    IF (IPRESI.EQ.43.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=101
964    IF (IPRESI.EQ.57.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=108
965    IF (IPRESI.EQ.28.AND.IPRESE.EQ.3) CURUSE = 111
966    IF (IPRESI.EQ.14.AND.IPRESE.EQ.3) CURUSE = 117
967    IF (IPRESI.EQ.14.AND.IPRESE.GE.4) GO TO 73
968    IF (CURUSE.EQ.0.AND.IPRESE.EQ.3) CURUSE = 13
969    GO TO 72
970 113 IF (IPRESI.EQ.14.AND.IPRESE.GE.4) CURUSE = 45
971    IF (IPRESI.EQ.29.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=76
972    IF (IPRESI.EQ.57.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=110
973    IF (IPRESI.EQ.43.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=102
974    IF (CURUSE.EQ.0.AND.IPRESE.EQ.3) CURUSE = 20
975    GO TO 72
976 114 IF (IPRESI.EQ.7.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=59
977    IF (IPRESI.EQ.59.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=73
978    IF (IPRESI.EQ.14.AND.IPRESE.GE.4) GO TO 73
979    IF (CURUSE.EQ.0.AND.IPRESE.EQ.3) CURUSE = 13
980    GO TO 72
981 115 IF (IPRESI.EQ.14.AND.IPRESE.GE.4) CURUSE = 89
982    IF (IPRESI.EQ.59.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=17
983    IF (IPRESI.EQ.28.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=99
984    IF (IPRESI.EQ.21.AND.IPRESE.EQ.3) CURUSE = 82
985    IF (CURUSE.EQ.0.AND.IPRESE.EQ.3) CURUSE = 20
986    GO TO 72
987 116 IF (IPRESI.EQ.14.AND.IPRESE.GE.4) CURUSE = 119
988    IF (IPRESI.EQ.21.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=99
989    IF (IPRESI.EQ.59.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=23
990    IF (IPRESI.EQ.28.AND.IPRESE.EQ.3) CURUSE = 82
991    IF (CURUSE.EQ.0.AND.IPRESE.EQ.3) CURUSE = 20
992    GO TO 72
993 117 IF (IPRESI.EQ.7.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=76
994    IF (IPRESI.EQ.43.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=103
995    IF (IPRESI.EQ.57.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=107
996    IF (IPRESI.EQ.14.AND.IPRESE.GE.4) CURUSE = 112
997    IF (IPRESI.EQ.28.AND.IPRESE.EQ.3) CURUSE = 81
998    IF (CURUSE.EQ.0.AND.IPRESE.EQ.3) CURUSE = 13
999    GO TO 72
1000 118 IF (IPRESI.EQ.7.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=110
1001    IF (IPRESI.EQ.29.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=107
1002    IF (IPRESI.EQ.43.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=9
1003    IF (IPRESI.EQ.14.AND.IPRESE.GE.4) CURUSE = 109
1004    IF (IPRESI.EQ.57.AND.IPRESE.EQ.3) CURUSE = 81
1005    IF (CURUSE.EQ.0.AND.IPRESE.EQ.3) CURUSE = 13
1006    GO TO 72
1007 119 IF (IPRESI.EQ.21.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=59
1008    IF (IPRESI.EQ.59.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=21
1009    IF (IPRESI.EQ.14.AND.IPRESE.EQ.3) CURUSE = 116
1010    IF (IPRESI.EQ.28.AND.IPRESE.EQ.3) CURUSE = 83
1011    IF (IPRESI.EQ.14.AND.IPRESE.GE.4) GO TO 73
1012    IF (CURUSE.EQ.0.AND.IPRESE.EQ.3) CURUSE = 27
1013    GO TO 72
1014 120 IF (IPRESI.EQ.29.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=121
1015    IF (IPRESI.EQ.43.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=123
1016    IF (IPRESI.EQ.53.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=45
1017    IF (IPRESI.EQ.57.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=74
1018    IF (IPRESI.EQ.43.AND.IPRESE.EQ.3) CURUSE = 120
1019    IF (IPRESI.EQ.57.AND.IPRESE.EQ.3) CURUSE = 120
1020    IF (IPRESI.EQ.53.AND.IPRESE.EQ.3) CURUSE = 120

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1021 IF (IPRESI.EQ. 14 .AND. IPRESE .GE. 4) CURUSE = 112
1022 IF (CURUSE .EQ. 0 .AND. IPRESE .EQ. 3) CURUSE = 50
1023 GO TO 72
1024 121 IF (IPRESI.EQ.43.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=121
1025 IF (IPRESI.EQ.53.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=44
1026 IF (IPRESI.EQ.57.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=75
1027 IF (IPRESI .EQ. 28 .AND. IPRESE .EQ. 3) CURUSE = 120
1028 IF (IPRESI .EQ. 14 .AND. IPRESE .GE. 4) CURUSE = 112
1029 IF (CURUSE .EQ. 0 .AND. IPRESE .EQ. 3) CURUSE = 50
1030 GO TO 72
1031 122 IF (IPRESI.EQ.57.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=53
1032 IF (IPRESI.EQ.53.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=57
1033 IF (IPRESI .EQ. 28 .AND. IPRESE .EQ. 3) CURUSE = 123
1034 IF (IPRESI .EQ. 43 .AND. IPRESE .EQ. 3) CURUSE = 121
1035 IF (IPRESI .EQ. 14 .AND. IPRESE .GE. 4) CURUSE = 112
1036 IF (IPRESI .EQ. 21 .AND. IPRESE .EQ. 3) CURUSE = 130
1037 IF (IPRESI .EQ. 55 .AND. IPRESE .EQ. 3) CURUSE = 141
1038 IF (CURUSE .EQ. 0 .AND. IPRESE .EQ. 3) CURUSE = 50
1039 GO TO 72
1040 123 IF (IPRESI.EQ.28.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=122
1041 IF (IPRESI.EQ.53.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=92
1042 IF (IPRESI.EQ.57.AND.(IPRESE.EQ.5.OR.IPRESE.EQ.8))CURUSE=93
1043 IF (IPRESI .EQ. 21 .AND. IPRESE .EQ. 3) CURUSE = 133
1044 IF (IPRESI .EQ. 43 .AND. IPRESE .EQ. 3) CURUSE = 120
1045 IF (IPRESI .EQ. 14 .AND. IPRESE .GE. 4) CURUSE = 112
1046 IF (CURUSE .EQ. 0 .AND. IPRESE .EQ. 3) CURUSE = 33
1047 GO TO 72
1048 124 IF (IPRESI .EQ. 43 .AND. IPRESE .EQ. 3) CURUSE = 124
1049 GO TO 72
1050 125 IF (IPRESI .EQ. 43 .AND. IPRESE .EQ. 3) CURUSE = 124
1051 IF (CURUSE .EQ. 0) CURUSE = 125
1052 GO TO 72
1053 126 IF (IPRESI .EQ. 7 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ. 8)) CURUSE = 55
1054 IF (IPRESI .EQ. 55 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ. 8)) CURUSE = 7
1055 IF (IPRESI .EQ. 14 .AND. IPRESE .EQ. 3) CURUSE = 128
1056 IF (IPRESI .EQ. 14 .AND. IPRESE .GE. 4) GO TO 73
1057 IF (CURUSE .EQ. 0 .AND. IPRESE .EQ. 3) GO TO 13
1058 GO TO 72
1059 127 IF (IPRESI .EQ. 7 .AND. IPRESE .EQ. 3) CURUSE = 128
1060 IF (IPRESI .EQ. 14 .AND. IPRESE .GE. 4) CURUSE = 55
1061 IF (IPRESI .EQ. 55 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ. 8))
1062 1 CURUSE = 14
1063 IF (IPRESI .EQ. 5 .OR. IPRESI .EQ. 6) CURUSE = 127
1064 IF (CURUSE .EQ. 0 .AND. IPRESE .EQ. 3) CURUSE = 20
1065 GO TO 72
1066 128 IF (IPRESI .EQ. 7 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ. 8)) CURUSE=127
1067 IF (IPRESI .EQ. 14 .AND. IPRESE .GE. 4) CURUSE = 126
1068 IF (IPRESI .EQ. 55 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ. 8)) CURUSE=8
1069 IF (CURUSE .EQ. 0 .AND. IPRESE .EQ. 3) CURUSE = 13
1070 GO TO 72
1071 129 IF (IPRESI .EQ. 7 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ. 8)) CURUSE=63
1072 IF (IPRESI .EQ. 63 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ. 8)) CURUSE=7
1073 IF (IPRESI .EQ. 14 .AND. IPRESE .GE. 4) GO TO 73
1074 IF (CURUSE .EQ. 0 .AND. IPRESE .EQ. 3) CURUSE = 13
1075 GO TO 72
1076 130 IF (IPRESI .EQ. 57 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ. 8)) CURUSE=151
1077 IF (IPRESI .EQ. 21 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ. 8)) CURUSE=122
1078 IF (IPRESI .EQ. 53 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ. 8)) CURUSE=84
1079 IF (IPRESI .EQ. 14 .AND. IPRESE .GE. 4) GO TO 73
1080 IF (IPRESI .EQ. 28 .AND. IPRESE .EQ. 3) CURUSE=133

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1081      IF (CURUSE .EQ. 0 .AND. IPRESE .EQ. 3) CURUSE = 27
1082      GO TO 72
1083      131 IF (IPRESI .EQ. 21 .AND. (IPRESE.EQ.5 .OR. IPRESE.EQ.8)) CURUSE=92
1084      IF (IPRESI .EQ. 28 .AND. (IPRESE.EQ.5 .OR. IPRESE.EQ.8)) CURUSE=84
1085      IF (IPRESI .EQ. 57 .AND. (IPRESE.EQ.5 .OR. IPRESE.EQ.8)) CURUSE=24
1086      IF (IPRESI .EQ. 53 .AND. IPRESE .EQ. 3) CURUSE = 133
1087      IF (IPRESI .EQ. 14 .AND. IPRESE .GE. 4) GO TO 73
1088      IF (CURUSE .EQ. 0 .AND. IPRESE .EQ. 3) CURUSE = 33
1089      GO TO 72
1090      132 IF (IPRESI .EQ. 21 .AND. (IPRESE.EQ.5 .OR. IPRESE.EQ.8)) CURUSE=93
1091      IF (IPRESI .EQ. 28 .AND. (IPRESE.EQ.5 .OR. IPRESE.EQ.8)) CURUSE=151
1092      IF (IPRESI .EQ. 53 .AND. (IPRESE.EQ.5 .OR. IPRESE.EQ.8)) CURUSE=24
1093      IF (IPRESI .EQ. 57 .AND. IPRESE .EQ. 3) CURUSE=133
1094      IF (IPRESI .EQ. 14 .AND. IPRESE .GE. 4) GO TO 73
1095      IF (CURUSE .EQ. 0 .AND. IPRESE .EQ. 3) CURUSE = 33
1096      GO TO 72
1097      133 IF (IPRESI .EQ. 21 .AND. (IPRESE.EQ.5 .OR. IPRESE.EQ.8)) CURUSE=123
1098      IF (IPRESI .EQ. 28 .AND. (IPRESE.EQ.5 .OR. IPRESE.EQ.8)) CURUSE=130
1099      IF (IPRESI .EQ. 57 .AND. (IPRESE.EQ.5 .OR. IPRESE.EQ.8)) CURUSE=132
1100      IF (IPRESI .EQ. 53 .AND. (IPRESE.EQ.5 .OR. IPRESE.EQ.8)) CURUSE=131
1101      IF (CURUSE .EQ. 0 .AND. IPRESE .EQ. 3) CURUSE = 33
1102      IF (IPRESI .EQ. 14 .AND. IPRESE .GE. 4) GO TO 73
1103      GO TO 72
1104      134 IF (IPRESI .EQ. 53 .AND. (IPRESE.EQ.5 .OR. IPRESE.EQ.8)) CURUSE=59
1105      IF (IPRESI .EQ. 59 .AND. (IPRESE.EQ.5 .OR. IPRESE.EQ.8)) CURUSE=53
1106      IF (IPRESI .EQ. 64 .AND. IPRESE .EQ. 3) CURUSE = 136
1107      IF (IPRESI .EQ. 14 .AND. IPRESE .GE. 4) GO TO 73
1108      IF (CURUSE .EQ. 0 .AND. IPRESE .EQ. 3) CURUSE = 54
1109      GO TO 72
1110      135 IF (IPRESI .EQ. 64 .AND. (IPRESE.EQ.5 .OR. IPRESE.EQ.8)) CURUSE=59
1111      IF (IPRESI .EQ. 59 .AND. (IPRESE.EQ.5 .OR. IPRESE.EQ.8)) CURUSE=64
1112      IF (IPRESI .EQ. 53 .AND. IPRESE .EQ. 3) CURUSE = 136
1113      IF (IPRESI .EQ. 14 .AND. IPRESE .GE. 4) GO TO 73
1114      IF (CURUSE .EQ. 0 .AND. IPRESE .EQ. 3) CURUSE = 69
1115      GO TO 72
1116      136 IF (IPRESI .EQ. 53 .AND. (IPRESE.EQ.5 .OR. IPRESE.EQ.8)) CURUSE=135
1117      IF (IPRESI .EQ. 64 .AND. (IPRESE.EQ.5 .OR. IPRESE.EQ.8)) CURUSE=134
1118      IF (IPRESI .EQ. 59 .AND. (IPRESE.EQ.5 .OR. IPRESE.EQ.8)) CURUSE=152
1119      IF (IPRESI .EQ. 14 .AND. IPRESE .GE. 4) GO TO 73
1120      IF (CURUSE .EQ. 0 .AND. IPRESE .EQ. 3) CURUSE = 54
1121      GO TO 72
1122      137 IF (IPRESI .EQ. 63 .AND. (IPRESE.EQ.5 .OR. IPRESE.EQ.8)) CURUSE=57
1123      IF (IPRESI .EQ. 57 .AND. (IPRESE.EQ.5 .OR. IPRESE.EQ.8)) CURUSE=63
1124      IF (IPRESI .EQ. 14 .AND. IPRESE .GE. 4) GO TO 73
1125      IF (CURUSE .EQ. 0 .AND. IPRESE .EQ. 3) CURUSE = 58
1126      GO TO 72
1127      138 IF (IPRESI .EQ. 53 .AND. (IPRESE.EQ.5 .OR. IPRESE.EQ.8)) CURUSE=53
1128      IF (IPRESI .EQ. 53 .AND. (IPRESE.EQ.5 .OR. IPRESE.EQ.8)) CURUSE=34
1129      IF (IPRESI .EQ. 14 .AND. IPRESE .GE. 4) GO TO 73
1130      IF (CURUSE .EQ. 0 .AND. IPRESE .EQ. 3) CURUSE = 54
1131      GO TO 72
1132      139 IF (IPRESI .EQ. 53 .AND. (IPRESE.EQ.5 .OR. IPRESE.EQ.8)) CURUSE=55
1133      IF (IPRESI .EQ. 55 .AND. (IPRESE.EQ.5 .OR. IPRESE.EQ.8)) CURUSE=53
1134      IF (IPRESI .EQ. 57 .AND. IPRESE .EQ. 3) CURUSE = 141
1135      IF (IPRESI .EQ. 6 .OR. IPRESI .EQ. 5) CURUSE = 139
1136      IF (IPRESI .EQ. 14 .AND. IPRESE .GE. 4) GO TO 73
1137      IF (CURUSE .EQ. 0 .AND. IPRESE .EQ. 3) CURUSE = 54
1138      GO TO 72
1139      140 IF (IPRESI .EQ. 55 .AND. (IPRESE.EQ.5 .OR. IPRESE.EQ.8)) CURUSE=57
1140      IF (IPRESI .EQ. 57 .AND. (IPRESE.EQ.5 .OR. IPRESE.EQ.8)) CURUSE=55

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1141 IF (IPRESI .EQ. 53 .AND. IPRESE .EQ. 3) CURUSE = 141
1142 IF (IPRESI .EQ. 14 .AND. IPRESE .GE. 4) GO TO 73
1143 IF (CURUSE .EQ. 0 .AND. IPRESE .EQ. 3) CURUSE = 56
1144 GO TO 72
1145 141 IF (IPRESI .EQ. 53 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ. 8)) CURUSE=140
1146 IF (IPRESI .EQ. 55 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ. 8)) CURUSE=122
1147 IF (IPRESI .EQ. 57 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ. 8)) CURUSE=139
1148 IF (IPRESI .EQ. 64 .AND. IPRESE .EQ. 3) CURUSE = 142
1149 IF (IPRESI .EQ. 14 .AND. IPRESE .GE. 4) GO TO 73
1150 IF (CURUSE .EQ. 0 .AND. IPRESE .EQ. 3) CURUSE = 54
1151 GO TO 72
1152 142 IF (IPRESI .EQ. 64 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ. 8)) CURUSE=141
1153 IF (IPRESI .EQ. 14 .AND. IPRESE .GE. 4) GO TO 73
1154 IF (CURUSE .EQ. 0 .AND. IPRESE .EQ. 3) CURUSE = 54
1155 GO TO 72
1156 143 IF (IPRESI .EQ. 28 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ. 8)) CURUSE=66
1157 IF (IPRESI .EQ. 66 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ. 8)) CURUSE=28
1158 IF (IPRESI .EQ. 21 .AND. IPRESE .EQ. 3) CURUSE = 145
1159 IF (IPRESI .EQ. 14 .AND. IPRESE .GE. 4) GO TO 73
1160 IF (CURUSE .EQ. 0 .AND. IPRESE .EQ. 3) CURUSE = 33
1161 GO TO 72
1162 144 IF (IPRESI .EQ. 21 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ. 8)) CURUSE=66
1163 IF (IPRESI .EQ. 66 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ. 8)) CURUSE=21
1164 IF (IPRESI .EQ. 28 .AND. IPRESE .EQ. 3) CURUSE = 145
1165 IF (IPRESI .EQ. 14 .AND. IPRESE .GE. 4) GO TO 73
1166 IF (CURUSE .EQ. 0 .AND. IPRESE .EQ. 3) CURUSE = 33
1167 GO TO 72
1168 145 IF (IPRESI .EQ. 21 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ. 8)) CURUSE=143
1169 IF (IPRESI .EQ. 29 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ. 8)) CURUSE=144
1170 IF (IPRESI .EQ. 66 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ. 8)) CURUSE=24
1171 IF (IPRESI .EQ. 14 .AND. IPRESE .GE. 4) GO TO 73
1172 IF (CURUSE .EQ. 0 .AND. IPRESE .EQ. 3) CURUSE = 33
1173 GO TO 72
1174 146 IF (IPRESI .EQ. 7 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ. 8)) CURUSE=24
1175 IF (IPRESI .EQ. 21 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ. 8)) CURUSE=10
1176 IF (IPRESI .EQ. 28 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ. 8)) CURUSE=70
1177 IF (IPRESI .EQ. 14 .AND. IPRESE .GE. 4) GO TO 73
1178 IF (CURUSE .EQ. 0 .AND. IPRESE .EQ. 3) CURUSE = 13
1179 GO TO 72
1180 147 IF (IPRESI .EQ. 55 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ. 8)) CURUSE=48
1181 IF (IPRESI .EQ. 43 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ. 8)) CURUSE=91
1182 IF (IPRESI .EQ. 57 .AND. IPRESE .EQ. 3) CURUSE = 148
1183 IF (IPRESI .EQ. 14 .AND. IPRESE .GE. 4) GO TO 73
1184 IF (CURUSE .EQ. 0 .AND. IPRESE .EQ. 3) CURUSE = 33
1185 GO TO 72
1186 148 IF (IPRESI .EQ. 57 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ. 8)) CURUSE=147
1187 IF (IPRESI .EQ. 55 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ. 8)) CURUSE=45
1188 IF (IPRESI .EQ. 64 .AND. IPRESE .EQ. 3) CURUSE = 149
1189 IF (IPRESI .EQ. 14 .AND. IPRESE .GE. 4) GO TO 73
1190 IF (CURUSE .EQ. 0 .AND. IPRESE .EQ. 3) CURUSE = 33
1191 GO TO 72
1192 149 IF (IPRESI .EQ. 64 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ. 8)) CURUSE=148
1193 IF (IPRESI .EQ. 14 .AND. IPRESE .GE. 4) GO TO 73
1194 IF (CURUSE .EQ. 0 .AND. IPRESE .EQ. 3) CURUSE = 33
1195 GO TO 72
1196 150 IF (IPRESI .EQ. 29 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ. 8)) CURUSE=42
1197 IF (IPRESI .EQ. 42 .AND. (IPRESE .EQ. 5 .OR. IPRESE .EQ. 8)) CURUSE=28
1198 IF (IPRESI .EQ. 14 .AND. IPRESE .GE. 4) GO TO 73
1199 IF (CURUSE .EQ. 0 .AND. IPRESE .EQ. 3) CURUSE = 33
1200 GO TO 72

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1201      151 IF(IPRESI .EQ. 21 .AND.(IPRESE.EQ.5 .OR. IPRESE.EQ.8)) CURUSE=53
1202      IF(IPRESI .EQ. 53 .AND.(IPRESE.EQ.5 .OR. IPRESE.EQ.8)) CURUSE=21
1203      IF (IPRESI .EQ. 28 .AND. IPRESE .EQ. 3) CURUSE = 132
1204      IF (IPRESI .EQ. 57 .AND. IPRESE .EQ. 3) CURUSE = 130
1205      IF (IPRESI .EQ. 14 .AND. IPRESE .GE. 4) GO TO 73
1206      IF (CURUSE .EQ. 0 .AND. IPRESE .EQ. 3) CURUSE = 27
1207      GO TO 72
1208      152 IF(IPRESI .EQ. 53 .AND.(IPRESE.EQ.5 .OR. IPRESE.EQ.8)) CURUSE=64
1209      IF(IPRESI .EQ. 64 .AND.(IPRESE.EQ.5 .OR. IPRESE.EQ.8)) CURUSE=53
1210      IF (IPRESI .EQ. 59 .AND. IPRESE .EQ. 3) CURUSE = 136
1211      IF (IPRESI .EQ. 14 .AND. IPRESE .GE. 4) GO TO 73
1212      IF (CURUSE .EQ. 0 .AND. IPRESE .EQ. 3) CURUSE = 152
1213      GO TO 72
1214      69 CURUSE = 69
1215      GO TO 72
1216      73 CURUSE = IPREVI
1217      C   FOR CASE WHERE PRESENT ITEM = 0 (NO CHANGE)
1218      GO TO 72
1219      70 CURUSE = 0
1220      C   FOR BAD DATA
1221      GO TO 72
1222      300 IF (IPRESE .EQ. 3 .OR. IPRESE .EQ. 7 .OR. IPRESE .EQ. 12) CURUSE=
1223      1 IPRESI
1224      IF (IPRESE .EQ. 5 .OR. IPRESE .EQ. 8) CURUSE = 4
1225      IF ((IPRESI .EQ. 5 .OR. IPRESI .EQ. 6) .AND.(IPRESE .EQ. 1 .OR.
1226      1 IPRESE .EQ. 2)) CURUSE = 3
1227      GO TO 72
1228      301 CURUSE = -3
1229      C   ABOVE FOR ENDING OF UNKNOWN PERIOD
1230      GO TO 72
1231      71 CURUSE = -1
1232      C   FOR PREVIOUS BAD DATA
1233      72 CONTINUE
1234      IF (IPRESE .EQ. 12) CURUSE=IPRESI
1235      C   END OF FUNCTION "CURUSE"
1236      RETURN
1237      END
END OF FILE

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1      SUBROUTINE USETAB(IBEFFN,IAFTFN,IBEF1,IAFT1,ICDS1,ICDS2,ICON23,
2      1 ICOTYP, IDIAGN)
3      C      THIS SUBROUTINE (USETAB) TABULATES DAYS UNDER EACH LAND USE PLUS
4      C      PERCENTAGES OF TOTAL NON-VIRGIN DAYS, BURN INFORMATION, ETC.
5      C      DEFAULT ADDITIONS ARE MADE FOR DRYING MAIZE AND BARE TO WEED TO
6      C      SECOND GROWTH TRANSITIONS. APPROPRIATE CERTAINTY CODES ARE ALSO
7      C      COMPUTED FOR EACH ITEM TABULATED. OUTPUT HAS 22 LINES OF 80 COLS.
8      C      SUBPROGRAMS CALLED ARE: WEATBD, CURUSE AND DA1900.
9      C      THE FORTRAN MONITOR "MINUSZERO" FEATURE IS USED, AS IS
10     C      THE MTS LOGICAL COMPARISON OF CHARACTERS ("LCOMC") FUNCTION.
11     C      LAST REVISION: JUNE 18, 1977
12     C      INTEGER DA1900, CURUSE
13     C      INTEGER VAR367, VAR370, VAR371, VAR372, VAR373, VAR374, VAR375,
14     C      1VAR376, VAR377, VAR378, VAR387,VAR369
15     C      ABOVE TYPE DECLARATION FOR CARD TYPE 23
16     C      INTEGER VAR006, VAR007, VAR008, VAR011
17     C      INTEGER VAR020,VAR002,VAR005,VAR009,VAR010,VAR004
18     C      ABOVE TYPE DECLARATION FOR CARD TYPE 1
19     C      INTEGER VAR023, VAR028, VAR031, VAR033, VAR040, VA042A
20     C      ABOVE TYPE DECLARATION FOR CARD TYPE 2
21     C      COMMON VAR002(903), VAR004(903), VAR005(903), VAR006(903),
22     C      1VAR007(903),VAR008(903),VAR009(903),VAR010(903), VAR011(903),
23     C      1IDUM6(903), IDUM7(903), IDUM8(903), IDUM9(903),
24     C      2 VAR020(903), VAR021(903)
25     C      COMMON VAR023(903),VAR025(903), VAR028(903), VAR030(903),
26     C      1VAR031(903),VAR032(903),VAR033(903), VAR040(903), VA042A(903)
27     C      COMMON/C2/RAINBD, EVAPBD, SUNBD, MISPRE, MISEVA, MISINS
28     C      COMMON/MZ/MINZRC
29     C      COMMON/MAX24/ RMAX24, MRDATE
30     C      ABOVE COMMON MZ FOR MINUS ZERO BLOCK DATA SECTION
31     C      DIMENSION VAR367(4320), VAR369(4320), VAR370(4320), VAR371(4320),
32     C      1VAR372(4320), VAR373(4320), VAR374(4320), VAR375(4320),
33     C      1VAR376(4320), VAR377(4320), VAR378(4320), VAR387(4320)
34     C      DIMENSION KT367(100), KT369(100), KT370(100),
35     C      1KT371(100), KT372(100), KT373(100), KT374(100), KT375(100),
36     C      2KT376(100), KT377(100), KT378(100), KT387(100), KTDAT(100),
37     C      3 KCURUS(100)
38     C      DIMENSION JT367(100), JT369(100), JT370(100),
39     C      1JT371(100), JT372(100), JT373(100), JT374(100), JT375(100),
40     C      2JT376(100), JT377(100), JT378(100), JT387(100), JTDAT(100),
41     C      3 JCURUS(100)
42     C      DIMENSION KAS367(100), KAS369(100), KAS370(100), KAS371(100),
43     C      1KAS372(100), KAS373(100), KAS374(100), KAS375(100), KAS376(100),
44     C      1KAS377(100), KAS378(100), KAS387(100)
45     C      DIMENSION JAS367(100), JAS369(100), JAS370(100), JAS371(100),
46     C      1JAS372(100), JAS373(100), JAS374(100), JAS375(100), JAS376(100),
47     C      1JAS377(100), JAS378(100), JAS387(100)
48     C      DIMENSION IPLINE(20), IPL2(20)
49     C      DIMENSION RAIN(150)
50     C      EQUIVALENCE (KT367(1),KAS367(1)) , (KT369(1),KAS369(1)) , (KT370(1
51     C      1),KAS370(1)) , (KT371(1),KAS371(1)) , (KT372(1),KAS372(1)) ,
52     C      1(KAS373(1),KT373(1)) , (KT374(1),KAS374(1)) , (KT375(1),KAS375(1))
53     C      1, (KT376(1),KAS376(1)) , (KT377(1),KAS377(1)) , (KT378(1),KAS378(1))
54     C      1),(KT387(1),KAS387(1))
55     C      EQUIVALENCE (JT367(1),JAS367(1)) , (JT369(1),JAS369(1)) , (JT370(1
56     C      1),JAS370(1)) , (JT371(1),JAS371(1)) , (JT372(1),JAS372(1)) ,
57     C      1(JAS373(1),JT373(1)) , (JT374(1),JAS374(1)) , (JT375(1),JAS375(1))
58     C      1, (JT376(1),JAS376(1)) , (JT377(1),JAS377(1)) , (JT378(1),JAS378(1)
59     C      1),(JT387(1),JAS387(1))
60     C      CALL FTNCMD('SET MINUSZERO=ON',16)

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61      IF (VAR367(1) .GE. 1) GO TO 999
62      READ (10,9005)(VAR367(114), VAR369(114), VAR370(114), VAR371(114),
63      1 VAR372(114),
64      1VAR373(114), VAR374(114), VAR375(114), VAR376(114), VAR377(114),
65      2VAR378(114), VAR387(114), 114=1,ICON23)
66      9005 FORMAT(4X,I5,5X,I4,I2,3I3, I2, I3, 3I2, 20X, I3)
67      C      ABOVE FORMAT 9005 IS FOR CARD 23 INFORMATION IN ONE23
68      999      CCNTINUE
69              DO 562 I10=1,ICDS2
70      C      FINDS CARD 2 INFORMATION LINE NOS. FOR BEFORE AND AFTER FIELDS
71              IF(VAR023(I10) .EQ. 1BEFFN) 1BEF2=I10
72              IF(VAR023(I10) .EQ. 1AFTFN) 1AFT2=I10
73      562      CCNTINUE
74              MT001 = 0
75              MT002 = 0
76              MT003 = 0
77              MT004 = 0
78              MT005 = 0
79              MT006 = 0
80              MT007 = 0
81              MT008 = 0
82              MT009 = 0
83              MT010 = 0
84              MT011 = 0
85              TAB012 = 0.
86              TAB013 = 0.
87              MT014 = 0
88              MT015 = 0
89              TAB016 = 0.
90              MT017 = 0
91              MT018 = 0
92              MT019 = 0
93              MT020 = 0
94              MT021 = 0
95              TAB022 = 0.
96              MT023 = 0
97              MT024 = 0
98              TAB025 = 0.
99              MT026 = 0
100             MT027 = 0
101             TAB028 = 0.
102             MT029 = 0
103             TAB030 = 0.
104             MT031 = 0
105             MT032 = 0
106             MT033 = 0
107             TAB034 = 0.
108             MT035 = 0
109             MT036 = 0
110             TAB037 = 0.
111             MT038 = 0
112             MT039 = 0
113             TAB040 = 0.
114             MT041 = 0
115             MT042 = 0
116             TAB043 = 0.
117             MT044 = 0
118             MT045 = 0
119             TAB046 = 0.
120             MT047 = 0

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121	MT049 = 0
122	TAB049 = 0.
123	MT050 = 0
124	MT051 = 0
125	TAB052 = 0.
126	MT053 = 0
127	MT054 = 0
128	TAB055 = 0.
129	MT056 = 0
130	MT057 = 0
131	TAB058 = 0.
132	MT059 = 0
133	MT060 = 0
134	TAB061 = 0.
135	MT062 = 0
136	MT063 = 0
137	TAB064 = 0.
138	MT065 = 0
139	MT066 = 0
140	TAB067 = 0.
141	MT068 = 0
142	MT069 = 0
143	TAB070 = 0.
144	MT071 = 0
145	MT072 = 0
146	TAB073 = 0.
147	MT074 = 0
148	MT075 = 0
149	TAB076 = 0.
150	MT077 = 0
151	MT078 = 0
152	TAB079 = 0.
153	MT080 = 0
154	MT081 = 0
155	TAB082 = 0.
156	MT083 = 0
157	MT084 = 0
158	TAB085 = 0.
159	MT086 = 0
160	MT087 = 0
161	TAB088 = 0.
162	MT089 = 0
163	MT090 = 0
164	TAB091 = 0.
165	MT092 = 0
166	MT093 = 0
167	TAB094 = 0.
168	MT095 = 0
169	MT096 = 0
170	TAB097 = 0.
171	MT098 = 0
172	MT099 = 0
173	TAB100 = 0.
174	MT101 = 0
175	MT102 = 0
176	TAB103 = 0.
177	MT104 = 0
178	MT105 = 0
179	TAB106 = 0.
180	MT107 = 0

181	MT108 = 0
182	TAB109 = 0.
183	MT110 = 0
184	MT111 = 0
185	TAB112 = 0.
186	MT113 = 0
187	MT114 = 0
188	TAB115 = 0.
189	MT116 = 0
190	MT117 = 0
191	TAB118 = 0.
192	MT119 = 0.
193	MT120 = 0
194	TAB121 = 0.
195	MT122 = 0
196	MT123 = 0
197	TAB124 = 0.
198	MT125 = 0
199	MT126 = 0
200	TAB127 = 0.
201	MT128 = 0
202	MT129 = 0
203	TAB130 = 0.
204	MT131 = 0
205	MT132 = 0
206	TAB133 = 0.
207	MT134 = 0
208	MT135 = 0
209	TAB136 = 0.
210	MT137 = 0
211	MT138 = 0
212	TAB139 = 0.
213	MT140 = 0
214	MT141 = 0
215	TAB142 = 0.
216	MT143 = 0
217	MT144 = 0
218	TAB145 = 0.
219	MT146 = 0
220	MT147 = 0
221	TAB148 = 0.
222	MT149 = 0
223	MT150 = 0
224	TAB151 = 0.
225	MT152 = 0
226	MT153 = 0
227	TAB154 = 0.
228	MT155 = 0
229	MT156 = 0
230	TAB157 = 0.
231	MT158 = 0
232	MT159 = 0
233	TAB160 = 0.
234	MT161 = 0
235	MT162 = 0
236	TAB163 = 0.
237	MT164 = 0
238	MT165 = 0
239	TAB166 = 0.
240	MT167 = 0

241	MT168 = 0
242	TAB169 = 0.
243	MT170 = 0
244	MT171 = 0
245	TAB172 = 0.
246	MT173 = 0
247	MT174 = 0
248	TAB175 = 0.
249	MT176 = 0
250	MT177 = 0
251	TAB178 = 0.
252	MT179 = 0
253	MT180 = 0
254	TAB181 = 0.
255	MT182 = 0
256	MT183 = 0
257	TAB184 = 0.
258	MT185 = 0
259	MT186 = 0
260	TAB187 = 0.
261	MT188 = 0
262	MT189 = 0
263	TAB190 = 0.
264	MT191 = 0
265	MT192 = 0
266	TAB193 = 0.
267	MT194 = 0
268	MT195 = 0
269	TAB196 = 0.
270	MT197 = 0
271	MT198 = 0
272	TAB199 = 0.
273	MT200 = 0
274	MT201 = 0
275	TAB202 = 0
276	MT203 = 0
277	MT204 = 0
278	TAB205 = 0.
279	MT206 = 0
280	MT207 = 0
281	TAB208 = 0.
282	MT209 = 0
283	MT210 = 0
284	TAB211 = 0.
285	MT212 = 0
286	MT213 = 0
287	TAB214 = 0.
288	MT215 = 0
289	MT216 = 0
290	MT218 = 0
291	MT219 = 0
292	MT220 = 0
293	MT221 = 0
294	MT222 = 0
295	MT223 = 0
296	MT224 = 0
297	MT225 = 0
298	MT226 = 0
299	MT227 = 0
300	MT228 = 0

301	MT229	= 0
302	MT230	= 0
303	MT231	= 0
304	MT232	= 0
305	MT233	= 0
306	MT234	= 0
307	MT235	= 0
308	MT236	= 0
309	MT237	= 0
310	MT238	= 0
311	MT239	= 0
312	MT240	= 0
313	MT241	= 0
314	MT242	= 0
315	MT243	= 0
316	MT244	= 0
317	MT245	= 0
318	MT246	= 0
319	MT247	= 0
320	MT248	= 0
321	MT249	= 0
322	MT250	= 0
323	MT251	= 0
324	MT252	= 0
325	MT253	= 0
326	MT254	= 0
327	MT255	= 0
328	MT256	= 0
329	MT257	= 0
330	MT258	= 0
331	MT259	= 0
332	MT260	= 0
333	MT261	= 0
334	MT262	= 0
335	MT263	= 0
336	MT264	= 0
337	MT265	= 0
338	MT266	= 0
339	MT267	= 0
340	MT268	= 0
341	MT269	= 0
342	MT270	= 0
343	MT271	= 0
344	MT272	= 0
345	MT273	= 0
346	MT274	= 0
347	MT275	= 0
348	MT276	= 0
349	MT277	= 0
350	MT278	= 0
351	MT279	= 0
352	MT280	= 0
353	MT281	= 0
354	MT282	= 0
355	MT283	= 0
356	MT284	= 0
357	MT285	= 0
358	MT286	= 0
359	MT287	= 0
360	MT288	= 0

361	MT289	= 0
362	MT290	= 0
363	MT291	= 0
364	MT292	= 0
365	MT293	= 0
366	MT294	= 0
367	MT295	= 0
368	MT296	= 0
369	MT297	= 0
370	MT298	= 0
371	MT299	= 0
372	MT300	= 0
373	MT301	= 0
374	MT302	= 0
375	MT303	= 0
376	MT304	= 0
377	MT305	= 0
378	MT306	= 0
379	MT307	= 0
380	MT308	= 0
381	MT309	= 0
382	MT310	= 0
383	MT311	= 0
384	MT312	= 0
385	MT313	= 0
386	MT314	= 0
387	MT315	= 0
388	MT316	= 0
389	MT317	= 0
390	MT318	= 0
391	MT319	= 0
392	MT320	= 0
393	MT321	= 0
394	MT322	= 0
395	MT323	= 0
396	MT324	= 0
397	MT325	= 0
398	MT326	= 0
399	MT327	= 0
400	MT328	= 0
401	MT329	= 0
402	MT330	= 0
403	MT331	= 0
404	MT332	= 0
405	MT333	= 0
406	MT334	= 0
407	MT335	= 0
408	MT336	= 0
409	MT337	= 0
410	MT338	= 0
411	MT339	= 0
412	MT340	= 0
413	MT341	= 0
414	MT342	= 0
415	MT343	= 0
416	MT344	= 0
417	MT345	= 0
418	MT346	= 0
419	MT347	= 0
420	MT348	= 0

421	MT349 = 0
422	MT350 = 0
423	MT351 = 0
424	MT352 = 0
425	MT353 = 0
426	MT354 = 0
427	MT355 = 0
428	MT356 = 0
429	MT357 = 0
430	MT358 = 0
431	MT359 = 0
432	MT360 = 0
433	MT361 = 0
434	MT362 = 0
435	MT363 = 0
436	MT364 = 0
437	MT365 = 0
438	MT366 = 0
439	MT367 = 0
440	MT368 = 0
441	MT369 = 0
442	MT370 = 0
443	MT371 = 0
444	MT372 = 0
445	MT373 = 0
446	MT374 = 0
447	MT375 = 0
448	MT376 = 0
449	MT377 = 0
450	MT378 = 0
451	MT379 = 0
452	MT380 = 0
453	TAB217 = 0.
454	IPASTS = 0
455	IWFEE00 = 0
456	IBARED = 0
457	IGRMZD = 0
458	LUNKS = 0
459	LUNKD = 0
460	IFALLS = 0
461	IFALLD = 0
462	LNOBUS = 0
463	IGRMZS = 0
464	LGRMZS = 0
465	LGRMZD = 0
466	LUNKE = 0
467	KPASTS = 0
468	LT007 = 0
469	LT008 = 0
470	LT005 = 0
471	LFELL = 0
472	LT009 = 0
473	LCAPAG = 0
474	LT011 = 0
475	LVIRBU = 0
476	LCAPJB = 0
477	LT003 = 0
478	LT002 = 0
479	KCARDS = 0
480	I3 = 1

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481      K3 = 1
482      J3 = 1
483      INSKIP = 0
484      IMPNTD = 0
485      ICCTOT = 0
486      ICTPRV = 0
487      IBEGIN = 0
488      IEND = 0
489      IS2 = 0
490      DO 201 IR=1,150
491 201  RAIN(IR) = 0.
492      IBOR1 = IBEF1
493  C      IBOR1 IS THE ORIGINAL BEFORE FIELD CARD 1 LINE NO. BEFORE ANY
494  C      ALTERATIONS TO ACCOMMODATE INTERVENING SAMPLES
495      IROUND = 1
496  C      IROUND IS CCOUNTER FOR BEFORE OR AFTER ROUND: 1=BEFORE
497      IRPREV = 0
498  C      IRPREV IS IROUND OF THE PREVIOUS ROUND
499      LBEGIN = 0
500      IF((ICOTYP.EQ.7)LBEGIN = CAL900(VAR006(IBEFL),VAR007(IBEFL),
501 1  VAR008(IBEFL), 1, 0)
502  C      LBEGIN IS THE BEGINNING DATE OF THE ENTIRE COMPARISON INTERVAL.
503  C      REGARDLESS OF WHETHER OR NOT OTHER SAMPLES WERE TAKEN WITHIN THE INTERVAL
504      IF(VAR011(IBEFL).EQ. 1) GO TO 500
505      GO TO 501
506 500  CONTINUE
507      IF(VAR011(IAFT1).EQ. 1) GO TO 502
508  C      FOLLOWING FOR FIELDS WHERE BEFORE FIELD IS VIRGIN
509  C      AND AFTER FIELD IS NOT
510      IF (VAR010(IAFT1).GE. 1 .AND. ICOTYP .EQ. 1) GO TO 950
511  C      TRANSFER FOR CASES WHERE PREVIOUS FIELDS AT SAME LOCATION
512  C      MUST BE EXAMINED FOR CARD 23 HISTORY FOR PART OF INTERVAL
513      IF(VAR010(IAFT1).GE.1.AND.VAR010(IAFT1).NE.IBEFFN)GO TO 984
514      LCURLS = 1
515  C      LAST CURRENT USE ASSIGNED 1 (VIRGIN) FOR USE TAB CALCULATIONS
516      IPV1 = IAFT1
517      IPV2 = IAFT2
518  C      ASSIGNS IPV1 AND IPV2 AS AFTER FIELD VALUES FOR TYPE 1
519  C      COMPARISONS WITH NO INTERVENING SAMPLES
520      GO TO 549
521  C      TRANSFER FOR CASES WHERE BEFORE FIELD IS VIRGIN AND AFTER NOT
522 984  CONTINUE
523  C      COLLECTS USED-VIRGIN COMPARISONS WHERE THERE ARE INTERVENING
524  C      "PREVIOUS" SAMPLES
525      IAF = IAFT1
526 982  DO 981 I111 = 1,ICCS1
527      IF (VAR002(I111).EQ. VAR010(IAF)) GO TO 983
528 981  CONTINUE
529      GO TO 508
530 983  IF (VAR011(I111).AE.1) IBEFL = I111
531      IF (VAR011(I111).EQ. 1) IAF = VAR010(IAF)
532      IF (VAR011(I111).EQ. 1) GO TO 982
533      GO TO 501
534 950  CONTINUE
535  C      COLLECTS VIRGIN PAIR COMPARISONS WHERE PREVIOUS FIELDS PRESENT
536      DO 949 I120=1,ICDS1
537  C      FINDS CARD 1 & 2 INFORMATION
538      IF (VAR002(I120).EQ. VAR010(IAFT1)) IBEFL = I120
539      IF (VAR023(I120).EQ. VAR010(IAFT2)) IBEF2 = I120
540      IROUND = 2

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541      949 CONTINUE
542      GO TO 501
543      502 CONTINUE
544      C COLLECTS CASES WHERE BCTH BEFORE AND AFTER ARE VIRGIN
545      IEND = CA1900(VAR006(IAFT1),VAR007(IAFT1),VAR008(IAFT1),1,0)
546      IBEGIN = CA1900(VAR006(IBEFT1),VAR007(IBEFT1),VAR008(IBEFT1),1,0)
547      IF(IEND.EQ.IBEGIN) IBEGIN=IBEGIN - 1
548      MT018 = IEND - IBEGIN
549      MT044 = MT018
550      MT045 = 1
551      TAB046 = 100.0
552      GO TO 505
553      C TRANSFERS TO WRITING SECTION
554      501 CONTINUE
555      C COLLECTS FIELDS WHERE NEITHER BEFORE NOR AFTER IS VIRGIN
556      DO 405 I51=1,20
557      C INITIALIZES IPLINE AND IPL2 AT ZERO
558      IPLINE(I51) = 0
559      IPL2(I51) = 0
560      405 CONTINUE
561      IF (ICOTYP .EQ. 7 .OR. ICOTYP .EQ. 1) GO TO 990
562      IBEF1 = 0
563      IF (.NOT.(VAR010(IAFT1) .GE. 1)) GO TO 990
564      DO 928 I106 = 1,ICDS1
565      C FINDS CARD 1 & 2 INFO. FOR COMPARISONS OTHER THAN SEQ. & VIRG.PRS.
566      IF (VAR002(I106).EQ.VAR010(IAFT1)) IBEF1 = I106
567      IF (VAR023(I106).EQ.VAR010(IAFT1)) IBEF2 = I106
568      988 CONTINUE
569      990 CONTINUE
570      IF (IBEF1 .EQ. 0) GO TO 549
571      C TRANSFER FOR TYPE 2, 4 & 5 COMPARISONS WHERE NO PREVIOUS SAMPLES TAKEN
572      NPVSAM = 1
573      IPLINE(1) = IBEF1
574      C IPLINE IS THE ARRAY OF PREVIOUS LINE NUMBERS FOR CARD 1 INFO. THIS WILL
575      C BE IN REVERSE DATE ORDER
576      IPL2(1) = IBEF2
577      IPV1 = IBEF1
578      IPV2 = IBEF2
579      400 CONTINUE
580      C FINDS PREVIOUS FIELDS BEFORE THE "BEFORE FIELD" IN TIME
581      IPV1 = IPLINE(NPVSAM)
582      IF (VAR010(IPV1) .GE. 1) GO TO 401
583      GO TO 407
584      401 CONTINUE
585      DO 403 I50=1,ICDS1
586      C FINDS CARD 1 INFO. FOR PREVIOUS FIELDS
587      IF (VAR002(I50) .EQ. VAR010(IPV1)) GO TO 404
588      403 CONTINUE
589      WRITE(6,2000) VAR010(IPV1), IBEFFN, IAFTEFN
590      2000 FORMAT(1X,'PREVIOUS FIELD CARD 1 INFO. MISSING FOR FN:',I5,
591      1/1X,'IN COMPARISON OF: BEFORE FIELD',I5,', AFTERFIELD',I5 ,
592      2 20(1X,/), 1X)
593      GO TO 508
594      404 CONTINUE
595      NPVSAM=NPVSAM + 1
596      C NUMBER OF PREVIOUS SAMPLES (INCLUDING "BEFORE" FIELD)
597      IPLINE(NPVSAM) = I50
598      C LINE NUMBER OF CARD 1 INFO. FOR THIS PREVIOUS SAMPLE
599      DO 362 I60 = 1,ICOS2
600      C FINDS CARD 2 INFO. FOR PREVIOUS FIELDS

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601      IF(VAR023(I60) .EQ. VAR010(IPV1) ) GO TO 363
602      362 CONTINUE
603      WRITE(6,2050) VAR010(IPV1),IBEFFN,IAFTFN
604      2050 FORMAT(1X,'PREVIOUS FIELD CARD 2 INFO. MISSING FOR FN:',I5,
605      1/1X,'IN COMPARISON OF: BEFORE FIELD',I5,',', AFTER FIELD',
606      2 I5, 20(1X,/), 1X)
607      GO TO 508
608      363 IPL2(NPVSAM) = I60
609      C LINE NUMBER OF CARD 2 INFO. FOR THIS PREVIOUS SAMPLE
610      GO TO 400
611      407 CONTINUE
612      I52 = NPVSAM + 1
613      402 CONTINUE
614      C BEGINNING OF EXPLICIT DC LCOP ENDING AT STATEMENT 406, I52 IS COUNTER
615      C DOES ONE ITERATION FOR EACH "PREVIOUS" SAMPLE (INCLUDING BEFORE SAMPLE)
616      C COUNTER IS DECREMENTED TO ZERO AS IPLINE ARRAY IS IN REVERSE DATE ORDER
617      I52 = I52 - 1
618      IF (I52 .LE. 0) GO TO 406
619      IPV1 = IPLINE(I52)
620      IPV2 = IPL2(I52)
621      IF (I52 .EQ. NPVSAM) LCURUS = 1
622      C ASSIGNS VIRGIN AS LAST CURRENT USE FOR THE FIRST EVENT
623      C OF THE HISTORY PERIOD BEFORE THE EARLIEST SAMPLE
624      IF (VAR011(IPV1) .EQ. 1) GO TO 549
625      C TRANSFER IF PRESENT "BEFORE" FIELD USE IS VIRGIN
626      DO 507 I1=1,ICCN23
627      C FINDS PREVIOUS AND BEFORE FIELD INFORMATION IN ONE23
628      IF(IVAR367(I1).EQ.VAR002(IPV1).AND..NOT.(VAR369(I1).GT.0))GO TO 506
629      507 CONTINUE
630      WRITE (12,9021) VAR002(IPV1)
631      9021 FORMAT(1X,'NO DATA FOUND FOR BEFORE FIELD ',I5,' IN FILE ONE23',
632      1 20(1X,/),1X,/1X)
633      C ABOVE FORMAT 9021 HOLDS SPACE FOR CASE IN OUTPUT (14 LINES) IF
634      C NO HISTORY DATA EXISTS
635      GO TO 508
636      506 CONTINUE
637      DO 509 I2 = 1,100
638      C COUNTS CARDS FOR CASE
639      ICUR23 = I2 + I1 - 1
640      IF (ICOTYP .EQ. 1 .AND. VAR371(ICUR23) .EQ. 1
641      1 .AND. VAR372(ICUR23) .EQ. 1) LBEGIN = 0A1900(
642      2 VAR375(ICUR23),VAR376(ICUR23), VAR377(ICUR23),1,1)
643      IF(IVAR370(ICUR23) .EQ. 1) GO TO 511
644      IF(IVAR367(ICUR23).NE.VAR002(IPV1).OR.VAR369(ICUR23).GT.0)GO TO 513
645      509 CONTINUE
646      WRITE (12,9024)VAR002(IPV1)
647      9024 FORMAT(1X,'MORE THAN 100 CARDS FOR BEFORE FIELD NO. ',I5,20(1X,
648      1 /), 1X)
649      GO TO 508
650      510 CONTINUE
651      WRITE (12,9022) VAR002(IPV1)
652      9022 FORMAT(1X,'ERROR: NO LAST CARD CODE FOR BEFORE FIELD NO. ',I5,
653      1 20(1X,/), 1X)
654      GO TO 508
655      511 CONTINUE
656      ICCASE = I2 + 1
657      C AN ADDITIONAL 1 IS ADDED FOR THE SAMPLING DATE PSEUDOEVENT
658      C ICCASE IS NUMBER OF CARDS FOR CASE
659      IF (VAR377(ICUR23) .EQ. 0 .OR. VAR377(ICUR23)
660      1 .EQ. -0) ICCASE = ICCASE - 1

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661 C REDUCES NO OF CARDS FOR CASE BY 1 IF YEAR FOR LAST
662 C CARD 23 EVENT IS 0 OR BLANK
663 IFCFC = I1
664 C IFCFC IS FIRST CARD FOR CASE
665 350 CONTINUE
666 C RE-ENTRY POINT FOR ROUND 2 FROM STATEMENT 553
667 IF (ICOTYP.EQ. 7 .OR. ICOTYP.EQ. 1) J3 = 1
668 IF (ICOTYP.EQ. 7 .OR. ICOTYP.EQ. 1) I3 = 1
669 C I3 IS A COUNTER FOR EXPLICIT DO LOOP BEGINNING AT 522 CONTINUE
670 IF (ICOTYP.NE.7 .AND. ICOTYP.NE.1 .AND. K3.GT.1) GO TO 987
671 IF (INSKIP.EQ. 1) GO TO 987
672 DO 527 I7=1,100
673 C INITIALIZES "K" AND "J" ARRAYS WITH ALL ITEMS EQUAL TO ZERO
674 KAS367(I7) = 0
675 JAS367(I7) = 0
676 KAS369(I7) = 0
677 JAS369(I7) = 0
678 KAS370(I7) = 0
679 JAS370(I7) = 0
680 KAS371(I7) = 0
681 JAS371(I7) = 0
682 KAS372(I7) = 0
683 JAS372(I7) = 0
684 KAS373(I7) = 0
685 JAS373(I7) = 0
686 KAS374(I7) = 0
687 JAS374(I7) = 0
688 KAS375(I7) = 0
689 JAS375(I7) = 0
690 KAS376(I7) = 0
691 JAS376(I7) = 0
692 KAS377(I7) = 0
693 JAS377(I7) = 0
694 KAS378(I7) = 0
695 JAS378(I7) = 0
696 KAS379(I7) = 0
697 JAS379(I7) = 0
698 KAS380(I7) = 0
699 KTDATE(I7) = 0
700 JTDATE(I7) = 0
701 KCURUS(I7) = 0
702 JCURUS(I7) = 0
703 527 CONTINUE
704 987 CONTINUE
705 ICCTOT = ICCTCT + ICCASE
706 C ICCTOT IS THE TOTAL NO. OF CARDS (FROM ALL CASES)
707 IF (ICOTYP.EQ. 7 .OR. ICOTYP.EQ. 1) ICCTOT = ICCASE
708 ICTPRV = ICTPRV + 1
709 IF (ICOTYP.EQ. 7 .OR. ICOTYP.EQ. 1) ICTPRV = 1
710 IX4 = 0
711 DO 523 I4=ICTPRV,ICCTCT
712 C PUTS CARD 23 INFORMATION FOR CASE IN K ARRAY AND CALCULATES IDATE
713 IX4 = IX4 + 1
714 LINE = IFCFC + IX4 - 1
715 IF (I4.EQ. ICCTCT) GO TO 352
716 GO TO 353
717 352 CONTINUE
718 C FOLLOWING FOR SAMPLING CASE PSEUDOEVENTS
719 IF (IROUND.EQ. 2 .AND. ICOTYP.EQ. 7) IPV1=IAFT1
720 IF (IROUND.EQ. 2 .AND. ICOTYP.NE. 7 .AND. ICOTYP.NE. 1 .AND. I52.LE. 1) IPV1

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721      I = IAF11
722      KAS367(I4) = VAR002(IPV1)
723      KAS370(I4) = 2
724      C    LAST CARD ASSIGNED VALUE OF "2" FOR SAMPLING PSEUDOEVENT
725      KAS369(I4) = 0
726      KAS371(I4) = -2
727      C    ITEM CODE OF "-2" ASSIGNED FOR SAMPLING PSEUDOEVENT
728      KAS372(I4) = -2
729      C    EVENT CODE VALUE OF "-2" ASSIGNED FOR PSEUDOEVENT
730      KAS373(I4) = 0
731      KAS375(I4) = VAR006(IPV1)
732      KAS376(I4) = VAR007(IPV1)
733      KAS377(I4) = VAR008(IPV1)
734      KAS378(I4) = 1
735      KAS387(I4) = 0
736      KTDATE(I4) = DA1900(VAR006(IPV1),VAR007(IPV1),VAR008(IPV1),
737      10,0)
738      GO TO 523
739      353 CONTINUE
740      C    FOLLOWING FOR EVENTS RECORDED IN ONE23 (NOT THE SAMPLING
741      C    DATE PSEUDOEVENTS WHICH ARE DERIVED FROM CARD 1 INFORMATION
742      KAS367(I4) = VAR367(LINE)
743      KAS370(I4) = VAR370(LINE)
744      KAS369(I4) = VAR369(LINE)
745      KAS371(I4) = VAR371(LINE)
746      KAS372(I4) = VAR372(LINE)
747      KAS373(I4) = VAR373(LINE)
748      KAS374(I4) = VAR374(LINE)
749      KAS375(I4) = VAR375(LINE)
750      KAS376(I4) = VAR376(LINE)
751      KAS377(I4) = VAR377(LINE)
752      KAS378(I4) = VAR378(LINE)
753      KAS387(I4) = VAR387(LINE)
754      KTDATE(I4) = DA1900(VAR375(LINE),VAR376(LINE),VAR377(LINE),
755      1VAR371(LINE),VAR372(LINE))
756      523 CONTINUE
757      ICTPRV = ICCTCT
758      C    ICTPRV IS THE PREVIOUS CARD TOTAL (FOR USE IN TYPE 2,4 & 5 COMPARISONS)
759      IF (ICOTYP.NE.1 .AND. ICOTYP.NE.7 .AND. I52.GT. 1)GO TO 402
760      IF (ICOTYP.NE.1.AND.ICOTYP.NE.7.AND.I52.EQ.1)GO TO 979
761      GO TO 979
762      979 I52 = I52 - 1
763      INSKIP = 1
764      C    INSKIP SET AT "1" CAUSES INITIALIZATION OF "K" AND "J" ARRAYS TO
765      C    BE SKIPPED AT STATEMENT 350
766      GO TO 549
767      978 CONTINUE
768      C    ABOVE TRANSFER ALLOWS CONCATENATION OF PREVIOUS FIELD HISTORIES IN "K" ARR
769      C    FOR TYPE 2, 4 & 5 COMPARISONS
770      DO 325 I6=1,ICCTCT
771      C    ORDERS INFORMATION IN "J" ARRAY BY DATE
772      JJ = 1
773      JTDATE(I6) = KTDATE(1)
774      JAS367(I6) = KAS367(1)
775      JAS369(I6) = KAS369(1)
776      JAS370(I6) = KAS370(1)
777      JAS371(I6) = KAS371(1)
778      JAS372(I6) = KAS372(1)
779      JAS373(I6) = KAS373(1)
780      JAS374(I6) = KAS374(1)

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781      JAS375(I6) = KAS375(I)
782      JAS376(I6) = KAS376(I)
783      JAS377(I6) = KAS377(I)
784      JAS378(I6) = KAS378(I)
785      JAS387(I6) = KAS387(I)
786      IF (ICCTOT .EQ. 1) GO TO 525
787      DO 526 I7 = 2, ICCTOT
788  C      SECOND ORDERING DO LOOP
789      IF(JTCATE(I6) .LE. KTCATE(I7)) GO TO 526
790      JTCATE(I6) = KTCATE(I7)
791      JAS367(I6) = KAS367(I7)
792      JAS369(I6) = KAS369(I7)
793      JAS370(I6) = KAS370(I7)
794      JAS371(I6) = KAS371(I7)
795      JAS372(I6) = KAS372(I7)
796      JAS373(I6) = KAS373(I7)
797      JAS374(I6) = KAS374(I7)
798      JAS375(I6) = KAS375(I7)
799      JAS376(I6) = KAS376(I7)
800      JAS377(I6) = KAS377(I7)
801      JAS378(I6) = KAS378(I7)
802      JAS387(I6) = KAS387(I7)
803      IJ = I7
804      526 CONTINUE
805      KTCATE(IJ) = 99999
806      525 CONTINUE
807  C
808  C      AT THIS POINT ALL EVENTS RECORDED IN ONE23 FOR THE SEGMENT UNDER CONSIDER-
809  C      ATION (WHICH CAN BE EITHER (1) THE COMPARISON INTERVAL, (2) ONE OF
810  C      THE PREVIOUS INTER-SAMPLING INTERVALS, OR (3) THE HISTORY BEFORE THE
811  C      FIRST SAMPLE TAKEN AT THE SITE) ARE IN DATE ORDER IN THE "J" ARRAYS.
812  C      NO DEFAULT-CREATED EVENTS ARE INCLUDED YET
813  C
814      DO 528 I8 = 1, ICCTOT
815  C      RE-INITIALIZES "K" ARRAY WITH ALL ITEMS EQUAL TO ZERO
816      KAS367(I8) = 0
817      KAS369(I8) = 0
818      KAS370(I8) = 0
819      KAS371(I8) = 0
820      KAS372(I8) = 0
821      KAS373(I8) = 0
822      KAS374(I8) = 0
823      KAS375(I8) = 0
824      KAS376(I8) = 0
825      KAS377(I8) = 0
826      KAS378(I8) = 0
827      KAS387(I8) = 0
828      KTCATE(I8) = 0
829      KCURUS(I8) = 0
830      528 CONTINUE
831      IF(ICCTYP.EQ.7 .OR. ICCTYP.EQ.1)KCARDS = 0
832      IF(ICCTYP.EQ.7 .OR. ICCTYP.EQ.1)K3 = 1
833      522 CONTINUE
834  C      BEGINNING OF EXPLICIT DO LOOP TO CREATE DEFAULTS FOR MAIZE DRYING,
835  C      BARE TO WEEDS AND WEEDS TO CAPOEIRA TRANSFORMATIONS, AND COUNTS OF
836  C      FALLOW AND PASTURE DAYS FOR BURN INFORMATION TABULATION
837      ITDATE = JTCATE(I3)
838  C      ITDATE IS THE DATE OF THE EVENT RECORDED IN ONE23 WHICH IS
839  C      BEING EXAMINED TO DETERMINE IF ADDITIONAL DEFAULT-CREATED
840  C      EVENTS SHOULD BE ADDED TO THE "K" ARRAYS.

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841      IF(IPOUND .EQ. 2 .AND. K3 .EQ. 1 .AND. IGRMZD .GE. 1 .AND. IRPREV
842      1 .EQ. 1) LGRMZS = LREGIN
843      IF(ICCTYP.NE.7 .AND. ICCTYP .NE. 1 .AND. JDATE(J3)
844      1 .EQ. LBEGIN .AND. IGRMZD .GE. 1) LGRMZS = LBEGIN
845      IF (JAS372(J3) .EC. 9) GO TO 622
846      IF (JAS372(J3) .EQ. 10) GO TO 623
847      GO TO 624
848      622 CONTINUE
849      C   FOR BEGINNING CF UNKNOWN HISTORY PERIOD
850      LUNKD = 1
851      LUNKS = JDATE(J3)
852      GO TO 624
853      623 CONTINUE
854      C   FOR END OF UNKNOWN HISTORY PERIOD
855      IF (IROUND .EQ. 1 .AND. (ICOTYP .EQ. 1 .OR. ICOTYP .EQ. 7))
856      1 GO TO 975
857      IF(ICOTYP .NE. 1 .AND. ICOTYP .NE. 7 .AND. JDATE(J3) .LT.
858      1 LREGIN) GO TO 975
859      GO TO 974
860      975 LUNKS = 0
861      LUNKD = 0
862      LUNKE = 0
863      GO TO 624
864      974 CONTINUE
865      LUNKD = LUNKD + JDATE(I3) - LUNKS
866      LUNKE = JDATE(I3)
867      C   SAVES LAST UNKNOWN ENDING DATE FOR DAYS SINCE LAST UNK. CALC.
868      624 CONTINUE
869      C   DEFAULT TRANSITION FOR GREEN MAIZE TO DRY MAIZE FOLLOWS
870      IF (IGRMZD .GE. 1) GO TO 520
871      C   SELECTS EVENTS WHERE GREEN MAIZE IS PRESENT
872      GO TO 519
873      520 CONTINUE
874      C   COLLECTS GREEN MAIZE PRESENT
875      JPREV = J3 - 1
876      IF (JPREV .EQ. 0) JPREV = 1
877      IGRMZD = JDATE(J3) - IGRMZS
878      IF (IGRMZD .GE. 100) GO TO 535
879      C   SELECTS GREEN MAIZE FIELDS OVER 100 DAYS OLD FOR DEFAULT DRYING
880      IF(IROUND .EQ. 2 .AND. I3 .EQ. ICCTOT) GO TO 521
881      IF (ICOTYP .NE. 7 .AND. ICOTYP .NE. 1 .AND. I3 .EQ. ICCTOT)
882      1 GO TO 521
883      GO TO 519
884      535 CONTINUE
885      ITDAF = IGRMZS + 100
886      C   ASSIGNS DEFAULT DAY AS 100 DAYS AFTER MAIZE PLANTING
887      KPREV = K3 - 1
888      IF (KPREV .LE. 0) KPREV = 1
889      IF (K3 .EQ. 1) KPVUSE = LCURUS
890      IF (K3 .GT. 1) KPVUSE = KCURUS(KPREV)
891      KCURUS(K3) = CURUSE(KPVUSE, 14,4,0,4)
892      IF (IROUND .EQ. 2) GO TO 650
893      IF (ICOTYP .NE. 7 .AND. ICOTYP .NE. 1 .AND. ITDAF .GE. LBEGIN
894      1 .AND. LBEGIN .NE. 0) GO TO 650
895      GO TO 651
896      650 CONTINUE
897      IF (LGRMZS .LT. 1) GO TO 651
898      LGRMZD = ITDAF - LGRMZS + LGRMZD
899      C   LGRMZD IS NO. OF DAYS IN ANY GREEN MAIZE COMBINATION
900      C   WITHIN THE TABULATION INTERVAL

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901      MT036 = MAX0(MT036,JT378(J3))
902      C      MT036 IS THE CERTAINTY OF DAYS IN ANY COMBINATION OF GREEN MAIZE
903      651 CONTINUE
904      KAS367(K3) = JAS367(J3)
905      KAS369(K3) = JAS369(J3)
906      KAS370(K3) = JAS370(J3)
907      KAS371(K3) = 14
908      KAS372(K3) = 6
909      KAS373(K3) = JAS373(J3)
910      KAS374(K3) = 4
911      KAS378(K3) = 4
912      KAS387(K3) = JAS387(J3)
913      KTDADF(K3) = ITDAOF
914      IGRMZC = 0
915      IGRMZS = 0
916      LGRMZS = 0
917      IF (KCURUS(K3) .EQ. 4) IFALLS = KTDADF(K3)
918      IF (KCURUS(K3) .EQ. 4) IBARED = 1
919      IF (KCURUS(K3) .EQ. 4) IFALLO = 1
920      K3 = K3 + 1
921      KCARDS = KCARDS + 1
922      GO TO 519
923      521 CONTINUE
924      C      FOR LESS THAN 100-DAY-OLD MAIZE IF LAST EVENT OF ROUND 2
925      IF (IROUND .EQ. 2 .AND. (ICOTYP .EQ. 1 .OR. ICOTYP .EQ. 7)) LGRMZD
926      1 = LGRMZD + IGRMZD
927      IF (ICOTYP .NE. 1 .AND. ICOTYP .NE. 7 .AND. JTDADF(J3)
928      1 .EQ. IEND) LGRMZD = LGRMZD + IGRMZD
929      519 CONTINUE
930      C      DEFAULT ROUTINE FOLLOWS FOR BARE TO WEEDS TRANSITION
931      IF (IBARED .GE. 1) GO TO 532
932      GO TO 533
933      532 CONTINUE
934      JPREV = J3 - 1
935      IF (JPREV .EQ. 0) JPREV = 1
936      IBAREC = ITDAOF-IFALLS
937      IF (IBAREC .GE. 60) GO TO 534
938      C      SELECTS FIELDS WHICH HAVE BEEN BARE FOR OVER 2 MONTHS
939      GO TO 533
940      534 CONTINUE
941      ITDAOF = IFALLS + 60
942      C      ASSIGNS DEFAULT DAYS AS 60 DAYS AFTER BEGINNING OF BARE STATE
943      KAS367(K3) = JAS367(J3)
944      KAS369(K3) = JAS369(J3)
945      KAS370(K3) = JAS369(J3)
946      KAS371(K3) = 5
947      KAS372(K3) = 7
948      KAS373(K3) = 0
949      KAS374(K3) = 4
950      KAS378(K3) = 4
951      KAS387(K3) = JAS387(J3)
952      KTDADF(K3) = ITDAOF
953      KCARDS = KCARDS + 1
954      IBARED = 0
955      IWEEDD = 1
956      IFALLO = 60
957      KPREV = K3 - 1
958      IF (KPREV .LE. 0) KPREV = 1
959      IF (K3 .EQ. 1) KPVLSE = KCURUS
960      IF (K3 .GT. 1) KPVLSE = KCURUS(KPREV)

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961      KCURUS(K3) = CURUSE(KPVUSE,      KAS371(K3),KAS372(K3),KAS373(K3)
962      1,KAS374(K3))
963      IF (KAS371(K3) .EQ. -2) KCURUS(K3) = KPVUSE
964      K3 = K3 + 1
965      533 CONTINUE
966      C  DEFAULT ROUTINE FOR WEEDS TO CAPOEIRA FOLLOWS
967      IF (IWEEDD .GE. 1) GO TO 529
968      GO TO 530
969      529 CONTINUE
970      KPREV = K3 - 1
971      IF (KPREV .LE. 0) KPREV = 1
972      IWEEDD = ITCADF - IFALLS
973      IF (IWEEDD .GE. 243) GO TO 531
974      C  SELECTS WEEDS OVER 8 MONTHS OLD (6 MONTHS AFTER BARE)
975      GO TO 530
976      531 CONTINUE
977      ITCADF = IFALLS + 243
978      C  ASSIGNS DEFAULT DAYS AS 183 DAYS AFTER END OF BARE STATE
979      KAS367(K3) = JAS367(J3)
980      KAS369(K3) = JAS369(J3)
981      KAS370(K3) = JAS370(J3)
982      KAS371(K3) = 6
983      KAS372(K3) = 7
984      KAS373(K3) = 1
985      KAS374(K3) = 4
986      KAS378(K3) = 4
987      KTCATE(K3) = ITCADF
988      C  DEFAULT DATE ASSIGNED TO KTCATE
989      KCARDS = KCARDS + 1
990      IWEEDD = 0
991      C  DAYS WEEDS RESET TO ZERO
992      IFALLD = 243
993      C  DAYS FALLOW IS DATE OF EVENT IN "K" ARRAY - FALLOW START DATE
994      ICAPOD = 1
995      KPREV = K3 - 1
996      IF (KPREV .LE. 0) KPREV = 1
997      IF (K3 .EQ. 1) KPVUSE = LCURUS
998      IF (K3 .GT. 1) KPVUSE = KCURUS(KPREV)
999      KCURUS(K3) = CURUSE(KPVUSE,      6,7,0,KAS374(K3))
1000     K3 = K3 + 1
1001     530 CONTINUE
1002     C  TRANSFER OF J ARRAY VALUES TO K ARRAY FOLLOWS
1003     KCARDS = KCARDS + 1
1004     KAS367(K3) = JAS367(J3)
1005     KAS369(K3) = JAS369(J3)
1006     KAS370(K3) = JAS370(J3)
1007     KAS371(K3) = JAS371(J3)
1008     KAS372(K3) = JAS372(J3)
1009     KAS373(K3) = JAS373(J3)
1010     KAS374(K3) = JAS374(J3)
1011     KAS375(K3) = JAS375(J3)
1012     KAS376(K3) = JAS376(J3)
1013     KAS377(K3) = JAS377(J3)
1014     KAS378(K3) = JAS378(J3)
1015     KAS387(K3) = JAS387(J3)
1016     KTCATE(K3) = JTCATE(J3)
1017     KPREV = K3 - 1
1018     IF (KPREV .LE. 0) KPREV = 1
1019     IF (K3 .EQ. 1) KPVUSE = LCURUS
1020     IF (K3 .GT. 1) KPVUSE = KCURUS(KPREV)

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1021      KCURUS(K3) = CURUSE(KPVUSE,      KAS371(K3),KAS372(K3),KAS373(K3)
1022      1,KAS374(K3))
1023      IF(KAS371(K3) .EQ. -2) KCURUS(K3) = KPVUSE
1024      C      ASSIGNS PREVIOUS USE AS CUPRENT USE FOR SAMPLE DATE PSEUDOEVENTS
1025      IF(IFALLS .GT. 0) IFALLD = KTCATE(K3) - IFALLS
1026      IF(IPASTS .GT. 0) IPASTD = KTCATE(K3) - IPASTS
1027      IF(ROUND.EQ.1 .AND.(ICCTYP.EQ.7 .OR. ICOTYP.EQ.1))GO TO 985
1028      IF(ICOTYP.NE.7 .AND. ICOTYP.NE.1 .AND. KTDATE(K3).LT.LBEGIN)GO TO
1029      1 985
1030      IF (KAS371(K3) .EQ. 1 .AND. KAS372(K3) .EQ. 1)
1031      1LFELL = KTDATE(K3)
1032      C      SAVES FELLING DATE IF FELLIED IN TABULATION INTERVAL
1033      985 CONTINUE
1034      IF (KAS371(K3) .EQ. 1 .AND. KAS372(K3) .EQ. 2) GO TO 555
1035      C      SELECTS VIRGIN BURNS
1036      IF (KAS371(K3) .NE. 1 .AND. KAS372(K3) .EQ. 2) GO TO 537
1037      C      SELECTS OTHER BURNS
1038      IF (( KAS371(K3) .EQ. 5 .OR. KAS371(K3) .EQ.
1039      16.OR.KAS371(K3).EQ.4) .AND. KAS372(K3) .EQ. 1) GO TO 360
1040      C      SELECTS , WEED AND CAPC. CUTTING FOR BARE AND FALLOW DAY
1041      C      COUNT BEGINNING
1042      GO TO 538
1043      C      FOLLOWING FOR CUTTING OF WEEDS OR CAPOEIRA
1044      360 IF(IFALLS.GT.1)LCAPAG = KTDATE(K3) - IFALLS
1045      IF(KAS371(K3) .NE. 1)LT011=MAX0(LT011,KAS378(K3))
1046      IX2 = IAFI2
1047      IF ((ICOTYP.EQ.7.OR.ICCTYP.EQ.1).AND.ROUND.EQ.1)IX2=IPV2
1048      IF (ICOTYP.NE.7.AND.ICOTYP.NE.1.AND.KTDATE(K3).LT.LBEGIN)IX2=IPV2
1049      TAB016 = VAR032(IX2)
1050      MT017 = VAR033(IX2)
1051      TAB013 = VAR030(IX2)
1052      MT014 = VA042A(IX2)
1053      TAB012 = VAR021(IX2)
1054      MT015 = VAR031(IX2)
1055      GO TO 534
1056      537 CONTINUE
1057      C      COLLECTS CAPOEIRA AND WEED BURNS
1058      IF (ROUND .EQ. 1.AND.(ICOTYP.EQ.7.OR.ICOTYP.EQ.1)) GO TO 361
1059      IF(ICOTYP.NE.7.AND.ICOTYP.NE.1.AND.KTDATE(K3).LT.LBEGIN)GO TO 361
1060      C      FOLLOWING SAVES CAPOEIRA AGE AND SIZE FOR BURN INFO. TABULATION
1061      LT007 = KAS371(K3)
1062      C      SAVES BURN TYPE FOR USE IN MT007
1063      LT008 = KAS373(K3)
1064      C      SAVES BURN QUALITY FOR USE AS MT008
1065      LT009 = KT374(K3)
1066      C      SAVES BURN QUALITY CERTAINTY FOR USE AS MT009
1067      LCAPOB = KTCATE(K3)
1068      C      SAVES CAPOEIRA BURN DATE
1069      LNB08 = LNB08 + 1
1070      C      COUNTS NO. OF BURNS FOR MT006
1071      IF (LCAPAG .GT. 1) GO TO 554
1072      C      FOLLOWING FOR CAPOEIRA AND WEED BURNS WITHOUT CUTTING PRIOR TO
1073      C      BURN
1074      IF (KT371(K3) .EQ. 34 .OR. KT371(K3) .EQ. 40) GO TO 557
1075      IF (IFALLS .GT. 1)LCAPAG = KTDATE(K3) - IFALLS
1076      C      SAVES CAPOEIRA AGE
1077      LT011 = MAX0(LT011,KAS378(K3))
1078      GO TO 558
1079      557 CONTINUE
1080      IF (IPASTS .GT. 1)LCAPAG = KTCATE(K3) - IPASTS

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1081      558 CONTINUE
1082      LT011 = KT378(K3)
1083      C      SAVES DATE CERTAINTY FOR USE AS TAB011
1084      GO TO 554
1085      361 CONTINUE
1086      C      RE-ZEROS CAPOEIRA DESCRIPTION IF BURNED BEFORE TAB. INTERVAL
1087      TAB012 = 0
1088      LCPAG = 0
1089      TAB013 = 0
1090      TAB016 = 0
1091      MT014 = 0
1092      MT015 = 0
1093      MT017 = 0
1094      GO TO 554
1095      555 CONTINUE
1096      C      COLLECTS VIRGIN BURNS FOR COUNT OF DAYS SINCE VIRGIN BURN IN INTV.
1097      IF (IROUND .EQ. 1.AND.(ICOTYP.EQ.7.OR.ICOTYP.EQ.1)) GO TO 554
1098      C      BYPASSES BURNING IN BEFORE FIELD
1099      IF(ICOTYP.NE.7.AND.ICOTYP.NE.1.ANC.KTDATE(K3).LT.LBEGIN)GO TO 554
1100      IF(ICOTYP.NE.7.AND. ICOTYP.NE.1.AND..NOT.(LBEGIN.GE.1))GO TO 554
1101      LVIRBU = KTDATE(K3)
1102      C      SAVES DATE OF VIRGIN BURN IN INTERVAL
1103      MT001 = MT001 + 1
1104      C      COLNTS VIRGIN BURNS
1105      LT002 = KT373(K3)
1106      C      SAVES VIRGIN BURN QUALITY FOR MT002
1107      LT003 = KT374(K3)
1108      C      SAVES VIRGIN BURN QUALITY CERTAINTY FOR MT003
1109      LT005 = KT378(K3)
1110      C      SAVES VIRGIN BURN DATE CERTAINTY FOR MT005
1111      554 CONTINUE
1112      C      COLLECTS ALL BURNING AND CUTTING EVENTS FOR
1113      C      FALLOW AND BARE COUNT START (WITH EXCEPTION OF PASTURE)
1114      IFALLS = KTDATE(K3)
1115      IFALLO = 1
1116      IWEEDD = 0
1117      ICAPOD = 0
1118      IPASTD = 0
1119      IBARED = 1
1120      538 CONTINUE
1121      IF (JAS371(I3) .EQ. 5 .AND. JAS372(I3) .EQ. 7) GO TO 515
1122      C      SELECTS WEED NATURAL SEEDING EVENTS
1123      IF ((JAS371(I3) .EQ. 2 .OR. JAS371(I3) .EQ. 4 .OR. JAS371(I3)
1124      1) .EQ. 3) .AND. (JAS372(I3) .EQ. 3 .OR. JAS372(I3) .EQ. 7
1125      2)) GO TO 516
1126      C      SELECTS BARE BEFORE BURN AND BARE AFTER BURN BEGINNING EVENTS
1127      IF (JAS371(I3) .EQ. 34 .AND. (JAS372(I3) .EQ. 3 .OR. JAS372(
1128      1)3) .EQ. 7)) GO TO 536
1129      C      SELECTS PASTURE WITHOUT ANIMALS BEGINNING EVENTS
1130      IF (JAS371(I3) .GE. 6 .AND. (JAS372(I3) .EQ. 3 .OR.
1131      1 JAS372(I3) .EQ. 7)) GO TO 995
1132      C      SELECTS CODED CAPOEIRA BEGINNING EVENTS
1133      GO TO 513
1134      995 CONTINUE
1135      IF (KCURUS(K3) .EQ. 6 .AND. IFALLS .EQ. 0) GO TO 516
1136      C      OVERRIDES CODED CAPOEIRA STARTING IF PREVIOUSLY BARE
1137      IF (IFALLS .GT. 0) GO TO 513
1138      IFALLS = ITCATE
1139      IFALLO = 1
1140      ICAPOD = 1

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1141      GO TO 513
1142      515 CONTINUE
1143      IWEED = 1
1144      C      REGINS WEED DAY COUNT
1145      GO TO 513
1146      516 CONTINUE
1147      IBARED = 1
1148      C      BEGINS PARE DAY COUNT
1149      IFALLS = ITOATE
1150      IFALLO = 1
1151      GO TO 513
1152      536 CONTINUE
1153      IPASTS = ITOATE
1154      IPASTD = 1
1155      C      STARTS PASTURE DAY COUNT
1156      GO TO 513
1157      513 CONTINUE
1158      IF (JAS371(I3) .EQ. 14 .AND. JAS372(I3) .EQ. 3) GO TO 517
1159      C      SELECTS MAIZE PLANTING EVENTS
1160      GO TO 513
1161      517 CONTINUE
1162      IGRMZS = ITOATE
1163      IF((IRCUND.EQ.2.AND.(ICCTYP.EQ.7.OR.ICOTYP.EQ.1)) LGRMZS = ITOATE
1164      IF(ICOTYP.NE.7.AND.ICCTYP.NE.1.AND.ITDATE.GE.LBEGIN.AND.
1165      1 LBEGIN .GT. 0) LGRMZS = ITOATE
1166      C      LGRMZS IS STARTING DATE FOR EACH GREEN MAIZE PRESENCE WITHIN
1167      C      THE TABULATION INTERVAL
1168      IGRMZD = 1
1169      C      STARTS GREEN MAIZE DAYS COUNT
1170      518 CONTINUE
1171      IF((KAS371(K3).EQ.34.OR.KAS371(K3).EQ.40).AND.(KAS372(K3)
1172      1.EQ. 1 .OR. KAS372(K3) .EQ. 2)) GO TO 539
1173      C      SELECTS BEGINNING PASTURE AND UNBURNED PASTURE TIME COUNT
1174      GO TO 540
1175      539 CONTINUE
1176      IFALLS = 0
1177      IFALLO = 0
1178      IWEED = 0
1179      ICAPOD = 0
1180      IPASTD = 1
1181      IPASTS = KTDAT(K3)
1182      IBARED = 0
1183      GO TO 541
1184      540 CONTINUE
1185      IF(KAS371(K3).EQ.14 .AND.(KAS372(K3).EQ.4 .OR. KAS372(K3).EQ.6
1186      1) .AND. IGRMZD .GE. 1) GO TO 370
1187      IF(IGRMZD.GE.1 .AND. KAS371(K3).EQ.14 .AND.(KAS372(K3)
1188      1.EQ.5 .OR. KAS372(K3).EQ.8)) GO TO 370
1189      GO TO 371
1190      370 IGRMZD = KTDAT(K3) - IGRMZS
1191      IF(ROUND .EQ. 2.AND.LGRMZS.GE.1 ) LGRMZD=LGRMZD+KTDAT(K3)
1192      1- LGRMZS
1193      IGRMZC=0
1194      IGRMZS=0
1195      LGRMZS = 0
1196      C      ENDS GREEN MAIZE DAY COUNT IF MAIZE DRYING, FOLDING, HARVESTING,
1197      C      OR DEATH EVENT RECORDED WHILE GREEN MAIZE PRESENT
1198      IF (KCURUS(K3) .EQ. 4) IFALLS = KTDAT(K3)
1199      IF (KCURUS(K3) .EQ. 4) IBARED = 1
1200      IF (KCURUS(K3) .EQ. 4) IFALLO = 1

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1201      371 CONTINUE
1202      IF (KAS371(K3) .GE. 1 .AND. KAS371(K3) .LE. 6) GO TO 512
1203      C      PASSES OVER NON-CROP USES
1204      C      FOLLOWING STATEMENTS SELECT SINGLE CROP HARVESTING DATES FOR
1205      C      BARE AND FALLOW DAY COUNT START
1206      IF (KAS372(K3) .EQ. 5 .OR. KAS372(K3) .EQ. 8 .OR. KAS372(K3)
1207      1 .EQ. 4 .OR. KAS372(K3) .EQ. 6) GO TO 543
1208      C      SELECTS HARVESTING & CROP DEATH EVENTS PLUS MAIZE DRYING AND FOLDING
1209      GO TO 541
1210      543 CONTINUE
1211      KPREV = K3 - 1
1212      IF (KPREV .EQ. 0) KPREV = 1
1213      IF (K3 .EQ. 1) KPVUSE = LCURUS
1214      IF (K3 .GT. 1) KPVUSE = KCURUS(KPREV)
1215      IF (KPVUSE .NE. KAS371(K3)) GO TO 870
1216      IF (KPVUSE .EQ. 7 .OR. KPVUSE .EQ. 21 .OR. KPVUSE .EQ. 28) GO TO
1217      1542
1218      IF (KPVUSE .EQ. 42 .OR. KPVUSE .EQ. 43 .OR. KPVUSE .EQ. 51 .OR.
1219      1 KPVUSE .EQ. 53) GO TO 542
1220      IF (KPVUSE .EQ. 55 .OR. KPVUSE .EQ. 57 .OR. KPVUSE .EQ. 59 .OR.
1221      1 KPVUSE .EQ. 60 .CR. (KPVUSE .GE. 62 .AND. KPVUSE .LE. 68))
1222      2 GO TO 542
1223      IF (KPVUSE .EQ. 14 .AND. KAS371(K3) .EQ. 14 .AND. IGRMZD
1224      1 .GE. 1) GO TO 542
1225      870 IF (KAS371(K3) .EQ. 14 .AND. KAS372(K3) .EQ. 4 .OR.
1226      1 KAS372(K3) .EQ. 6 .CR. KAS372(K3) .EQ. 5 .OR. KAS372(K3)
1227      2 .EQ. 8) GO TO 545
1228      GO TO 512
1229      542 CONTINUE
1230      C      BEGINS BARE AND FALLOW COUNTS FOR HARVESTED OR DEAD CROPS AND DRY
1231      C      MAIZE (FOR SINGLE CROPS ONLY)
1232      IWEED = 0
1233      ICAPOD = 0
1234      IFALLO = 1
1235      IFALLS = KDATE(K3)
1236      IBARE = 1
1237      945 IGRMZD = 0
1238      LGRMZS = 0
1239      IGRMZS = 0
1240      541 CONTINUE
1241      C      FOLLOWING STATEMENTS SELECT PLANTING OR NATURAL SEEDING OF CROPS
1242      C      FOR BARE, WEED AND FALLOW COUNT STOP
1243      IF (KAS372(K3) .EQ. 3 .CR. KAS372(K3) .EQ. 7) GO TO 545
1244      GO TO 512
1245      545 CONTINUE
1246      IF (KAS371(K3) .EQ. 7 .OR. KAS371(K3) .EQ. 14 .OR. KAS371(K3) .EQ.
1247      121 .OR. KAS371(K3) .EQ. 28) GO TO 546
1248      IF (KAS371(K3) .EQ. 42 .OR. KAS371(K3) .EQ. 43 .OR. KAS371(K3) .EQ.
1249      151 .OR. KAS371(K3) .EQ. 53) GO TO 546
1250      IF (KAS371(K3) .EQ. 55 .OR. KAS371(K3) .EQ. 57 .OR. KAS371(K3) .EQ.
1251      159 .OR. KAS371(K3) .EQ. 60 .OR. KAS371(K3) .GE. 62) GO TO 546
1252      GO TO 512
1253      546 CONTINUE
1254      C      ENDS BARE, WEED, AND FALLOW COUNTS WHEN CROPS PLANTED
1255      IWEED = 0
1256      ICAPOD = 0
1257      IFALLO = 0
1258      IFALLS = 0
1259      IBARE = 0
1260      512 CONTINUE

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1261      I3 = I3 + 1
1262      IF (I3 .GT. ICCTOT) GC TO 544
1263      K3 = K3 + 1
1264      J3 = J3 + 1
1265      GO TO 522
1266  544 CONTINUE
1267      LCU2 = KCURUS(K3)
1268  C      LCU2 IS SECOND LAST CURRENT USE VALUE TO BE USED (AT STATEMENT 553)
1269  C      IN CASES WHERE A SAMPLE WAS TAKEN DURING THE COMPARISON INTERVAL
1270      IF (IRCUND .EQ. 2 ) GC TO 553
1271  C      SENDS INFO. TO TABULATION CALCULATIONS IF IN SECOND (AFTER FIELD)
1272  C      ROUND
1273      IF (ICOTYP .EQ. 7) LCURUS = KCURUS(K3)
1274  C      SAVES LAST CURRENT USE IN BEFORE FIELD CALCULATIONS FOR FIRST
1275  C      INTER-EVENT INTERVAL TABULATION CALCULATIONS
1276      IF (IDIAGN .EQ. 1) GO TO 402
1277      WRITE (18, 1238)
1278  1238 FORMAT(1X,'EVENTS PRICR TO COMPARISON INTERVAL')
1279      WRITE (18, 1234)
1280      IF (ICCTOT .LE. 0) GO TO 402
1281      WRITE (18, 1235)(I,KAS367(I),KAS371(I),KAS372(I),KAS373(I),
1282      1 KAS374(I), KTDAT(I), KAS378(I), KCURUS(I), I=1,KCARDS)
1283      GO TO 402
1284  406 CONTINUE
1285  C      END OF EXPLICIT DO LOOP BEGINNING AT STATEMENT 402
1286  549 CONTINUE
1287  C      ENTRY POINT FOR FIELDS WHICH ARE VIRGIN BEFORE BUT NOT AFTER
1288      DO 547 I9=1,ICON23
1289  C      FINDS AFTER FIELD INFORMATION IN ONE23
1290      IF (VAR367(I9) .EQ. IAFTFN .AND. .NOT.(VAR369(I8) .GT. 0)) GO TO 548
1291      547 CONTINUE
1292      WRITE (12,9023) IAFTFN
1293  9023 FORMAT(1X,' NO DATA FOUND FOR AFTER FIELD ',I5,' IN FILE ONE23',
1294      1 20(1X,/,1X,/,1X)
1295  C      ABOVE FORMAT 9023 HOLDS SPACE IN OUTPUT (14 LINES) IF HISTORY DATA
1296  C      DOES NOT EXIST
1297      GO TO 508
1298  548 CONTINUE
1299      DO 550 I9 =1,100
1300  C      COUNTS CARDS FOR CASE FOR AFTER FIELD
1301      ICUR23 = I9 + I9 - 1
1302      IF (ICOTYP .EQ. 1 .AND. VAR371(ICUR23) .EQ. 1
1303      1 .AND. VAR372(ICUR23) .EQ. 1) LBEGIN = DA1900(
1304      2 VAR375(ICUR23),VAR376(ICUR23), VAR377(ICUR23),1,1)
1305      IF ((ICOTYP .EQ. 2 .OR. ICOTYP .EQ. 4 .OR. ICOTYP .EQ.
1306      1 5) .AND. (VAR371(ICUR23) .NE. 1 .AND. VAR372(ICUR23)
1307      2 .EQ. 1 .AND. I52.LE.1)) LBEGIN = DA1900(VAR375(ICUR23),
1308      3 VAR376(ICUR23), VAR377(ICUR23), VAR371(ICUR23),1)
1309  C      FOLLOWING FOR CAPOEIRA, PASTURE, GR PASTURE & CAPOEIRA
1310  C      WHICH IS BURNED WITHOLT CUTTING
1311      IF ((ICOTYP .EQ. 2 .OR. ICOTYP .EQ. 4 .OR. ICOTYP
1312      1 .EQ. 5) .AND. (VAR371(ICUR23) .NE. 1 .AND.
1313      2 VAR372(ICUR23) .EQ. 2 .AND. LBEGIN .EQ. 0 .AND. I52.LE.1)) LBEGIN=
1314      3 DA1900(VAR375(ICUR23), VAR376(ICUR23), VAR377(ICUR23),
1315      4 VAR371(ICUR23), 2)
1316      IF (VAR370(ICUR23) .EQ. 1) GO TO 551
1317  C      FINDS LAST CARD FOR CASE
1318      IF (VAR367(ICUR23) .NE. IAFTFN .OR. VAR369(ICUR23) .GT. 0) GO TO
1319      1552
1320  550 CONTINUE

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1321      WRITE (12,9025) IAFTEF
1322 9025 FORMAT(1X,'MORE THAN 100 CARDS FOR AFTER FIELD NO. ', I5,20(1X,/),
1323      1 1X)
1324      GO TO 508
1325      552 CONTINUE
1326      WRITE (12,9026) IAFTEF
1327 9026 FORMAT(1X,'ERROR: NO LAST CARD CODE FOR AFTER FIELD NO. ', I5,
1328      1 20(1X,/),1X)
1329      GO TO 508
1330      551 CONTINUE
1331      ICCASE = I9 + 1
1332      C      ICCASE IS THE NUMBER OF CARDS FOR CASE
1333      C      AN ADDITIONAL "1" IS ADDED TO I9 SO THAT THE AFTER SAMPLE
1334      C      SAMPLING DATE WILL ALSO BE TREATED AS AN EVENT IN THE DEFAULT
1335      C      SECTION OF ROUND 2 (SAMPLING DATE PSEUDOEVENT)
1336      IF (VAR377(ICUR23) .EQ. 0 .OR. VAR377(ICUR23) .EQ. -0)
1337      1 ICCASE = ICCASE - 1
1338      C      NO OF CARDS FOR CASE REDUCED BY 1 IF YEAR OF EVENT IS 0 OR BLANK
1339      IFCFC = I8
1340      C      IFCFC IS FIRST CARD FOR CASE
1341      IF (ICOTYP.EQ.7 .OR. ICCTYP.EQ.1) LNOBUS = 0
1342      IF (ICOTYP.NE.7 .AND. ICOTYP.NE.1 .AND. KDATE(K3).LT.LBEGIN)
1343      1 LNOBUS = 0
1344      C      INITIALIZES NUMBER OF OTHER BURNS (MT006) AT ZERO
1345      IF(ICOTYP.EQ.7.OR.ICOTYP.EQ.1)J3 = 1
1346      IF(ICOTYP.EQ.7.OR.ICOTYP.EQ.1)K3 = 1
1347      IF(ICOTYP.EQ.7.OR.ICOTYP.EQ.1)I3 = 1
1348      IF(ICOTYP.EQ.7.OR.ICOTYP.EQ.1)KCARDS = 0
1349      IPPREV = IRCUND
1350      C      SAVES PREVIOUS IRCUND INDICATOR
1351      IRCUND = 2
1352      C      IRCUND IS COUNTER FOR ROUND: 2= AFTER FIELD
1353      GO TO 350
1354      553 CONTINUE
1355      C      BEGINS TABULATION CALCULATIONS
1356      C      "L" PREFIXED ITEMS ARE ITEMS APPLYING TO TIME WITHIN THE COMPARISON
1357      C      TABULATION INTERVAL
1358      MT002 = LT002
1359      MT003 = LT003
1360      MT004 = DA1900(VAR006(IAFT1),VAR007(IAFT1),VAR008(IAFT1),0,0) -
1361      1LVIRRU
1362      IF (LVIRRU .EQ. 0) MT004 = 0
1363      C      ASSIGNS VALUE OF 0 IF THERE ARE NO VIRGIN BURNS IN INTERVAL
1364      MT005 = LT005
1365      MT006 = LNCBUS
1366      MT007 = LT007
1367      MT008 = LT008
1368      MT009 = LTC09
1369      MT010 = LCAPAG
1370      MT011 = LT011
1371      C      FOLLOWING TAKES CAPOEIRA DESCRIPTION FROM AFTER FIELD
1372      C      IF NOTE INDICATES THAT INFORMATION REFERS TO STATUS BEFORE
1373      C      A RECENT CUTTING
1374      IF (VAR040(IAFT2) .EQ. 3) TAB013 = VAR030(IAFT2)
1375      IF (VAR040(IAFT2) .EQ. 3) MT014 = VAR042A(IAFT2)
1376      IF (VAR040(IAFT2) .EQ. 3) MT015 = VAR031(IAFT2)
1377      IF(IEND.EQ.0)IEND = DA1900(VAR006(IAFT1),VAR007(IAFT1),
1378      1 VAR008(IAFT1),1,0)
1379      IF(1BEGIN.EQ.0.AND.ICCTYP.EQ.7)1BEGIN = DA1900(VAR006(1BEF1),
1380      1 VAR007(1BEF1), VAR008(1BEF1),1,0)

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1381      MT019 = IEND - LFELL
1382      IF (IBEGIN.EQ. IEND) IBEGIN = IBEGIN - 1
1383      IF (LBEGIN.EQ. IEND) LBEGIN = LBEGIN - 1
1384      MT019 = IEND - LBEGIN
1385      IF (LFELL.EQ. 0) MT019 = MT018
1386      C   ASSIGNS ENTIRE SPAN AS NON-VIRGIN IF NOT FELLED IN INTERVAL
1387      FT019 = FLDAT(MT019)
1388      IF (ICIAGN.EQ. 1) GO TO 970
1389      C   SKIPS DIAGNOSTIC MESSAGE IF DIAGNOSTIC CODE SET AT "1"
1390      IF (IHPNTD.EQ. 0) WRITE(18,1237)
1391      1237 FORMAT(1X,'TABLE OF EVENTS IN COMPARISON INTERVAL')
1392      IF(IHPNTD.EQ.0)WRITE (18,1234)
1393      1234 FORMAT(1X,' NO. FIELD ITEM EVENT QUAL. CERT DATE CERT U
1394      1SE')
1395      IHPNTD = 1
1396      WRITE(18,1235)(I,KAS367(I),KAS371(I),KAS372(I),KAS373(I),
1397      1 KAS374(I), KTDAT(I), KAS378(I),KCURUS(I), I=1,KCARDS)
1398      1235 FORMAT(1X,I3,2X,I5,2X,I3,4X,I3,4X,I2,5X,I2,1X,I7,5X,I2,2X,I3)
1399      WRITE (18,1236) IFCFC, LBEGIN
1400      1236 FORMAT(1X,'FIRST CNE23 CARD FOR CASE:', I5,
1401      1 ' INTERVAL BEGIN DATE:',I6)
1402      970 CONTINUE
1403      DO 263 I11=1,KCARDS
1404      C   DOES CNE ITERATION FOR EVERY "CARD" (EVENT) IN THE INTERVAL
1405      IF(KTDAT(I11).LE.LBEGIN)GO TO 263
1406      C   ABOVE TRANSFER SKIPS TABULATIONS FOR DATES BEFORE INTERVAL BEGINNING FOR
1407      C   TYPE 2, 4, & 5 COMPARISONS
1408      MP = 0
1409      KPREV = I11 - 1
1410      IF (KPREV.EQ. 0) KPREV = 1
1411      IF (I11.EQ. 1.AND.ICCTYP.EQ.7) IBDAT = DA1900(VAR006(IBEFL),
1412      1 VAR007(IBEFL), VAR008(IBEFL), 1, 0)
1413      C   ASSIGNS THE BEFORE SAMPLE DATE AS BEGINNING DATE OF THE FIRST
1414      C   INTER-EVENT INTERVAL FOR SEQUENTIAL PAIR COMPARISONS
1415      IF (I11.GT. 1) IBCAT = KTDAT(KPREV)
1416      C   CALCULATES BEGINNING DATE FOR EACH INTER-EVENT INTERVAL
1417      IF (I11.EQ. 1) IPVUSE = LCURLS
1418      C   "LCURLS" HERE IS USE AT BEGINNING OF TABULATION (COMPARISON) INTERVAL
1419      IF (I11.GT. 1) IPVUSE = KCURLS(KPREV)
1420      C   CALCULATES CURRENT USE DURING EACH INTER-EVENT INTERVAL
1421      IF (IPVUSE.EQ. 1) GO TO 564
1422      IF (IPVUSE.EQ. 2) GO TO 565
1423      IF (IPVUSE.EQ. 3) GO TO 566
1424      IF (IPVUSE.EQ. 4) GO TO 567
1425      IF (IPVUSE.EQ. 5) GO TO 568
1426      IF (IPVUSE.EQ. 6) GO TO 569
1427      IF (IPVUSE.EQ. 7) GO TO 570
1428      IF (IPVUSE.EQ. 8 .OR. IPVUSE.EQ. 15) GO TO 571
1429      IF (IPVUSE.EQ. 9 .OR. IPVUSE.EQ. 16 .OR. IPVUSE.EQ. 30) GO TO
1430      1572
1431      IF (IPVUSE.EQ. 10 .OR. IPVUSE.EQ. 29) GO TO 573
1432      IF (IPVUSE.EQ. 11 .OR. IPVUSE.EQ. 36) GO TO 574
1433      IF (IPVUSE.EQ. 12 .OR. IPVUSE.EQ. 18 .OR. IPVUSE.EQ. 37) GO TO
1434      1575
1435      IF (IPVUSE.EQ. 13) GO TO 576
1436      IF (IPVUSE.EQ. 14) GO TO 577
1437      IF (IPVUSE.EQ. 17 .OR. IPVUSE.EQ. 31) GO TO 578
1438      IF (IPVUSE.EQ. 19 .OR. IPVUSE.EQ. 35) GO TO 579
1439      IF (IPVUSE.EQ. 20) GO TO 580
1440      IF (IPVUSE.EQ. 21) GO TO 581

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1441	IF (IPVUSE .EQ. 22) GC TO 582
1442	IF (IPVUSE .EQ. 23) GC TO 583
1443	IF (IPVUSE .EQ. 24 .OR. IPVUSE .EQ. 32) GO TO 584
1444	IF (IPVUSE .EQ. 25) GC TO 585
1445	IF (IPVUSE .EQ. 26) GC TO 586
1446	IF (IPVUSE .EQ. 27) GC TO 587
1447	IF (IPVUSE .EQ. 28) GC TO 588
1448	IF (IPVUSE .EQ. 33) GC TO 589
1449	IF (IPVUSE .EQ. 34) GC TO 590
1450	IF (IPVUSE .EQ. 38) GC TO 591
1451	IF (IPVUSE .EQ. 39) GC TO 592
1452	IF (IPVUSE .EQ. 40) GC TO 593
1453	IF (IPVUSE .EQ. 41) GC TO 594
1454	IF (IPVUSE .EQ. 42) GC TO 595
1455	IF (IPVUSE .EQ. 43) GC TO 596
1456	IF (IPVUSE .EQ. 44) GC TO 597
1457	IF (IPVUSE .EQ. 45) GC TO 598
1458	IF (IPVUSE .EQ. 46) GC TO 599
1459	IF (IPVUSE .EQ. 47) GC TO 600
1460	IF (IPVUSE .EQ. 48) GC TO 601
1461	IF (IPVUSE .EQ. 49) GC TO 602
1462	IF (IPVUSE .EQ. 50) GC TO 603
1463	IF (IPVUSE .EQ. 51) GC TO 604
1464	IF (IPVUSE .EQ. 52) GC TO 605
1465	IF (IPVUSE .EQ. 53) GC TO 606
1466	IF (IPVUSE .EQ. 54) GC TO 607
1467	IF (IPVUSE .EQ. 55) GC TO 608
1468	IF (IPVUSE .EQ. 56) GC TO 609
1469	IF (IPVUSE .EQ. 57) GC TO 610
1470	IF (IPVUSE .EQ. 58) GC TO 611
1471	IF (IPVUSE .EQ. 59) GC TO 612
1472	IF (IPVUSE .EQ. 60) GC TO 613
1473	IF (IPVUSE .EQ. 61) GC TO 614
1474	IF (IPVUSE .EQ. 62) GC TO 615
1475	IF (IPVUSE .EQ. 63) GC TO 616
1476	IF (IPVUSE .EQ. 64) GC TO 617
1477	IF (IPVUSE .EQ. 65) GC TO 618
1478	IF (IPVUSE .EQ. 66) GC TO 619
1479	IF (IPVUSE .EQ. 67) GC TO 620
1480	IF (IPVUSE .EQ. 68) GC TO 621
1481	IF (IPVUSE .EQ. 70) GC TO 625
1482	IF (IPVUSE .EQ. 71) GC TO 626
1483	IF (IPVUSE .EQ. 72) GC TO 627
1484	IF (IPVUSE .EQ. 73) GC TO 628
1485	IF (IPVUSE .EQ. 74) GC TO 629
1486	IF (IPVUSE .EQ. 75) GC TO 630
1487	IF (IPVUSE .EQ. 76) GC TO 631
1488	IF (IPVUSE .EQ. 77) GC TO 632
1489	IF (IPVUSE .EQ. 78) GC TO 633
1490	IF (IPVUSE .EQ. 79) GC TO 634
1491	IF (IPVUSE .EQ. 80) GC TO 635
1492	IF (IPVUSE .EQ. 81) GC TO 636
1493	IF (IPVUSE .EQ. 82) GC TO 637
1494	IF (IPVUSE .EQ. 83) GC TO 638
1495	IF (IPVUSE .EQ. 84) GC TO 639
1496	IF (IPVUSE .EQ. 85) GC TO 640
1497	IF (IPVUSE .EQ. 86) GC TO 641
1498	IF (IPVUSE .EQ. 87) GC TO 642
1499	IF (IPVUSE .EQ. 88) GC TO 643
1500	IF (IPVUSE .EQ. 89) GC TO 644

1501	IF (IPVUSE .EQ. 901) GC TO 645
1502	IF (IPVUSE .EQ. 91) GC TO 646
1503	IF (IPVUSE .EQ. 92) GC TO 647
1504	IF (IPVUSE .EQ. 93) GC TO 648
1505	IF (IPVUSE .EQ. 95) GC TO 649
1506	IF (IPVUSE .EQ. 96) GC TO 652
1507	IF (IPVUSE .EQ. 97) GC TO 653
1508	IF (IPVUSE .EQ. 98) GC TO 654
1509	IF (IPVUSE .EQ. 99) GC TO 655
1510	IF (IPVUSE .EQ. 100) GC TO 656
1511	IF (IPVUSE .EQ. 101) GC TO 657
1512	IF (IPVUSE .EQ. 102) GC TO 658
1513	IF (IPVUSE .EQ. 103) GC TO 659
1514	IF (IPVUSE .EQ. 104) GC TO 660
1515	IF (IPVUSE .EQ. 105) GC TO 661
1516	IF (IPVUSE .EQ. 106) GC TO 662
1517	IF (IPVUSE .EQ. 107) GC TO 663
1518	IF (IPVUSE .EQ. 108) GC TO 664
1519	IF (IPVUSE .EQ. 109) GC TO 665
1520	IF (IPVUSE .EQ. 110) GC TO 666
1521	IF (IPVUSE .EQ. 111) GC TO 667
1522	IF (IPVUSE .EQ. 112) GC TO 668
1523	IF (IPVUSE .EQ. 113) GC TO 669
1524	IF (IPVUSE .EQ. 114) GC TO 670
1525	IF (IPVUSE .EQ. 115) GC TO 671
1526	IF (IPVUSE .EQ. 116) GC TO 672
1527	IF (IPVUSE .EQ. 117) GC TO 673
1528	IF (IPVUSE .EQ. 118) GC TO 674
1529	IF (IPVUSE .EQ. 119) GC TO 675
1530	IF (IPVUSE .EQ. 120) GC TO 676
1531	IF (IPVUSE .EQ. 121) GC TO 677
1532	IF (IPVUSE .EQ. 122) GC TO 678
1533	IF (IPVUSE .EQ. 123) GC TO 679
1534	IF (IPVUSE .EQ. 124) GC TO 680
1535	IF (IPVUSE .EQ. 125) GC TO 681
1536	IF (IPVUSE .EQ. 126) GC TO 682
1537	IF (IPVUSE .EQ. 127) GC TO 683
1538	IF (IPVUSE .EQ. 128) GC TO 684
1539	IF (IPVUSE .EQ. 129) GC TO 685
1540	IF (IPVUSE .EQ. 130) GC TO 686
1541	IF (IPVUSE .EQ. 131) GC TO 687
1542	IF (IPVUSE .EQ. 132) GC TO 688
1543	IF (IPVUSE .EQ. 133) GC TO 689
1544	IF (IPVUSE .EQ. 134) GC TO 690
1545	IF (IPVUSE .EQ. 135) GC TO 691
1546	IF (IPVUSE .EQ. 136) GC TO 692
1547	IF (IPVUSE .EQ. 137) GC TO 693
1548	IF (IPVUSE .EQ. 138) GC TO 694
1549	IF (IPVUSE .EQ. 139) GC TO 695
1550	IF (IPVUSE .EQ. 140) GC TO 696
1551	IF (IPVUSE .EQ. 141) GC TO 697
1552	IF (IPVUSE .EQ. 142) GC TO 698
1553	IF (IPVUSE .EQ. 143) GC TO 699
1554	IF (IPVUSE .EQ. 144) GC TO 700
1555	IF (IPVUSE .EQ. 145) GC TO 701
1556	IF (IPVUSE .EQ. 146) GC TO 702
1557	IF (IPVUSE .EQ. 147) GC TO 703
1558	IF (IPVUSE .EQ. 148) GC TO 704
1559	IF (IPVUSE .EQ. 149) GC TO 705
1560	IF (IPVUSE .EQ. 150) GC TO 706

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1561         IF (IPVUSE .EQ. 151) GO TO 707
1562         IF (IPVUSE .EQ. 152) GO TO 708
1563         WRITE (12,9031) IBEFFN, IAFTFN, IPVUSE
1564 9031 FORMAT(1X,'ERROR: FOR BEFCRE FN: ',I5,' AFTER FN: ',I5,' IPVUSE
1565        1I5,' NOT RECOGNIZED', 20(1X,/),1X,/1X)
1566         GO TO 508
1567
1568 564 IF (ICCTYP .EQ. 1) GO TO 263
1569 MT044 = MT044 + KTCATE(I11) - IBDATE
1570 IF (KAS378(I11) .GE. MT045) MT045 = KAS378(I11)
1571 C      CALCULATES MAXIMUM CERTAINTY AS LEAST TRUSTWORTHY DATE VALUE
1572 MR = 1
1573 GO TO 563
1574
1575 565 MT047 = MT047 + KTCATE(I11) - IBDATE
1576 IF (KAS378(I11) .GE. MT048) MT048 = KAS378(I11)
1577 MR = 2
1578 GO TO 563
1579
1580 566 MT050 = MT050 + KTCATE(I11) - IBDATE
1581 IF (KAS378(I11) .GE. MTC51) MT051 = KAS378(I11)
1582 MR = 3
1583 GO TO 563
1584
1585 567 MT053 = MT053 + KTCATE(I11) - IBDATE
1586 IF (KAS378(I11) .GE. MT054) MT054 = KAS378(I11)
1587 MR = 4
1588 GO TO 563
1589
1590 568 MT056 = MT056 + KTCATE(I11) - IBDATE
1591 IF (KAS378(I11) .GE. MT057) MT057 = KAS378(I11)
1592 MR = 5
1593 GO TO 563
1594
1595 569 MT059 = MT059 + KTCATE(I11) - IBDATE
1596 IF (KAS378(I11) .GE. MT060) MT060 = KAS378(I11)
1597 MR = 6
1598 GO TO 563
1599
1600 570 MT062 = MT062 + KTCATE(I11) - IBDATE
1601 IF (KAS378(I11) .GE. MT063) MT063 = KAS378(I11)
1602 MR = 7
1603 GO TO 563
1604
1605 571 MT065 = MT065 + KTCATE(I11) - IBDATE
1606 IF (KAS378(I11) .GE. MT066) MT066 = KAS378(I11)
1607 MR = 8
1608 GO TO 563
1609
1610 572 MT068 = MT068 + KTCATE(I11) - IBDATE
1611 IF (KAS378(I11) .GE. MT069) MT069 = KAS378(I11)
1612 MR = 9
1613 GO TO 563
1614
1615 573 MT071 = MT071 + KTCATE(I11) - IBDATE
1616 IF (KAS378(I11) .GE. MT072) MT072 = KAS378(I11)
1617 MR = 10
1618 GO TO 563
1619
1620 574 MT074 = MT074 + KTCATE(I11) - IBDATE
1621 IF (KAS378(I11) .GE. MT076) MT076 = KAS378(I11)
1622 MR = 11
1623 GO TO 563
1624
1625 575 MT077 = MT077 + KTCATE(I11) - IBDATE
1626 IF (KAS378(I11) .GE. MT078) MT078 = KAS378(I11)
1627 MR = 12
1628 GO TO 563
1629
1630 576 MT080 = MT080 + KTCATE(I11) - IBDATE
1631 IF (KAS378(I11) .GE. MT081) MTC81 = KAS378(I11)
1632 MR = 13
1633 GO TO 563

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1621      577 MT083 = MT083 + KTCATE(I11) - IBDATE
1622      IF (KAS378(I11) .GE. MT084) MT084 = KAS378(I11)
1623      MR = 14
1624      GO TO 563
1625      578 MT086 = MT086 + KTCATE(I11) - IBDATE
1626      IF (KAS378(I11) .GE. MT087) MT087 = KAS378(I11)
1627      MR = 15
1628      GO TO 563
1629      579 MT089 = MT089 + KTCATE(I11) - IBDATE
1630      IF (KAS378(I11) .GE. MT090) MT090 = KAS378(I11)
1631      MR = 16
1632      GO TO 563
1633      580 MT092 = MT092 + KTCATE(I11) - IBDATE
1634      IF (KAS378(I11) .GE. MT093) MT093 = KAS378(I11)
1635      MR = 17
1636      GO TO 563
1637      581 MT095 = MT095 + KTCATE(I11) - IBDATE
1638      IF (KAS378(I11) .GE. MT096) MT096 = KAS378(I11)
1639      MR = 18
1640      GO TO 563
1641      582 MT098 = MT098 + KTCATE(I11) - IBDATE
1642      IF (KAS378(I11) .GE. MT099) MT099 = KAS378(I11)
1643      MR = 19
1644      GO TO 563
1645      583 MT101 = MT101 + KTCATE(I11) - IBDATE
1646      IF (KAS378(I11) .GE. MT102) MT102 = KAS378(I11)
1647      MR = 20
1648      GO TO 563
1649      584 MT104 = MT104 + KTCATE(I11) - IBDATE
1650      IF (KAS378(I11) .GE. MT105) MT105 = KAS378(I11)
1651      MR = 21
1652      GO TO 563
1653      585 MT107 = MT107 + KTCATE(I11) - IBDATE
1654      IF (KAS378(I11) .GE. MT108) MT108 = KAS378(I11)
1655      MR = 22
1656      GO TO 563
1657      586 MT110 = MT110 + KTCATE(I11) - IBDATE
1658      IF (KAS378(I11) .GE. MT111) MT111 = KAS378(I11)
1659      MR = 23
1660      GO TO 563
1661      587 MT113 = MT113 + KTCATE(I11) - IBDATE
1662      IF (KAS378(I11) .GE. MT114) MT114 = KAS378(I11)
1663      MR = 24
1664      GO TO 563
1665      588 MT116 = MT116 + KTCATE(I11) - IBDATE
1666      IF (KAS378(I11) .GE. MT117) MT117 = KAS378(I11)
1667      MR = 25
1668      GO TO 563
1669      589 MT119 = MT119 + KTCATE(I11) - IBDATE
1670      IF (KAS378(I11) .GE. MT120) MT120 = KAS378(I11)
1671      MR = 26
1672      GO TO 563
1673      590 MT122 = MT122 + KTCATE(I11) - IBDATE
1674      IF (KAS378(I11) .GE. MT123) MT123 = KAS378(I11)
1675      MR = 27
1676      GO TO 563
1677      591 MT125 = MT125 + KTCATE(I11) - IBDATE
1678      IF (KAS378(I11) .GE. MT126) MT126 = KAS378(I11)
1679      MR = 28
1680      GO TO 563

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1681      592 MT128 = MT128 + KTCATE(I11) - I8DATE
1682      IF (KAS378(I11) .GE. MT129) MT129 = KAS378(I11)
1693      MR = 29
1684      GO TO 563
1685      593 MT131 = MT131 + KTCATE(I11) - I8DATE
1686      IF (KAS378(I11) .GE. MT132) MT132 = KAS378(I11)
1687      MR = 30
1688      GO TO 563
1689      594 MT134 = MT134 + KTCATE(I11) - I8DATE
1690      IF (KAS378(I11) .GE. MT135) MT135 = KAS378(I11)
1691      MR = 31
1692      GO TO 563
1693      595 MT137 = MT137 + KTCATE(I11) - I8DATE
1694      IF (KAS378(I11) .GE. MT138) MT138 = KAS378(I11)
1695      MR = 32
1696      GO TO 563
1697      596 MT140 = MT140 + KTCATE(I11) - I8DATE
1698      IF (KAS378(I11) .GE. MT141) MT141 = KAS378(I11)
1699      MR = 33
1700      GO TO 563
1701      597 MT143 = MT143 + KTCATE(I11) - I8DATE
1702      IF (KAS378(I11) .GE. MT144) MT144 = KAS378(I11)
1703      MR = 34
1704      GO TO 563
1705      598 MT146 = MT146 + KTCATE(I11) - I8DATE
1706      IF (KAS378(I11) .GE. MT147) MT147 = KAS378(I11)
1707      MR = 35
1708      GO TO 563
1709      599 MT149 = MT149 + KTCATE(I11) - I8DATE
1710      IF (KAS378(I11) .GE. MT150) MT150 = KAS378(I11)
1711      MR = 36
1712      GO TO 563
1713      600 MT152 = MT152 + KTCATE(I11) - I8DATE
1714      IF (KAS378(I11) .GE. MT153) MT153 = KAS378(I11)
1715      MR = 37
1716      GO TO 563
1717      601 MT155 = MT155 + KTCATE(I11) - I8DATE
1718      IF (KAS378(I11) .GE. MT156) MT156 = KAS378(I11)
1719      MR = 38
1720      GO TO 563
1721      602 MT158 = MT158 + KTCATE(I11) - I8DATE
1722      IF (KAS378(I11) .GE. MT159) MT159 = KAS378(I11)
1723      MR = 39
1724      GO TO 563
1725      603 MT161 = MT161 + KTCATE(I11) - I8DATE
1726      IF (KAS378(I11) .GE. MT162) MT162 = KAS378(I11)
1727      MR = 40
1728      GO TO 563
1729      604 MT164 = MT164 + KTCATE(I11) - I8DATE
1730      IF (KAS378(I11) .GE. MT165) MT165 = KAS378(I11)
1731      MR = 41
1732      GO TO 563
1733      605 MT167 = MT167 + KTCATE(I11) - I8DATE
1734      IF (KAS378(I11) .GE. MT168) MT168 = KAS378(I11)
1735      MR = 42
1736      GO TO 563
1737      606 MT170 = MT170 + KTCATE(I11) - I8DATE
1738      IF (KAS378(I11) .GE. MT171) MT171 = KAS378(I11)
1739      MR = 43
1740      GO TO 563

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1741      607 MT173 = MT173 + KTCATE(I11) - I8DATE
1742      IF (KAS378(I11) .GE. MT174) MT174 = KAS378(I11)
1743      MR = 44
1744      GO TO 563
1745      608 MT176 = MT176 + KTCATE(I11) - I8DATE
1746      IF (KAS378(I11) .GE. MT174) MT174 = KAS378(I11)
1747      MR = 45
1748      GO TO 563
1749      609 MT179 = MT179 + KTCATE(I11) - I8DATE
1750      IF (KAS378(I11) .GE. MT180) MT180 = KAS378(I11)
1751      MR = 46
1752      GO TO 563
1753      610 MT182 = MT182 + KTCATE(I11) - I8DATE
1754      IF (KAS378(I11) .GE. MT183) MT183 = KAS378(I11)
1755      MR = 47
1756      GO TO 563
1757      611 MT185 = MT185 + KTCATE(I11) - I8DATE
1758      IF (KAS378(I11) .GE. MT186) MT186 = KAS378(I11)
1759      MR = 48
1760      GO TO 563
1761      612 MT188 = MT188 + KTCATE(I11) - I8DATE
1762      IF (KAS378(I11) .GE. MT189) MT189 = KAS378(I11)
1763      MR = 49
1764      GO TO 563
1765      613 MT191 = MT191 + KTCATE(I11) - I8DATE
1766      IF (KAS378(I11) .GE. MT192) MT192 = KAS378(I11)
1767      MR = 50
1768      GO TO 563
1769      614 MT194 = MT194 + KTCATE(I11) - I8DATE
1770      IF (KAS378(I11) .GE. MT195) MT195 = KAS378(I11)
1771      MR = 51
1772      GO TO 563
1773      615 MT197 = MT197 + KTCATE(I11) - I8DATE
1774      IF (KAS378(I11) .GE. MT198) MT198 = KAS378(I11)
1775      MR = 52
1776      GO TO 563
1777      616 MT200 = MT200 + KTCATE(I11) - I8DATE
1778      IF (KAS378(I11) .GE. MT201) MT201 = KAS378(I11)
1779      MR = 53
1780      GO TO 563
1781      617 MT203 = MT203 + KTCATE(I11) - I8DATE
1782      IF (KAS378(I11) .GE. MT204) MT204 = KAS378(I11)
1783      MR = 54
1784      GO TO 563
1785      618 MT206 = MT206 + KTCATE(I11) - I8DATE
1786      IF (KAS378(I11) .GE. MT207) MT207 = KAS378(I11)
1787      MR = 55
1788      GO TO 563
1789      619 MT209 = MT209 + KTCATE(I11) - I8DATE
1790      IF (KAS378(I11) .GE. MT210) MT210 = KAS378(I11)
1791      MR = 56
1792      GO TO 563
1793      620 MT212 = MT212 + KTCATE(I11) - I8DATE
1794      IF (KAS378(I11) .GE. MT213) MT213 = KAS378(I11)
1795      MR = 57
1796      GO TO 563
1797      621 MT215 = MT215 + KTCATE(I11) - I8DATE
1798      IF (KAS378(I11) .GE. MT216) MT216 = KAS378(I11)
1799      MR = 58
1800      GO TO 563

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1801      625 MT218 = MT218 + KTCATE(I11) - I8DATE
1802      IF (KAS378(I11) .GE. MT219) MT219 = KAS378(I11)
1803      MR = 66
1804      GO TO 563
1805      626 MT220 = MT220 + KTCATE(I11) - I8DATE
1806      IF (KAS378(I11) .GE. MT221) MT221 = KAS378(I11)
1807      MR = 67
1808      GO TO 563
1809      627 MT222 = MT222 + KTCATE(I11) - I8DATE
1810      IF (KAS378(I11) .GE. MT223) MT223 = KAS378(I11)
1811      MR = 68
1812      GO TO 563
1813      628 MT224 = MT224 + KTCATE(I11) - I8DATE
1814      IF (KAS378(I11) .GE. MT225) MT225 = KAS378(I11)
1815      MR = 69
1816      GO TO 563
1817      629 MT226 = MT226 + KTCATE(I11) - I8DATE
1818      IF (KAS378(I11) .GE. MT227) MT227 = KAS378(I11)
1819      MR = 70
1820      GO TO 563
1821      630 MT228 = MT228 + KTCATE(I11) - I8DATE
1822      IF (KAS378(I11) .GE. MT229) MT229 = KAS378(I11)
1823      MR = 71
1824      GO TO 563
1825      631 MT230 = MT230 + KTCATE(I11) - I8DATE
1826      IF (KAS378(I11) .GE. MT231) MT231 = KAS378(I11)
1827      MR = 72
1828      GO TO 563
1829      632 MT232 = MT232 + KTCATE(I11) - I8DATE
1830      IF (KAS378(I11) .GE. MT233) MT233 = KAS378(I11)
1831      MR = 73
1832      GO TO 563
1833      633 MT234 = MT234 + KTCATE(I11) - I8DATE
1834      IF (KAS378(I11) .GE. MT235) MT235 = KAS378(I11)
1835      MR = 74
1836      GO TO 563
1837      634 MT236 = MT236 + KTCATE(I11) - I8DATE
1838      IF (KAS378(I11) .GE. MT237) MT237 = KAS378(I11)
1839      MR = 75
1840      GO TO 563
1841      635 MT238 = MT238 + KTCATE(I11) - I8DATE
1842      IF (KAS378(I11) .GE. MT239) MT239 = KAS378(I11)
1843      MR = 76
1844      GO TO 563
1845      636 MT240 = MT240 + KTCATE(I11) - I8DATE
1846      IF (KAS378(I11) .GE. MT241) MT241 = KAS378(I11)
1847      MR = 77
1848      GO TO 563
1849      637 MT242 = MT242 + KTCATE(I11) - I8DATE
1850      IF (KAS378(I11) .GE. MT243) MT243 = KAS378(I11)
1851      MR = 78
1852      GO TO 563
1853      638 MT244 = MT244 + KTCATE(I11) - I8DATE
1854      IF (KAS378(I11) .GE. MT245) MT245 = KAS378(I11)
1855      MR = 79
1856      GO TO 563
1857      639 MT246 = MT246 + KTCATE(I11) - I8DATE
1858      IF (KAS378(I11) .GE. MT247) MT247 = KAS378(I11)
1859      MR = 80
1860      GO TO 563

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1861      640 MT248 = MT248 + KTDATE(I11) - IBDATE
1862      IF (KAS378(I11) .GE. MT249) MT249 = KAS378(I11)
1863      MR = 81
1864      GO TO 563
1865      641 MT250 = MT250 + KTDATE(I11) - IBDATE
1866      IF (KAS378(I11) .GE. MT251) MT251 = KAS378(I11)
1867      MR = 82
1868      GO TO 563
1869      642 MT252 = MT252 + KTDATE(I11) - IBDATE
1870      IF (KAS378(I11) .GE. MT253) MT253 = KAS378(I11)
1871      MR = 83
1872      GO TO 563
1873      643 MT254 = MT254 + KTDATE(I11) - IBDATE
1874      IF (KAS378(I11) .GE. MT255) MT255 = KAS378(I11)
1875      MR = 84
1876      GO TO 563
1877      644 MT256 = MT256 + KTDATE(I11) - IBDATE
1878      IF (KAS378(I11) .GE. MT257) MT257 = KAS378(I11)
1879      MR = 85
1880      GO TO 563
1881      645 MT258 = MT258 + KTDATE(I11) - IBDATE
1882      IF (KAS378(I11) .GE. MT259) MT259 = KAS378(I11)
1883      MR = 86
1884      GO TO 563
1885      646 MT260 = MT260 + KTDATE(I11) - IBDATE
1886      IF (KAS378(I11) .GE. MT261) MT261 = KAS378(I11)
1887      MR = 87
1888      GO TO 563
1889      647 MT262 = MT262 + KTDATE(I11) - IBDATE
1890      IF (KAS378(I11) .GE. MT263) MT263 = KAS378(I11)
1891      MR = 88
1892      GO TO 563
1893      648 MT264 = MT264 + KTDATE(I11) - IBDATE
1894      IF (KAS378(I11) .GE. MT265) MT265 = KAS378(I11)
1895      MR = 89
1896      GO TO 563
1897      649 MT266 = MT266 + KTDATE(I11) - IBDATE
1898      IF (KAS378(I11) .GE. MT267) MT267 = KAS378(I11)
1899      MR = 90
1900      GO TO 563
1901      652 MT268 = MT268 + KTDATE(I11) - IBDATE
1902      IF (KAS378(I11) .GE. MT269) MT269 = KAS378(I11)
1903      MR = 91
1904      GO TO 563
1905      653 MT270 = MT270 + KTDATE(I11) - IBDATE
1906      IF (KAS378(I11) .GE. MT271) MT271 = KAS378(I11)
1907      MR = 92
1908      GO TO 563
1909      654 MT272 = MT272 + KTDATE(I11) - IBDATE
1910      IF (KAS378(I11) .GE. MT273) MT273 = KAS378(I11)
1911      MR = 93
1912      GO TO 563
1913      655 MT274 = MT274 + KTDATE(I11) - IBDATE
1914      IF (KAS378(I11) .GE. MT275) MT275 = KAS378(I11)
1915      MR = 94
1916      GO TO 563
1917      656 MT276 = MT276 + KTDATE(I11) - IBDATE
1918      IF (KAS378(I11) .GE. MT277) MT277 = KAS378(I11)
1919      MR = 95
1920      GO TO 563

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1921      657 MT278 = MT278 + KTCATE(I11) - IBDATE
1922      IF (KAS378(I11) .GE. MT279) MT279 = KAS378(I11)
1923      MR = 96
1924      GO TO 563
1925      658 MT280 = MT280 + KTCATE(I11) - IBDATE
1926      IF (KAS378(I11) .GE. MT281) MT281 = KAS378(I11)
1927      MR = 97
1928      GO TO 563
1929      659 MT282 = MT282 + KTCATE(I11) - IBDATE
1930      IF (KAS378(I11) .GE. MT283) MT283 = KAS378(I11)
1931      MR = 98
1932      GO TO 563
1933      660 MT284 = MT284 + KTCATE(I11) - IBDATE
1934      IF (KAS378(I11) .GE. MT285) MT285 = KAS378(I11)
1935      MR = 99
1936      GO TO 563
1937      661 MT286 = MT286 + KTCATE(I11) - IBDATE
1938      IF (KAS378(I11) .GE. MT287) MT287 = KAS378(I11)
1939      MR = 100
1940      GO TO 563
1941      662 MT288 = MT288 + KTCATE(I11) - IBDATE
1942      IF (KAS378(I11) .GE. MT289) MT289 = KAS378(I11)
1943      MR = 101
1944      GO TO 563
1945      663 MT290 = MT290 + KTCATE(I11) - IBDATE
1946      IF (KAS378(I11) .GE. MT291) MT291 = KAS378(I11)
1947      MR = 102
1948      GO TO 563
1949      664 MT292 = MT292 + KTCATE(I11) - IBDATE
1950      IF (KAS378(I11) .GE. MT293) MT293 = KAS378(I11)
1951      MR = 103
1952      GO TO 563
1953      665 MT294 = MT294 + KTCATE(I11) - IBDATE
1954      IF (KAS378(I11) .GE. MT295) MT295 = KAS378(I11)
1955      MR = 104
1956      GO TO 563
1957      666 MT296 = MT296 + KTCATE(I11) - IBDATE
1958      IF (KAS378(I11) .GE. MT297) MT297 = KAS378(I11)
1959      MR = 105
1960      GO TO 563
1961      667 MT298 = MT298 + KTCATE(I11) - IBDATE
1962      IF (KAS378(I11) .GE. MT299) MT299 = KAS378(I11)
1963      MR = 106
1964      GO TO 563
1965      668 MT300 = MT300 + KTCATE(I11) - IBDATE
1966      IF (KAS378(I11) .GE. MT301) MT301 = KAS378(I11)
1967      MR = 107
1968      GO TO 563
1969      669 MT302 = MT302 + KTCATE(I11) - IBDATE
1970      IF (KAS378(I11) .GE. MT303) MT303 = KAS378(I11)
1971      MR = 108
1972      GO TO 563
1973      670 MT304 = MT304 + KTCATE(I11) - IBDATE
1974      IF (KAS378(I11) .GE. MT305) MT305 = KAS378(I11)
1975      MR = 109
1976      GO TO 563
1977      671 MT306 = MT306 + KTCATE(I11) - IBDATE
1978      IF (KAS378(I11) .GE. MT307) MT307 = KAS378(I11)
1979      MR = 110
1980      GO TO 563

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1981      672 MT308 = MT308 + KTCATE(I11) - I8DATE
1982      IF (KAS378(I11) .GE. MT309) MT309 = KAS378(I11)
1983      MR = 111
1984      GO TO 563
1985      673 MT310 = MT310 + KTCATE(I11) - I8DATE
1986      IF (KAS378(I11) .GE. MT311) MT311 = KAS378(I11)
1987      MR = 112
1988      GO TO 563
1989      674 MT312 = MT312 + KTCATE(I11) - I8DATE
1990      IF (KAS378(I11) .GE. MT313) MT313 = KAS378(I11)
1991      MR = 113
1992      GO TO 563
1993      675 MT314 = MT314 + KTCATE(I11) - I8DATE
1994      IF (KAS378(I11) .GE. MT315) MT315 = KAS378(I11)
1995      MR = 114
1996      GO TO 563
1997      676 MT316 = MT316 + KTCATE(I11) - I8DATE
1998      IF (KAS378(I11) .GE. MT317) MT317 = KAS378(I11)
1999      MR = 115
2000      GO TO 563
2001      677 MT318 = MT318 + KTCATE(I11) - I8DATE
2002      IF (KAS378(I11) .GE. MT319) MT319 = KAS378(I11)
2003      MR = 116
2004      GO TO 563
2005      678 MT320 = MT320 + KTCATE(I11) - I8DATE
2006      IF (KAS378(I11) .GE. MT321) MT321 = KAS378(I11)
2007      MR = 117
2008      GO TO 563
2009      679 MT322 = MT322 + KTCATE(I11) - I8DATE
2010      IF (KAS378(I11) .GE. MT323) MT323 = KAS378(I11)
2011      MR = 118
2012      GO TO 563
2013      680 MT324 = MT324 + KTCATE(I11) - I8DATE
2014      IF (KAS378(I11) .GE. MT325) MT325 = KAS378(I11)
2015      MR = 119
2016      GO TO 563
2017      681 MT326 = MT326 + KTCATE(I11) - I8DATE
2018      IF (KAS378(I11) .GE. MT327) MT327 = KAS378(I11)
2019      MR = 120
2020      GO TO 563
2021      682 MT328 = MT328 + KTCATE(I11) - I8DATE
2022      IF (KAS378(I11) .GE. MT329) MT329 = KAS378(I11)
2023      MR = 121
2024      GO TO 563
2025      683 MT330 = MT330 + KTCATE(I11) - I8DATE
2026      IF (KAS378(I11) .GE. MT331) MT331 = KAS378(I11)
2027      MR = 122
2028      GO TO 563
2029      684 MT332 = MT332 + KTCATE(I11) - I8DATE
2030      IF (KAS378(I11) .GE. MT333) MT333 = KAS378(I11)
2031      MR = 123
2032      GO TO 563
2033      685 MT334 = MT334 + KTCATE(I11) - I8DATE
2034      IF (KAS378(I11) .GE. MT335) MT335 = KAS378(I11)
2035      MR = 124
2036      GO TO 563
2037      686 MT336 = MT336 + KTCATE(I11) - I8DATE
2038      IF (KAS378(I11) .GE. MT337) MT337 = KAS378(I11)
2039      MR = 125
2040      GO TO 563

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2041 687 MT338 = MT338 + KTCATE(I11) - IBDATE
2042 IF (KAS378(I11) .GE. MT339) MT339 = KAS378(I11)
2043 MR = 126
2044 GO TO 563
2045 688 MT340 = MT340 + KTCATE(I11) - IBDATE
2046 IF (KAS378(I11) .GE. MT341) MT341 = KAS378(I11)
2047 MR = 119
2048 GO TO 563
2049 689 MT342 = MT342 + KTCATE(I11) - IBDATE
2050 IF (KAS378(I11) .GE. MT343) MT343 = KAS378(I11)
2051 MR = 129
2052 GO TO 563
2053 690 MT344 = MT344 + KTCATE(I11) - IBDATE
2054 IF (KAS378(I11) .GE. MT345) MT345 = KAS378(I11)
2055 MR = 129
2056 GO TO 563
2057 691 MT346 = MT346 + KTCATE(I11) - IBDATE
2058 IF (KAS378(I11) .GE. MT347) MT347 = KAS378(I11)
2059 MR = 130
2060 GO TO 563
2061 692 MT348 = MT348 + KTCATE(I11) - IBDATE
2062 IF (KAS378(I11) .GE. MT349) MT349 = KAS378(I11)
2063 MR = 131
2064 GO TO 563
2065 693 MT350 = MT350 + KTCATE(I11) - IBDATE
2066 IF (KAS378(I11) .GE. MT351) MT351 = KAS378(I11)
2067 MR = 132
2068 GO TO 563
2069 694 MT352 = MT352 + KTCATE(I11) - IBDATE
2070 IF (KAS378(I11) .GE. MT353) MT353 = KAS378(I11)
2071 MR = 133
2072 GO TO 563
2073 695 MT354 = MT354 + KTCATE(I11) - IBDATE
2074 IF (KAS378(I11) .GE. MT355) MT355 = KAS378(I11)
2075 MR = 134
2076 GO TO 563
2077 696 MT356 = MT356 + KTCATE(I11) - IBDATE
2078 IF (KAS378(I11) .GE. MT357) MT357 = KAS378(I11)
2079 MR = 135
2080 GO TO 563
2081 697 MT358 = MT358 + KTCATE(I11) - IBDATE
2082 IF (KAS378(I11) .GE. MT359) MT359 = KAS378(I11)
2083 MR = 136
2084 GO TO 563
2085 698 MT360 = MT360 + KTCATE(I11) - IBDATE
2086 IF (KAS378(I11) .GE. MT361) MT361 = KAS378(I11)
2087 MR = 137
2088 GO TO 563
2089 699 MT362 = MT362 + KTCATE(I11) - IBDATE
2090 IF (KAS378(I11) .GE. MT363) MT363 = KAS378(I11)
2091 MR = 138
2092 GO TO 563
2093 700 MT364 = MT364 + KTCATE(I11) - IBDATE
2094 IF (KAS378(I11) .GE. MT365) MT365 = KAS378(I11)
2095 MR = 139
2096 GO TO 563
2097 701 MT366 = MT366 + KTCATE(I11) - IBDATE
2098 IF (KAS378(I11) .GE. MT367) MT367 = KAS378(I11)
2099 MR = 140
2100 GO TO 563

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2101 702 MT363 = MT368 + KTCATE(I11) - IBDATE
2102 IF (KAS378(I11) .GE. MT369) MT369 = KAS378(I11)
2103 MR = 141
2104 GO TO 563
2105 703 MT370 = MT370 + KTCATE(I11) - IBDATE
2106 IF (KAS378(I11) .GE. MT371) MT371 = KAS378(I11)
2107 MR = 142
2108 GO TO 563
2109 704 MT372 = MT372 + KTCATE(I11) - IBDATE
2110 IF (KAS378(I11) .GE. MT373) MT373 = KAS378(I11)
2111 MR = 143
2112 GO TO 563
2113 705 MT374 = MT374 + KTCATE(I11) - IBDATE
2114 IF (KAS378(I11) .GE. MT375) MT375 = KAS378(I11)
2115 MR = 144
2116 GO TO 563
2117 706 MT376 = MT376 + KTCATE(I11) - IBDATE
2118 IF (KAS378(I11) .GE. MT377) MT377 = KAS378(I11)
2119 MR = 145
2120 GO TO 563
2121 707 MT378 = MT378 + KTCATE(I11) - IBDATE
2122 IF (KAS378(I11) .GE. MT379) MT379 = KAS378(I11)
2123 MR = 146
2124 GO TO 563
2125 708 MT380 = MT380 + KTCATE(I11) - IBDATE
2126 IF (KAS378(I11) .GE. MT381) MT381 = KAS378(I11)
2127 MR = 147
2128 563 CONTINUE
2129 IF (LCOMC(4,MIN2RC,RAIN(MR)).EQ.0) GO TO 200
2130 CALL WEATED(IBDATE, KTCATE(I11))
2131 IF (IBDATE .EQ. KTCATE(I11)) RAIN80 = 0.
2132 IF (RAIN80 .LT. -.9.) GO TO 200
2133 RAIN(MR) = RAIN(MR) + RAIN80
2134 GO TO 263
2135 200 RAIN(MR) = -0.
2136 253 CONTINUE
2137 LCU2 = LCU2
2138 LCU2 CALCULATED AT STATEMENT 544
2139 C IF(I52.GE.1)GO TO 402
2140 C TRANSFER FOR FIELDS WITH INTERVENING SAMPLES IN THE COMPARISON INTERVAL
2141 MT020 = MT062 + MT065 + MT068 + MT071 + MT074 + MT077 + MT080 +
2142 1MT093 + MT086 + MT089 + MT092 + MT095 + MT098 + MT101 + MT104 +
2143 2MT107 + MT110 + MT113 + MT116 + MT119 + MT146 + MT149 + MT152 +
2144 3MT155 + MT198 + MT194 + MT200 + MT203 + MT206 + MT209 + MT215 +
2145 4MT213 + MT220 + MT222 + MT224 + MT226 + MT230 + MT232 + MT234 +
2146 5MT236 + MT238 + MT240 + MT242 + MT244 + MT246 + MT248 +
2147 6MT250 + MT252 + MT254 + MT256 + MT258 + MT258 + MT260 + MT262 +
2148 7MT264 + MT266 + MT268 + MT270 + MT272 + MT274 + MT276 + MT278 +
2149 8MT279 + MT280 + MT282 + MT284 + MT286 + MT288 + MT290 + MT292 +
2150 9MT294 + MT296 + MT298 + MT300 + MT302 + MT304 + MT306 + MT308 +
2151 1MT310 + MT312 + MT314 + MT316 + MT322 + MT328 + MT330 + MT332 +
2152 3 MT366 + MT368 + MT370 + MT372 + MT374 + MT376 +
2153 4 MT378 + MT380
2154 1 + MT334 + MT336 + MT338 + MT340 + MT342 + MT344 +
2155 2 MT346 + MT348 + MT350 + MT360 + MT362 + MT364
2156 C MT020 IS TOTAL DAYS IN ANNUAL CROPS
2157 MT023 = MT140 + MT143 + MT146 + MT149 + MT152 + MT155 + MT158 +
2158 1MT161 + MT170 + MT173 + MT176 + MT179 + MT182 + MT185 + MT191 +
2159 2MT194 + MT197 + MT222 + MT224 + MT228 + MT230 + MT232 +
2160 3MT234 + MT240 + MT246 + MT260 + MT262 + MT264 + MT290 + MT292 +

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2161 4MT294 + MT296 + MT298 + MT300 + MT302 + MT310 + MT312 + MT316 +
 2162 5 MT318 + MT320 + MT322 + MT324 + MT328 + MT330 + MT332 + MT336 +
 2163 6 MT338 + MT340 + MT342 + MT344 + MT348 + MT350 + MT352 +
 2164 7 MT354 + MT356 + MT358 + MT360 + MT370 + MT372 + MT374
 2165 C MT023 IS TOTAL DAYS TREE CROPS
 2166 MT023 = MT047 + MT050 + MT053 + MT056 + MT059 + MT125
 2167 C MT025 IS TOTAL DAYS FALLOW (BARE, WEEDS, CAPO. OR CAPIM WITH CAPO)
 2168 MT025 = MT062 + MT065 + MT068 + MT071 + MT074 + MT077 + MT080 +
 2169 1MT213 + MT236 + MT240 + MT276 + MT278 + MT282 + MT284 + MT290 +
 2170 2MT292 + MT294 + MT298 + MT300 + MT304 + MT310 + MT312 + MT328 +
 2171 2 MT332 + MT334 + MT368
 2172 C MT032 IS TOTAL DAYS IN ANY RICE COMBINATION
 2173 MT035 = LGPMZD
 2174 C MT035 IS DAYS IN ANY GREEN MAIZE COMBINATION
 2175 IF (LUNKE .GE. 1) MT031 = IEND - LUNKE
 2176 C MT031 IS DAYS SINCE LAST UNKNOWN HISTORY INTERVAL
 2177 IF (LUNKE .EQ. 0) MT031 = 0
 2178 MT029 = LUNKD
 2179 C MT029 IS HISTORY UNKNOWN INTERVAL DAYS
 2180 MT033 = MT095 + MT098 + MT101 + MT104 + MT107 + MT110 + MT113 +
 2181 1MT213 + MT220 + MT222 + MT232 + MT238 + MT242 + MT244 + MT246 +
 2182 2MT248 + MT250 + MT250 + MT266 + MT268 + MT272 + MT308 + MT314 + MT336 +
 2183 3 MT338 + MT340 + MT342 + MT364 + MT366 + MT368 + MT378
 2184 C MT033 IS TOTAL DAYS IN ANY BEAN COMBINATION
 2185 MT041 = MT068 + MT071 + MT086 + MT104 + MT107 + MT110 + MT116 +
 2186 1 MT119 + MT146 + MT149 + MT152 + MT155 + MT222 + MT226 + MT234 +
 2187 2 MT236 + MT240 + MT242 + MT244 + MT256 + MT258 + MT260 +
 2188 3 MT262 + MT264 + MT268 + MT276 + MT280 + MT284 + MT286 +
 2189 4 MT288 + MT294 + MT296 + MT298 + MT302 + MT306 + MT312 +
 2190 5 MT316 + MT322 + MT338 + MT340 + MT342 + MT362 + MT366 + MT368 +
 2191 6 MT370 + MT372 + MT374 + MT376
 2192 C MT041 IS TOTAL DAYS OF ANY COMBINATION OF MANIOC
 2193 MT021 = MAXC(MT063, MT066, MT069, MT072, MT075, MT078, MT081,
 2194 1MT084, MT087, MT090, MT093, MT096, MT099, MT102, MT105, MT108,
 2195 2MT111, MT114, MT117, MT120, MT147, MT150, MT153, MT156, MT195,
 2196 3MT201, MT204, MT207, MT210, MT216, MT219, MT221, MT223, MT225,
 2197 1 MT227, MT239, MT241, MT243, MT245, MT247, MT249, MT251,
 2198 5 MT253, MT255, MT257, MT259, MT261, MT263, MT265, MT267,
 2199 6 MT269, MT271, MT273, MT275, MT277, MT279, MT281, MT283,
 2200 7 MT285, MT287, MT289, MT291, MT293, MT295, MT297, MT299,
 2201 1 MT301, MT303, MT305, MT307, MT309, MT311, MT313, MT315,
 2202 2 MT317, MT323, MT325, MT331, MT333, MT335, MT337, MT339,
 2203 3 MT341, MT343, MT345, MT347, MT349, MT351, MT361, MT363,
 2204 4 MT365, MT367, MT369, MT371, MT373, MT375, MT377, MT379, MT381)
 2205 C MT021 IS CERTAINTY FOR TOTAL DAYS IN ANNUAL CROPS
 2206 MT024 = MAXC(MT141, MT144, MT147, MT150, MT153, MT156, MT159,
 2207 1MT162, MT171, MT174, MT195, MT198, MT223, MT225, MT227, MT229,
 2208 2 MT231, MT233, MT235, MT241, MT247, MT261, MT263, MT265,
 2209 6 MT291, MT293, MT295, MT297, MT299, MT301, MT303, MT311,
 2210 7 MT313, MT317, MT319, MT321, MT323, MT325, MT329, MT331, MT333,
 2211 8 MT337, MT339, MT341, MT343, MT345, MT349, MT351, MT353,
 2212 9 MT355, MT357, MT369, MT361, MT371, MT373, MT375)
 2213 C MT024 IS CERTAINTY FOR TOTAL DAYS IN TREE CROPS
 2214 MT027 = MAXC(MT048, MT051, MT054, MT057, MT060, MT126)
 2215 C MT027 IS CERTAINTY FOR TOTAL DAYS FALLOW
 2216 MT033 = MAXC(MT063, MT066, MT069, MT072, MT075, MT078, MT081,
 2217 1 MT219, MT237, MT241, MT277, MT279, MT283, MT285, MT291,
 2218 2 MT293, MT295, MT299, MT301, MT305, MT311, MT313, MT329,
 2219 3 MT333, MT335, MT369)
 2220 C MT033 IS CERTAINTY FOR TOTAL DAYS IN ANY RICE COMBINATION

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2221      MT039 = MAXO(MT096,MT099, MT102, MT105, MT108, MT111, MT114 ,
2222      1 MT219, MT221, MT223, MT233, MT239, MT243, MT245, MT247,
2223      2 MT249, MT251, MT267, MT269, MT273, MT309, MT315,MT337, MT339,
2224      3 MT341, MT343, MT365, MT367, MT369, MT379)
2225      C      MT039 IS MAX. CERTAINTY FOR TCTAL DAYS IN ANY BEAN COMBINATION
2226      MT042 = MAXO(MT069, MT072, MT087, MT105, MT107, MT111, MT117,
2227      1 MT120, MT147, MT150, MT153, MT156, MT223, MT227, MT235,
2228      2 MT237, MT241, MT243, MT245, MT257, MT259, MT261, MT263,
2229      3 MT265, MT269, MT277, MT281, MT285, MT287, MT289, MT295,
2230      5 MT297, MT299, MT303, MT307, MT313, MT317, MT323,MT339, MT341,
2231      7 MT343, MT363, MT367, MT369, MT371, MT373, MT375, MT377)
2232      C      MT042 IS MAX. CERTAINTY FOR TCTAL DAYS IN ANY MANIOC COMBINATION
2233      C      FOLLOWING FOR "OTHER" CROPS AND COMBINATIONS, WHICH
2234      C      ARE LUMPED WITH USES 59, 60 AND 61 FOR ANNUAL CROPS,
2235      C      PERENNIAL CROPS AND ANNUAL CROPS WITH PERENNIAL CROPS
2236      C      RESPECTIVELY.
2237      MT188 = MT188 + MT218 + MT238 + MT242 + MT244 + MT256 +
2238      1 MT258 + MT270 + MT274 + MT304 + MT306 + MT308 + MT314
2239      2 + MT334 + MT346 + MT362 + MT364 + MT366 + MT368 + MT376
2240      MT139 = MAXO(MT189, MT219, MT239, MT243, MT245, MT257,MT259,
2241      1 MT271, MT275, MT305, MT307, MT309, MT315, MT335,
2242      2 MT347, MT363, MT365, MT367, MT369, MT377)
2243      MT191 = MT191 + MT228 + MT318 + MT320 + MT324 + MT352 + MT354 +
2244      1 MT356 + MT358
2245      MT192 = MAXO(MT192, MT229, MT319, MT321, MT325, MT353, MT355,
2246      1 MT357, MT359)
2247      MT194 = MT194 + MT220 + MT222 + MT224 + MT226 + MT230 + MT232 +
2248      1 MT234 + MT236 + MT240 + MT246 + MT248 + MT250 + MT252 + MT254 +
2249      1 MT260 + MT262 +
2250      2 MT264 + MT266 + MT268 + MT272 + MT276 + MT278 + MT280 + MT282 +
2251      2 MT284 + MT286 + MT288 +
2252      3 MT290 + MT292 + MT294 + MT296 + MT298 + MT300 + MT302 + MT310 +
2253      4 MT312 + MT316 + MT318 + MT320 + MT322 + MT328 + MT330 + MT332 +
2254      5 MT336 + MT338 + MT340 + MT342 + MT344 + MT348 + MT350 + MT360 +
2255      6 MT370 + MT372 + MT374 + MT378 + MT380
2256      MT195 = MAXO(MT195, MT221, MT223, MT225, MT227, MT231, MT233,
2257      1 MT235, MT237, MT241, MT247, MT249, MT251, MT253, MT255, MT261,
2258      2 MT263, MT265, MT267, MT269, MT273, MT277, MT279, MT281, MT283,
2259      3 MT285, MT287, MT289, MT291, MT293, MT295, MT297, MT299, MT301,
2260      4 MT303, MT311, MT313, MT317, MT319, MT321, MT323, MT329, MT331,
2261      5 MT333, MT337, MT339, MT341, MT343, MT345, MT349,
2262      6 MT351, MT361, MT371, MT373, MT375, MT379, MT381)
2263      TAB022 = (FLCAT(MT020)/FT019) * 100.0
2264      TAB025 = (FLCAT(MT023)/FT019) * 100.0
2265      TAB028 = (FLCAT(MT026)/FT019) * 100.0
2266      TAB030 = (FLCAT(MT029)/FT019) * 100.0
2267      TAB034 = (FLCAT(MT032)/FT019) * 100.0
2268      TAB037 = (FLCAT(MT035)/FT019) * 100.0
2269      TAB040 = (FLCAT(MT038)/FT019) * 100.0
2270      TAB043 = (FLCAT(MT041)/FT019) * 100.0
2271      TAB046 = (FLCAT(MT044)/FLCAT(MT018))*100.0
2272      C      TAB046 IS PERCENT OF TCTAL DAYS IN INTERVAL WHERE USE WAS VIRGIN
2273      TAB049 = (FLCAT(MT047)/FT019) * 100.0
2274      TAB052 = (FLCAT(MT050)/FT019) * 100.0
2275      TAB055 = (FLCAT(MT053)/FT019) * 100.0
2276      TAB058 = (FLCAT(MT056)/FT019) * 100.0
2277      TAB061 = (FLCAT(MT059)/FT019) * 100.0
2278      TAB064 = (FLCAT(MT062)/FT019) * 100.0
2279      TAB067 = (FLCAT(MT065)/FT019) * 100.0
2280      TAB070 = (FLCAT(MT068)/FT019) * 100.0

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2281      TAB073 = (FLCAT(MT071)/FT019) * 100.0
2282      TAB076 = (FLCAT(MT074)/FT019) * 100.0
2283      TAB079 = (FLCAT(MT077)/FT019) * 100.0
2284      TAB082 = (FLCAT(MT080)/FT019) * 100.0
2285      TAB085 = (FLCAT(MT083)/FT019) * 100.0
2286      TAB088 = (FLCAT(MT086)/FT019) * 100.0
2287      TAB091 = (FLCAT(MT089)/FT019) * 100.0
2288      TAB094 = (FLCAT(MT092)/FT019) * 100.0
2289      TAB097 = (FLCAT(MT095)/FT019) * 100.0
2290      TAB100 = (FLCAT(MT098)/FT019) * 100.0
2291      TAB103 = (FLCAT(MT101)/FT019) * 100.0
2292      TAB106 = (FLCAT(MT104)/FT019) * 100.0
2293      TAB109 = (FLCAT(MT107)/FT019) * 100.0
2294      TAB112 = (FLCAT(MT110)/FT019) * 100.0
2295      TAB115 = (FLCAT(MT113)/FT019) * 100.0
2296      TAB118 = (FLCAT(MT116)/FT019) * 100.0
2297      TAB121 = (FLCAT(MT119)/FT019) * 100.0
2298      TAB124 = (FLCAT(MT122)/FT019) * 100.0
2299      TAB127 = (FLCAT(MT125)/FT019) * 100.0
2300      TAB130 = (FLCAT(MT128)/FT019) * 100.0
2301      TAB133 = (FLCAT(MT131)/FT019) * 100.0
2302      TAB136 = (FLCAT(MT134)/FT019) * 100.0
2303      TAB139 = (FLCAT(MT137)/FT019) * 100.0
2304      TAB142 = (FLCAT(MT140)/FT019) * 100.0
2305      TAB145 = (FLCAT(MT143)/FT019) * 100.0
2306      TAB148 = (FLCAT(MT146)/FT019) * 100.0
2307      TAB151 = (FLCAT(MT149)/FT019) * 100.0
2308      TAB154 = (FLCAT(MT152)/FT019) * 100.0
2309      TAB157 = (FLCAT(MT155)/FT019) * 100.0
2310      TAB160 = (FLCAT(MT158)/FT019) * 100.0
2311      TAB163 = (FLCAT(MT161)/FT019) * 100.0
2312      TAB166 = (FLCAT(MT164)/FT019) * 100.0
2313      TAB169 = (FLCAT(MT167)/FT019) * 100.0
2314      TAB172 = (FLCAT(MT170)/FT019) * 100.0
2315      TAB175 = (FLCAT(MT173)/FT019) * 100.0
2316      TAB178 = (FLCAT(MT176)/FT019) * 100.0
2317      TAB181 = (FLCAT(MT179)/FT019) * 100.0
2318      TAB184 = (FLCAT(MT182)/FT019) * 100.0
2319      TAB187 = (FLCAT(MT185)/FT019) * 100.0
2320      TAB190 = (FLCAT(MT188)/FT019) * 100.0
2321      TAB193 = (FLCAT(MT191)/FT019) * 100.0
2322      TAB196 = (FLCAT(MT194)/FT019) * 100.0
2323      TAB199 = (FLCAT(MT197)/FT019) * 100.0
2324      TAB202 = (FLCAT(MT200)/FT019) * 100.0
2325      TAB205 = (FLCAT(MT203)/FT019) * 100.0
2326      TAB208 = (FLCAT(MT206)/FT019) * 100.0
2327      TAB210 = (FLCAT(MT209)/FT019) * 100.0
2328      TAB214 = (FLCAT(MT212)/FT019) * 100.0
2329      TAB217 = (FLCAT(MT215)/FT019) * 100.0
2330      RAIN(59) = -0.
2331      C      "RAIN(59)" IS THE TOTAL RAIN WHILE BARE
2332      IF (LCCMC(4,MINZRO,RAIN(2)).EQ.0) GO TO 202
2333      IF (LCCMC(4,MINZRC,RAIN(3)).EQ.0) GO TO 202
2334      IF (LCCMC(4,MINZRO,RAIN(4)).EQ.0) GO TO 202
2335      RAIN(59) = RAIN(2)+RAIN(3)+RAIN(4)
2336      202      RAIN(60) = -0.
2337      C      "RAIN(60)" IS THE TOTAL RAIN WHILE IN ANNUAL CROPS
2338      IF (LCCMC(4,MINZRO,RAIN(7)).EQ.0) GO TO 203
2339      IF (LCCMC(4,MINZRO,RAIN(8)).EQ.0) GO TO 203
2340      IF (LCCMC(4,MINZRC,RAIN(9)).EQ.0) GO TO 203

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2341 IF (LCOMC(4,MINZRO,RAIN(10)).EQ.0) GO TO 203
2342 IF (LCOMC(4,MINZRO,RAIN(13)).EQ.0) GO TO 203
2343 IF (LCOMC(4,MINZRO,RAIN(14)).EQ.0) GO TO 203
2344 IF (LCOMC(4,MINZRO,RAIN(11)).EQ.0) GO TO 203
2345 IF (LCOMC(4,MINZRO,RAIN(12)).EQ.0) GO TO 203
2346 IF (LCOMC(4,MINZRC,RAIN(15)).EQ.0) GO TO 203
2347 IF (LCOMC(4,MINZRO,RAIN(16)).EQ.0) GO TO 203
2348 IF (LCOMC(4,MINZRC,RAIN(17)).EQ.0) GO TO 203
2349 IF (LCOMC(4,MINZRO,RAIN(18)).EQ.0) GO TO 203
2350 IF (LCOMC(4,MINZRC,RAIN(19)).EQ.0) GO TO 203
2351 IF (LCOMC(4,MINZRO,RAIN(20)).EQ.0) GO TO 203
2352 IF (LCOMC(4,MINZRO,RAIN(21)).EQ.0) GO TO 203
2353 IF (LCOMC(4,MINZRO,RAIN(22)).EQ.0) GO TO 203
2354 IF (LCOMC(4,MINZRC,RAIN(23)).EQ.0) GO TO 203
2355 IF (LCOMC(4,MINZRO,RAIN(24)).EQ.0) GO TO 203
2356 IF (LCOMC(4,MINZRC,RAIN(25)).EQ.0) GO TO 203
2357 IF (LCOMC(4,MINZRO,RAIN(26)).EQ.0) GO TO 203
2358 IF (LCOMC(4,MINZRO,RAIN(35)).EQ.0) GO TO 203
2359 IF (LCOMC(4,MINZRC,RAIN(36)).EQ.0) GO TO 203
2360 IF (LCOMC(4,MINZRC,RAIN(37)).EQ.0) GO TO 203
2361 IF (LCOMC(4,MINZRO,RAIN(38)).EQ.0) GO TO 203
2362 IF (LCOMC(4,MINZRC,RAIN(49)).EQ.0) GO TO 203
2363 IF (LCOMC(4,MINZRO,RAIN(51)).EQ.0) GO TO 203
2364 IF (LCOMC(4,MINZRC,RAIN(53)).EQ.0) GO TO 203
2365 IF (LCOMC(4,MINZRO,RAIN(54)).EQ.0) GO TO 203
2366 IF (LCOMC(4,MINZRO,RAIN(55)).EQ.0) GO TO 203
2367 IF (LCOMC(4,MINZRC,RAIN(56)).EQ.0) GO TO 203
2368 IF (LCOMC(4,MINZRO,RAIN(58)).EQ.0) GO TO 203
2369 IF (LCOMC(4,MINZRO,RAIN(66)).EQ.0) GO TO 203
2370 IF (LCOMC(4,MINZRC,RAIN(67)).EQ.0) GO TO 203
2371 IF (LCOMC(4,MINZRC,RAIN(68)).EQ.0) GO TO 203
2372 IF (LCOMC(4,MINZRC,RAIN(69)).EQ.0) GO TO 203
2373 IF (LCOMC(4,MINZRO,RAIN(70)).EQ.0) GO TO 203
2374 IF (LCOMC(4,MINZRC,RAIN(71)).EQ.0) GO TO 203
2375 IF (LCOMC(4,MINZRO,RAIN(72)).EQ.0) GO TO 203
2376 IF (LCOMC(4,MINZRO,RAIN(73)).EQ.0) GO TO 203
2377 IF (LCOMC(4,MINZRC,RAIN(74)).EQ.0) GO TO 203
2378 IF (LCOMC(4,MINZRC,RAIN(75)).EQ.0) GO TO 203
2379 IF (LCOMC(4,MINZRO,RAIN(76)).EQ.0) GO TO 203
2380 IF (LCOMC(4,MINZRC,RAIN(77)).EQ.0) GO TO 203
2381 IF (LCOMC(4,MINZRO,RAIN(78)).EQ.0) GO TO 203
2382 IF (LCOMC(4,MINZRC,RAIN(79)).EQ.0) GO TO 203
2383 IF (LCOMC(4,MINZRC,RAIN(80)).EQ.0) GO TO 203
2384 IF (LCOMC(4,MINZRC,RAIN(81)).EQ.0) GO TO 203
2385 IF (LCOMC(4,MINZRO,RAIN(82)).EQ.0) GO TO 203
2386 IF (LCOMC(4,MINZRC,RAIN(83)).EQ.0) GO TO 203
2387 IF (LCOMC(4,MINZRC,RAIN(84)).EQ.0) GO TO 203
2388 IF (LCOMC(4,MINZRC,RAIN(85)).EQ.0) GO TO 203
2389 IF (LCOMC(4,MINZRO,RAIN(86)).EQ.0) GO TO 203
2390 IF (LCOMC(4,MINZRC,RAIN(87)).EQ.0) GO TO 203
2391 IF (LCOMC(4,MINZRO,RAIN(88)).EQ.0) GO TO 203
2392 IF (LCOMC(4,MINZRC,RAIN(89)).EQ.0) GO TO 203
2393 IF (LCOMC(4,MINZRC,RAIN(90)).EQ.0) GO TO 203
2394 IF (LCOMC(4,MINZRC,RAIN(91)).EQ.0) GO TO 203
2395 IF (LCOMC(4,MINZRO,RAIN(92)).EQ.0) GO TO 203
2396 IF (LCOMC(4,MINZRC,RAIN(93)).EQ.0) GO TO 203
2397 IF (LCOMC(4,MINZRO,RAIN(94)).EQ.0) GO TO 203
2398 IF (LCOMC(4,MINZRC,RAIN(95)).EQ.0) GO TO 203
2399 IF (LCOMC(4,MINZRO,RAIN(96)).EQ.0) GO TO 203
2400 IF (LCOMC(4,MINZRO,RAIN(97)).EQ.0) GO TO 203

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2401 IF (LCCMC(4,MINZRO,RAIN(98)).EQ.0) GO TO 203
2402 IF (LCCMC(4,MINZRO,RAIN(99)).EQ.0) GO TO 203
2403 IF (LCCMC(4,MINZRO,RAIN(100)).EQ.0) GO TO 203
2404 IF (LCCMC(4,MINZRO,RAIN(101)).EQ.0) GO TO 203
2405 IF (LCCMC(4,MINZRO,RAIN(102)).EQ.0) GO TO 203
2406 IF (LCCMC(4,MINZRO,RAIN(103)).EQ.0) GO TO 203
2407 IF (LCCMC(4,MINZRO,RAIN(104)).EQ.0) GO TO 203
2408 IF (LCCMC(4,MINZRO,RAIN(105)).EQ.0) GO TO 203
2409 IF (LCCMC(4,MINZRO,RAIN(106)).EQ.0) GO TO 203
2410 IF (LCCMC(4,MINZRO,RAIN(107)).EQ.0) GO TO 203
2411 IF (LCCMC(4,MINZRO,RAIN(108)).EQ.0) GO TO 203
2412 IF (LCCMC(4,MINZRO,RAIN(109)).EQ.0) GO TO 203
2413 IF (LCCMC(4,MINZRO,RAIN(110)).EQ.0) GO TO 203
2414 IF (LCCMC(4,MINZRO,RAIN(111)).EQ.0) GO TO 203
2415 IF (LCCMC(4,MINZRO,RAIN(112)).EQ.0) GO TO 203
2416 IF (LCCMC(4,MINZRO,RAIN(113)).EQ.0) GO TO 203
2417 IF (LCCMC(4,MINZRO,RAIN(114)).EQ.0) GO TO 203
2418 IF (LCCMC(4,MINZRO,RAIN(115)).EQ.0) GO TO 203
2419 IF (LCCMC(4,MINZRO,RAIN(118)).EQ.0) GO TO 203
2420 IF (LCCMC(4,MINZRO,RAIN(121)).EQ.0) GO TO 203
2421 IF (LCCMC(4,MINZRO,RAIN(122)).EQ.0) GO TO 203
2422 IF (LCCMC(4,MINZRO,RAIN(123)).EQ.0) GO TO 203
2423 IF (LCCMC(4,MINZRO,RAIN(124)).EQ.0) GO TO 203
2424 IF (LCCMC(4,MINZRO,RAIN(125)).EQ.0) GO TO 203
2425 IF (LCCMC(4,MINZRO,RAIN(126)).EQ.0) GO TO 203
2426 IF (LCCMC(4,MINZRO,RAIN(127)).EQ.0) GO TO 203
2427 IF (LCCMC(4,MINZRO,RAIN(128)).EQ.0) GO TO 203
2428 IF (LCCMC(4,MINZRO,RAIN(129)).EQ.0) GO TO 203
2429 IF (LCCMC(4,MINZRO,RAIN(130)).EQ.0) GO TO 203
2430 IF (LCCMC(4,MINZRO,RAIN(131)).EQ.0) GO TO 203
2431 IF (LCCMC(4,MINZRO,RAIN(132)).EQ.0) GO TO 203
2432 RAIN(60) = RAIN(9) + RAIN(10) + RAIN(11) + RAIN(12) +
2433 1 RAIN(13) + RAIN(14) + RAIN(15) + RAIN(16) +
2434 2 RAIN(17) + RAIN(18) + RAIN(19) + RAIN(20) + RAIN(21) +
2435 3 RAIN(22) + RAIN(23) + RAIN(24) + RAIN(25) + RAIN(26) +
2436 4 RAIN(35) + RAIN(36) + RAIN(37) + RAIN(38) +
2437 5 RAIN(49) + RAIN(51) + RAIN(52) + RAIN(54) + RAIN(55) +
2438 6 RAIN(56) + RAIN(58) + RAIN(66) + RAIN(67) + RAIN(68) +
2439 7 RAIN(69) + RAIN(70) + RAIN(72) + RAIN(73) + RAIN(74) +
2440 8 RAIN(75) + RAIN(76) + RAIN(77) + RAIN(78) + RAIN(79) +
2441 9 RAIN(80) + RAIN(81) + RAIN(82) + RAIN(83) + RAIN(84)
2442 RAIN(60) = RAIN(60) +
2443 1 RAIN(85) + RAIN(86) + RAIN(87) + RAIN(88) + RAIN(89) +
2444 2 RAIN(90) + RAIN(91) + RAIN(92) + RAIN(93) + RAIN(94) +
2445 3 RAIN(95) + RAIN(96) + RAIN(97) + RAIN(98) + RAIN(99) +
2446 4 RAIN(100) + RAIN(101) + RAIN(102) + RAIN(103) + RAIN(104) +
2447 5 RAIN(105) + RAIN(106) + RAIN(107) + RAIN(108) + RAIN(109) +
2448 6 RAIN(110) + RAIN(111) + RAIN(112) + RAIN(113) + RAIN(114) +
2449 7 RAIN(115) + RAIN(118) + RAIN(121) + RAIN(122) + RAIN(123) +
2450 8 RAIN(124) + RAIN(125) + RAIN(126) + RAIN(127) + RAIN(128) +
2451 9 RAIN(129) + RAIN(130) + RAIN(131) + RAIN(132) + RAIN(137) +
2452 1 RAIN(138) + RAIN(139) + RAIN(140) + RAIN(141) + RAIN(142) +
2453 2 RAIN(143) + RAIN(144) + RAIN(145) + RAIN(146) + RAIN(147)
2454 203 RAIN(61) = -0.
2455 C "RAIN(61)" IS THE TOTAL RAIN UNDER TREE CROPS
2456 IF (LCCMC(4,MINZRO,RAIN(33)).EQ.0) GO TO 204
2457 IF (LCCMC(4,MINZRO,RAIN(34)).EQ.0) GO TO 204
2458 IF (LCCMC(4,MINZRO,RAIN(35)).EQ.0) GO TO 204
2459 IF (LCCMC(4,MINZRO,RAIN(36)).EQ.0) GO TO 204
2460 IF (LCCMC(4,MINZRO,RAIN(37)).EQ.0) GO TO 204

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2461 IF (LCCMC(4,MINZRO,RAIN(38)).EQ.0) GO TO 204
2462 IF (LCCMC(4,MINZRO,RAIN(39)).EQ.0) GO TO 204
2463 IF (LCCMC(4,MINZRO,RAIN(40)).EQ.0) GO TO 204
2464 IF (LCCMC(4,MINZRO,RAIN(43)).EQ.0) GO TO 204
2465 IF (LCCMC(4,MINZRO,RAIN(44)).EQ.0) GO TO 204
2466 IF (LCCMC(4,MINZRO,RAIN(45)).EQ.0) GO TO 204
2467 IF (LCCMC(4,MINZRO,RAIN(46)).EQ.0) GO TO 204
2468 IF (LCCMC(4,MINZRO,RAIN(47)).EQ.0) GO TO 204
2469 IF (LCCMC(4,MINZRO,RAIN(48)).EQ.0) GO TO 204
2470 IF (LCCMC(4,MINZRO,RAIN(50)).EQ.0) GO TO 204
2471 IF (LCCMC(4,MINZRO,RAIN(51)).EQ.0) GO TO 204
2472 IF (LCCMC(4,MINZRO,RAIN(52)).EQ.0) GO TO 204
2473 IF (LCCMC(4,MINZRO,RAIN(68)).EQ.0) GO TO 204
2474 IF (LCCMC(4,MINZRO,RAIN(69)).EQ.0) GO TO 204
2475 IF (LCCMC(4,MINZRO,RAIN(70)).EQ.0) GO TO 204
2476 IF (LCCMC(4,MINZRO,RAIN(71)).EQ.0) GO TO 204
2477 IF (LCCMC(4,MINZRO,RAIN(72)).EQ.0) GO TO 204
2478 IF (LCCMC(4,MINZRO,RAIN(73)).EQ.0) GO TO 204
2479 IF (LCCMC(4,MINZRO,RAIN(74)).EQ.0) GO TO 204
2480 IF (LCCMC(4,MINZRO,RAIN(77)).EQ.0) GO TO 204
2481 IF (LCCMC(4,MINZRO,RAIN(80)).EQ.0) GO TO 204
2482 IF (LCCMC(4,MINZRO,RAIN(87)).EQ.0) GO TO 204
2483 IF (LCCMC(4,MINZRO,RAIN(88)).EQ.0) GO TO 204
2484 IF (LCCMC(4,MINZRO,RAIN(89)).EQ.0) GO TO 204
2485 IF (LCCMC(4,MINZRO,RAIN(102)).EQ.0) GO TO 204
2486 IF (LCCMC(4,MINZRO,RAIN(103)).EQ.0) GO TO 204
2487 IF (LCCMC(4,MINZRO,RAIN(104)).EQ.0) GO TO 204
2488 IF (LCCMC(4,MINZRO,RAIN(105)).EQ.0) GO TO 204
2489 IF (LCCMC(4,MINZRO,RAIN(106)).EQ.0) GO TO 204
2490 IF (LCCMC(4,MINZRO,RAIN(107)).EQ.0) GO TO 204
2491 IF (LCCMC(4,MINZRO,RAIN(108)).EQ.0) GO TO 204
2492 IF (LCCMC(4,MINZRO,RAIN(112)).EQ.0) GO TO 204
2493 IF (LCCMC(4,MINZRO,RAIN(113)).EQ.0) GO TO 204
2494 IF (LCCMC(4,MINZRO,RAIN(115)).EQ.0) GO TO 204
2495 IF (LCCMC(4,MINZRO,RAIN(116)).EQ.0) GO TO 204
2496 IF (LCCMC(4,MINZRO,RAIN(117)).EQ.0) GO TO 204
2497 IF (LCCMC(4,MINZRO,RAIN(118)).EQ.0) GO TO 204
2498 IF (LCCMC(4,MINZRO,RAIN(119)).EQ.0) GO TO 204
2499 IF (LCCMC(4,MINZRO,RAIN(121)).EQ.0) GO TO 204
2500 IF (LCCMC(4,MINZRO,RAIN(122)).EQ.0) GO TO 204
2501 IF (LCCMC(4,MINZRO,RAIN(123)).EQ.0) GO TO 204
2502 IF (LCCMC(4,MINZRO,RAIN(125)).EQ.0) GO TO 204
2503 IF (LCCMC(4,MINZRO,RAIN(126)).EQ.0) GO TO 204
2504 IF (LCCMC(4,MINZRO,RAIN(127)).EQ.0) GO TO 204
2505 IF (LCCMC(4,MINZRO,RAIN(128)).EQ.0) GO TO 204
2506 IF (LCCMC(4,MINZRO,RAIN(128)).EQ.0) GO TO 204
2507 IF (LCCMC(4,MINZRO,RAIN(129)).EQ.0) GO TO 204
2508 IF (LCCMC(4,MINZRO,RAIN(131)).EQ.0) GO TO 204
2509 IF (LCCMC(4,MINZRO,RAIN(132)).EQ.0) GO TO 204
2510 IF (LCCMC(4,MINZRO,RAIN(133)).EQ.0) GO TO 204
2511 IF (LCCMC(4,MINZRO,RAIN(134)).EQ.0) GO TO 204
2512 IF (LCCMC(4,MINZRO,RAIN(135)).EQ.0) GO TO 204
2513 IF (LCCMC(4,MINZRO,RAIN(136)).EQ.0) GO TO 204
2514 IF (LCCMC(4,MINZRO,RAIN(137)).EQ.0) GO TO 204
2515 IF (LCCMC(4,MINZRO,RAIN(142)).EQ.0) GO TO 204
2516 IF (LCCMC(4,MINZRO,RAIN(143)).EQ.0) GO TO 204
2517 IF (LCCMC(4,MINZRO,RAIN(144)).EQ.0) GO TO 204
2518 IF (LCCMC(4,MINZRO,RAIN(146)).EQ.0) GO TO 204
2519 IF (LCCMC(4,MINZRO,RAIN(147)).EQ.0) GO TO 204
2520 RAIN(61) = RAIN(33) + RAIN(34) + RAIN(35) + RAIN(36) +

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2521      1 RAIN(37) + RAIN(38) + RAIN(39) + RAIN(40) + RAIN(43) +
2522      2 RAIN(44) + RAIN(45) + RAIN(46) + RAIN(47) + RAIN(48) +
2523      3 RAIN(50) + RAIN(51) + RAIN(52) + RAIN(68) + RAIN(69) +
2524      4 RAIN(70) + RAIN(71) + RAIN(72) + RAIN(73) + RAIN(74) +
2525      5 RAIN(77) + RAIN(80) + RAIN(87) + RAIN(88) + RAIN(89) +
2526      6 RAIN(102) + RAIN(103) + RAIN(104) + RAIN(105) +
2527      7 RAIN(106) + RAIN(107) + RAIN(108) + RAIN(112) +
2528      8 RAIN(113) + RAIN(115) + RAIN(116) + RAIN(117) + RAIN(118)
2529      3 + RAIN(119) + RAIN(121) + RAIN(122) + RAIN(123) + RAIN(125) +
2530      4 RAIN(127) + RAIN(129) + RAIN(129) + RAIN(131) + RAIN(132) +
2531      5 RAIN(134) + RAIN(135) + RAIN(136) + RAIN(137) + RAIN(142) +
2532      6 RAIN(146) + RAIN(147) + RAIN(126) + RAIN(133) + RAIN(144)
2533      204 RAIN(62) = -0.
2534      C "RAIN(62)" IS THE TOTAL RAIN WHILE PASTURE
2535      IF (LCCMC(4,MINZRC,RAIN(27)).EQ.0) GO TO 205
2536      IF (LCCMC(4,MINZRC,RAIN(28)).EQ.0) GO TO 205
2537      IF (LCCMC(4,MINZRC,RAIN(29)).EQ.0) GO TO 205
2538      IF (LCCMC(4,MINZRC,RAIN(30)).EQ.0) GO TO 205
2539      IF (LCCMC(4,MINZRC,RAIN(31)).EQ.0) GO TO 205
2540      IF (LCCMC(4,MINZRC,RAIN(67)).EQ.0) GO TO 205
2541      IF (LCCMC(4,MINZRC,RAIN(75)).EQ.0) GO TO 205
2542      IF (LCCMC(4,MINZRC,RAIN(90)).EQ.0) GO TO 205
2543      IF (LCCMC(4,MINZRC,RAIN(91)).EQ.0) GO TO 205
2544      IF (LCCMC(4,MINZRC,RAIN(95)).EQ.0) GO TO 205
2545      IF (LCCMC(4,MINZRC,RAIN(100)).EQ.0) GO TO 205
2546      IF (LCCMC(4,MINZRC,RAIN(101)).EQ.0) GO TO 205
2547      IF (LCCMC(4,MINZRC,RAIN(133)).EQ.0) GO TO 205
2548      RAIN(62) = RAIN(27) + RAIN(28) + RAIN(29) + RAIN(30) +
2549      1 RAIN(31) + RAIN(67) + RAIN(75) + RAIN(90) + RAIN(91) +
2550      2 RAIN(95) + RAIN(100) + RAIN(101) + RAIN(133)
2551      205 RAIN(63) = -0.
2552      C "RAIN(63)" IS THE TOTAL RAIN IN THE COMPARISON INTERVAL
2553      CALL WEATBD(LBEGIN, IEND)
2554      RAIN(63) = RAINPC
2555      C FOLLOWING FOR RAIN UNDER "OTHER" ANNUAL CROPS AND COMBINATIONS
2556      C OF ANNUAL CROPS
2557      IF (LCCMC(4,MINZPC,RAIN(49)).EQ.0) GO TO 210
2558      IF (LCCMC(4,MINZRC,RAIN(66)).EQ.0) GO TO 210
2559      IF (LCCMC(4,MINZPC,RAIN(67)).EQ.0) GO TO 210
2560      IF (LCCMC(4,MINZRC,RAIN(76)).EQ.0) GO TO 210
2561      IF (LCCMC(4,MINZRC,RAIN(78)).EQ.0) GO TO 210
2562      IF (LCCMC(4,MINZRC,RAIN(79)).EQ.0) GO TO 210
2563      IF (LCCMC(4,MINZRC,RAIN(85)).EQ.0) GO TO 210
2564      IF (LCCMC(4,MINZRC,RAIN(86)).EQ.0) GO TO 210
2565      IF (LCCMC(4,MINZRC,RAIN(94)).EQ.0) GO TO 210
2566      IF (LCCMC(4,MINZRC,RAIN(109)).EQ.0) GO TO 210
2567      IF (LCCMC(4,MINZRC,RAIN(110)).EQ.0) GO TO 210
2568      IF (LCCMC(4,MINZRC,RAIN(111)).EQ.0) GO TO 210
2569      IF (LCCMC(4,MINZRC,RAIN(114)).EQ.0) GO TO 210
2570      IF (LCCMC(4,MINZRC,RAIN(124)).EQ.0) GO TO 210
2571      IF (LCCMC(4,MINZRC,RAIN(125)).EQ.0) GO TO 210
2572      IF (LCCMC(4,MINZRC,RAIN(126)).EQ.0) GO TO 210
2573      IF (LCCMC(4,MINZRC,RAIN(127)).EQ.0) GO TO 210
2574      IF (LCCMC(4,MINZRC,RAIN(128)).EQ.0) GO TO 210
2575      IF (LCCMC(4,MINZRC,RAIN(129)).EQ.0) GO TO 210
2576      IF (LCCMC(4,MINZRC,RAIN(130)).EQ.0) GO TO 210
2577      IF (LCCMC(4,MINZRC,RAIN(138)).EQ.0) GO TO 210
2578      IF (LCCMC(4,MINZRC,RAIN(139)).EQ.0) GO TO 210
2579      IF (LCCMC(4,MINZRC,RAIN(140)).EQ.0) GO TO 210
2580      IF (LCCMC(4,MINZRC,RAIN(141)).EQ.0) GO TO 210

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2581      IF (LCCMC(4,MINZRC,RAIN(145)).EQ.0) GO TO 210
2582      RAIN(46) = RAIN(49) + RAIN(66) + RAIN(67) + RAIN(76) + RAIN(78) +
2583      1 RAIN(79) + RAIN(85) + RAIN(86) + RAIN(94) + RAIN(109) +
2584      2 RAIN(110) + RAIN(111) + RAIN(114) + RAIN(124) + RAIN(125) +
2585      3 RAIN(126) + RAIN(127) + RAIN(128) + RAIN(129) + RAIN(130) +
2586      4 RAIN(138) + RAIN(139) + RAIN(140) + RAIN(141) + RAIN(145)
2587  210 CONTINUE
2588      C FOLLOWING FOR RAIN UNDER "OTHER PERENNIALS" AND OTHER COMBINATIONS
2589      C OF PERENNIAL CROPS
2590      IF (LCCMC(4,MINZRC,RAIN(50)).EQ.0) GO TO 211
2591      IF (LCCMC(4,MINZRC,RAIN(71)).EQ.0) GO TO 211
2592      IF (LCCMC(4,MINZRC,RAIN(116)).EQ.0) GO TO 211
2593      IF (LCCMC(4,MINZRC,RAIN(117)).EQ.0) GO TO 211
2594      IF (LCCMC(4,MINZRC,RAIN(119)).EQ.0) GO TO 211
2595      IF (LCCMC(4,MINZRC,RAIN(133)).EQ.0) GO TO 211
2596      IF (LCCMC(4,MINZRC,RAIN(134)).EQ.0) GO TO 211
2597      IF (LCCMC(4,MINZRC,RAIN(135)).EQ.0) GO TO 211
2598      IF (LCCMC(4,MINZRC,RAIN(136)).EQ.0) GO TO 211
2599      RAIN(50) = RAIN(50) + RAIN(71) + RAIN(116) + RAIN(117) +
2600      1 RAIN(119) + RAIN(133) + RAIN(134) + RAIN(135) + RAIN(136)
2601  211 CONTINUE
2602      C FOLLOWING FOR RAIN UNDER "OTHER PERENNIAL WITH OTHER ANNUAL" AND
2603      C OTHER COMBINATIONS OF PERENNIAL WITH ANNUAL CROPS
2604      IF (LCCMC(4,MINZRC,RAIN(51)).EQ.0) GO TO 212
2605      IF (LCCMC(4,MINZRC,RAIN(68)).EQ.0) GO TO 212
2606      IF (LCCMC(4,MINZRC,RAIN(69)).EQ.0) GO TO 212
2607      IF (LCCMC(4,MINZRC,RAIN(70)).EQ.0) GO TO 212
2608      IF (LCCMC(4,MINZRC,RAIN(72)).EQ.0) GO TO 212
2609      IF (LCCMC(4,MINZRC,RAIN(73)).EQ.0) GO TO 212
2610      IF (LCCMC(4,MINZRC,RAIN(74)).EQ.0) GO TO 212
2611      IF (LCCMC(4,MINZRC,RAIN(77)).EQ.0) GO TO 212
2612      IF (LCCMC(4,MINZRC,RAIN(80)).EQ.0) GO TO 212
2613      IF (LCCMC(4,MINZRC,RAIN(84)).EQ.0) GO TO 212
2614      IF (LCCMC(4,MINZRC,RAIN(87)).EQ.0) GO TO 212
2615      IF (LCCMC(4,MINZRC,RAIN(89)).EQ.0) GO TO 212
2616      IF (LCCMC(4,MINZRC,RAIN(93)).EQ.0) GO TO 212
2617      IF (LCCMC(4,MINZRC,RAIN(96)).EQ.0) GO TO 212
2618      IF (LCCMC(4,MINZRC,RAIN(97)).EQ.0) GO TO 212
2619      IF (LCCMC(4,MINZRC,RAIN(98)).EQ.0) GO TO 212
2620      IF (LCCMC(4,MINZRC,RAIN(99)).EQ.0) GO TO 212
2621      IF (LCCMC(4,MINZRC,RAIN(102)).EQ.0) GO TO 212
2622      IF (LCCMC(4,MINZRC,RAIN(103)).EQ.0) GO TO 212
2623      IF (LCCMC(4,MINZRC,RAIN(104)).EQ.0) GO TO 212
2624      IF (LCCMC(4,MINZRC,RAIN(105)).EQ.0) GO TO 212
2625      IF (LCCMC(4,MINZRC,RAIN(106)).EQ.0) GO TO 212
2626      IF (LCCMC(4,MINZRC,RAIN(107)).EQ.0) GO TO 212
2627      IF (LCCMC(4,MINZRC,RAIN(108)).EQ.0) GO TO 212
2628      IF (LCCMC(4,MINZRC,RAIN(112)).EQ.0) GO TO 212
2629      IF (LCCMC(4,MINZRC,RAIN(113)).EQ.0) GO TO 212
2630      IF (LCCMC(4,MINZRC,RAIN(115)).EQ.0) GO TO 212
2631      IF (LCCMC(4,MINZRC,RAIN(118)).EQ.0) GO TO 212
2632      IF (LCCMC(4,MINZRC,RAIN(75)).EQ.0) GO TO 212
2633      IF (LCCMC(4,MINZRC,RAIN(81)).EQ.0) GO TO 212
2634      IF (LCCMC(4,MINZRC,RAIN(82)).EQ.0) GO TO 212
2635      IF (LCCMC(4,MINZRC,RAIN(83)).EQ.0) GO TO 212
2636      IF (LCCMC(4,MINZRC,RAIN(90)).EQ.0) GO TO 212
2637      IF (LCCMC(4,MINZRC,RAIN(91)).EQ.0) GO TO 212
2638      IF (LCCMC(4,MINZRC,RAIN(92)).EQ.0) GO TO 212
2639      IF (LCCMC(4,MINZRC,RAIN(95)).EQ.0) GO TO 212
2640      IF (LCCMC(4,MINZRC,RAIN(100)).EQ.0) GO TO 212

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2641 IF (LCCMC(4,MINZRO,RAIN(101)).EQ.0) GO TO 212
2642 IF (LCCMC(4,MINZRO,RAIN(121)).EQ.0) GO TO 212
2643 IF (LCCMC(4,MINZRO,RAIN(122)).EQ.0) GO TO 212
2644 IF (LCCMC(4,MINZRO,RAIN(123)).EQ.0) GO TO 212
2645 IF (LCCMC(4,MINZRO,RAIN(125)).EQ.0) GO TO 212
2646 IF (LCCMC(4,MINZRO,RAIN(126)).EQ.0) GO TO 212
2647 IF (LCCMC(4,MINZRO,RAIN(127)).EQ.0) GO TO 212
2648 IF (LCCMC(4,MINZRO,RAIN(127)).EQ.0) GO TO 212
2649 IF (LCCMC(4,MINZRO,RAIN(128)).EQ.0) GO TO 212
2650 IF (LCCMC(4,MINZRO,RAIN(129)).EQ.0) GO TO 212
2651 IF (LCCMC(4,MINZRO,RAIN(131)).EQ.0) GO TO 212
2652 IF (LCCMC(4,MINZRO,RAIN(132)).EQ.0) GO TO 212
2653 IF (LCCMC(4,MINZRO,RAIN(137)).EQ.0) GO TO 212
2654 IF (LCCMC(4,MINZRO,RAIN(142)).EQ.0) GO TO 212
2655 IF (LCCMC(4,MINZRO,RAIN(143)).EQ.0) GO TO 212
2656 IF (LCCMC(4,MINZRO,RAIN(144)).EQ.0) GO TO 212
2657 IF (LCCMC(4,MINZRO,RAIN(146)).EQ.0) GO TO 212
2658 IF (LCCMC(4,MINZRO,RAIN(147)).EQ.0) GO TO 212
2659 RAIN(51) = RAIN(51) + RAIN(68) + RAIN(69) + RAIN(70) +
2660 1 RAIN(72) + RAIN(73) + RAIN(74) + RAIN(77) + RAIN(80) +
2661 1 RAIN(84) + RAIN(87) + RAIN(88) + RAIN(89) + RAIN(93) +
2662 1 RAIN(96) + RAIN(97) + RAIN(98) + RAIN(99) + RAIN(102) +
2663 2 RAIN(103) + RAIN(104) + RAIN(105) + RAIN(106) + RAIN(107) +
2664 3 RAIN(108) + RAIN(112) + RAIN(113) + RAIN(115) + RAIN(118) +
2665 4 RAIN(75) + RAIN(81) + RAIN(82) + RAIN(83) + RAIN(90) +
2666 5 RAIN(91) + RAIN(92) + RAIN(95) + RAIN(100) + RAIN(101) +
2667 6 RAIN(121) + RAIN(122) + RAIN(123) + RAIN(125) + RAIN(126) +
2668 7 RAIN(127) + RAIN(129) + RAIN(129) + RAIN(131) + RAIN(132) +
2669 8 RAIN(137) + RAIN(142) + RAIN(143) + RAIN(144) + RAIN(146) +
2670 9 RAIN(147)
2671 212 CONTINUE
2672 MRUSE = -0
2673 DO 850 IMR24=1,KCARDS
2674 IMPREV = IMR24 - 1
2675 IF (IMPREV .LE. 0) IMPREV = 1
2676 IF (MRDATE .LT. KTCATE(1)) MRUSE = LCURUS
2677 850 IF(MRCATE .LT. KTDATE(IMP24) .AND. MRDATE .GE.
2678 1 KTDATE(IMPREV)) MRUSE = KCURUS(IMPREV)
2679 C "MRUSE" IS THE USE AT THE TIME OF THE MAXIMUM RAINFALL IN 24 HRS
2680 505 CONTINUE
2681 WRITE (12,9027)IREFFN, IBCR1,IAFTFN, IAFT1
2682 9027 FORMAT(1X,'USE HISTORY: BEFORE FIELD= ',I5,' (LINE ',I5,') AFTER =
2683 1IELD= ',I5,' (LINE ',I5,')')
2684 WRITE (12,9028) MT001, MT002, MT003, MT004, MT005, MT006, MT007,
2685 1MT008, MT009, MT010, MT011, TAB012, TAB013, MT014, MT015, TAB016,
2686 2MT017, MT018, MT019, MT020, MT021, TAB022, MT023, MT024, TAB025,
2687 3MT026, MT027, TAB028, MT029, TAB030, MT031
2688 9028 FORMAT(1X, 3I2, 16, 5I2, 16, 12, F5.0, F5.1, 2I2, F5.1, 12 / 1X,
2689 13I6, 12, F5.1, 2(I6, 12, F5.1), 16, F5.1, 16)
2690 WRITE (12,9029) MT032, MT033, TAB034, MT035, MT036, TAB037, MT038,
2691 1MT039, TAB040, MT041, MT042, TAB043, MT044, MT045, TAB046, MT047,
2692 2MT048, TAB049, MT050, MT051, TAB052, MT053, MT054, TAB055, MT056,
2693 3MT057, TAB058, MT059, MT060, TAB061, MT062, MT063, TAB064, MT065,
2694 4MT066, TAB067
2695 9029 FORMAT(1X, 6(I6,12, F5.1)/1X, 6(I6, 12, F5.1))
2696 WRITE (12,9029) MT068, MT069, TAB070, MT071, MT072, TAB073, MT074,
2697 1MT075, TAB076, MT077, MT078, TAB079, MT080, MT081, TAB082, MT083,
2698 2MT084, TAB085, MT086, MT087, TAB088, MT089, MT090, TAB091, MT092,
2699 3MT093, TAB094, MT095, MT096, TAB097, MT098, MT099, TAB100, MT101,
2700 4MT102, TAB103

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2701      WRITE (12,9029) MT104, MT105, TAB106, MT107, MT108, TAB109, MT110,
2702      1MT111, TAB112, MT113, MT114, TAB115, MT116, MT117, TAB118, MT119,
2703      2MT120, TAB121, MT122, MT123, TAB124, MT125, MT126, TAB127, MT128,
2704      3MT129, TAB130, MT131, MT132, TAB133, MT134, MT135, TAB136, MT137,
2705      4MT138, TAB139
2706      WRITE (12,9029) MT140, MT141, TAB142, MT143, MT144, TAB145, MT146,
2707      1MT147, TAB148, MT149, MT150, TAB151, MT152, MT153, TAB154, MT155,
2708      2MT156, TAB157, MT158, MT159, TAB160, MT161, MT162, TAB163, MT164,
2709      3MT165, TAB166, MT167, MT168, TAB169, MT170, MT171, TAB172, MT173,
2710      4MT174, TAB175
2711      WRITE (12,9029) MT176, MT177, TAB178, MT179, MT180, TAB181, MT182,
2712      1MT183, TAB184, MT185, MT186, TAB187, MT188, MT189, TAB190, MT191,
2713      2MT192, TAB193, MT194, MT195, TAB196, MT197, MT198, TAB199, MT200,
2714      3MT201, TAB202, MT203, MT204, TAB205, MT206, MT207, TAB208, MT209,
2715      4MT210, TAB211
2716      WRITE (12,9030) MT212, MT213, TAB214, MT215, MT216, TAB217
2717      9030 FORMAT(1X, 2(I6, I2, F5.1))
2718      WRITE(12,4001)(RAIN(I), I=1,63)
2719      4001 FORMAT(1X, F8.0)
2720      WRITE (12,4002) RMAX24, MRUSE, MRDATE
2721      4002 FORMAT(1X, F8.0, I3, I7)
2722      508 CONTINUE
2723      C      END OF SUBROUTINE CSETAB
2724      RETURN
2725      END
END OF FILE

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1 C
2 THIS PROGRAM ("SOILPREDPRINT") PRINTS THE INFORMATION FOR THE PREDICTION
3 OF SOIL CHANGES WHICH IS STORED IN "SOILHIST". THE OUTPUT PROVIDES
4 HEADINGS IDENTIFYING EACH ITEM. NO SUBROUTINES ARE CALLED.
5 C
6 DIMENSION H(19), USETIT(20)
7 DIMENSION RAINA(130)
8 READ (5, 1000) ICASES
9 1000 FORMAT(1X, I5)
10 C ICASES IS THE NUMBER OF CASES TO BE PRINTED
11 DO 100 I1=1, ICASES
12 READ (7, 1001) (H(I2), I2=1, 19)
13 1001 FORMAT(19A4)
14 C ABOVE FORMAT 1001 FOR HEADING INFORMATION
15 READ (7, 1002) V002, V005, V006, V007, V008, V011, V020, R1, V021
16 1002 FORMAT(4X, A4, 7X, A4, A3, 2A2, 9X, A3, 34X, A3, A1, A4)
17 C ABOVE FORMAT 1002 FOR BEFORE CARD 1 INFO.
18 READ (7, 1003) A006, A007, A008, A009, A011, A020, ARI, A021
19 1003 FORMAT(19X, A3, 2A2, A4, 5X, A3, 34X, A3, A1, A4)
20 C ABOVE FORMAT 1003 IS FOR CIA INFORMATION
21 READ (7, 1004) SLB1, SLB2, V028, R2, V030, V031, V040
22 READ (7, 1004) SLA1, SLA2, A28, AR2, A030, A031, A040
23 1004 FORMAT(13X, A3, A2, 8X, A2, 2X, A1, A4, A2, 29X, A4)
24 C ABOVE FORMAT 1004 FOR CARD 2 INFO.
25 READ (7, 1005) B1, B2, B3, B4, B5, B6, B7, B8, B9, B10, B11, B12,
26 1 B13, B14, B15, B16, B17, B18, B19, B20, B21, B22
27 1005 FORMAT(7X, 2A4, 8(A1, A4), 4A3)
28 C ABOVE FORMAT FOR CARD 13 INFO. IN SOILHIST
29 READ (7, 1006) B23, B24, B25, B26
30 1006 FORMAT(9X, 2(A1, A4))
31 C ABOVE FORMAT 1006 FOR NITROGEN INFO.
32 READ (7, 1007) B27, B28, B29, B30, B31, B32, B33, B34, B35, B36,
33 1 B37, B38, B39, B40, B41, B42
34 1007 FORMAT(10X, 8(A1, A4))
35 C ABOVE FORMAT 1007 FOR CARD 28 INFO. IN SOILHIST
36 READ (7, 1007) B43, B44, B45, B46, B47, B48, B49, B50, B51,
37 1 B52, B53, B54, B55, B56, B57, B58
38 READ (7, 1008) B59, B60, B61, B62, B63, B64, B65, B66, B67, B68,
39 1 B69, B70, B71, B72, B73, B74, B75, B76, B77, B78
40 1008 FORMAT(7X, 9A4, 6(A2, A4))
41 C ABOVE FORMAT 1008 FOR CARD 16 INFO. IN SOILHIST
42 READ (7, 2001) (USETIT(I4), I4=1, 20)
43 2001 FORMAT(20A4)
44 READ (7, 1009) M1, M2, M3, M4, M5, M6, M7, M8, M9, M10, M11, T12,
45 1 T13, M14, M15, T16, M17, M18, M19, M20, M21, T22, M23, M24, T25, M26, M27,
46 2 T28, M29, T30, M31, M32, M33, T34, M35, M36, T37, M38, M39, T40,
47 3 M41, M42, T43, M44, M45, T46, M47, M48, T49
48 1009 FORMAT(1X, 3I2, I6, I2, F5.0, F5.1, 2I2, F5.2, I2, / 1X, 3I6, I2,
49 1 F5.1, 2I6, I2, F5.1), I6, F5.1, I6, / 1X, 6(I6, I2, F5.1))
50 C ABOVE FORMAT 1009 FOR FIRST 3 LINES OF USE TABULATION
51 READ (7, 1010) M50, M51, T52, M53, M54, T55, M56, T58, M59,
52 1 M60, T61, M62, M63, T64, M65, M66, T67, M68, M69, T70, M71, M72,
53 2 T73, M74, M75, T76, M77, M78, T79, M80, M81, T82, M83, M84, T85
54 1010 FORMAT(1X, 6(I6, I2, F5.1), / 1X, 6(I6, I2, F5.1))
55 C ABOVE FORMAT FOR USETAB ITEMS 50 - 193
56 READ (7, 1010) M86, M87, T88, M89, M90, T91, M92, M93, T94, M95,
57 1 M96, T97, M98, M99, T100, M101, M102, T103, M104, M105, T106,
58 2 M107, M108, T109, M110, M111, T112, M113, M114, T115, M116, M117,
59 3 T118, M119, M120, T121
60 READ (7, 1010) M122, M123, T124, M125, M126, T127, M128, M129,

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61      1 T130, M131, M132, T133, M134, M135, T136, M137, M138, T139, M140,
62      2 M141, T142, M143, M144, T145, M146, M147, T148, M149, M150, T151,
63      3 M152, M153, T154, M155, M156, T157
64      READ (7, 1010) M158, M159, T160, M161, M162, T163, M164, M165,
65      1 T166, M167, M168, T169, M170, M171, T172, M173, M174, T175, M176,
66      2 M177, T178, M179, M180, T181, M182, M183, T184, M185, M186, T187,
67      3 M188, M189, T190, M191, M192, T193
68      READ (7, 1011) M194, M195, T196, M197, M198, T199, M200, M201,
69      1 T202, M203, M204, T205, M206, M207, T208, M209, M210, T211, M212,
70      2 M213, T214, M215, M216, T217
71      1011 FORMAT(1X, 6(I5, I2, F5.1), / 1X, 2(I6, I2, F5.1))
72      C      ABOVE FORMAT 1011 FOR LAST 2 LINES OF USETAB INFO.
73      READ (7, 8000)(RAIN(J), J=1,126)
74      8000 FORMAT(1X, 18A4)
75      C      ABOVE FORMAT 8000 FOR RAINFALL DATA
76      READ (7,8020) RM1, RM2, RM3, RM4, RM5
77      8020 FORMAT(1X, 2A4, 2A3, A4)
78      C      ABOVE FORMAT 8020 FOR MAXIMUM RAIN IN 24 HOURS INFO.
79      WRITE (6, 1012)(M(I3), I3=1,13)
80      1012 FORMAT('1', 1X, 19A4)
81      C      ABOVE FORMAT 1012 FOR TITLE INFO.
82      WRITE (6, 1013)
83      1013 FORMAT(/// 1X, 'COLON-   DATE BEFORE   DATE AFTER   SEQUEN- BEFORE
84      1 AFTER DRAIN- BEFORE   AFTER   BEFORE   AFTER', / 1X,
85      2 'IST NO.  SAMPLE          SAMPLE      TIAL    USE      USE    AGE
86      3 HT. IF 2ND HT. IF 2ND AVE. 2ND AVE 2ND', / 10X, 'DAY MO YR
87      4 DAY MO YR  PAIR      CODE      CODE          GROWTH(M)  GROWTH(M)
88      5 GTH.DBH(CM)  GTH.DBH(CM)')
89      WRITE (6, 1014) V005, V006, V007, V008, A006, A007, A008, A009,
90      1 V011, A011, V029, R2, V030, R2, A030, R1, V021, R1, A021
91      1014 FORMAT(/ 2X, A4, 4X, A3, 1X, A2, 1X, A2, 4X, A3, 1X, A2, 1X, A2,
92      1 3X, A4, 6X, A2, 6X, A2, 5X, A2, 6X, A1, A4, 6X, A1, A4, 6X, A1,
93      2 A4, 8X, A1, A4)
94      WRITE (6, 1015)
95      1015 FORMAT(/// 1X, 'BEFORE AFTER   NOTES   NOTES   PHOS.',
96      2 3X, 'PHOS.', 2X, 'PCTAS', 3X,
97      1 'POTAS CA++EMG++ CA++EMG++ AL+++ AL+++ ', / 1X, '2ND GTH 2
98      2ND GTH BEFORE AFTER   BEFORE DIFF. BEFORE DIFF. BEFORE
99      3 DIFFERENCE BEFORE DIFF.', / 1X, 'TYPE TYPE CT1 CT2 CT
100     4 CT2 (PPM) (PPM) (PPM) (PPM) (ME/100G) (ME/100G) (ME/10
101     50G) (ME/100G)')
102     WRITE (6, 1016) V031, A031, V020, V040, A020, A040, B1, B2, B3,
103     1 B4, B5, B6, B7, B8, B9, B10, B11, B12, B13, B14
104     1016 FORMAT(/ 3X, A2, 7X, A2, 5X, A3, A4, A3, A4, 4X, A4, 4X, A4, 2X,
105     1 A1, A4, 3X, A1, A4, 3X, A1, A4, 7X, A1, A4, 5X, A1, A4, 6X, A1,
106     2 A4)
107     WRITE (6, 1017)
108     1017 FORMAT(/// 1X, 'PH      PH      NOTE 1  NOTE 2  NITROGEN NITROGE
109     1N CARBON CARBON NA+      NA+      K+      K+', / 1X,
110     2 'BEFORE DIFF. CARD 13 CARD 13 BEFORE DIFF. BEFORE DIF
111     3F. BEFORE DIFF. BEFORE DIFF.', / 16X, 'BEF AFT BEF
112     4 AFT (%)', 7X, '(%)', 7X, '(%) (%)', 3X, '(ME/100G) (ME/100G) (
113     5ME/100G) (ME/100G)')
114     WRITE (6, 1018) B15, B16, B17, B18, B19, B20, B21, B22, B23, B24,
115     1 B25, B26, B27, B28, B29, B30, B31, B32, B33, B34, B35, B36, B37,
116     2 B38
117     1018 FORMAT(/ 1X, A1, A4, 3X, A1, A4, 2X, A3, 1X, A3, 2X, A3, 1X, A3,
118     13X, A1, A4, 5X, A1, A4, 4X, A1, A4, 3X, A1, A4, 3X, A1, A4, 6X,
119     2 A1, A4, 7X, A1, A4, 5X, A1, A4)
120     WRITE (6, 1019)

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121 1019 FORMAT(/// 1X, 'CA++          CA++          MG++          MG++          H+
122 1      H+          AL+++          AL+++          P205          P205',
123 1 7X, 'SLOPE(%)', / 1X,
124 2ORE      DIFF.      BEFORE      DIFF.      BEFORE      DIFF.      'BEF
125 3ORE      DIFF.      BEFORE      DIFF.      BEFORE      DIFF.      'BEF
126 4 (ME/100G) (ME/100G) (ME/100G) (ME/100G) (ME/100G) (ME/100G)
127 5 (MG/100G) (MG/100G)')
128 WRITE (6, 1020) B39, B40, B41, B42, B43, B44, B45, B46, B47, B48,
129 1 B49, B50, B51, B52, B53, B54, B55, B56, B57, B58, SLB1, SLB2, B59
130 1020 FORMAT(/ 2X, A1, A4, 6X, A1, A4, 6X, A1, A4, 5X, A1, A4, 6X, A1,
131 1 A4, 6X, A1, A4, 6X, A1, A4, 6X, A1, A4, 6X, A1, A4, 6X, A1, A4,
132 1 7X, A3, A2)
133 WRITE (6, 1021)
134 1021 FORMAT(/// 1X, 'ERCSION COARSE COARSE FINE FINE SILT S
135 1ILT TOTAL TOTAL S102 S102 AL203 AL203 FE2J3 FE2J3
136 2', / 1X, 'PLOT SAND SAND SAND SAND BEFORE DIFF.
137 3CLAY CLAY BEFORE DIFF. BEFORE DIFF. BEFORE DIFF.', /
138 4 1X, 'NO. BEF(%) DIF(%) BEF(%) DIF(%) (%) (%) BEF(
139 5%) DIF(%) (%) (%) (%) (%) (%)')
140 WRITE (6, 1022) B59, B60, B61, B62, B63, B64, B65, B66, B67, B68,
141 1 B69, B70, B71, B72, B73, B74, B75, B76, B77, B78
142 1022 FORMAT(/ 2X, A4, 6(4X, A4), 3X, A4, 4X, A4, 5X, A2, A4, 1X, A2,
143 1 A4, 2X, A4, A4, 1X, A2, A4, 2X, A2, A4, 1X, A2, A4)
144 WRITE (6, 1023) (USETIT(I5), I5=1,20)
145 1023 FORMAT(/// 1X, 20A4)
146 WRITE (6, 1024)
147 1024 FORMAT(/ 1X, 'VIRGIN BURNS IN INTERVAL . . . / OTHER BURNS IN I
148 INTERVAL . . . /',
149 2 // 1X, 'NO. IN BURN CE- DAYS SINCE CE- NO. IN LAST BURN CE-
150 3 CALC. 2ND GROWTH CE- AVE. HT IF 2ND CE- TYPE 2ND', / 1X,
151 4 'INTVL QUAL PT. VIRG. BURN RT. INTVL TYPE QUAL RT AGE A
152 5T CUT(DAYS) RT DBH(CM) GROWTH(M) RT GROWTH')
153 WRITE (6, 1025) M1, M2, M3, M4, M5, M6, M7, M8, M9, M10, M11, T12,
154 1 T13, M14, M15
155 1025 FORMAT(/ 3X, I2, 4X, I2, 3X, I2, 4X, I6, 5X, I2, 4X, I2, 5X, I2,
156 1 4X, I2, 3X, I2, 7X, I6, 7X, I2, 3X, F5.0, 5X, F5.1, 5X, I2, 5X,
157 2 I2)
158 WRITE (6, 1026)
159 1026 FORMAT('1', 1X, 'TOTAL / DAYS INS / ANNUAL CROPS TOT./TREE CROPS
160 1TOT. / FALLOW / HISTORY UNKNOWN IN INT./ RICE(ANY COMBIN
161 2)', // 1X, 'DAYS IN INTVL NOT DAYS CE- % OF DAYS CE- %
162 3OF DAYS CE- % OF DAYS % OF DAYS SINCE DAYS CE- % OF',
163 4 / 1X, 'INTERVAL VIRG(DNV) RT DNV RT DNV
164 5 RT DNV DNV LAST UNK.I. RT DNV')
165 WRITE (6, 1027) M18, M19, M20, M21, T22, M23, M24, T25, M26, M27,
166 1 T28, M29, T30, M31, M32, M33, T34
167 1027 FORMAT(/ 2X, I6, 4X, I6, 3X, I6, 2X, I2, 2X, F5.1, 1X, I6, 2X, I2,
168 12X, F5.1, 1X, I6, 2X, I2, 2X, F5.1, 1X, I6, 1X, F5.1, 3X, I6, 5X,
169 2 I6, 2X, I2, 2X, F5.1)
170 WRITE (6, 1028)
171 1028 FORMAT(/// 1X, 'GREEN MAIZE(ANY C)/ BEANS(V OR P:ANY C)/MANIOC(B.O
172 1P S.:ANY C)/ VIRGIN (USE=1) /CUT BEFORE BURN(2)/BARE AFT.BURN(3
173 2)'/, // 2X, 'DAYS CE- % OF DAYS CE- % OF DAYS CE-
174 3% OF DAYS CE- % OF DAYS CE- % OF DAYS CE- %OF',
175 5 / 9X, 'RT DNV RT DNV RT DNV RT DNV
176 6 RT TOT DAYS RT DNV RT DNV')
177 WRITE (6, 1029) M35, M36, T37, M38, M39, T40, M41, M42, T43, M44,
178 1 M45, T46, M47, M48, T49, M50, M51, T52
179 1029 FORMAT(/ 1X, I6, 2X, I2, 2X, F5.1, 2X, I6, 2X, I2, 2X, F5.1, 5X,
180 1 I6, 2X, I2, 2X, F5.1, 4X, I6, 2X, I2, 3X, F5.1, 2X, I6, 2X, I2,

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181      2 2X, F5.1, I6, 2X, I2, 2X, F5.1)
182      WRITE (6, 1030)
183 1030 FORMAT(/// 1X, 'BARE AFT.HARV(4)/ WEEDS (5) / 2ND GROWTH (5)
184 1/ RICE ALONE(7) / RI-GRMZ (9) / RI-GRMZ-MN(9) / RI-MN (13)
185 2 /', // 2X, 'DAYS CE- % CF DAYS CE- % OF DAYS CE- % OF
186 3 DAYS CE- % OF DAYS CE- % OF DAYS CE- % OF DAYS CE- % OF'
187 4, /10X, 'RT DNV RT DNV RT DNV RT DNV RT DNV RT
188 5 DNV RT DNV RT DNV RT DNV RT DNV')
189      WRITE (6, 1031) M53, M54, T55, M56, M57, T58, M59, M60, T61, M62,
190      1 M63, T64, M65, M66, T67, M68, M69, T70, M71, M72, T73
191 1031 FORMAT(/ 1X, I6, 1X, I2, 2X, F5.1, 2X, I6, 1X, I2, 2X, F5.1, I6,
192 1 2X, I2, 2X, F5.1, 1X, I6, 2X, I2, 2X, F5.1, 2X, I5, 2X, I2, 1X,
193 2 F5.1, 1X, I6, 2X, I2, 2X, F5.1, I6, 1X, I2, F5.1)
194      WRITE (6, 1032)
195 1032 FORMAT(/// 1X, 'RI-PAST (11) / RI-GMZ-PA(12) / RI-OTHER (13) /
196 1 GRMZ ALONE (14)/ GRMZ-MN (17) / GRMZ-PAST (19) / GRMZ-OTHER (20
197 2) /')
198      WRITE (6, 1033)
199 1033 FORMAT(/ 2X, 'DAYS CE- % OF', 6(2X, 'DAYS CE- % OF'), / 8X,
200 1 'RT DNV', 6(9X, 'RT DNV'))
201      WRITE (6, 1034) M74, M75, T76, M77, M78, T79, M80, M81, T82, M83,
202      1 M84, T85, M86, M87, T88, M89, M90, T91, M92, M93, T94
203 1034 FORMAT(/ 1X, I6, 1X, I2, 2X, F5.1, 6(I6, 2X, I2, 2X, F5.1))
204      WRITE (6, 1035)
205 1035 FORMAT(/// 1X, 'BEANS ALONE(21)/ BE-DRY MZ (22)/ BE-GRMZ (23) /
206 1 BE-MN (24) / BE-DRY MZ-MN(25)/BE-GRMZ-MN(26)/ BE-OTHER (27)
207 2 /')
208      WRITE (6, 1033)
209      WRITE (6, 1034) M95, M96, T97, M98, M99, T100, M101, M102, T103,
210      1 M104, M105, T106, M107, M108, T109, M110, M111, T112, M113,
211      2 M114, T115
212      WRITE (6, 1036)
213 1036 FORMAT(/// 1X, 'MANIOC ALONE(28)/ MN-OTHER (33) /PAST W/O ANIM(34)
214 1/PA-2ND GTH (38)/PA-OT(W/O A)(39)/PA WITH ANIM(40)/PA-OT WITH A(41
215 2) /')
216      WRITE (6, 1033)
217      WRITE (6, 1034) M116, M117, T118, M119, M120, T121, M122, M123,
218      1 T124, M125, M126, T127, M128, M129, T130, M131, M132, T133,
219      2 M134, M135, T136
220      WRITE (6, 1037)
221 1037 FORMAT('1', 1X, 'SUGAR CANE (42)/ CACAO ALONE(43)/CACAO-BANANA(44)/
222 1CAC-BANAN-MN(45)/CAC-BAN-MN-CLIT(46)/CAC-MN-CLIT(47)/CACAO-MN (48
223 2) /')
224      WRITE (6, 1033)
225      WRITE (6, 1034) M137, M138, T139, M140, M141,
226      1 T142, M143, M144, T145, M146, M147, T148, M149, M150, T151,
227      2 M152, M153, T154, M155, M156, T157
228      WRITE (6, 1038)
229 1038 FORMAT(/// 1X, 'CACAU-CLIT.(49)/ CACAO-OTHER(50)/BLACK PEPPER(51)/
230 1B.PEPP-OTHER(52)/ COFFEE (53) / COFFEE-OTHER(54)/FRUIT TREES(55
231 2) /')
232      WRITE (6, 1033)
233      WRITE (6, 1034) M159, M159, T160, M161, M162, T163, M164, M165,
234      1 T166, M167, M168, T169, M170, M171, T172, M173, M174, T175, M176,
235      2 M177, T178
236      WRITE (6, 1039)
237 1039 FORMAT(/// 1X, 'FRUIT TR-OT(56)/ BANANA (57) / BANANA-OT (58)/
238 1OTHER ANNUAL(59)/OTHER PEREN.(60)/OTH.PER-OT.ANN(61)/CLITORIA (62
239 2) /')
240      WRITE (6, 1033)

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241      WRITE (6, 1034) M179, M180, T131, M182, M183, T184, M185, M186,
242      1 T197, M188, M189, T190, M191, M192, T193, M194, M195, T196, M197,
243      2 M198, T199
244      WRITE (6, 1040)
245      1040 FORMAT(/// 1X, 'COTTON (63) / PINEAPPLE (64) / SOYA BEANS (65) /
246      1 TOBACCO (66) / CURRAL (67) / SWEET POTATOE (68) /', // 2X, 'DAY
247      25 CE- % OF', 5(2X, 'DAYS CE- % OF'), / 8X, 'RT DNV', 5(9X,
248      3 'RT DNV'))
249      WRITE (6, 1041) M200, M201, T202, M203, M204, T205, M206, M207,
250      1 T209, M209, M210, T211, M212, M213, T214, M215, M216, T217
251      1041 FORMAT(/ 1X, I6, 1X, I2, 2X, F5.1, 5(I6, 2X, I2, 2X, F5.1))
252      WRITE (6, 8001)
253      8001 FORMAT(/// 1X, 'RAINFALL (MM) WHILE IN EACH LAND USE CATEGORY ..
254      1. . . . .
255      2.', // 1X, 'VIRGIN CUT BEF. BARE AFT- BARE AFT. WEEDS', 4X,
256      2 'SECOND', 5X, 'RICE', 5X,
257      2 'RICE & RI-GREEN RICE- RICE-', 5X, 'RICE-GR', /
258      3 11X, 'BURN BURN HARVEST', 13X, 'GROWTH ALONE', 4X,
259      4 'GR.MAIZE MZ-MANIOC MANICC PASTURE MZ-PAST')
260      WRITE (6, 8004)
261      8004 FORMAT(1X, '(USE=1) (2)', 7X, '(3)', 3X, '(4)', 7X, '(5)', 6X,
262      1 '(6)', 9X, '(7)', 7X, '(8)', 7X, '(9)', 7X, '(10)', 6X, '(11)',
263      2 6X, '(12)')
264      WRITE (6, 8002)(RAINA(K), K=1, 24)
265      8002 FORMAT(/ 1X, I2(2A4, 2X))
266      WRITE (6, 9003)
267      9003 FORMAT('1', 1X, 'RAINFALL (MM) WHILE IN EACH LAND USE CATEGORY (CONT
268      1 INUED)', 30(' '))
269      8003 FORMAT(/// 1X, 'RAINFALL (MM) WHILE IN EACH LAND USE CATEGORY (CONT
270      1 INUED)', 30(' '))
271      WRITE (6, 3005)
272      8005 FORMAT(/ 2X, 'RICE- GR.MAIZE GR.MAIZE GR.MAIZE GR.MAIZE',
273      1 2X, 'BEANS- BEANS- BEANS- BEANS-', 4X, 'BE-DRY MZ', 1X,
274      2 'RE-GREEN BEANS -', / 2X, 'OTHER ALONE MANIOC PASTURE'
275      3 3X, 'OTHER ALONE DRY MAIZE GR.MAIZE MANIOC -MANIOC',
276      4 3X, 'MZ-MANIOC OTHER', / 3X, '(13)', 7X, '(14)', 5X, '(17)', 6X,
277      5 '(19)', 6X, '(20)', 6X, '(21)', 6X, '(22)', 6X, '(23)', 6X,
278      6 '(24)', 6X, '(25)', 6X, '(26)', 6X, '(27)')
279      WRITE (6, 8002)(RAINA(K), K=25, 48)
280      WRITE (6, 8003)
281      WRITE (6, 8006)
282      8006 FORMAT(/ 1X, 'MANIOC MANICC- PAST.W/O PASTURE- PAST-OT.',
283      1 2X, 'PASTURE PAST-CT SUGAR', 5X, 'CACAO CACAO-', 4X,
284      2 'CAC-BAN- CAC-BAN-', / 1X, 'ALONE OTHER ANIMALS', 3X,
285      3 '2ND GTH. W/O ANIM. W/ ANIM. W/ ANIM. CANE', 6X, 'ALONE', 4X,
286      4 'BANANA MANICC MN-CLIT.', / 3X, '(28)', 6X, '(33)', 6X,
287      5 '(34)', 6X, '(38)', 6X, '(39)', 6X, '(40)', 6X, '(41)', 6X, '(42)'
288      6, 5X, '(43)', 7X, '(44)', 6X, '(45)', 6X, '(46)')
289      WRITE (6, 8002)(RAINA(K), K=49, 72)
290      WRITE (6, 8003)
291      WRITE (6, 8007)
292      8007 FORMAT(/ 1X, 'CAC-MAN- CACAC- CACAO- CACAO- BLACK',
293      1 5X, 'B.PEPPER COFFEE', 5X, 'COFFEE- FRUIT FRUIT TR', 2X,
294      2 'BANANA BANANA-', / 1X, 'CLITCRIA MANIOC CLITORIA OTHER',
295      3 5X, 'PEPPER -OTHER', 15X, 'OTHER TREES -OTHER', 14X,
296      4 'CTWEP', / 3X, '(47)', 6X, '(48)', 6X, '(49)', 6X, '(50)', 6X,
297      5 '(51)', 6X, '(52)', 6X, '(53)', 6X, '(54)', 6X, '(55)', 6X,
298      6 '(56)', 7X, '(57)', 5X, '(58)')
299      WRITE (6, 8002)(RAINA(K), K=73, 96)
300      WRITE (6, 8003)

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301      WRITE (6, 8008)
302 8008 FORMAT(// 1X, 'CTHER      OTHER      OTH.PER- CLITORIA', 2X,
303 1 'COTTON    PINEAPPLE SOYA', 6X, 'TOBACCO    CURRAL SWEET', 6X,
304 2 'TOTAL    TOT.WHILE', / 1X, 'ANNUAL      PERENNIAL OTH.ANN.', 33X,
305 3 'BEANS', 24X, 'POTATCES  WHILE  ANNUALS', / 3X, '(59)', 6X,
306 4 '(60)', 7X, '(61)', 5X, '(62)', 6X, '(63)', 6X, '(64)', 6X, '(65)'
307 5, 6X, '(66)', 6X, '(67)', 6X, '(68)', 5X, 'BARE    CROPS')
308      WRITE (6, 8002)(RAINA(K), K=97,120)
309      WRITE (6, 8011)
310 8011 FORMAT(/// 1X, 'RAIN WHILE IN EACH LAND USE (CONT.)')
311      WRITE (6, 8009)
312 8009 FORMAT(// 1X, 'TOT.WHILE TCTAL    TOTAL', 6X, 'MAXIMUM',
313 1 4X, 'USE WHEN', 2X, 'DATE OF', / 1X, 'TREE', 7X,
314 1 'WHILE    RAIN IN', 4X, 'RAIN IN', 4X, 'MAXIMUM',
315 1 3X, 'MAXIMUM',
316 1 / 1X, 'CROPS', 6X, 'PASTURE INTERVAL', 3X,
317 1 '24 HOURS', 3X, 'RAIN', 6X, 'RAIN')
318      WRITE (6, 8010)(RAINA(K), K=121,126) , RM1,RM2,RM3,RM4,RM5
319 8010 FORMAT(/ 1X, 3(2A4, 2X), 2A4, 5X, A3, 5X, A4)
320      100 CONTINUE
321 C      END OF PROGRAM "SCILPREDPRINT"
322      END
END OF FILE

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1 C THIS PROGRAM ("ERCSICNNEIGH8") TAKES INFORMATION NEEDED FOR EROSION
2 C PREDICTIONS (GRANULOMETRIC DATA, SLOPE AND SOILDEPTH) FROM VIRGSOIL
3 C AND NONVIRGSOIL AND CALCULATES DISTANCES BETWEEN ALL POSSIBLE PAIRS
4 C OF SAMPLES. INFORMATION ON SAMPLES WITHIN A SPECIFIED RANGE IS
5 C OUTPUT IN THE FILE ALLNEIGHBORS. WITH TWO LINES PER CASE. THIS
6 C PROVIDES THE INPUT FOR THE "ERPRTAB" PROGRAM. THE VALUE "-9." IS
7 C OUTPUT FOR MISSING DATA. INPUT DEVICES ARE: 5=ENDATA, 7=VIRGSOIL,
8 C AND 10=NONVIRGSOIL. OUTPUT DEVICE IS: 8=ALLNEIGHBORS. NO SUBPROGRAMS
9 C ARE CALLED.
10 C THE FORTRAN MONITOR "MINUSZERO" FEATURE IS USED, AS IS THE MTS
11 C LOGICAL COMPARISON OF CHARACTERS (LCCMC) FUNCTION.
12 C
13 C
14 C INTEGER V002, V261, V010
15 C DIMENSION (BV002(1100), BACX(1100), BACY(1100), BV261(1100),
16 C 1 BV025(1100), BV027(1100), BV236(1100), BV237(1100), BV238(1100),
17 C 2 BV239(1100)
18 C DATA MINZRC/Z800000000/
19 C CALL FTNCMD('SET MINUSZERO=ON',16)
20 C READ (5, 1001) ICVIRG, ICNVIR, IQUADS, RADIUS, DISMIN, MAXNOF,
21 C IRESAM, IPROFI, ITEST
22 C 1001 FORMAT(1X, 2I5, I2, 2F6.0, 3I4, I5)
23 C "ICVIRG" IS THE NUMBER OF CASES IN VIRGSOIL
24 C "ICNVIR" IS THE NUMBER OF CASES IN NONVIRGSOIL
25 C "IQUADS" IS THE CODE FOR QUADRANTS TO BE INCLUDED IN ALLNEIGHBORS
26 C (1=QUADRANT 1 ONLY, 2=QUADRANTS 1 & 4 ONLY, 4=ALL QUADRANTS)
27 C "RADIUS" IS THE MAXIMUM DISTANCE BETWEEN PAIRS OF SAMPLES TO BE
28 C INCLUDED.
29 C "DISMIN" IS THE MINIMUM DISTANCE BETWEEN PAIRS OF SAMPLES TO BE
30 C INCLUDED
31 C "MAXNOF" IS THE MAXIMUM NUMBER OF FIELDS TO BE INCLUDED FOR ANY ONE
32 C REFERENCE FIELD
33 C "IRESAM" INDICATES WHETHER RESAMPLES SHOULD BE INCLUDED (0=NO; 1=YES)
34 C "IPROFI" INDICATES WHETHER THE UPPERMOST SAMPLE OF PROFILES SHOULD
35 C BE INCLUDED (0=NO; 1=YES)
36 C "ITEST" ALLOWS FOR A TEST RUN WITH LESS THAN THE FULL DATA SET
37 C (0=USE FULL DATA SET; A NUMBER GREATER THAN 1 IS NO. OF REFERENCE
38 C SAMPLES TO USE)
39 C ICTOT = ICVIRG + ICNVIR
40 C I2 = 0
41 C DO 100 I1=1,ICTOT
42 C I0 = 7
43 C IF (I1.GT. ICVIRG) I0 = 10
44 C READ (I0, 1000) ACX, ACY, V002, V010, V025, V027, V261, V236,
45 C 1 V237, V238, V239
46 C 1000 FORMAT(54X, F8.0, 1X, F8.0, / 4X, A4, 22X, I5, / 13X, F5.0, 3X,
47 C 1 F5.0, / 3X, I4, // 21X, 4F4.0 ///)
48 C ABOVE FORMAT 1000 FOR VIRGSOIL AND NONVIRGSOIL
49 C IF(LCCMC(4,MINZRC,ACX).EQ.0) GO TO 100
50 C IF(LCCMC(4,MINZRC,ACY).EQ.0) GO TO 100
51 C IF (ACX.LT. 0.1 .OR. ACY.LT. 0.1) GO TO 100
52 C IF (IRESAM.EQ. 0 .AND. V010.GE. 1) GO TO 100
53 C SKIPS RETURN SAMPLES IF SPECIFIED
54 C IF (IPROFI.EQ. 0 .AND. V261.GE. 1) GO TO 100
55 C SKIPS PROFILES IF SPECIFIED
56 C I2 = I2 + 1
57 C BV002(I2) = V002
58 C BV261(I2) = V261
59 C BACX(I2) = ACX
60 C BACY(I2) = ACY

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61      BV025(I2) = V025
62      BV027(I2) = V027
63      BV236(I2) = V236
64      BV237(I2) = V237
65      BV238(I2) = V238
66      BV239(I2) = V239
67  100 CONTINUE
68      MAXREF = I2
69      IF (ITEST .GE. 1) MAXREF = ITEST
70      NC = 0
71      DO 101 I3=1,MAXREF
72  C      DOES ONE ITERATION FOR EACH REFERENCE SAMPLE
73      INCF = 0
74      DO 102 I4=1,I2
75  C      DOES ONE ITERATION FOR EACH SAMPLE BEING COMPARED WITH THE REFERENCE SAMP.
76      IF (I3 .EQ. I4) GO TO 102
77  C      FOLLOWING SELECTS SPECIFIED QUADRANTS
78      IF (IQUADS .EQ. 4) GO TO 103
79      IF (IQUADS .EQ. 1 .AND. BACX(I4) .GT. BACX(I3) .AND. BACY(I4) .GT.
80      1 BACY(I3)) GO TO 103
81      IF (IQUADS .EQ. 2 .AND. BACY(I4) .GT. BACY(I3)) GO TO 103
82      GO TO 102
83  103 DIST = SQRT((BACX(I4) - BACX(I3))*(BACX(I4)-BACX(I3)) +
84      1 (BACY(I4) - BACY(I3))*(BACY(I4) - BACY(I3)))
85      IF (DIST .GT. RADIUS) GO TO 102
86  C      SKIPS FIELDS FURTHER THAN SPECIFIED RADIUS
87      IF (DIST .LT. DISMIN) GO TO 102
88  C      SKIPS FIELDS CLOSER THAN THE SPECIFIED MINIMUM DISTANCE
89  C      FOLLOWING STATEMENTS SELECT PAIRS WHERE SOME COMPARABLE
90  C      INFORMATION EXISTS
91      IF (LCCMC(4,MINZRO,BV025(I3)).EQ.0
92      1 .AND. LCCMC(4,MINZRC,BV025(I4)).EQ.0) GO TO 200
93      IF (LCCMC(4,MINZRO,BV027(I3)).EQ.0
94      1 .AND. LCCMC(4,MINZRC,BV027(I4)).EQ.0) GO TO 200
95      IF (LCCMC(4,MINZRC,BV236(I3)).EQ.0
96      1 .AND. LCCMC(4,MINZRC,BV236(I4)).EQ.0) GO TO 200
97      IF (LCCMC(4,MINZRC,BV237(I3)).EQ.0
98      1 .AND. LCCMC(4,MINZRC,BV237(I4)).EQ.0) GO TO 200
99      IF (LCCMC(4,MINZRO,BV238(I3)).EQ.0
100     1 .AND. LCCMC(4,MINZRC,BV238(I4)).EQ.0) GO TO 200
101     IF (LCCMC(4,MINZRO,BV239(I3)).EQ.0
102     1 .AND. LCCMC(4,MINZRC,BV239(I4)).EQ.0) GO TO 200
103     GO TO 102
104  200 CONTINUE
105     INCF = INCF + 1
106     NC = NC + 1
107  C      "NC" IS COUNTER FOR NUMBER OF CASES
108     IF (INCF .GT. MAXNCF) GO TO 102
109  C      FOLLOWING ASSIGNS VALUE OF "-9." TO MISSING DATA
110     IF (LCCMC(4,MINZRO,BV236(I3)).EQ.0) BV236(I3) = -9.
111     IF (LCCMC(4,MINZRO,BV237(I3)).EQ.0) BV237(I3) = -9.
112     IF (LCCMC(4,MINZRO,BV238(I3)).EQ.0) BV238(I3) = -9.
113     IF (LCCMC(4,MINZRO,BV239(I3)).EQ.0) BV239(I3) = -9.
114     IF (LCCMC(4,MINZRC,BV025(I3)).EQ.0) BV025(I3) = -9.
115     IF (LCCMC(4,MINZRC,BV027(I3)).EQ.0) BV027(I3) = -9.
116     WRITE (8, 1003) NC,IBV002(I3),IBV261(I3), BV236(I3), BV237(I3),
117     1 BV238(I3), BV239(I3), BV025(I3), BV027(I3), BACX(I3), BACY(I3),
118     2 IBV002(I4), IBV261(I4), DIST, BV236(I4), BV237(I4), BV238(I4),
119     3 BV239(I4), BV025(I4), BV027(I4)
120  1003 FORMAT(1X, I5, A4, 1X, I4, 4F4.0, 2F5.0, 2F8.0, / 6X, A4, 1X, I4,

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121          1 F8.0, 4F4.0, 2F5.0)
122      C      ABOVE FORMAT 1003 FOR ALLNEIGHBORS
123      102 CONTINUE
124      101 CONTINUE
125      C      END OF PROGRAM "ERCSICNNEIGHB"
126      END
END OF FILE
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1 C
2 C THIS PROGRAM ("ERPRTAB") CALCULATES TRANSFER PROBABILITIES FOR
3 C EROSION-RELATED DATA IN THE FILE "ALLNEIGHBORS" (GRANULOMETRIC
4 C DATA, SLOPE AND SCILDEPTH). TABLES OF PROBABILITIES ARE OUTPUT
5 C IN "EROSIONPROBS" WITH APPROPRIATE HEADINGS. THE PROGRAM ACCEPTS
6 C PARAMETERS READ IN AS DATA SPECIFYING THE UPPER AND LOWER LIMITS
7 C FOR DISTANCES FOR TWO LENGTHS OF MOVES, THE CUT POINTS FOR 7 LEVELS
8 C OF 6 VARIABLES FOR WHICH TABLES ARE TO BE MADE, AND TITLE AND
9 C HEADING INFORMATION. DEVICES ARE: 5=EPTDATA, 7=ALLNEIGHBORS,
10 C 8=EROSIONPROBS. NO SUBPROGRAMS ARE CALLED.
11 C THE FORTRAN MONITOR "MINUSZERO" FEATURE IS USED, AS IS THE MTS
12 C LOGICAL COMPARISON OF CHARACTERS (LCOMC) FUNCTION
13 C
14 C DIMENSION IE1(1500), IE2(1500), IE3(1500), E4(1500), E5(1500)
15 C 1, E6(1500), E7(1500), E9(1500), E9(1500), E10(1500),
16 C 2 IE11(1500), IE12(1500), IE13(1500), IE14(1500), IE15(1500),
17 C 3 IE16(1500), IE17(1500), IE18(1500), IE19(1500), E20(1500)
18 C DIMENSION HEAD(90), CLTS(60), THEAD(130), P(50), B(50), C(10)
19 C READ (5, 1003) ICALLN, CRITD1, CRITD2, CRITD3, CRITD4, INCHAR,
20 C 1 IMOVE1, IMOVE2
21 C 1003 FORMAT(1X, 15, 4F5.0, 12, 215)
22 C "ICALLN" IS THE NUMBER OF CARDS IN ALLNEIGHBORS
23 C "CRITD1" AND "CRITD2" ARE THE LOWER AND UPPER LIMITS FOR DISTANCES
24 C BETWEEN SAMPLES TO BE INCLUDED IN THE FIRST OF THE TWO SETS OF
25 C TABULATIONS FOR MOVES OF DIFFERENT DISTANCES
26 C "CRITD3" AND "CRITD4" ARE THE LOWER AND UPPER DISTANCE LIMITS FOR
27 C THE SECOND SET OF TABULATIONS
28 C "INCHAR" THE NUMBER OF VARIABLES (UP TO 6) FOR WHICH TABULATIONS
29 C ARE TO BE MADE
30 C "IMOVE1" AND "IMOVE2" ARE THE LENGTHS OF THE MOVES TO APPEAR IN
31 C THE TITLES OF THE TABLES
32 C READ (5, 5002) (THEAD(II), II=1,120)
33 C 5002 FORMAT(20A4)
34 C "THEAD" IS THE TABLE TITLE INFORMATION
35 C READ (5, 5000) (HEAD(I), I=1,84)
36 C 5000 FORMAT(1X, 14A4)
37 C "HEAD" IS THE HEADING INFO. FOR THE ROWS AND COLUMNS IN THE TABLES
38 C READ (5, 5001) (CUTS(IC), IC=1,48)
39 C 5001 FORMAT(1X, 8F5.0)
40 C "CUTS" ARE THE CUTPOINTS FOR TABLE ROWS AND COLUMNS
41 C READ (7, 1004) (IE1(I), IE2(I), IE3(I), E4(I), E5(I), E6(I), E7(I),
42 C 1 E8(I), E9(I), E10(I), IE11(I), IE12(I), IE13(I), IE14(I), IE15(I),
43 C 2 IE16(I), IE17(I), IE18(I), IE19(I), E20(I), I=1,ICALLN)
44 C 1004 FORMAT(1X, 15, 14, 1X, 14, 4F4.0, 2F5.0, 2F8.0, / 6X, 14, 1X, 14,
45 C 1 F8.0, 4F4.0, 2F5.0)
46 C ABOVE FORMAT 1004 FOR ALLNEIGHBORS
47 C DO 501 IRCUND=1,2
48 C MAKES ONE ITERATION FOR EACH ROUND OF CALCULATION (100M OR 500M)
49 C IF (IRCUND.EQ. 1) IMOVE = IMOVE1
50 C IF (IRCUND.EQ. 2) IMOVE = IMOVE2
51 C WRITE (9, 1020) IMOVE
52 C 1020 FORMAT(10(1X, /), 'TRANSITION PROBABILITIES FOR A MOVE OF', 15, 2X,
53 C 1 'METERS')
54 C DO 502 ICHAR=1,INCHAR
55 C DOES ONE ITERATION FOR EACH VARIABLE(UP TO 6) TO BE TABULATED
56 C DO 200 K=1,50
57 C P(K) = 0.
58 C 200 R(K) = 0.
59 C DO 201 J=1,10
60 C 201 C(J) = 0.

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61      DO 500 I5=1,ICALLN
62      C      DOES ONE ITERATION FOR EACH CASE IN ALLNEIGHBORS
63      IF (IROUND .EQ. 1 .AND. E14(I5) .GE. CRIT01 .AND. E14(I5) .LE.
64      1 CRIT02) GO TO 104
65      IF (IROUND .EQ. 2 .AND. E14(I5) .GE. CRIT03 .AND. E14(I5) .LE.
66      1 CRIT04) GO TO 104
67      GO TO 500
68      104 CONTINUE
69      M1 = ICHAR * 8 + 1 - 8
70      M2 = ICHAR * 8 + 2 - 8
71      M3 = ICHAR * 8 + 3 - 8
72      M4 = ICHAR * 8 + 4 - 8
73      M5 = ICHAR * 8 + 5 - 8
74      M6 = ICHAR * 8 + 6 - 8
75      M7 = ICHAR * 8 + 7 - 8
76      M8 = ICHAR * 8 + 8 - 8
77      IF (ICCHAR .EQ. 1) CV = E4(I5)
78      IF (ICCHAR .EQ. 1) CV = E15(I5)
79      IF (ICCHAR .EQ. 2) CV = E5(I5)
80      IF (ICCHAR .EQ. 2) DV = E16(I5)
81      IF (ICCHAR .EQ. 3) CV = E6(I5)
82      IF (ICCHAR .EQ. 3) CV = E17(I5)
83      IF (ICCHAR .EQ. 4) CV = E7(I5)
84      IF (ICCHAR .EQ. 4) CV = E18(I5)
85      IF (ICCHAR .EQ. 5) CV = E8(I5)
86      IF (ICCHAR .EQ. 5) CV = E19(I5)
87      IF (ICCHAR .EQ. 6) CV = E9(I5)
88      IF (ICCHAR .EQ. 6) DV = E20(I5)
89      IF (CV .LT. 0. .OR. DV .LT. 0.) GO TO 500
90      IF (CV .EQ. -0. .OR. CV .EQ. -0.) GO TO 500
91      KC = 0
92      IF (CV .GE. CUTS(M1) .AND. CV .LT. CUTS(M2)) KC = 1
93      IF (CV .GE. CUTS(M2) .AND. CV .LT. CUTS(M3)) KC = 2
94      IF (CV .GE. CUTS(M3) .AND. CV .LT. CUTS(M4)) KC = 3
95      IF (CV .GE. CUTS(M4) .AND. CV .LT. CUTS(M5)) KC = 4
96      IF (CV .GE. CUTS(M5) .AND. CV .LT. CUTS(M6)) KC = 5
97      IF (CV .GE. CUTS(M6) .AND. CV .LT. CUTS(M7)) KC = 6
98      IF (CV .GE. CUTS(M7) .AND. CV .LT. CUTS(M8)) KC = 7
99      IF (KC .EQ. 0) GO TO 500
100      KD1 = KC * 7 - 7 + 1
101      KD2 = KC * 7 - 7 + 2
102      KD3 = KC * 7 - 7 + 3
103      KD4 = KC * 7 - 7 + 4
104      KD5 = KC * 7 - 7 + 5
105      KD6 = KC * 7 - 7 + 6
106      KD7 = KC * 7 - 7 + 7
107      IF (DV .GE. CUTS(M1) .AND. DV .LT. CUTS(M2)) B(KD1) = B(KD1) + 1.
108      IF (DV .GE. CUTS(M2) .AND. DV .LT. CUTS(M3)) B(KD2) = B(KD2) + 1.
109      IF (DV .GE. CUTS(M3) .AND. DV .LT. CUTS(M4)) B(KD3) = B(KD3) + 1.
110      IF (DV .GE. CUTS(M4) .AND. DV .LT. CUTS(M5)) B(KD4) = B(KD4) + 1.
111      IF (DV .GE. CUTS(M5) .AND. DV .LT. CUTS(M6)) B(KD5) = B(KD5) + 1.
112      IF (DV .GE. CUTS(M6) .AND. DV .LT. CUTS(M7)) B(KD6) = B(KD6) + 1.
113      IF (DV .GE. CUTS(M7) .AND. DV .LT. CUTS(M8)) B(KD7) = B(KD7) + 1.
114      C(KC) = C(KC) + 1.
115      500 CONTINUE
116      C      FOLLOWING CALCULATES TRANSITION PROBABILITIES
117      DO 134 I6=1,7
118      DO 135 I7=1,7
119      I8 = I6 * 7 + I7 - 7
120      IF (C(I6) .LE. 0.001) GO TO 136

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121      P(I9) = E(I8) / C(I6)
122      GO TO 135
123      136 P(I9) = 0.
124      135 CONTINUE
125      134 CONTINUE
126      IBEG = ICHAR * 20 - 20 + 1
127      IEND = IBEG + 19
128      WRITE (8, 1011)(THEAD(I), I=IBEG, IEND)
129      1011 FORMAT(1X, / 1X, / 1X, / 1X, / 1X, / 20A4)
130      IB = ICHAR * 14 - 14 + 1
131      IE = IB + 13
132      WRITE (8, 1010)(HEAD(II), II=IB,IE)
133      1010 FORMAT(1X, / 1X, / 11X, 7(2A4, 3X), 2X, 'SAMP.SIZE', / 1X)
134      DO 137 I9 = 1, 7
135      I10 = ICHAR * 14 - 14 + I9 * 2 - 2 + 1
136      I11 = I10 + 1
137      I12 = I9 * 7 - 7 + 1
138      I13 = I12 + 1
139      I14 = I12 + 2
140      I15 = I12 + 3
141      I16 = I12 + 4
142      I17 = I12 + 5
143      I18 = I12 + 6
144      WRITE (8, 1012) HEAD(I10), HEAD(I11), P(I12), P(I13), P(I14),
145      1 P(I15), P(I16), P(I17), P(I18), C(I9)
146      1012 FORMAT(2X, 2A4, 3X, 7(F5.2, 6X), 2X, F3.0)
147      137 CONTINUE
148      502 CONTINUE
149      501 CONTINUE
150      C      END OF PROGRAM "ERPRTAB"
151      END
END OF FILE

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1 C
2 C THIS PROGRAM ("WEATHERFREQ") CALCULATES RAINFALL, EVAPORATION AND
3 C INSOLATION FOR EACH DAY AS A PROPORTION OF THE MONTHLY TOTAL AND
4 C FOR EACH MONTH AS A PROPORTION OF THE YEARLY TOTAL.
5 C INPUT UNITS ARE: 5=DATAFILE 7=DAILYWEATHER.
6 C OUTPUT UNITS ARE: 8=DAYWEATFREQ AND 9=MONTHWEATFREQ
7 C THE MTS "MINLSZER0" AND LOGICAL COMPARISON OF CHARACTERS (LCOMC)
8 C FEATURES ARE USED.
9 C SUBPROGRAMS CALLED ARE KDAY5 AND WEATBD, PLUS THE IDMO FUNCTION
10 C WHICH IS INCLUDED IN THE WEATHERFREQ SOURCE.
11 C
12 DIMENSION TCTRMO(5,12), TCTMOE(5,12), TOTMOI(5,12),
13 1 TOTRYR(5), TCTEYR(5), TOTIYR(5)
14 COMMON/C1/ L41(1700), RL46(1700), RL47(1700), RL48(1700)
15 COMMON/C2/ RAINBD, EVAPBD, SUNBD, MISPRE, MISEVA, MISINS
16 DATA MINZRO/Z80C00C00/
17 CALL FTNCMC('SET MINUSZERO=CN',16)
18 ICASES = 1697
19 READ (5, 1000) IFCR, IYR1, IYR2
20 1000 FORMAT(3I3)
21 IF (IFCR .EQ. 1)
22 1 READ (7, 1)(L41(I9), RL46(I9), RL47(I9), RL48(I9), I9=1, ICASES)
23 IF (IFCR .EQ. 5)
24 1 READ (7, 5)(L41(I9), RL46(I9), RL47(I9), RL48(I9), I9=1, ICASES)
25 5 FORMAT(//// 2X, I6, 12X, F6.1, 2F5.1)
26 C ABOVE FORMAT 5 IS FOR STATION NEAREST THE INTENSIVE STUDY AREA
27 1 FORMAT(2X, I6, 12X, F6.1, 2F5.1 ////)
28 C ABOVE FORMAT 1 IS FOR ALTAMIRA WEATHER STATION
29 DO 102 I=1,5
30 TCTRYR(I)=0.
31 TCTEYR(I) = 0.
32 102 TOTIYR(I) = 0.
33 DO 100 I1=IYR1, IYR2
34 IYR = I1 - IYR1 + 1
35 DO 101 I2=1,12
36 NODAYS = IDMC(I2, I1)
37 IFIRST = KDAY5(I1, I2, I1)
38 ILAST = KDAY5(NODAYS, I2, I1)
39 CALL WEATBD(IFIRST, ILAST)
40 TCTRMO(IYR, I2) = RAINBD
41 TCTMOE(IYR, I2) = EVAPBD
42 TOTMOI(IYR, I2) = SUNBD
43 101 CONTINUE
44 DO 106 IX =1,12
45 IF (TCTRMO(IYR, IX) .LT. -8.) GO TO 107
46 TCTRYR(IYR) = TCTRYR(IYR) + TCTRMO(IYR, IX)
47 GO TO 108
48 107 TCTRYR(IYR) = -0.0
49 108 IF (TOTMOE(IYR, IX) .LT. -8.) GO TO 109
50 TCTEYR(IYR) = TCTEYR(IYR) + TOTMOE(IYR, IX)
51 GO TO 110
52 109 TCTEYR(IYR) = -0.0
53 110 IF (TOTMOI(IYR, IX) .LT. -8.) GO TO 111
54 TOTIYR(IYR) = TOTIYR(IYR) + TOTMOI(IYR, IX)
55 GO TO 106
56 111 TOTIYR(IYR) = -0.0
57 106 CONTINUE
58 100 CONTINUE
59 DO 200 I4=IYR1, IYR2
60 IYR = I4 - IYR1 + 1

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61      DO 201 I5=1,12
62      LAST6 = IDMO(I5, I4)
63      DO 202 I6=1,LAST6
64      ID1900 = KDAY5(I6, I5, I4)
65      J = ID1900 - KDAY5(1, 1, IYR1) + 1
66      IF (LCCMC(4,MINZRO,RL46(J)) .EQ. 0 .OR. TOTRMO(IYR,I5) .LT. -8.)
67      1 GO TO 112
68      RPRMC = RL46(J) / TOTRMC(IYR, I5)
69      GO TO 113
70      112 RPRMC = -0.0
71      113 IF (LCOMC(4,MINZRO,RL47(J)) .EQ. 0 .OR. TOTMOE(IYR,I5) .LT. -8.)
72      1 GO TO 114
73      EPRMC = RL47(J) / TOTMCE(IYR, I5)
74      GO TO 115
75      114 EPRMC = -0.0
76      115 IF (LCOMC(4,MINZRO,RL48(J)) .EQ. 0 .OR. TOTMOI(IYR,I5) .LT. -8.)
77      1 GO TO 116
78      RPRMC = RL48(J) / TOTMCI(IYR, I5)
79      GO TO 117
80      116 RPRMC = -0.00
81      117 WRITE (9, 2000) ID1900, I6, I5, I4, RL46(J), RPRMC, RL47(J),
82      1 EPRMC, RL48(J), RPRMC
83      2000 FORMAT(1X, I6, 3I3, 3(F6.2, F7.3))
84      202 CONTINUE
85      IF (TCTRMO(IYR, I5) .LT. -8. .OR. LCOMC(4,MINZRO,TOTRYR).EQ.0)
86      1 GO TO 118
87      RMPY = TCTRMC(IYR, I5) / TCTRYR(IYR)
88      GO TO 119
89      118 RMPY = -0.0
90      119 IF (TOTMCE(IYR, I5) .LT. -8. .OR. LCOMC(4,MINZRO,TOTEYR(IYR)) .EQ.
91      1 0) GO TO 120
92      EMPY = TOTMCE(IYR, I5) / TOTEYR(IYR)
93      GO TO 121
94      120 EMPY = -0.00
95      121 IF (TOTMCI(IYR, I5) .LT. -8. .OR. LCOMC(4,MINZRO,TOTIYR(IYR)) .EQ.
96      1 0) GO TO 122
97      RIMPY = TOTMCI(IYR, I5) / TOTIYR(IYR)
98      GO TO 123
99      122 RIMPY = -0.0
100      IF(TOTPMO(IYR,I5) .LT. -8.) TCTRMC(IYR,I5) = -0.0
101      IF(TOTMOE(IYR,I5) .LT. -8.) TCTMOE(IYR,I5) = -0.0
102      IF(TOTMOI(IYR,I5) .LT. -8.) TCTMOI(IYR,I5) = -0.0
103      123 WRITE (9, 2001) I5, I4, TCTRMO(IYR, I5), TOTRYR(IYR), RMPY,TOTMOE(
104      1 IYR,I5),TOTEYR(IYR),EMPY,TOTMCI(IYR, I5), TCTIYR(IYR), RIMPY
105      2001 FORMAT(1X, 2I3, 3(F7.2, F8.2, F7.3))
106      201 CONTINUE
107      200 CONTINUE
108      END
109      FUNCTION IDMO(IMC, IYR)
110      C      THIS FUNCTION RETURNS THE NUMBER OF DAYS IN A MONTH
111      IF (IMC .EQ. 1) ICMO = 31
112      IF (IMC .EQ. 2) IDMC = 28
113      IREMOR = MOD(IYR, 4)
114      IF (IMC .EQ. 2 .AND. IREMOR .EQ. 0) IDMO = 29
115      IF (IMC .EQ. 3) IDMO = 31
116      IF (IMC .EQ. 4) ICMC = 30
117      IF (IMC .EQ. 5) ICMC = 31
118      IF (IMC .EQ. 6) ICMC = 30
119      IF (IMC .EQ. 7) ICMC = 31
120      IF (IMC .EQ. 8) ICMC = 31

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121      IF (IMO .EQ. 9) ICMC = 30
122      IF (IMO .EQ. 10) ICMC = 30
123      IF (IMO .EQ. 11) ICMC = 30
124      IF (IMO .EQ. 12) ICMC = 31
125      RETURN
126      END
END OF FILE
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1      SUBROUTINE PDENS(ICRCP, SEEDS, ICERT1, DENS, ICERT2)
2      C      THIS SUBROUTINE (PDENS) CALCULATES THE PLANTING DENSITY FROM THE
3      C      KGS SEEDS PER HECTARE IF A MORE RELIABLE DIRECT DENSITY MEASURE IS
4      C      NOT AVAILABLE. THIS SUBROUTINE IS CALLED BY IPLANT, RIINTR, MZINTR,
5      C      BEINTR AND MNINTR. ARGUMENTS ARE ICRCP: THE SINGLE CROP LAND USE
6      C      CODE, SEEDS: KGS SEEDS/HA, ICERT1: CERTAINTY OF KGS SEEDS/HECTARE,
7      C      DENS: PLANTING DENSITY IN PLANTS/HA, ICERT2: CERTAINTY OF PLANTING
8      C      DENSITY. VALUES RETURNED ARE PLANTD: CALCULATED PLANTING DENSITY,
9      C      METHOD: METHOD OF CALCULATION (1 = REPORTED AS DENSITY, 2 = FROM
10     C      KGS SEEDS/HA.), ICERT: CERTAINTY OF INFORMATION
11     COMMON/C4/ PLANTD, METHOD, ICERT
12     PLANTD = -0.
13     METHOD = -0
14     ICERT = -0
15     RISMAX = 50.
16     C      RISMAX IS UPPER LIMIT OF RICE SEED/DENSITY REGRESSION RELIABILITY
17     RISLOP = 3021.2
18     C      RISLOP IS SLOPE OF SEEDS/DENSITY REGRESSION FOR RICE
19     MZSMAX = 50.
20     MZSLOP = 414.86
21     BESMAX = 152.
22     RESLOP = 1602.2
23     IF (DENS .GT. 0.) GO TO 100
24     GO TO 101
25     100 PLANTD = DENS
26     METHOD = 1
27     ICERT = ICERT2
28     GO TO 202
29     101 CONTINUE
30     IF (.NOT.(SEEDS .GT. 0.)) GO TO 202
31     IF (ICRCP .EQ. 7) GO TO 203
32     IF (ICRCP .EQ. 14) GO TO 204
33     IF (ICRCP .EQ. 21) GO TO 205
34     GO TO 202
35     203 CONTINUE
36     C      FOR CASE WHERE ICRCP IS RICE
37     IF (SEEDS .GT. RISMAX) GO TO 202
38     PLANTD = RISLOP * SEEDS
39     206 CONTINUE
40     METHOD = 2
41     ICERT = ICERT1
42     GO TO 202
43     204 CONTINUE
44     C      FOR CASE WHERE ICRCP IS MAIZE
45     IF (SEEDS .GT. MZSMAX) GO TO 202
46     PLANTD = MZSLOP * SEEDS
47     GO TO 206
48     205 CONTINUE
49     C      FOR CASE WHERE ICRCP IS BEANS
50     IF (SEEDS .GT. BESMAX) GO TO 202
51     PLANTD = RESLOP * SEEDS
52     GO TO 206
53     202 CONTINUE
54     C      END OF SUBROUTINE PDENS
55     RETURN
56     END

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END OF FILE

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1 C THIS PROGRAM ("MASTERPRINT") PRINTS THE DATA FROM THE CROP YIELD
2 C PREDICTION MASTER FILES WITH HEADINGS TO IDENTIFY EACH ITEM.
3 C APPROPRIATE HEADINGS FOR INTERPLANTING DATA WITH EITHER RICE, MAIZE,
4 C BEANS OR MANIOC AS PRINCIPAL CROP ARE GENERATED. NO SUBROUTINES ARE CALLED
5 C INPUT UNITS FOR RICE ARE: 5=MPDATA 7=RIMASTER. OUTPUT UNIT IS 5=PRINT*
6 C
7 C
8 C
9 C
10 C INTEGER V109
11 C DIMENSION P(302), H(20)
12 C READ (5, 1000) ICDS9
13 C 1000 FORMAT(IX, I5)
14 C ICDS9 IS THE NUMBER OF CROP CASES TO BE PRINTED (SAME AS NO. OF TYPE 9)
15 C 70 100 I3=1,ICDS9
16 C DOES ONE ITERATION FOR EACH CROP CASE
17 C READ(7, 1001)(H(I1), I1=1,20)
18 C 1001 FORMAT(IX, A3, 19A4)
19 C ABOVE FORMAT FOR HEADING INFORMATION
20 C READ (7, 1002) D1, V002, D2, V003, V004, V005, V006, V007, V008,
21 C 1 V009, D3, V010, V011, V012, D4, V013, V014, D5, V015, D6, V016,
22 C 2 D7, V017, D8, V018, D9, V019, V020, D10, V021
23 C 1002 FORMAT(3X, A1, A4, A1, A4, A2, A4, A3, 2A2, A4, A1, A4, A3, A2, A1,
24 C 1 A4, A2, 5(A1, A4), A3, A1, A4)
25 C ABOVE FORMAT 1002 FOR CARD 1 INFORMATION
26 C READ (7, 1003) D11, V025, V026, D12, V027, V028, V029, D13,
27 C 1 V030, V031, D14, V032, V033, D15, V034, V035, V036, D16, V037,
28 C 2 V038, V039, V040, V041, V042, V042A
29 C 1003 FORMAT(13X, A1, A4, A2, 2A1, A4, 2A2, A1, A4, A2, A1, A4, A2, A1,
30 C 12A4, A2, A1, 2A4, A2, A4, A2, A4, A2)
31 C ABOVE FORMAT 1003 FOR CARD TYPE 2 INFORMATION
32 C READ (7, 1004) D17, V393, V394, V395, V396, V404
33 C 1004 FORMAT(17X, A1, A4, A3, A4, A3, 29X, A3)
34 C ABOVE FORMAT 1004 FOR CARD TYPE 24 INFORMATION
35 C READ (7, 1005) D18, V107, V108, V109, V110, V111, V112, V113,
36 C 1 V114, V115, V116, V117, D19, V118, V119, D20, V120, V121, V122,
37 C 2 V123, D21, V124, V125, D22, V126, V127, V128
38 C 1005 FORMAT(9X, A1, A4, A4, I3, 2(A3, 3A2), A1, A4, A2, 2A4, A2, A3, A2,
39 C 1 A3, A4, A2, A3, A4, 2A2)
40 C ABOVE FORMAT 1005 FOR CARD TYPE 9 INFORMATION
41 C READ (7, 1006) V190, V191, V192, D23, V193, V194, V195, V196, D24,
42 C 1 V197, D25, V198, D27, V200, D28, V201, V202A, V202B
43 C 1006 FORMAT(22X, 2A3, A4, A1, 4A4, 2(A1, A4), 5X, 2(A1, A4), 2A3)
44 C ABOVE FORMAT 1006 FOR CARD TYPE 13, FORMAT NO. 2
45 C READ (7, 1007) V236, V237, V238, V239, D29, V240, D30, V241, D31,
46 C 1 V242, V243
47 C 1007 FORMAT(22X, 4A4, 3(A2, A4), A3)
48 C ABOVE FORMAT 1007 FOR CARD TYPE 16 INFORMATION
49 C READ (7, 1008) D32, V555, D26, V556, D33, V557, D34, V558, D35,
50 C 1 V559A, D36, V558B, D37, V558C, D38, V558D, D39, V558E, V559,
51 C 2 V560
52 C 1008 FORMAT(18X, 9(A1, A4), 12X, 2A3)
53 C ABOVE FORMAT 1008 FOR CARD TYPE 28 INFORMATION
54 C READ (7, 1009) D40, C4, D41, C5, C6, C7, C8, C9, D43, C10, D44,
55 C 1 C11, C12
56 C 1009 FORMAT(17X, 2(A1, A4), A2, A1, A4, A1, 2A4, A1, A4, A2, 2A4/1)
57 C ABOVE FORMAT 1009 FOR SOILCALCS INFORMATION
58 C IF (V109.EQ. 7) READ (7, 1010) T2, T3, T4, T5, T6, T7, D45, T8,
59 C 1 T9, T10, T11A, T11B, T12, T13, T14, T15, T16, T17, T18, T19, D46,
60 C 2 T20, T21, T22, T23A, T23B, T24, T25, T26, T27, D47, T28, T29,
61 C 3 T30, T31A, T31B, T32, T33, T34, T35, T36, T37, T38, T39, T40,
62 C 4 D48, T41, T42, T43, T44A, T44B, T45A, T45B, T46A, T46B, T47, T48,

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61      5 T49, T50, T51, T52, T53, T54, T55, T56, T57, T58, T59, T60, T61,
62      6 T62
63      1010 FORMAT(5X, 3(A4, A2), A3, A4, 3A2, A1, 4(A4, A2), A3, A4, 3A2, A1,
64      1 / 1X, 2(A4, A2), A3, A4, 3A2, A1, 3A3, 3(A4, A2), A3, A4, 2A2,
65      2 3(A2, A1), / 1X, 8(A4, A4))
66      C      ABOVE FORMAT 1010 FOR RITB10
67      IF (V109.EQ. 14) READ (7, 1011) T64, T65, T66, T67, T68, T69,
68      1 D49, T70, T71, T72, T73A, T73B, T74, T75, T76, T77, T78, T79,
69      2 D50, T80, T81, T82, T83A, T83B, T84, T85, T86, T87, T88, T89,
70      3 D51, T90, T91, T92, T93A, T93B, T94, T95, T96, T97, D52, T98, T99
71      4 T100, T101A, T101B, T102, T103, T104, T105, T106, T107, T108,
72      5 T109, T110, D53, T111, T112, T113, T114A, T114B, T115A, T115B,
73      6 T116A, T116B, T117, T118, T119, T120, T121, T122, T123, T124,
74      7 T125, T126, T127, T128, T129, T130, T131, T132
75      1011 FORMAT(5X, 3(A4, A2), A3, A4, 3A2, A1, 3(A4, A2), A3, A4, 3A2, A1,
76      1 / 1X, 3(A4, A2), A3, A4, 3A2, A1, 2(A4, A2), A3, A4, 3A2, A1,
77      2 3A3, 2(A4, A2), / 1X, A4, A2, A3, A4, 2A2, 3(A2, A1), 8(A4, A2))
78      C      ABOVE FORMAT 1011 FOR MZTB10
79      IF (V109.EQ. 21) READ (7, 1012) T134, T135, T136, T137, T138,
80      1 T139, D54, T140, T141, T142, T143A, T143B, T144, T145, T146, T147
81      2 T148, T149, T150, T151, D55, T152, T153A, T153B, T154A, T154B,
82      3 T155, T156, T157, T158, T159, T160, T161, T162, T163, D56, T164,
83      4 T165, T166, T167A, T167B, T168A, T168B, T169A, T169B, T170, T171,
84      5 T172, T173, T174, T175, T176, T177, T178, T179, T180, T181, T182,
85      6 T183, T184, T185
86      1012 FORMAT(5X, 3(A4, A2), A3, A4, 3A2, A1, 4(A4, A2), A3, A4, 3A2, A1,
87      1 / 1X, 3A3, 3(A4, A2), A3, A4, 2A2, 3(A2, A1), / 1X, 8(A4, A2))
88      C      ABOVE FORMAT 1012 FOR RETB10
89      IF (V109.EQ. 28) READ (7, 1013) T241, T242, T243, T244, T245,
90      1 T246, D57, T247, T248, T249, T250A, T250B, T251, T252, T253,
91      2 T254, T255, T256, D58, T257, T258, T259, T260A, T260B, T261,
92      3 T262, T263, T264, T265, T266, T267, T268, D59, T269, T270, T271,
93      4 T272A, T272B, T273, T274, T275, T276, T277, T278, T279, T280,
94      5 T281, D60, T282, T283, T284, T285A, T285B, T286A, T286B, T287A,
95      6 T287B, T289, T290, T291, T292, T293, T294, T295, T296, T297,
96      7 T298, T299, T300, T301, T302
97      1013 FORMAT(5X, 3(A4, A2), A3, A4, 3A2, A1, 3(A4, A2), A3, A4, 3A2, A1,
98      1 A4, A2, / 1X, 3(A4, A2), A3, A4, 3A2, A1, 3A3, 3(A4, A2), A3, A4,
99      2 2A2, 3(A2, A1), / 1X, 7(A4, A2))
100     C      ABOVE FORMAT 1013 FOR MNTB10
101     READ (7, 1014)(P(I2), I2=1,302)
102     1014 FORMAT(/1X,33A2, 1X, A2, 3A2, / 1X, 1X, A2, 36A2, / 1X, 39A2, /
103     1 1X, 27A2, 2(1X, A2, 3A2), A4, / 1X, 39A2, / 1X, 12A2, 2(1X, A2,
104     2 3A2), 19A2, / 1X, 6A2, 2(1X, A2, 3A2), 24A2, / 1X, 24A2, 2(1X,
105     3 A2, 3A2), 6A2)
106     C      ABOVE FORMAT 1014 FOR TB11
107     READ (7, 2000) C344, C345, C346, C347D1, C347D2, C348,
108     1 C349, C350, C351, C352, C353, C354, C355,
109     1 C356, C357, C358, C359A, C360A, C361A, C362A, C363A1,
110     2 C363A2, C364, C365
111     2000 FORMAT(20X, A2, A4, A2, A2, A3, 7A2, A4, 4A2, A4, 3A2,
112     1 A3, A4, A3)
113     C      ABOVE FORMAT 2000 FOR FIRST CARD OF R122 INFO. FOR CASE
114     READ (7, 2001) C359B, C360B, C361B, C362B, C363B1, C363B2,
115     1 MORE22
116     2001 FORMAT(57X, A2, A4, 3A2, A3, I5)
117     C      ABOVE FORMAT 2001 FOR SECOND RECORD OF R122 INFO. FOR CASE
118     READ (7, 1015) D61, L1, D62, L2, D63, L3, L4, L5, L6, D64, L7,
119     1 D65, L8, D66, L9, L10, L11, L12, D67, L19, D68, L20, L13, L14,
120     2 L15, L16, L17, L18

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121 1015 FORMAT(1X, 2(A3, A4, 2(A2, A4), 3A2), 4A4, 6A2)
122 C ABOVE FORMAT 1015 FOR FIRST & LAST 15 DAYS WEATHER + ABSOLUTE COORDINATES
123 WRITE (6, 1016)(H(I4), I4=1,20)
124 1016 FORMAT('1', 1X, A3, 15A4)
125 C ABOVE FORMAT 1016 FOR HEADING INFORMATION
126 WRITE (6, 1017)
127 1017 FORMAT(/// 2X, 'FIELD SAMPLE PREC COLON- DATE SAMP. SEQUEN- P
128 1REVOLS PRESENT PAIRED COMPARISONS EQUIVALENT FIELDS NJTE'
129 2, / 3X, 'NO. NO. TYPE 1ST NO. DAY MO YR TIAL PR FIELD NO
130 3 USE TYPE FIELD TYPE FIELD (1) (2) (3) (4) CT 2')
131 WRITE (6, 1018) D1, V002, D2, V003, V004, V005, V006, V007, V008,
132 1 V009, D3, V010, V011, V012, D40, V013, V014, D5, V015, D6, V016,
133 2 D7, V017, D8, V018, D9, V019, V020
134 1018 FORMAT(/ 1X, A1, A4, 3X, A1, A4, 4X, A2, 4X, A4, 3X, A3, 2(1X, A2),
135 1 4X, A4, 5X, A1, A4, 7X, A3, 5X, A2, 1X, A1, A4, 3X, A2, 1X, A1,
136 2 A4, 2X, 4(A1, A4), 2X, A3)
137 C ABOVE FORMAT 1018 FOR FIRST LINE OF NUMERICAL OUTPUT
138 WRITE (6, 1019)
139 1019 FORMAT(/// 1X, 'AVE.CAPO- SLOPE SUP.AP. SOIL DRAIN- EROS- 1
140 1T. IF CAPO. MOS.SINCE CERT- ROCKS', / 1X, 'EIRA DBH (E
141 2) TEX COL DEPTH AGE ICN CAPOEIRA TYPE LAST CULT AIN
142 3TY % OCCUR. DEPTH OUTCP')
143 WRITE (6, 1020) D10, V021, D11, V025, V026, V026A, D12, V027,
144 1 V028, V029, D13, V030, V031, D14, V032, V033, D15, V034, V035,
145 2 V036
146 1020 FORMAT(/ 2X, A1, A4, 5X, A1, A4, 2X, A2, 3X, A1, 3X, A1, A4, 3X,
147 1 A2, 6X, A2, 5X, A1, A4, 5X, A2, 6X, A1, A4, 5X, A2, 6X, A1, A4,
148 2 3X, A4, 3X, A2)
149 C ABOVE FORMAT 1020 FOR SECOND LINE OF NUMERICAL OUTPUT
150 WRITE (6, 1021)
151 1021 FORMAT(/// 1X, 'LATERITIC CONCRETIONS NOTE CHARCOAL CERTAINTY
152 1 SOIL MUNSELL COLOR NOTE CASE UNSAMP PRINC. PLANT.DT. CE
153 2PT', / 1X, '% OCCUR. DEPTH SCLID CT 2 PRES.DEPTH CT2 INFO. 4J
154 3E CHROMA VALUE CT24 NO. LOCATION CROP DAY MO YR')
155 WRITE (6, 1022) D16, V037, V038, V039, V040, V041, V042, V042A,
156 1 D17, V393, V394, V395, V396, V404, D18, V107, V108, V109, V110,
157 2 V111, V112, V113
158 1022 FORMAT(/ 2X, A1, A4, 3X, A4, 3X, A2, 5X, A3, 4X, A2, 2X, A4, 6X,
159 1 A2, 5X, A1, A4, A3, 2X, A4, 1X, '/', 1X, A3, 3X, A3, 2X, A1, A4,
160 2 4X, A4, 5X, 13, 4X, A3, 1X, A2, 1X, A3, 1X, A2)
161 C ABOVE FORMAT 1022 FOR THIRD LINE OF NUMERICAL OUTPUT
162 WRITE (6, 1023)
163 1023 FORMAT(/// 1X, 'HARV.DATE CERT KGS.SEEDS CERT PLANTING CERT
164 1 VAR- CERT YIELD CERT AREA CERT NOTE GLEBA LOT LOCATION C
165 2C.', / 1X, 'DAY MO YR PER HECT. DENSITY IEF
166 3Y KG/HA (HA) CT 9 NO. NO. FRONT DEPTH')
167 WRITE (6, 1024) V114, V115, V116, V117, D19, V118, V119, D20, V123
168 1, V121, V122, V123, D21, V124, V125, D22, V126, V127, V128, V193,
169 2 V191, V192, D23, V193
170 1024 FORMAT(/ 1X, A3, 1X, A2, 1X, A2, 4X, A2, 5X, A1, A4, 5X, A2, 3X,
171 1 2A4, 3X, A2, 3X, A3, 4X, A2, 1X, A3, A4, 3X, A2, 1X, A3, A4, 2X,
172 2 A2, 4X, A2, 4X, A3, 3X, A3, 2X, A4, 2X, A1, A4)
173 C ABOVE FORMAT 1024 FOR FOURTH LINE OF NUMERICAL OUTPUT
174 WRITE (6, 1025)
175 1025 FORMAT(/// 1X, 'SAMP.DEPTH PHOS. POTAS. CA++&MG++ NITROGEN 4
176 1L+++ PH NOTES CT13 COARSE FINE SILT TOTAL SIO2 AL2O3
177 23', / 1X, 'BEGIN END (PPM) (PPM) (ME/100G) (%) (ME/100G
178 3) (1) (2) SAND SAND CLAY')
179 WRITE (6, 1026) V194, V195, V196, D24, V197, D25, V198, C7, CX7,
180 1 D27, V200, D28, V201, V202A, V202B, V236, V237, V238, V239, D29,

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181      2 V240, D30, V231
182 1026 FORMAT(/ 1X, A4, 1X, A4, 3X, A4, 3X, A1, A4, 5X, A1, A4, 6X, A1,
183      1 A4, 5X, A1, A4, 4X, A1, A4, 3X, A3, 2X, A3, 4X, A4, 3X, A4, 2X,
184      2 A4, 2X, A4, 2X, A2, A4, 1X, A2, A4)
185 C      ABOVE FORMAT 1026 FOR FIFTH LINE OF NUMERICAL OUTPUT
186      WRITE (6, 1027)
187 1027 FORMAT(/ 2X, 'FE203 NOTE CARBON EXCHANGEABLE BASES(ME/100G)
188      1 H+ AL+++ P205 NOTES CT28 KI KR LATO ORGANIC
189      2', / 9X, 'CT16 (7) NA+ K+ CA++ MG++ (ME/100G)(ME/1
190      300G)(ME/100G) (1) (2) SOL MATTER')
191      WRITE (6, 1028) D31, V242, V243, D32, V555, D33, V557, D34, V558,
192      1 D35, V558A, D36, V558B, D37, V558C, D38, V558D, D39, V558E, V559,
193      2 V560, D40, C4, D41, C5, C6, C42, C8
194 1028 FORMAT(/ 1X, A2, A4, 3X, A2, 3X, A1, A4, 3X, A1, A4, 2X, A1, A4,
195      1 2X, A1, A4, 2X, A1, A4, 4X, A1, A4, 4X, A1, A4, 3X, A1, A4, 6X,
196      2 A3, 2X, A3, 3X, A1, A4, 2X, A1, A4, 4X, A2, 3X, A1, A4)
197 C      ABOVE FORMAT 1028 FOR SIXTH LINE OF NUMERICAL OUTPUT
198      WRITE (6, 1029)
199 1029 FORMAT(/ 2X, 'C/N SUM EX. TOT.CAT. POT. BASE', / 7X, 'BASES
200      1 EXC.CAP. SATURATION')
201      WRITE (6, 1030) C9, D43, C10, D44, C11, C12
202 1030 FORMAT(/ 1X, A4, 2X, A1, A4, 4X, A2, A4, 7X, A4)
203 C      ABOVE FORMAT 1030 FOR SEVENTH LINE OF NUMERICAL OUTPUT
204      IF (V109.EQ. 7) WRITE (6, 1031)
205 1031 FORMAT('1', 1X, ' INTERPLANTING INFORMATION', / 1X, 'GREEN MAIZE A
206      1S INTERPLANTED CROP (ANY COMBINATION) . . . . .', /
207      2. . . . . / 'MANIOC AS INTER. CROP', / 1X, 'TOT. CERT DAYS AF
208      3T CERT DAYS BEF CERT INT.CR. DENSITY DENS. NOTES FOLDED
209      4 CERT TOT CERT DAYS AFT CE-', / 1X, 'DAYS PC PLANT
210      5 PC HARV (MAIZE) CALC. CERT. CT10 DAYS AFTER
211      6 DAYS P.C.PLTD RT.', / 1X, 'GRMZ IC BEGUN
212      TIC ENDED DENSITY METHOD (1)(2) PC PLANTED
213      8 MN I.C.BEG.')
214      IF (V109.EQ. 7) WRITE (6, 1032) T2, T3, T4, T5, T6, T7, D45, T8,
215      1 T9, T10, T11A, T11B, T12, T13, T14, T15, T16, T17
216 1032 FORMAT(/ 1X, A4, 3X, A2, 7X, A4, 3X, A2, 5X, A4, 5X, A2, 2X, A3,
217      1 A4, 5X, A2, 6X, A2, 4X, A2, 2X, A1, 6X, A4, 6X, A2, 3X, A4, 3X,
218      2 A2, 4X, A4, 3X, A2)
219 C      ABOVE FORMAT 1032 FOR FIRST LINE OF NUM. INTERPL. OUT. IF RI OR 3E IS PC.
220      IF (V109.EQ. 7) WRITE (6, 1033)
221 1033 FORMAT(/ 1X, 'MANIOC CONTINUED (EITHER BITTER OR SWEET) . . . . .', /
222      1 PASTURE AS INTERPLANTED CROP (ANY COMBINATION) . . . . .', /
223      2 1X, 'DAYS BEFORE CERT INT.CROP DENSITY DENS. NOTES TOT.
224      3ERT DAYS AFT. CERT INT.CR. DENS. DENS. NOTES', / 1X, 'P.C. H
225      4ARV. (MANIOC) CALC. CERT. CT10 DAYS PC PLA
226      5NT. (PAST.) CALC. CERT. CT10', / 1X, 'IC ENDED
227      6 DENSITY METHOD (1)(2) PAST. IC BEGUN
228      7 DENSITY METH. (1)(2)')
229      IF (V109.EQ. 7) WRITE (6, 1034) T18, T19, D46, T20, T21, T22,
230      1 T23A, T23B, T24, T25, T26, T27, D47, T28, T29, T30, T31A, T31B
231 1034 FORMAT(/ 4X, A4, 7X, A2, 3X, A3, A4, 5X, A2, 6X, A2, 4X, A2, 2X,
232      1 A1, 3X, A4, 4X, A2, 5X, A4, 6X, A2, 3X, A3, A4, 3X, A2, 5X, A2,
233      2 4X, A2, 2X, A1)
234 C      ABOVE FORMAT 1034 FOR SECOND LINE OF NUM. INTERPL. OUT. IF RICE IS PC.
235      IF (V109.EQ. 7) WRITE (6, 1035)
236 1035 FORMAT(/ 1X, 'OTHER INTERPLANTED CROPS . . . . .', /
237      1 . . . . .', /
238      2 // 1X, 'OTHER OTHER OTHER TOT. CERT DAYS AFT. CERT DAYS 3E
239      3F. CERT OTHER ICS DENS. DENS. NOTES NOTES NOTES', / 1X,
240      4 'I.C. I.C. I.C. DAYS PC PLANT. PC HARV.

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241      5 TOTAL      CALC. MAX. IC 1 IC 2 IC 3, / 2X, '(1) (2
242      6) (3) OTHER IC BEGUN IC ENDED DENSITY
243      7 METH CERT. (1)(2) (1)(2) (1)(2)')
244      IF (V109.EQ. 7) WRITE (6, 1036) T32, T33, T34, T35, T36, T37,
245      1 T38, T39, T40, D48, T41, T42, T43, T44A, T44B, T45A, T45B, T46A,
246      2 T46B
247      1036 FORMAT(/ 2X, A3, 4X, A3, 4X, A3, 3X, A4, 3X, A2, 5X, A4, 5X, A2,
248      1 5X, A4, 6X, A2, 4X, A3, A4, 4X, A2, 3X, A2, 3X, A2, 2X, A1, 3X,
249      2 A2, 2X, A1, 3X, A2, 2X, A1)
250      C ABOVE FORMAT FOR THIRD LINE OF NUM. INTERPL. OUT IF RI, MZ, BE OR MN IS P
251      IF (V109.EQ. 7) WRITE (6, 1037)
252      1037 FORMAT(/// 1X, 'COMBINATIONS OF INTERPLANTED CROPS . . . . .
253      1 . . . . .
254      2 1X, 'TOT.DAYS CERT DAYS CERT DAYS CERT DAYS CERT DAYS
255      3 CERT DAYS CERT DAYS CERT DAYS CERT' / 1X, 'PC (RICE)
256      4 RICE RI-GR RI-GMZ RI-MN RI-PA
257      5 RI-GMZ- RI-OT', / 1X, 'CYCLE (7) MZ
258      6(8) -MN(9) (10) (11) PA(12)
259      7 (13)')
260      IF (V109.EQ. 7) WRITE (6, 1038) T47, T48, T49, T50, T51, T52, T53
261      1, T54, T55, T56, T57, T58, T59, T60, T61, T62
262      1038 FORMAT(3X, A4, 5X, A2, 3X, A4, 3X, A2, 3X, A4, 4X, A2, 4X, A4, 4X,
263      1 A2, 3X, A4, 4X, A2, 3X, A4, 4X, A2, 4X, A4, 5X, A2, 3X, A4, 4X,
264      2 A2)
265      C ABOVE FORMAT 1038 FOR 4TH LINE OF NUM. INTERPL. OUT. IF RICE IS PC.
266      IF (V109.EQ. 14) WRITE (6, 1039)
267      1039 FORMAT(/// 1X, 'INTERPLANTING INFORMATION', // 1X, 'RICE AS INTERP
268      1LANTED CROP (ANY COMBINATION) . . . . . / BEAN
269      2S (EITHER PS OR VI (ANY COMBINATION) .', // 1X, 'TOT. CERT DAYS A
270      3FT CERT DAYS BEF CERT INT. CR IC DENS DENS NOTES TOT. C
271      4ERT DAYS AFT CERT DAYS BEF CERT', / 1X, 'DAYS PC PLANT
272      5 PC HARV. (RICE) CALC. CERT CT10 DAYS
273      6 PC PLANT PC HARV.', / 1X, 'RICE IC BEGUN IC
274      7ENDED DENSITY METHOD (1)(2) BEANS IC BEGUN
275      8 IC ENDED')
276      IF (V109.EQ. 14) WRITE (6, 1040) T64, T65, T66, T67, T68, T69,
277      1 D49, T70, T71, T72, T73A, T73B, T74, T75, T76, T77, T78, T79
278      1040 FORMAT(/ 1X, A4, 3X, A2, 5X, A4, 5X, A2, 4X, A4, 6X, A2, 3X, A3,
279      1 A4, 4X, A2, 6X, A2, 3X, A2, 2X, A1, 3X, A4, 4X, A2, 5X, A4, 5X,
280      2 A2, 5X, A4, 4X, A2)
281      C ABOVE FORMAT 1040 FOR 1ST LINE OF NUM. INTERPL. OUT. IF MZ OR MN IS PC.
282      IF (V109.EQ. 14) WRITE (6, 1041)
283      1041 FORMAT(/// 1X, 'BEANS (CONTINUED) . / MANIOC AS INTERPLANTED CROP
284      1(EITHER BITTER OR SWEET)(ANY COMBINATION) . . . . . /', // 1X,
285      2 'INT. CR DENS CERT NOTES TOT. CERT DAYS AFT CERT DAYS BE
286      3F CERT INT.CR IC DENS DENS NOTES', / 1X, '(BEAN) CALC
287      4 CT10 DAYS PC PLANT PC HARV. (MANIOC) C
288      5ALC. CERT CT10', / 1X, 'DENSITY METH (1)(2) MAN.
289      6 IC BEGUN IC ENDED DENSITY METHOD (1)(2)
290      7')
291      IF (V109.EQ. 14) WRITE (6, 1042) D50, T80, T81, T82, T83A, T83B,
292      1 T84, T85, T86, T87, T88, T89, D51, T90, T91, T92, T93A, T93B
293      1042 FORMAT(/ 1X, A3, A4, 3X, A2, 3X, A2, 3X, A2, 2X, A1, 3X, A4, 3X,
294      1 A2, 5X, A4, 5X, A2, 5X, A2, 3X, A2, A3, A4, 5X, A2, 6X, A2,
295      2 3X, A2, 2X, A1)
296      C ABOVE FORMAT 1042 FOR 2ND LINE OF NUM. INTERPL. OUTPUT IF MAIZE IS P.C.
297      IF (V109.EQ. 14) WRITE (6, 1043)
298      1043 FORMAT(/// 1X, 'PASTURE AS INTERPLANTED CROP (ANY COMBINATION) . .
299      1 . . . . /', // 1X, 'TOT. CERT DAYS AFT CERT INT.CR IC DENS D
300      2ENS NOTES', / 1X, 'DAYS PC PLANT (PAST.) CALC.

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301      3CERT CT10', / 1X, 'PAST          BEGUN          DENSITY METHOD
302      4      (1)(2)')
303      IF (V109 .EQ. 14) WRITE (6, 1044) T94, T95, T96, T97, D52, T98,
304      1 T99, T100, T101A, T101B
305      1044 FORMAT(/ 1X, A4, 3X, A2, 5X, A4, 5X, A2, 3X, A3, A4, 4X, A2, 6X,
306      1 A2, 3X, A2, 2X, A1)
307      C      ABOVE FORMAT 1044 FOR 3RD LINE OF NUM. INTERPL. OUTPUT IF MZ IS PC
308      IF (V109 .EQ. 14) WRITE (6, 1035)
309      IF (V109 .EQ. 14) WRITE (6, 1036) T102, T103, T104, T105, T106,
310      1 T107, T108, T109, T110, D53, T111, T112, T113, T114A, T114B,
311      2 T115A, T115B, T116A, T116B
312      C      ABOVE WRITE FOR 4TH LINE OF NUM. IPLANT OUTPUT IF MZ IS PC
313      IF (V109 .EQ. 14) WRITE (6, 1045)
314      1045 FORMAT(/ 1X, 'COMBINATIONS OF INTERPLANTED CROPS . . . . .
315      1 . . . . . /',
316      2 // 1X, 'TOT.DAYS CERT DAYS CERT DAYS CERT DAYS CERT ' / 1X, 'P;
317      3DAYS CERT DAYS CERT DAYS CERT DAYS CERT', / 1X, 'P;
318      4(GRMZ) GRMZ RI-GMZ RI-GMZ RI-GMZ
319      5 GMZ- GMZ- GMZ-', / 1X, 'CYCLE (14)
320      6 (8) -MN(9) -PA(11) MN(17) PA
321      7(12) DT(20)')
322      IF (V109 .EQ. 14) WRITE (6, 1046) T117, T118, T119, T120, T121,
323      1 T122, T123, T124, T125, T126, T127, T128, T129, T130, T131, T132
324      1046 FORMAT(/ 3X, A4, 5X, A2, 3X, A4, 3X, A2, 4X, A4, 4X, A2, 4X, A4,
325      1 4X, A2, 4X, A4, 5X, A2, 3X, A4, 5X, A2, 3X, A4, 5X, A2, 3X, A4,
326      2 5X, A2)
327      C      ABOVE FORMAT 1046 FOR 5TH LINE OF NUM. INTERPL. OUTPUT IF MZ IS PC
328      IF (V109 .EQ. 21) WRITE (6, 1031)
329      IF (V109 .EQ. 21) WRITE (6, 1032) T134, T135, T136, T137, T138,
330      1 T139, D54, T140, T141, T142, T143A, T143B, T144, T145, T146,
331      2 T147, T148, T149
332      C      ABOVE WRITE FOR 1ST LINE OF NUM. INTERPL. OUTPUT IF BE IS PC
333      IF (V109 .EQ. 21) WRITE (6, 1047)
334      1047 FORMAT(/ 1X, 'MANIOC AS I.C. CONTINUED (EITHER BITTER OR SWEET)/
335      1', // 1X, 'DAYS BEFORE CERT INT.CROP DENSITY DENS. NOTES', /
336      2 1X, 'PC HARVEST (MANIOC) CALC. CERT CT10', / 1X,
337      3 'IC ENDED DENSITY METHOD (1)(2)')
338      IF (V109 .EQ. 21) WRITE (6, 1048) T150, T151, D55, T152, T153A,
339      1 T153B, T154A, T154B
340      1048 FORMAT(/ 4X, A4, 7X, A2, 3X, A3, A4, 5X, A2, 6X, A2, 4X, A2, 2X, A1)
341      C      ABOVE FORMAT 1048 FOR 2ND LINE OF NUM. INTERPL. OUTPUT IF BEANS IS PC
342      IF (V109 .EQ. 21) WRITE (6, 1035)
343      IF (V109 .EQ. 21) WRITE (6, 1036) T155, T156, T157, T158, T159,
344      1 T160, T161, T162, T163, D56, T164, T165, T166, T167A, T167B,
345      2 T168A, T168B, T169A, T169B
346      C      ABOVE WRITE FOR 3RD LINE OF NUM INTERPL. OUTPUT IF BEANS IS PC.
347      IF (V109 .EQ. 21) WRITE (6, 1049)
348      1049 FORMAT(/ 1X, 'COMBINATIONS OF INTERPLANTED CROPS . . . . .
349      1 . . . . . /',
350      2 // 1X, 'TOT.DAYS CERT DAYS CERT DAYS CERT DAYS CERT ' / 1X,
351      3DAYS CERT DAYS CERT DAYS CERT DAYS CERT', / 1X,
352      4 'PC (BEAN) BEANS BE-DRY BE-GR BE-MV
353      5 BE-DRY-MZ BE-GR-MZ BE-OT', / 1X, 'CYCLE
354      6 (21) MZ(22) MZ(23) (24) -MN(25)
355      7 -MN(26) (27)')
356      IF (V109 .EQ. 21) WRITE (6, 1050) T170, T171, T172, T173, T174,
357      1 T175, T176, T177, T178, T179, T180, T181, T182, T183, T184, T185
358      1050 FORMAT(/ 3X, A4, 5X, A2, 3X, A4, 4X, A2, 4X, A4, 4X, A2, 4X, A4,
359      1 4X, A2, 3X, A4, 4X, A2, 4X, A4, 6X, A2, 4X, A4, 5X, A2, 3X, A4,
360      2 4X, A2)

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361 C      ABOVE FORMAT 1050 FOR 4TH LINE OF NUM. INTERPL. OUTPUT IF BEANS IS PC.
362      IF (V109 .EQ. 28) WRITE (6, 1039)
363      IF (V109 .EQ. 28) WRITE (6, 1040) T241, T242, T243, T244, T245,
364      1 T246, D57, T247, T248, T249, T250A, T250B, T263, T264, T265,
365      2 T266, T267, T268
366 C      ABOVE WRITE FOR 1ST LINE OF NUM. INTERPL. OUTPUT IF MN IS PC.
367      IF (V109 .EQ. 29) WRITE (6, 1051)
368      1051 FORMAT(/// 1X, 'BEANS CONTINUED . . / GREEN MAIZE AS INTERPLANTED
369      1 CROP (ANY COMBINATION) . . . . . /'
370      2. // 1X, 'INT.CP DENS DENS NOTES TOT. CERT DAYS AFT CERT DA
371      3YS REF CERT INT.CR. DENS DENS NOTES FOLDED CERT', / 1X,
372      4 '(BEAN) CALC CERT CT10 DAYS PC PLANT PC HARV.
373      5 (MAIZE) CALC CERT CT10 DAYS AFT', / 1X, 'DENSITY MET4
374      6 (1)(2) GRMZ IC REGUN IC ENDED DENSITY
375      7METH (1)(2) PC PLANT')
376      IF (V109 .EQ. 29) WRITE (6, 1052) D59, T269, T270, T271, T272A,
377      1 T272B, T251, T252, T253, T254, T255, T256, D58, T257, T258, T259,
378      2 T260A, T260B, T261, T262
379      1052 FORMAT(/ 1X, A3, A4, 2X, A2, 4X, A2, 3X, A2, 3X, A4, 3X,
380      1 A2, 5X, A4, 4X, A2, 4X, A4, 5X, A2, 3X, A3, A4, 3X, A2, 4X, A2,
381      2 3X, A2, 2X, A1, 5X, A4, 6X, A2)
382 C      ABOVE FORMAT 1052 FOR 2ND LINE OF NUM. INTERPL. OUTPUT IF MANIOC IS PC.
383      IF (V109 .EQ. 28) WRITE (6, 1035)
384      IF (V109 .EQ. 28) WRITE (6, 1036) T273, T274, T275, T276, T277,
385      1 T278, T279, T280, T281, D60, T282, T283, T284, T285A, T285B,
386      2 T286A, T286B, T287A, T287B
387 C      ABOVE WRITE FOR 3RD LINE OF NUM. INTERPL. OUTPUT IF MN IS PC.
388      IF (V109 .EQ. 28) WRITE (6, 1053)
389      1053 FORMAT(/// 1X, 'COMBINATIONS OF INTERPLANTED CROPS . . . . .
390      1 . . . . . /', // 1X, 'TOT.DAYS CE
391      2RT DAYS CERT DAYS CERT DAYS CERT DAYS CERT DAYS CERT DAYS CE
392      3RT DAYS CERT', / 1X, 'PC (MAN) MN MN-RI
393      4MN-RI- MN-GMZ MN-BE MN-OT', / 1X, 'CYCLE
394      5 (28) (10) GMZ(19) (17) (24)
395      6 (23)')
396      IF (V109 .EQ. 28) WRITE (6, 1054) T289, T290, T291, T292, T293,
397      1 T294, T295, T296, T297, T298, T299, T300, T301, T302
398      1054 FORMAT(/ 3X, A4, 5X, A2, 3X, A4, 3X, A2, 3X, A4, 4X, A2, 3X, A4,
399      1 5X, A2, 3X, A4, 5X, A2, 3X, A4, 4X, A2, 3X, A4, 4X, A2)
400 C      ABOVE FORMAT 1054 FOR 4TH LINE OF NUM. INTERPL. OUT. IF MN IS PC.
401      WRITE (6, 1055)
402      1055 FORMAT('1', 1X, 'INSECT AND VERTEBRATE PEST OCCURRENCE', // 1X,
403      1 'STAGE 1: SEED . . . . . /',
404      2 . . . . . /',
405      3 // 1X, 'POOR GERM.(1) LIZARD (2) RATS (3) BIRDS (4
406      4) ANTS (5) INSECT.GEN(17) VERT.GEN (18) TERMITES (20)',
407      5 / 1X, 'INT- CE- ALL INT- CE- ALL INT- CE- ALL INT- CE- ALL IN
408      6- CE- ALL INT- CE- ALL INT- CE- ALL INT- CE- ALL', / 1X,
409      7 'ENS RT STG END RT STG ENS RT STG ENS RT STG ENS RT
410      8 STG ENS RT STG ENS RT STG ENS RT STG')
411      WRITE (6, 1056) (P(I6), I6=1,24)
412      1056 FORMAT(/ 1X, A2, 3X, A2, 2X, A2, 3X, A2, 3X, A2, 2X, A2, 3X, A2,
413      1 3X, A2, 2X, A2, 3X, A2, 3X, A2, 2X, A2, 3X, A2, 2X, A2,
414      2 3X, A2, 3X, A2, 2X, A2, 5X, A2, 3X, A2, 2X, A2, 4X, A2, 3X, A2,
415      3 2X, A2)
416 C      ABOVE FORMAT 1056 FOR 1ST LINE OF NUMERICAL PEST INFORMATION
417      WRITE (6, 1057)
418      1057 FORMAT(/// 1X, 'STAGE 1 (CONTINUED): SEED . . . . .
419      1 . . . . . / STAGE 2: PLANT VEGETATIVE PARTS',
420      2 // 1X, 'DOM.PIGS (21) CHICKENS (23) PIONUS(BIRD)(37) OTHER 1',

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421      3 12X, 'OTHER 2          RATS (3)          ANTS (5)', / 1X, 'INT- CE- 4
422      4LL INT- CE- ALL INT- CE- ALL          ITEM INT- CE- ALL ITEM INT- CE
423      5- ALL INT- CE- ALL INT- CE- ALL', / 1X, 'ENS RT STG ENS RT
424      6 STG ENS RT STG          ENS RT STG          ENS RT STG ENS RT
425      7T STG ENS RT STG')
426      WRITE (6, 1058)(P(I7), I7=25,47)
427      1058 FORMAT(/ 1X, A2, 3X, A2, 2X, A2, 4X, A2, 3X, A2, 2X, A2, 3X, A2,
428      1 3X, A2, 2X, A2, 7X, A2, 2X, A2, 2X, A2, 2X, A2, 4X, A2, 2X, A2,
429      2 3X, A2, 2X, A2, 3X, A2, 3X, A2, 2X, A2, 3X, A2, 3X, A2, 2X, A2)
430      C      ABOVE FORMAT 1058 FOR 2ND LINE OF NUM. PEST OUTPUT
431      WRITE (6, 1059)
432      1059 FORMAT(/// 1X, 'STAGE 2 (CONTINUED): PLANT VEGETATIVE PARTS . . .
433      1. . . . .',
434      2 // 1X, 'CATERPILLAR(6) BEETLES(7) STEM CUT(8) RABBIT(9)',
435      3 AGCUT(10) PAGA(11) CEER(12) MOTH(14)', / 1X, 'INT-
436      4 CE- ALL INT- CE- ALL INT- CE- ALL INT- CE- ALL INT- CE- ALL INT- CE- ALL
437      5 INT- CE- ALL INT- CE- ALL INT- CE- ALL INT- CE- ALL', / 1X, 'ENS RT STG
438      6 ENS RT STG ENS RT STG ENS RT STG ENS RT STG ENS RT STG ENS RT
439      7 STG ENS RT STG ENS RT STG')
440      WRITE (6, 1060)(P(I8), I8=48,71)
441      1060 FORMAT(/ 1X, A2, 3X, A2, 2X, A2, 5X, A2, 3X, A2, 2X, A2, 3X, A2,
442      1 3X, A2, 2X, A2, 3X, A2, 3X, A2, 3X, A2, 3X, A2, 3X, A2, 2X, A2,
443      2 3X, A2, 3X, A2, 2X, A2, 3X, A2, 3X, A2, 2X, A2, 3X, A2, 3X, A2,
444      3 2X, A2)
445      C      ABOVE FORMAT 1060 FOR 3RD LINE OF NUM. PEST OUTPUT
446      WRITE (6, 1061)
447      1061 FORMAT(/// 1X, 'STAGE 2 (CONTINUED): PLANT VEGETATIVE PARTS . . .
448      1. . . . .',
449      2. // 1X, 'CT.INSECT(15) CT.VERT.(16) INSECT GEN(17) VERTS.GEN(1
450      3P) WEEDS (19) TERMITE(20) DOM.PIGS(21) CHICKENS(23)', / 1X,
451      4 'INT- CE- ALL INT- CE- ALL INT- CE- ALL INT- CE- ALL INT- CE- ALL INT-
452      5 CE- ALL INT- CE- ALL INT- CE- ALL INT- CE- ALL INT- CE- ALL', / 1X, 'ENS RT
453      6T STG ENS RT STG ENS RT STG ENS RT STG ENS RT STG ENS RT STG
454      7 ENS RT STG ENS RT STG ENS RT STG ENS RT STG')
455      WRITE (6, 1062)(P(I9), I9=72,95)
456      1062 FORMAT(/ 1X, A2, 3X, A2, 2X, A2, 4X, A2, 3X, A2, 2X, A2, 3X, A2,
457      1 3X, A2, 2X, A2, 5X, A2, 3X, A2, 2X, A2, 4X, A2, 3X, A2, 2X, A2,
458      2 3X, A2, 3X, A2, 2X, A2, 3X, A2, 3X, A2, 2X, A2, 3X, A2, 3X, A2,
459      3 2X, A2)
460      C      ABOVE FORMAT 1062 FOR 4TH LINE OF NUMERICAL PEST OUTPUT
461      WRITE (6, 1063)
462      1063 FORMAT('1', 1X, 'STAGE 2 (CONTINUED): PLANT VEGETATIVE PARTS . . .
463      1. . . . .',
464      2. '1//1X, 'HOPSE/MULE(25) RAIN ROT(29) GRASSHOP.(30) SEEDLING(3
465      3(31) "PULGAG"(32) "PULG."CUT(33) NO RAIN(34) PECCARY(35)',
466      4 / 1X, 'INT- CE- ALL INT- CE- ALL INT- CE- ALL INT- CE- ALL INT- CE- ALL
467      5 INT- CE- ALL INT- CE- ALL INT- CE- ALL INT- CE- ALL INT- CE- ALL', /
468      6 1X, 'ENS RT STG ENS RT STG ENS RT STG ENS RT STG ENS RT STG
469      7 ENS RT STG ENS RT STG ENS RT STG ENS RT STG ENS RT STG')
470      WRITE (6, 1064) (P(I10), I10=96,119)
471      1064 FORMAT(/ 1X, A2, 3X, A2, 2X, A2, 5X, A2, 3X, A2, 2X, A2, 3X, A2,
472      1 3X, A2, 2X, A2, 4X, A2, 3X, A2, 2X, A2, 6X, A2, 3X, A2, 2X, A2,
473      2 3X, A2, 3X, A2, 2X, A2, 5X, A2, 3X, A2, 2X, A2, 3X, A2, 2X, A2,
474      3 3X, A2)
475      C      ABOVE FORMAT 1064 FOR 5TH LINE OF NUMERICAL PEST OUTPUT
476      WRITE (6, 1065)
477      1065 FORMAT(/// 1X, 'STAGE 2 (CONTINUED): PLANT VEGETATIVE PARTS . . .
478      1. . . . .', // 1X
479      2, 'ATTA(36) PIONUS(37) SLUG(38) LEAF EX.RAIN(39) VIN
480      35 EX.RAIN(40) "CRICKET"(41) STEM BORE(45)', / 1X, 'INT- CE- ALL

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481      4 INT- CE- ALL INT- CE- ALL INT- CE- ALL INT- CE- ALL I
482      5NT- CE- ALL INT- CE- ALL', / 1X, 'ENS RT STG ENS RT STG EN
483      6S RT STG ENS RT STG ENS RT STG ENS RT STG ENS
484      7 RT STG')
485      WRITE (6, 1066)(P(I11), I11=120,140)
486      1066 FORMAT(/ 1X, A2, 3X, A2, 2X, A2, 3X, A2, 3X, A2, 2X, A2, 3X, A2,
487      1 3X, A2, 2X, A2, 3X, A2, 3X, A2, 2X, A2, 7X, A2, 3X, A2, 2X, A2,
488      2 7X, A2, 3X, A2, 2X, A2, 4X, A2, 3X, A2, 2X, A2)
489      C ABOVE FORMAT 1066 FOR 6TH LINE OF NUMERICAL PEST OUTPUT
490      WRITE (6, 1067)
491      1067 FORMAT(/// 1X, 'STAGE 2(CONT.): PLANT VEGETATIVE PARTS/ MONTHS /
492      1STAGE 3 : PLANT REPRODUCTIVE PARTS . . . . .', // 1X,
493      2 'OTHER 1 OTHER 2 IN RATS (3)
494      3BIRD (4) CATERPILLAR(6) BEETLES (7)', / 1X, 'ITEM INT- CE-
495      4ALL ITEM INT- CE- ALL PILHAS INT- CE- ALL INT- CE- ALL INT
496      5- CE- ALL INT- CE- ALL', / 1X, 'ENS RT STG ENS
497      6PT STG ENS RT STG ENS RT STG ENS RT STG ENS
498      7 RT STG')
499      WRITE (6, 1068)(P(I12), I12=141,161)
500      1068 FORMAT(/ 2X, A2, 3X, A2, 3X, A2, 2X, A2, 4X, A2, 3X, A2, 3X, A2,
501      1 2X, A2, 4X, A4, 5X, A2, 3X, A2, 2X, A2, 3X, A2, 3X, A2, 2X, A2,
502      2 3X, A2, 3X, A2, 2X, A2, 5X, A2, 3X, A2, 2X, A2)
503      C ABOVE FORMAT 1068 FOR 7TH LINE OF NUMERICAL PEST OUTPUT
504      WRITE (6, 1069)
505      1069 FORMAT(/// 1X, 'STAGE 3 (CONTINUED): PLANT REPRODUCTIVE PARTS . .
506      1. . . . .', // 1X, 'AGOUTI (10) PACA (11) DEER (12) MOTH (14) I
507      3INSECT GEN(17) VERTS.GEN(18) DOM.PIGS(21) CHICKENS(23)', / 1X,
508      4 'INT- CE- ALL INT- CE- ALL INT- CE- ALL INT- CE- ALL INT- CE-
509      5 ALL INT- CE- ALL INT- CE- ALL INT- CE- ALL', / 1X, 'ENS RT
510      6 STG ENS RT STG ENS RT STG ENS RT STG ENS RT STG E
511      7NS RT STG ENS RT STG ENS RT STG')
512      WRITE (6, 1070)(P(I13), I13=162,185)
513      1070 FORMAT(/ 1X, A2, 3X, A2, 2X, A2, 3X, A2, 3X, A2, 2X, A2, 3X, A2,
514      1 3X, A2, 2X, A2, 3X, A2, 3X, A2, 2X, A2, 3X, A2, 3X, A2, 2X, A2,
515      2 5X, A2, 3X, A2, 2X, A2, 4X, A2, 3X, A2, 2X, A2, 3X, A2, 3X, A2,
516      3 2X, A2)
517      C ABOVE FORMAT 1070 FOR 8TH LINE OF NUMERICAL PEST OUTPUT
518      WRITE (6, 1071)
519      1071 FORMAT(/// 1X, 'STAGE 3 (CONTINUED): PLANT REPRODUCTIVE PARTS . .
520      1. . . . .', // 1X, 'HORSE/MULE(25) HOLLW BEAN(26) RAIN ROT(29) *PULGAD*(32)
521      2 1X, 'PIONUS (37) OTHER 1 OTHER 2', / 1X, 'INT- CE- ALL
522      3 INT- CE- ALL INT- CE- ALL INT- CE- ALL INT- CE- ALL INT- CE- ALL
523      4 INT- CE- ALL INT- CE- ALL INT- CE- ALL INT- CE- ALL INT- CE- ALL
524      5NT- CE- ALL ITEM INT- CE- ALL', / 1X, 'ENS RT STG ENS RT S
525      6TG ENS RT STG ENS RT STG ENS RT STG ENS RT STG
526      7 ENS RT STG')
527      WRITE (6, 1072)(P(I14), I14=186,208)
528      1072 FORMAT(/ 1X, A2, 3X, A2, 2X, A2, 5X, A2, 3X, A2, 2X, A2, 6X, A2,
529      1 3X, A2, 2X, A2, 3X, A2, 3X, A2, 2X, A2, 3X, A2, 3X, A2, 2X, A2,
530      2 4X, A2, 2X, A2, 3X, A2, 2X, A2, 4X, A2, 2X, A2, 3X, A2, 2X, A2)
531      C ABOVE FORMAT 1072 FOR 9TH LINE OF NUMERICAL PEST OUTPUT
532      WRITE (6, 1073)
533      1073 FORMAT(/// 1X, 'STAGE 4 : PILHAS . . . . .', // 1X,
534      1. . . . .', // 1X, 'RATS (3) BIRDS (4) BEETLES (7) AGOUTI (10) P
535      2 3ACA (11) MOTH (14) INSECT GEN(17) VERTS.GEN(18)', / 1X,
536      3 'INT- CE- ALL INT- CE- ALL INT- CE- ALL INT- CE- ALL INT- CE-
537      4 ALL INT- CE- ALL INT- CE- ALL INT- CE- ALL INT- CE- ALL', / 1X, 'ENS RT
538      5 6 STG ENS RT STG ENS RT STG ENS RT STG ENS RT STG ENS
539      7
540

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541      7 RT STG ENS RT STG      ENS RT STG')
542      WRITE (6, 1074)(P(I15), I15=209,232)
543 1074 FORMAT(/ 1X, A2, 3X, A2, 2X, A2, 3X, A2, 3X, A2, 2X, A2, 3X, A2,
544      1 3X, A2, 2X, A2, 3X, A2, 3X, A2, 2X, A2, 3X, A2, 3X, A2, 2X, A2,
545      2 3X, A2, 3X, A2, 2X, A2, 3X, A2, 3X, A2, 2X, A2, 5X, A2, 3X, A2,
546      3 2X, A2)
547 C      ABOVE FORMAT 1074 FOR 10TH LINE OF NUM. PEST OUTPUT
548      WRITE (6, 1075)
549 1075 FORMAT('1',1X,'STAGE 4 (CONTINUED) : PILHAS . . . / STAGE 6: ROOT
550      1S AND TUBERS . . . . .', // 1X
551      2, 'OTHER 1          OTHER 2          RATS (3)      ANTS (5)
552      3  CATERPILLAR(6) BEETLES (7) AGOUTI (10)', / 1X, 'ITEM INT- CE
553      4- ALL ITEM INT- CE- ALL INT- CE- ALL INT- CE- ALL INT- CE- ALL
554      5 INT- CE- ALL INT- CE- ALL', / 1X, '      ENS RT STG      EN
555      6S RT STG ENS RT STG ENS RT STG ENS RT STG      ENS RT S
556      7TG ENS RT STG')
557      WRITE (6, 1076)(P(I16), I16=233,255)
558 1076 FORMAT(/ 2X, A2, 2X, A2, 3X, A2, 2X, A2, 4X, A2, 2X, A2, 3X, A2,
559      1 2X, A2, 3X, A2, 3X, A2, 2X, A2, 3X, A2, 3X, A2, 2X, A2, 3X, A2,
560      2 3X, A2, 2X, A2, 5X, A2, 3X, A2, 2X, A2, 3X, A2, 2X, A2)
561 C      ABOVE FORMAT 1076 FOR 11TH LINE OF NUM. PEST OUTPUT
562      WRITE (6, 1077)
563 1077 FORMAT(/// 1X, 'STAGE 5 (CONTINUED): ROOTS AND TUBERS . . . . .
564      1 . . . . .', // 1X,
565      2 'PACA (11)      ROOT ROT (13) MOTH (14)      INSECT GEN(17) VERFS
566      3 GEN(12) DOM. PIGS(21) INSECTS ROOTS(24)', / 1X, 'INT- CE- ALL
567      4 INT- CE- ALL INT- CE- ALL INT- CE- ALL INT- CE- ALL INT-
568      5- ALL INT- CE- ALL', / 1X, 'ENS RT STG ENS RT STG ENS RT
569      6T STG ENS RT STG      ENS RT STG      ENS RT STG      ENS RT STG
570      7')
571      WRITE (6, 1078)(P(I17), I17=256,276)
572 1078 FORMAT(/ 1X, A2, 3X, A2, 2X, A2, 3X, A2, 3X, A2, 2X, A2, 4X, A2,
573      1 3X, A2, 2X, A2, 3X, A2, 3X, A2, 2X, A2, 5X, A2, 3X, A2, 2X, A2,
574      2 4X, A2, 3X, A2, 2X, A2, 4X, A2, 3X, A2, 2X, A2)
575 C      ABOVE FORMAT 1078 FOR 12TH LINE OF NUM. PEST OUTPUT
576      WRITE (6, 1079)
577 1079 FORMAT(/// 1X, 'STAGE 5 (CONTINUED): ROOTS OR TUBERS . . . . .
578      1 . . . . .
579      2 ./.// 1X, 'VERTS.ROOTS(28) RAIN ROT (29) "PULGAO"(32) PECCARY
580      3(35) OTHER 1          OTHER 2          NOTE 1      NOTE 2', /
581      4 1X, 'INT- CE- ALL      INT- CE- ALL      INT- CE- ALL INT- CE- ALL
582      5 ITEM INT- CE- ALL ITEM INT- CE- ALL IT-ST-NO- IT-ST-NO-', / 1X,
583      6 'ENS RT STG      ENS RT STG      ENS RT STG ENS RT STG
584      7 ENS RT STG      ENS RT STG EM AG TE EM AG TE')
585      WRITE (6, 1080)(P(I18), I18=277,302)
586 1080 FORMAT(/ 1X, A2, 3X, A2, 2X, A2, 3X, A2, 5X, A2, 3X, A2, 2X, A2, 4X, A2,
587      1 3X, A2, 2X, A2, 3X, A2, 3X, A2, 2X, A2, 4X, A2, 2X, A2, 3X, A2,
588      2 2X, A2, 4X, A2, 2X, A2, 3X, A2, 2X, A2, 3X, A2, 1X, A2, 1X, A2,
589      3 2X, A2, 1X, A2, 1X, A2)
590 C      ABOVE FORMAT 1080 FOR 13TH LINE OF NUM. PEST OUTPUT
591      WRITE (6, 2002)
592 2002 FORMAT(///1X,'WEEDINGS',15(' '),// DISEASE',11(' '),// TOPPLING
593      1 . . . / SEEDS / NOTE /', //1X, 'BEFORE PLANTING AFTER', 1X,
594      2 'PLANTING WEED FIRST DISEASE SECOND DISEASE PER- INT- CE-'
595      3 , 2X, 'PER', 5X, 'GT22', / 1X, 'NO.OF MAN-DAYS NO.OF MAN-DAYS
596      4 AREA DIS- INT- CE-', 2X, 'DIS- INT- CE- CENT ENS RT',
597      5 3X, 'MILL', / 1X, 'TIMES PER HA. TIMES PER HA. GERT', 2X,
598      6 'EASE ENS. RT EASE ENS. RT AREA')
599      WRITE (6, 2003) C344, C345, C346, C347D1, C347D2, C348, C349,
600      1 C350, C351, C352, C353, C354, C355, C356, C357, C364, C365

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601 2003 FORMAT(/3X,A2, 6X, A4, 6X, A2, 4X, A2, A3, 5X, A2, 4X, A2, 3X,
602 1 A2, 3X, A2, 4X, A2, 3X, A2, 3X, A4, 2X, A2, 3X, A2,
603 2 4X, A4, 4X, A3)
604 C ABOVE FORMAT 2003 FOR WEEDS, DISEASES AND TOPPLING INFORMATION
605 WRITE (6, 2004)
606 2004 FORMAT(////1X,'TREATMENTS',36(' '),'/',// 1X,'INCRA COLONIST',
607 1 1X, 'SEED TREATMENTS', 6X, 'PLANT AND PILHA TREATMENTS', 11X,
608 2 'OTHER', / 1X, 'SEED CHEM KG/100 CHEM KG/100', 3X,
609 3 'CHEM ST- KG/HA CHEM ST- KG/HA TREATMENTS', / 1X,
610 4 'TREAT. NO.1 KG SEED NO.2 KG SEED NO.1 AGE / YR NO.2',
611 5 2X, 'AGE / YR NOT SHOWN')
612 WRITE(6,2005)C358,C359A,C360A,C359B,C360B,C361A,C362A,C363A1,
613 1 C363A2,
614 1 C361B, C362B, C363B1, C363B2, MORE22
615 2005 FORMAT(/3X,A2, 4X, A2, 5X, A4, 4X, A2, 4X, A4, 5X, A2,
616 1 3X, A2, 3X, A2, A3, 3X, A2, 3X, A2, 3X, A2, A3, 5X, 15)
617 C ABOVE FORMAT 2005 FOR TREATMENT INFORMATION.
618 WRITE (6, 1081)
619 1081 FORMAT(//// 1X, 'WEATHER IN 15 DAYS AFTER PLANTING/ WEATHER IN 15
620 1 DAYS BEFORE HARVEST / MISSING DATA CODES / ABSOLUTE COORDINATE
621 25'// 1X, 'RAIN EVAP. INSOL. NO.MISSING RAIN EVAP.
622 3INSOL. NO.MISSING PLANTING HARVEST X Y', /25X
623 4, 'RA EV IN RA EV IN RA EV IN RA
624 5 EV IN')
625 WRITE (6, 1082) D61, L1, D62, L2, D63, L3, L4, L5, L6, D64, L7,
626 1 D65, L8, D66, L9, L10, L11, L12, L13, L14, L15, L16, L17, L18,
627 2 D67, L19, D68, L20
628 1082 FORMAT(/ 1X, A3, A4, 2X, A2, A4, 2X, A2, A4, 2X, 3(A2, 2X), A3,
629 1 A4, 2X, 2(A2, A4, 2X), 9(A2, 2X), 2A4, 2X, 2A4)
630 C ABOVE FORMAT 1082 FOR WEATHER AND ABSOL. COORDS.
631 100 CONTINUE
632 C END OF PROGRAM "MASTERPRINT"
633 END
END OF FILE

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1 C THIS PROGRAM (SOILCALCS) PERFORMS CALCULATIONS ON SOIL DATA FOR
2 C MEASURES OF THE LATERITIC COMPLEX, ORGANIC MATTER, C/N RATIO,
3 C EXCHANGEABLE BASES, CATION EXCHANGE CAPACITY, AND POTENTIAL BASE
4 C SATURATION. MISSING DATA CODE (-0) RETURNED WHEN APPROPRIATE.
5 C INPUT UNITS ARE: 5=DATAFILE 6=RI9-13-16-28 (FOR RICE):
6 C OUTPUT UNIT (FOR RICE): 7=RIS0ILCALCS
7 C NO SUBPROGRAMS ARE CALLED
8 C THE FORTRAN MONITOR "MINUSZERO" FEATURE IS USED.
9 C THE MTS LOGICAL COMPARISON OF CHARACTERS ("LCCMC") FUNCTION
10 C IS USED.
11 C REAL NITROG
12 C INTEGER VAR552, VAR553, VAR554
13 C DATA MINZRO/Z80000000/
14 C CALL FTNCMD('SET MINUSZERO=CN',16)
15 C READ (5, 6001) LCASES
16 C LCASES IS THE NUMBER OF CASES TO BE READ
17 C 6001 FORMAT(1X, I5)
18 C DO 600 I11=1,LCASES
19 C READ (6,6003) VAR159, VAR240, VAR241, VAR242, VAR552, VAR553,
20 C 1VAR554, VAR555, VAR556, VAR557, VAR558, VA558A,VA558B, VA558C,
21 C 2VA558D, VA558E
22 C 6003 FORMAT(/ 50X, F4.5 / 30X, 3F6.2 / 5X, 2A4, 1X, A4, F5.2, 1X, F4.2,
23 C 17F5.2)
24 C ABOVE FORMAT 6003 FOR RI9-13-16-28
25 C IF (.NOT.(VAR240 .GE. 0.01 .AND. VAR241 .GE. 0.01)) GO TO 613
26 C PKI = (VAR240 / VAR241)* 1.7
27 C IF (LCCMC(4,MINZRO,VAR242) .EQ. 0) GO TO 614
28 C PKR = 1.7 * VAR240 / (VAR241 + (0.5375 * VAR242))
29 C PKI ("KI") AND PKR ("KR") ARE MEASURES OF THE LIBERATION OF SILICA
30 C BY SILICATES FOR CLASSIFICATION OF SOIL AS "ALITIC" OR "SIALITIC".
31 C THE CONSTANTS COME FROM DIVISION OF THE PERCENT OF EACH COMPOUND
32 C BY THE MOLECULAR WEIGHT OF THE COMPOUND.
33 C LATOS = 0
34 C IF (RKI .GE. 1.33 .AND. PKI .LT. 1.82) LATOS = 1
35 C IF (RKI .GE. 1.82 .AND. PKI .LT. 2.50) LATOS = 2
36 C LATOS IS A CODE FOR SEPARATION OF LATOSOLS AND PODSOLS. 1=LATOSOL,
37 C 2=PODSOL, 0=DATA AVAILABLE BUT OUTSIDE OF RANGE. (SEE GUIMARAES,
38 C PASTOS AND LOPES. 1970: 84)
39 C GO TO 615
40 C 613 PKI = -0.00
41 C LATOS = -0
42 C 614 PKR = -0.00
43 C 615 CONTINUE
44 C IF (LCCMC(4,MINZRO,VA558A) .EQ. 0) GO TO 610
45 C IF (LCCMC(4,MINZRO,VA558B) .EQ. 0) GO TO 610
46 C IF (LCCMC(4,MINZRO,VAR557) .EQ. 0) GO TO 610
47 C IF (LCCMC(4,MINZRO,VAR558) .EQ. 0) GO TO 610
48 C S = VA558A + VA558B + VAR557 + VAR558
49 C S IS THE SUM OF EXCHANGEABLE BASES
50 C IF (LCCMC(4,MINZRO,VA558C) .EQ. 0) GO TO 611
51 C IF (LCCMC(4,MINZRO,VA558D) .EQ. 0) GO TO 611
52 C T = VA558A + VA558B + VAR557 + VAR558 + VA558C + VA558D
53 C T IS TOTAL CATION EXCHANGE CAPACITY
54 C IF (T .LE. 0.001) GO TO 650
55 C V = (S / T) * 100.0
56 C V IS POTENTIAL BASE SATURATION
57 C GO TO 612
58 C 610 S = -0.00
59 C 611 T = -0.00
60

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61      650 V = -0.
62      612 CONTINUE
63          IF (LCCMC(4,MINZRO,VAR555) .EQ. 0) GO TO 616
64          NITROG = VAR555
65          GO TO 617
66      616 IF (LCCMC(4,MINZRO,VAR199) .EQ. 0) GO TO 618
67          NITROG = VAR199
68          GO TO 617
69      618 NITROG = -0.00
70      619 CN = -0.
71          GO TO 620
72      617 CONTINUE
73          IF (LCCMC(4,MINZRO,VAR555) .EQ. 0) GO TO 619
74          CN = VAR555 / NITROG
75      C      CN IS THE CARBON/NITROGEN RATIO. 8 TO 14 IS THE NORMAL RANGE.
76      C      LOWER VALUES INDICATE MINERALIZED ORGANIC MATTER
77      620 IF (LCCMC(4,MINZRO,VAR555) .EQ. 0) GO TO 621
78          OM = 1.7162 * VAR555
79      C      OM IS ORGANIC MATTER
80          GO TO 622
81      621 OM = -0.00
82      622 CONTINUE
83          WRITE (7, 6000) VAR552, VAR553, VAR554, RKI, RKR, LATOS, NITROG,
84          OM, CN, S, T, V
85      6000 FORMAT(3X, 1X, 2A4, 1X, A4, 2F5.2, 12, 2F5.2, F4.0, F5.2, F6.2,
86          1F4.0)
87      C      ABOVE FORMAT 6000 FOR RISGILCALCS
88      600 CONTINUE
89          RETURN
90      END
END OF FILE

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1 C BEGINNING OF MAIN PROGRAM FOR SORTSOILPRED CALCULATIONS
2 C THIS PROGRAM ("SORTSOILPRED") SORTS SOIL CHANGE PREDICTION DATA
3 C AND MAKES CALCULATIONS OF DAYS SPENT IN EACH LAND USE CATEGORY, AND OF
4 C RAINFALL WHILE IN EACH LAND USE CATEGORY. THE MAIN PROGRAM CALLS THE
5 C SUBROUTINE "SORTSP", WHICH CALLS THE SUBROUTINE "SOILPR". ALL THREE
6 C OF THESE ARE IN THE SAME SOURCE AND OBJECT FILES. OTHER SUBPROGRAMS
7 C WHICH ARE NEEDED AND WHICH MUST BE SUPPLIED SEPARATELY ARE: USETA3,
8 C CUPUSE, DAL900, AND WEATRO.
9 C THE SUBPROGRAMS CALLED BY SORTSOILPRED USE THE FORTRAN MONITOR
10 C "MINUSZER" FEATURE AND THE MTS LOGICAL COMPARISON OF CHARACTERS ("COMC")
11 C FUNCTION.
12 C INPUT UNITS ARE: 7=TYPE1, 8=TYPE2, 9=TYPE13 11=TYPE28, 13=TYPE16, 14=DAILYWEATHER
13 C 7=SSPDATA AND 10=ONE23
14 C OUTPUT UNITS ARE: 6=SINK* (FOR ERROR MESSAGES), 12=SOILHIST
15 C AND 18=EVENTLIST
16 C THE FORTRAN MONITOR "MINUSZER" FEATURE IS USED.
17 C ICDS1,2,13,ONE23,28, AND 16 ARE THE NUMBER OF CARDS TO BE READ OF
18 C EACH TYPE. ICFOR1 IS THE NO. OF THE LAST CARD OF TYPE13 FORMAT 1.
19 C ISEQPR IS THE NO. OF SEQUENTIAL PAIRS
20 C READ (5,9000) ICDS1, ICDS2, ICDS13, IONE23, ICDS28, ICFOR1,
21 C ISEQPR, ICDS16
22 C 9000 FORMAT(1X, 8I5)
23 C CALL SORTSP(ICDS1, ICDS2, ICDS13, IONE23, ICDS28, ICFOR1, ISEQPR, ICDS16)
24 C END OF MAIN PROGRAM
25 C RETURN
26 C END
27 C SUBROUTINE SORTSP(ICDS1, ICDS2, ICDS13, IONE23, ICDS28, ICFOR1, ISEQPR,
28 C ICDS16)
29 C THIS SUBRTN (SORTSP) SORTS CARDS 1, 2, 13, 28, AND 16 INTO
30 C THE FILE SOILHIST FOR CASES WITH BEFORE AND AFTER SOIL DATA (BOTH
31 C FROM SEQUENTIAL PAIRS AND 5 OTHER PAIRED COMPARISONS). SOIL DATA
32 C IS TABULATED FOR BEFORE AND AFTER CONDITIONS, PLUS INTERVENING
33 C BURNS, BURN QUALITIES AND CAPCEIRA AGE AND SIZE INFORMATION, MOS.
34 C SINCE BURN AND MONTHS ELAPSED UNDER EACH LAND USE CATEGORY
35 C THE RAINFALL WHILE IN EACH LAND USE IS ALSO GIVEN
36 C
37 C BEGINNING OF SUBROUTINE SORTSP
38 C INTEGER VAR002,VAR004, VAR005, VAR006, VAR007, VAR008, VAR009,
39 C IVAR010, VAR011, VAR012, VAR013, VAR014, VAR015, VAR020
40 C CARD TYPE 1 TYPE DECLARATION ABOVE
41 C INTEGER VAR023, VAR028, VAR031, VAR040, VAR033, VAR042A
42 C ABOVE TYPE DECLARATION FOR CARD TYPE 2
43 C INTEGER VAR186, VA202A, VA202B
44 C ABOVE TYPE DECLARATION FOR CARD TYPE 13
45 C INTEGER VAR552
46 C ABOVE TYPE DECLARATION FOR CARD TYPE 28
47 C INTEGER VAR232, VAR235
48 C ABOVE TYPE DECLARATION FOR CARD TYPE 16
49 C COMMON VAR002(903), VAR004(903),VAR005(903),VAR006(903),
50 C IVAR007(903),VAR008(903),VAR009(903),VAR010(903),VAR011(903),
51 C IVAR012(903),VAR013(903),VAR014(903),VAR015(903),VAR020(903),
52 C IVAR021(903)
53 C COMMON VAR023(903),VAR025(903),VAR028(903),VAR030(903),
54 C IVAR031(903),VAR032(903), VAR033(903), VAR040(903), VAR042A(903)
55 C COMMON VAR186(1123),VAR196(1123),VAR197(1123),VAR198(1123),
56 C IVAR199(1123),VAR200(1123),VAR201(1123),VA202A(1123),VAR202B(1123)
57 C COMMON VAR552(974),VAR555(974),VAR556(974),VAR557(974),VAR558(974)
58 C
59 C 1.
60 C IVAR558A(974), VAR558B(974), VAR558C(974), VAR558D(974), VAR558E(974)
61 C COMMON VAR232(531),VAR235(531),VAR236(531),VAR237(531),VAR238(531)

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61      1.VAR239(531),VAR240(531),VAR241(531),VAR242(531), ICOMNO
62      COMMON/C1/ L41(1700), RL46(1700), RL47(1700), RL48(1700)
63      CALL FTNCMC('SET MINUSZERO=ON',16)
64      ICASES = 1697
65      READ (14,5002)(L41(I1), RL46(I1), RL47(I1), RL48(I1), I1=1,ICASES)
66      5002 FORMAT(///2X,I6,12X,F5.1,2F5.1)
67      READ (7,9001)(VAR002(I1), VAR004(I1), VAR005(I1), VAR006(I1),
68      1VAR007(I1), VAR008(I1), VAR009(I1), VAR010(I1), VAR011(I1),
69      1VAR012(I1), VAR013(I1), VAR014(I1), VAR015(I1), VAR020(I1),
70      1VAR021(I1), I1=1,ICDS1)
71      9001 FORMAT(3X,I5,5X,I2,I4,I3,2I2,I4,I5,I3,I2,I5,I2,I5,20X,I3,F5.0)
72      C      ABOVE FORMAT 9001 IS FOR CARD TYPE 1
73      READ (9,9002)(VAR023(I2),VAR025(I2), VAR028(I2), VAR030(I2),
74      1 VAR031(I2),
75      1VAR032(I2),VAR033(I2),VAR040(I2), VA042A(I2), I2=1,ICDS2)
76      9002 FORMAT(3X,I5,5X,F5.0,8X,I2,2X,F5.1,I2,F5.1,I2,22X,I4,6X,I2)
77      C      ABOVE FORMAT 9002 IS FOR CARD TYPE 2
78      DO 900 I3=1,ICDS13
79      IF (I3.GT. ICFOR1) GO TO 901
80      READ (9,9003) VAR186(I3), VAR196(I3), VAR197(I3), VAR198(I3),
81      1VAR199(I3), VAR200(I3), VAR201(I3), VA202A(I3), VA202B(I3)
82      9003 FORMAT(3X,I5,34X,F3.0,F4.0,F4.1,F4.2,2F4.1,2I2)
83      C      ABOVE FORMAT 9003 IS FOR CARD TYPE 13 FORMAT 1
84      GO TO 900
85      901 CONTINUE
86      READ (9,9004) VAR186(I3), VAR196(I3), VAR197(I3), VAR198(I3),
87      1VAR199(I3), VAR200(I3), VAR201(I3), VA202A(I3), VA202B(I3)
88      9004 FORMAT(3X,I5,36X,F4.0,F5.0,F5.1,F5.2,2F5.1,2I3)
89      C      ABOVE FORMAT 9004 IS FOR CARD TYPE 13 FORMAT NO. 2
90      900 CONTINUE
91      ICOMNO = 0
92      READ (11,9006)(VAR552(I5),VAR555(I5),VAR556(I5),VAR557(I5),
93      1VAR558(I5), VA558A(I5), VA558B(I5), VA558C(I5), VA558D(I5),VA558E(
94      1I5), I5=1,ICDS2A)
95      9006 FORMAT(3X,I5,9X,F5.2)
96      C      ABOVE FORMAT 9006 IS FOR CARD TYPE 28
97      READ (13,9007)(VAR232(I11), VAR235(I11), VAR236(I11), VAR237(I11),
98      1VAR238(I11), VAR239(I11), VAR240(I11), VAR241(I11), VAR242(I11),
99      2I11=1,ICDS16)
100      9007 FORMAT(3X,I5,9X, I4,4F4.0,3F6.2)
101      C      ABOVE FORMAT 9007 IS FOR CARD TYPE 16
102      DO 936 I6=1,ISEQPR
103      C      DOES ONE ITERATION FOR EACH SEQUENTIAL PAIR
104      IAFT1 = 0
105      IAFTN = 0
106      IBEFFN = 0
107      DO 903 I7=1,ICDS1
108      C      FINDS SEQ. PAIR WITH LOWEST SEQ. PAIR NUMBER
109      IF (VAR009(I7).EQ. I5 ) GO TO 904
110      GO TO 903
111      904 CONTINUE
112      IAFT1 = I7
113      IBEFFN = VAR010(I7)
114      IAFTN = VAR002(I7)
115      GO TO 200
116      903 CONTINUE
117      GO TO 936
118      200 CONTINUE
119      ICOTYP = 7
120      CALL SCILPR(IBEFFN,IAFTN,IAFT1,ICOTYP, ICDS1,ICDS2,ICDS13,

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181      COMMON VAR552(974),VAR555(974),VAR556(974),VAR557(974),VAR558(974)
182      1.
183      1VAR559A(974), VA558B(974), VA558C(974), VA558D(974), VA558E(974)
184      COMMON VAR232(531),VAR235(531),VAR236(531),VAR237(531),VAR238(531)
185      1.VAR239(531),VAR240(531),VAR241(531),VAR242(531), ICOMND
186      COMMON/MZ/MINZERO
187      IREF1 = 0
188      CALL FTNCMD('SET MINUSZERO=ON',16)
189      DO 905 I9 = 1,ICDS1
190      C      FINDS CARD 1 INFO. FOR BEFORE SAMPLE
191      IF (VAR002(I9) .EQ. IBEFFN) GO TO 906
192      GO TO 905
193      906 CONTINUE
194      IREF1 = I8
195      905 CONTINUE
196      IREF2 = 0
197      IAF2 = 0
198      DO 300 IJ1 = 1,ICDS2
199      IF (VAR023(IJ1) .EQ. IBEFFN) GO TO 301
200      IF (VAR023(IJ1) .EQ. IAF2FN) GO TO 302
201      GO TO 300
202      301 IBEF2 = IJ1
203      GO TO 300
204      302 IAF2 = IJ1
205      300 CONTINUE
206      IREF13 = 0
207      IAF13 = 0
208      DO 907 I9=1,ICDS13
209      C      FINDS CARD 13 INFO. FOR BEFORE AND AFTER FIELDS
210      IF (VAR186(I9) .EQ. IBEFFN) GO TO 908
211      IF (VAR186(I9) .EQ. IAF2FN) GO TO 909
212      GO TO 907
213      908 CONTINUE
214      IF (IBEFF13 .GE. 1) GO TO 907
215      C      ABOVE STATEMENT CAUSES ONLY FIRST CARD 13 RECORD TO BE USED IF MORE THAN
216      C      ONE IS PRESENT FOR FIELD
217      IREF13 = I9
218      GO TO 907
219      909 CONTINUE
220      IF (IAF13 .GE. 1) GO TO 907
221      C      ABOVE STATEMENT CAUSES ONLY FIRST CARD 13 RECORD TO BE USED IF MORE THAN
222      C      ONE IS PRESENT FOR FIELD
223      IAF13 = I9
224      907 CONTINUE
225      IREF28 = 0
226      IAF28 = 0
227      DO 910 I10=1,ICDS28
228      C      FINDS CARD 28 INFO. FOR BEFORE AND AFTER SAMPLES
229      IF (VAR552(I10) .EQ. IBEFFN) GO TO 911
230      IF (VAR552(I10) .EQ. IAF2FN) GO TO 912
231      GO TO 910
232      911 CONTINUE
233      IF (IBEFF28 .GT. 0) GO TO 900
234      IREF28 = I10
235      GO TO 910
236      912 CONTINUE
237      IF (IAF28 .GT. 0) GO TO 901
238      IAF28 = I10
239      GO TO 910
240      900 CONTINUE

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1      SUBROUTINE HISTPN(ICCASH,IBEG,IFOLDD,ICAS10,IEND)
2      THIS SUBROUTINE ("HISTPN") PRINTS INTERPLANTING HISTORY INFORMATION
3      WHICH IS CALCULATED IN INTERMEDIATE STEPS IN THE INTERPLANTING
4      TABULATIONS. THE SUBROUTINE IS CALLED BY IPLANT IF THE "INTERPLANTED
5      CROP CODE" IS SET EQUAL TO ZERO. THE SFUNCTION
6      SUBPROGRAM CA1900 IS CALLED. OUTPUT IS ON DEVICE 10.
7
8      INTEGER CA1900
9      INTEGER VAR107, VAR109, VAR110, VAR111, VAR112, VAR113, VAR114,
10     VAR115, VAR116, VAR117, VAR128
11     C      ABOVE TYPE DECLARATION FOR CARD 9
12     INTEGER VAR131, VAR133, VAR134, VAR135, VAR136, VAR137, VAR138,
13     VAR139, VAR140, VAR141, VAR142, VAR143, VAR144, VAR145, VAR146,
14     VAR148, VAR150, VAR151, VAR152
15     C      ABOVE TYPE DECLARATION FOR CARD 10
16     COMMON/C1/ VAR131(10), VAR133(10), VAR134(10), VAR135(10),
17     VAR136(10), VAR137(10), VAR138(10), VAR139(10), VAR140(10),
18     VAR141(10), VAR142(10), VAR143(10), VAR144(10), VAR145(10),
19     VAR146(10), VAR148(10), VAR149(10), VAR150(10),
20     VAR151(10), VAR152(10)
21     COMMON/C2/ VAR107, VAR109, VAR110, VAR111, VAR112, VAR113, VAR114,
22     VAR115, VAR116, VAR117, VAR128
23     COMMON/C3/ KL1(30), KL2(30), KL3(30), KL4(30), KL5(30), KL6(30),
24     KL7(30), KCURUS(30)
25     COMMON/C4/ PLANTD, METHCD, ICERT
26     WRITE (10, 2001) VAR107, VAR109
27     2001 FORMAT(1X,1X,'PRINC. CROP CASE:', I5, ' CROP:', I3, / 1X)
28     WRITE (10, 2000) ICCASH, IBEG, IFOLDD, ICAS10, IEND
29     2000 FORMAT(1X,'ICCASE=', I4, ' IBEG=', I6, ' IFOLDD=', I6,
30     ' ICAS10=', I3, ' IEND=', I6)
31     WRITE (10, 2003)
32     2003 FORMAT(2X,'NO.', 2X,'CASE', 2X,'ITEM', 2X,'EVENT', 2X,'QUAL', 3X,
33     ' ICERT', 3X,'DATE', 3X,'CERT', 2X,'USE')
34     DO 119 I10=1, ICCASH
35     WRITE (10, 2002) I10, KL1(I10), KL2(I10), KL3(I10), KL4(I10),
36     KL5(I10), KL6(I10), KL7(I10), KCURUS(I10)
37     2002 FORMAT(2X,I2,3X,I3,3X,I3,4X,I2,4X,I2,3X,I2,3X,I6,3X,I2,3X,I3)
38     119 CONTINUE
39     WRITE (10, 2004)
40     2004 FORMAT(1X,'INTERPLANTED CROPS IN ANY COMBINATION:',
41     1 /1X,'ICROP', 2X,'PLANT', 3X,'HARV.', 3X,'BEG.PRES', 2X,
42     2 'END PRES', 2X,'SPAN', 2X,'DENSITY', 2X,'METHOD', 2X,
43     3 'CERT')
44     DO 136 I12=1, ICAS10
45     C      MAKES TABULATIONS OF CROPS IN ANY COMBINATION FROM SCAN OF CARD 13
46     ICATE1 = CA1900(VAR135(I12),VAR136(I12),VAR137(I12),VAR138(I12),3)
47     C      ICATE1 IS THE PLANTING DATE OF INTERPLANTED CROP
48     ICATE2 = CA1900(VAR143(I12),VAR144(I12),VAR145(I12),VAR146(I12),3)
49     C      ICATE2 IS THE HARVEST DATE OF INTERPLANTED CROP
50     IF(VAR145(I12).EQ. -0 .AND. VAR146(I12).GT. 0) ICATE2 = IEND
51     IF(VAR134(I12).EQ.14) ICATE2=ICATE1 + 100
52     ICATE3 = ICATE1
53     C      ICATE3 IS BEGINNING DATE FOR INTERPLANTED CROP PRESENCE WITHIN THE
54     C      LIFESPAN OF THE PRINCIPAL CROP
55     ICATE4 = ICATE2
56     C      ICATE4 IS THE END DATE OF INTERPLANTED CROP PRESENCE WITHIN THE
57     C      LIFESPAN OF THE PRINCIPAL CROP
58     IF (ICATE1 .LE. IBEG) ICATE3 = IBEG
59     IF (ICATE2 .GE. IEND) ICATE4 = IEND
60     ISPAN = ICATE4 - ICATE3

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421         IF (LCOMC(4,MINZRO,NITREF).EQ.0) GO TO 928
422         IF (LCOMC(4,MINZRO,NITAFI).EQ.0) GO TO 928
423         NITDIF = NITAFI - NITREF
424         WRITE (12,9010) NITREF, NITDIF
425     9010 FORMAT('NITROGEN',2F5.2)
426     C      ABOVE FORMAT 9010 IS FOR NITROGEN DATA FROM EITHER CARD13 OR
427     C      CARD28 WHEN THERE IS COMPARABLE DATA
428         GO TO 929
429     929 CONTINUE
430         WRITE (12,9011)
431     9011 FORMAT('NITROGEN')
432     C      ABOVE FORMAT 9011 HOLDS SPACE FOR NITROGEN DATA WHERE THERE IS NO
433     C      COMPARABLE DATA
434     929 CONTINUE
435         V555DI = -0.
436         V557DI = -0.
437         V558DI = -0.
438         V553AD = -0.
439         V553BD = -0.
440         V553CD = -0.
441         V553DD = -0.
442         V553ED = -0.
443         IF (IBEF28.EQ.0.OR.IAFI28.EQ.0) GO TO 937
444         IF (LCOMC(4,MINZRO,VAR555(IAFI28)).EQ.0) GO TO 505
445         IF (LCOMC(4,MINZRO,VAR555(IBEF28)).EQ.0) GO TO 505
446         V555DI = VAR555(IAFI28) - VAR555(IBEF28)
447     505 CONTINUE
448         IF (LCOMC(4,MINZRO,VAR557(IAFI28)).EQ.0) GO TO 506
449         IF (LCOMC(4,MINZRO,VAR557(IBEF28)).EQ.0) GO TO 506
450         V557DI = VAR557(IAFI28) - VAR557(IBEF28)
451     506 CONTINUE
452         IF (LCOMC(4,MINZRO,VAR558(IAFI28)).EQ.0) GO TO 507
453         IF (LCOMC(4,MINZRO,VAR558(IBEF28)).EQ.0) GO TO 507
454         V558DI = VAR558(IAFI28) - VAR558(IBEF28)
455     507 CONTINUE
456         IF (LCOMC(4,MINZRO,VAR558A(IAFI28)).EQ.0) GO TO 600
457         IF (LCOMC(4,MINZRO,VAR558A(IBEF28)).EQ.0) GO TO 600
458         V553AD = VAR558A(IAFI28) - VAR558A(IBEF28)
459     600 IF (LCOMC(4,MINZRO,VAR558B(IAFI28)).EQ.0) GO TO 601
460         IF (LCOMC(4,MINZRO,VAR558B(IBEF28)).EQ.0) GO TO 601
461         V553BD = VAR558B(IAFI28) - VAR558B(IBEF28)
462     601 IF (LCOMC(4,MINZRO,VAR558C(IAFI28)).EQ.0) GO TO 602
463         IF (LCOMC(4,MINZRO,VAR558C(IBEF28)).EQ.0) GO TO 602
464         V553CD = VAR558C(IAFI28) - VAR558C(IBEF28)
465     602 IF (LCOMC(4,MINZRO,VAR558D(IAFI28)).EQ.0) GO TO 603
466         IF (LCOMC(4,MINZRO,VAR558D(IBEF28)).EQ.0) GO TO 603
467         V553DD = VAR558D(IAFI28) - VAR558D(IBEF28)
468     603 IF (LCOMC(4,MINZRO,VAR558E(IAFI28)).EQ.0) GO TO 604
469         IF (LCOMC(4,MINZRO,VAR558E(IBEF28)).EQ.0) GO TO 604
470         V553ED = VAR558E(IAFI28) - VAR558E(IBEF28)
471     604 CONTINUE
472         WRITE (12,9017) VAR555(IBEF28), V555DI, VAR557(IBEF28), V557DI,
473         IVAR558(IBEF28), V558DI, VAR558A(IBEF28), V553AD, VAR558B(IBEF28), V5
474         553BD, VAR558C(IBEF28), V553CD, VAR558D(IBEF28), V558DD, VAR558E(IBEF2
475         8), V553ED
476     9017 FORMAT('CARD28(1)',1X,9F5.2,/'CARD28(2)',1X,9F5.2)
477     C      ABOVE FORMAT 9017 IS FOR CARD28 INFO. WHEN THERE IS COMPARABLE
478     C      CARD 28 DATA
479         GO TO 933
480     937 CONTINUE

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481      WRITE (12,9018)
482 9018 FORMAT('CARD28(1)', / 'CARD28(2)')
483      ABOVE FORMAT 9018 HOLDS SPACE FOR CARD 28 WHEN THERE IS NO
484      COMPARABLE CARD 28 DATA
485 938 CONTINUE
486      V236DI = -0.
487      V237DI = -0.
488      V238DI = -0.
489      V239DI = -0.
490      V240DI = -0.
491      V241DI = -0.
492      V242DI = -0.
493      IF (IBEF16 .EQ. 0 .OR. IAF16 .EQ. 0) GO TO 939
494      IF (LCOMC(4,MINZRC,VAR236(IAF16)).EQ.0) GO TO 508
495      IF (LCOMC(4,MINZRC,VAR236(IBEF16)).EQ.0) GO TO 508
496      V236DI = VAR236(IAF16) - VAR236(IBEF16)
497 508 CONTINUE
498      IF (LCOMC(4,MINZRC,VAR237(IAF16)).EQ.0) GO TO 509
499      IF (LCOMC(4,MINZRC,VAR237(IBEF16)).EQ.0) GO TO 509
500      V237DI = VAR237(IAF16) - VAR237(IBEF16)
501 509 CONTINUE
502      IF (LCOMC(4,MINZRC,VAR238(IAF16)).EQ.0) GO TO 510
503      IF (LCOMC(4,MINZRC,VAR238(IBEF16)).EQ.0) GO TO 510
504      V238DI = VAR238(IAF16) - VAR238(IBEF16)
505 510 CONTINUE
506      IF (LCOMC(4,MINZRC,VAR239(IAF16)).EQ.0) GO TO 511
507      IF (LCOMC(4,MINZRC,VAR239(IBEF16)).EQ.0) GO TO 511
508      V239DI = VAR239(IAF16) - VAR239(IBEF16)
509 511 CONTINUE
510      IF (LCOMC(4,MINZRC,VAR240(IAF16)).EQ.0) GO TO 512
511      IF (LCOMC(4,MINZRC,VAR240(IBEF16)).EQ.0) GO TO 512
512      V240DI = VAR240(IAF16) - VAR240(IBEF16)
513 512 CONTINUE
514      IF (LCOMC(4,MINZRC,VAR241(IAF16)).EQ.0) GO TO 513
515      IF (LCOMC(4,MINZRC,VAR241(IBEF16)).EQ.0) GO TO 513
516      V241DI = VAR241(IAF16) - VAR241(IBEF16)
517 513 CONTINUE
518      IF (LCOMC(4,MINZRC,VAR242(IAF16)).EQ.0) GO TO 514
519      IF (LCOMC(4,MINZRC,VAR242(IBEF16)).EQ.0) GO TO 514
520      V242DI = VAR242(IAF16) - VAR242(IBEF16)
521 514 CONTINUE
522      WRITE (12,9019) VAR235(IBEF16), VAR236(IBEF16), V236DI,
523      1VAR237(IBEF16), V237DI, VAR238(IBEF16), V238DI, VAR239(IBEF16),
524      2V239DI, VAR240(IBEF16), V240DI, VAR241(IBEF16), V241DI,
525      3VAR242(IBEF16), V242DI
526 9019 FORMAT('CARD16',1X,I4,8F4.0,6F6.2)
527      ABOVE FORMAT 9019 IS FOR CARD 16 INFO. WHERE THERE IS COMPARABLE
528      CARD 16 DATA
529      GO TO 940
530 939 CONTINUE
531      WRITE (12,9020)
532 9020 FORMAT('CARD16')
533      ABOVE FORMAT 9020 IS FOR CARD 16 SPACE HOLDING WHEN THERE IS NO
534      COMPARABLE CARD 16 DATA
535 940 CONTINUE
536      IF (ICOTYP .EQ. 3) GO TO 10
537      IF (ICOTYP .EQ. 6) GO TO 11
538      CALL USETAB(IBEFFN,IAFTN,IBEF1,IAF1, ICOS1, ICOS2, IONE23,
539      1 ICOTYP, 2)
540      GO TO 902

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541      11 WRITE (12,2001)
542      2001 FORMAT(1X,'COMPARISON OF CAPOEIRA WITH SAME BURN & DIFFERENT USE
543      1 HISTORIES', 19(1X, /), 1X /)
544      GO TO 302
545      10 WRITE (12,2000)
546      2000 FORMAT(1X,'COMPARISON OF FIELDS WITH DIFFERENT BURN QUALS',
547      1 21(1X, /), 1X /)
548      302 CONTINUE
549      C      END OF SOILPR SUBROUTINE
550      RETURN
551      END
END OF FILE

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1 C THIS PROGRAM ("SOILADD") ADDS SOIL RESULT DATA RECEIVED AFTER
2 C THE INITIAL RUN OF SORTSILPRD TO THE SOILHIST DATA FILE. EITHER
3 C SURVEY DATA ONLY OR BOTH BASIC FERTILITY AND SURVEY DATA CAN BE ADDED.
4 C NO SUBPROGRAMS ARE CALLED.
5 C THE MTS FORTRAN MONITOR MINUS ZERO FEATURE AND THE
6 C MTS LOGICAL COMPARISON OF CHARACTERS (LDCMC) FUNCTION ARE USED
7 C INPUT UNITS ARE 5**SOURCE* 11=TYPE28 13=TYPE16 9=TYPE13 AND
8 C 15=(OLD) SOILHIST
9 C OUTPUT UNITS ARE 6**SINK* AND 12=(NEW) SOILHIST
10 C
11 C INTEGER VAR196, VA202A, VA202B, VAR187, VAR188, VAR189, VAR190
12 C INTEGER VAP552, VAR232, VAR235
13 C REAL NITAFI, NITBEF, NITDIF
14 C INTEGER VAR191, VAR192, VAR193, VAR194, VAR195
15 C DIMENSION VAP196(1150), VAR196(1150), VAR197(1150), VAR198(1150),
16 C 1 VAR199(1150), VAR200(1150), VAR201(1150), VA202A(1150),
17 C 1 VA202B(1150)
18 C ABOVE DIMENSION FOR CARD TYPE 13
19 C DIMENSION VAR552(1100), VAR553(1100), VAR554(1100), VAR555(1100),
20 C 1 VAR556(1100), VAR557(1100), VAR558(1100), VA558A(1100),
21 C 2 VA558B(1100), VA558C(1100), VA558D(1100), VA558E(1100)
22 C ABOVE DIMENSION FOR CARD TYPE 29
23 C DIMENSION VAR232(660), VAR235(660), VAR236(660), VAR237(660),
24 C 1 VAR238(660), VAR239(660), VAR240(660), VAR241(660),
25 C 2 VAR242(660)
26 C ABOVE DIMENSION FOR CARD TYPE 16
27 C DIMENSION S(550)
28 C DATA MINZRO/2800000000/
29 C CALL FTNCMD('SET MINUSZERO=ON',16)
30 C WRITE (6, 1001)
31 1001 FORMAT(1X, 'ENTER ICDS16 (FORMAT=I5)')
32 C READ (5, 1000) ICDS16
33 1000 FORMAT(I5)
34 C WRITE (6, 1002)
35 1002 FORMAT(1X, 'ENTER ICDS28 (FORMAT=I5)')
36 C READ (5, 1000) ICDS28
37 C WRITE (6, 1006)
38 1006 FORMAT(1X, 'ENTER ICDS13 (FORMAT=I5)')
39 C READ (5, 1000) ICDS13
40 C WRITE (6, 1009)
41 1009 FORMAT(1X, 'ENTER NUMBER OF CT13 FORMAT 1 CARDS (FMT=I5)')
42 C READ (5, 1000) ICFCR1
43 C WRITE (6, 1003)
44 1003 FORMAT(1X, 'ENTER NUMBER OF COMPARISONS (FORMAT=I5)')
45 C READ (5, 1000) ICOP
46 C WRITE (6, 1007)
47 1007 FORMAT(1X, 'IS NEW BASIC FERT. DATA TO BE ADDED? (1=YES, 2=NO: FMT=
48 C 1 I)')
49 C READ (5, 1008) IBASIC
50 1008 FORMAT(I1)
51 C DO 900 I3=1, ICDS13
52 C IF (I3 .GT. ICFCR1) GO TO 901
53 C READ (9, 9003) VAR186(I3), VAR196(I3), VAR197(I3), VAR198(I3),
54 C 1VAR199(I3), VAR200(I3), VAR201(I3), VA202A(I3), VA202B(I3)
55 C 9003 FORMAT(3X, I5, 34X, F3.0, F4.0, F4.1, F4.2, 2F4.1, 2I2)
56 C ABOVE FORMAT 9003 IS FOR CARD TYPE 13 FORMAT 1
57 C GO TO 900
58 901 CONTINUE
59 C READ (9, 9004) VAR186(I3), VAR196(I3), VAR197(I3), VAR198(I3),
60 C 1VAR199(I3), VAR200(I3), VAP201(I3), VA202A(I3), VA202B(I3)

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61 9004 FORMAT(3X,I5,36X,F4.0,F5.0,F5.1,F5.2,2F5.1,2I3)
62 C ABOVE FORMAT 9004 IS FOR CARD TYPE 13 FORMAT NO. 2
63 900 CONTINUE
64 READ (11,9006)(VAR552(I5),VAR555(I5),VAR556(I5),VAR557(I5),
65 1VAR558(I5),VAR559A(I5),VAR558B(I5),VAR558C(I5),VAR558D(I5),VAR558E(
66 I5), I5=1,ICDS28)
67 9006 FORMAT(3X,I5,9X,3F5.2)
68 C ABOVE FORMAT 9006 IS FOR CARD TYPE 28
69 READ (13,9007)(VAR232(I11),VAR235(I11),VAR236(I11),VAR237(I11),
70 1VAR238(I11),VAR239(I11),VAR240(I11),VAR241(I11),VAR2+2(I11),
71 2I11=1,ICDS16)
72 9007 FORMAT(3X,I5,9X,14,4F4.0,3F6.2)
73 C ABOVE FORMAT 9007 IS FOR CARD TYPE 16
74 DO 250 ISHND = 1,ICOM
75 READ (15,1004) P1, P2, P3, P4, P5, P6, P7, P8, P9, P10, P11,
76 1 P12, P13, P14, P15, IBEFFN, P16, P17, P18, IAFTEFN, (S(IK), IK=
77 2 1,540)
78 1004 FORMAT(14A4, A1, I5, 2A4, A2, I5, 5(/20A4), /// 22(/20A4))
79 IBEF13 = 0
80 IAF13 = 0
81 DO 907 I9=1,ICDS13
82 C FINDS CARD 13 INFO. FOR BEFORE AND AFTER FIELDS
83 IF (VAR136(I9).EQ. IBEFFN) GO TO 908
84 IF (VAR136(I9).EQ. IAFTEFN) GO TO 909
85 GO TO 907
86 908 CONTINUE
87 IF (IBEF13.GE. 1) GO TO 907
88 C ABOVE STATEMENT CAUSES ONLY FIRST CARD 13 RECORD TO BE USED IF MORE THAN
89 ONE IS PRESENT FOR FIELD
90 IBEF13 = I9
91 GO TO 907
92 909 CONTINUE
93 IF (IAF13.GE. 1) GO TO 907
94 C ABOVE STATEMENT CAUSES ONLY FIRST CARD 13 RECORD TO BE USED IF MORE THAN
95 ONE IS PRESENT FOR FIELD
96 IAF13 = I9
97 907 CONTINUE
98 IBEF28 = 0
99 IAF28 = 0
100 DO P10 I10=1,ICDS28
101 C FINDS CARD 28 INFO. FOR BEFORE AND AFTER SAMPLES
102 IF (VAR552(I10).EQ. IBEFFN) GO TO 911
103 IF (VAR552(I10).EQ. IAFTEFN) GO TO 912
104 GO TO 910
105 911 CONTINUE
106 IF (IAEF28.GT. 0) GO TO 800
107 IBEF28 = I10
108 GO TO 910
109 912 CONTINUE
110 IF (IAF28.GT. 0) GO TO 801
111 IAF28 = I10
112 GO TO 910
113 800 CONTINUE
114 C FOLLOWING FOR CASE OF MORE THAN ONE CARD 28 RECORD FOR BEFORE
115 C FIELD. DATA FROM SUBSEQUENT RECORDS FOR FIELD IS PUT IN ARRAY AT
116 C LOCATION OF THE FIRST RECORD FOR THE FIELD
117 IF(LCCMC(4,MINZPC,VAR555(I10)).NE.0)VAR555(IBE28)=VAR555(I10)
118 IF(LCCMC(4,MINZPC,VAR556(I10)).NE.0)VAR556(IBE28)=VAR556(I10)
119 IF(LCCMC(4,MINZPC,VAR557(I10)).NE.0)VAR557(IBE28)=VAR557(I10)
120 IF(LCCMC(4,MINZPC,VAR558(I10)).NE.0)VAR558(IBE28)=VAR558(I10)

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121 IF(LCCMC(4,MINZRO,VA558A(I10)).NE.0)VA558A(I8EF28)=VA558A(I10)
122 IF(LCCMC(4,MINZRO,VA558B(I10)).NE.0)VA558B(I8EF28)=VA558B(I10)
123 IF(LCCMC(4,MINZRO,VA558C(I10)).NE.0)VA558C(I8EF28)=VA558C(I10)
124 IF(LCCMC(4,MINZRO,VA558D(I10)).NE.0)VA558D(I8EF28)=VA558D(I10)
125 IF(LCCMC(4,MINZRO,VA558E(I10)).NE.0)VA558E(I8EF28)=VA558E(I10)
126 IF(LCCMC(4,MINZRO,VAR555(I10)).NE.0)VAR555(IAFT28)=VAR555(I10)
127 IF(LCCMC(4,MINZRO,VAR556(I10)).NE.0)VAR556(IAFT28)=VAR556(I10)
128 IF(LCCMC(4,MINZRO,VAR557(I10)).NE.0)VAR557(IAFT28)=VAR557(I10)
129 IF(LCCMC(4,MINZRO,VAR558(I10)).NE.0)VAR558(IAFT28)=VAR558(I10)
130 IF(LCCMC(4,MINZRO,VA558A(I10)).NE.0)VA558A(IAFT28)=VA558A(I10)
131 IF(LCCMC(4,MINZRO,VA558B(I10)).NE.0)VA558B(IAFT28)=VA558B(I10)
132 IF(LCCMC(4,MINZRO,VA558C(I10)).NE.0)VA558C(IAFT28)=VA558C(I10)
133 IF(LCCMC(4,MINZRO,VA558D(I10)).NE.0)VA558D(IAFT28)=VA558D(I10)
134 IF(LCCMC(4,MINZRO,VA558E(I10)).NE.0)VA558E(IAFT28)=VA558E(I10)
135 GO TO 910
136
137 801 CONTINUE
138 C FOLLOWING STATEMENTS FOR CASE OF MORE THAN ONE CARD 28 RECORD FOR AFTER
139 C FIELD
140 IF(LCCMC(4,MINZRO,VAR555(I10)).NE.0) VAR555(IAFT28)=VAR555(I10)
141 IF(LCCMC(4,MINZRO,VAR556(I10)).NE.0) VAR556(IAFT28)=VAR556(I10)
142 IF(LCCMC(4,MINZRO,VAR557(I10)).NE.0) VAR557(IAFT28)=VAR557(I10)
143 IF(LCCMC(4,MINZRO,VA558A(I10)).NE.0) VA558A(IAFT28)=VA558A(I10)
144 IF(LCCMC(4,MINZRO,VA558B(I10)).NE.0) VA558B(IAFT28)=VA558B(I10)
145 IF(LCCMC(4,MINZRO,VA558C(I10)).NE.0) VA558C(IAFT28)=VA558C(I10)
146 IF(LCCMC(4,MINZRO,VA558D(I10)).NE.0) VA558D(IAFT28)=VA558D(I10)
147 IF(LCCMC(4,MINZRO,VA558E(I10)).NE.0) VA558E(IAFT28)=VA558E(I10)
148
149 910 CONTINUE
150 C FINDS NITROGEN VALUE FROM CARD 13 OR 28
151 NITREF = -0.0
152 NITAFI = -0.0
153 IF (I8EF13 .EQ. 0) GO TO 919
154 IF (LCCMC(4,MINZRO,VAR199(I8EF13)).EQ.0)GO TO 919
155 NITREF = VAR199(I8EF13)
156
157 919 CONTINUE
158 IF (IAFT13 .EQ. 0) GO TO 920
159 IF (LCCMC(4,MINZRO,VAR199(IAFT13)).EQ.0)GO TO 920
160 NITAFI = VAR199(IAFT13)
161
162 920 CONTINUE
163 IF (I8EF28 .EQ. 0) GO TO 921
164 IF (LCCMC(4,MINZRO,VAR556(I8EF28)).EQ.0)GO TO 921
165 NITREF = VAR556(I8EF28)
166
167 921 CONTINUE
168 IF (IAFT28 .EQ. 0) GO TO 923
169 IF (LCCMC(4,MINZRO,VAR556(IAFT28)).EQ.0)GO TO 923
170 NITAFI = VAR556(IAFT28)
171
172 923 CONTINUE
173 IREF16 = 0
174 IAFI16 = 0
175 CC 913 I12 =1,IC0516
176 C FINDS CARD 16 FOR BEFORE AND AFTER FIELDS OF PAIR
177 IF (VAR232(I12) .EQ. IREFI16) GO TO 914
178 IF (VAR232(I12) .EQ. IAFI16) GO TO 915
179 GO TO 913
180
181 914 CONTINUE
182 IF (IREF16 .GE. 1) GO TO 810
183 IREF16 = I12
184 GO TO 913
185
186 810 CONTINUE
187 C FOLLOWING FOR CASE OF MORE THAN ONE CARD 16 RECORD FOR BEFORE FIELD.

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181      IF(LCCMC(4,MINZRO,VAR236(I12)).NE.0)VAR236(I8EF16)=VAR236(I12)
182      IF(LCCMC(4,MINZRO,VAR237(I12)).NE.0)VAR237(I8EF16)=VAR237(I12)
183      IF(LCCMC(4,MINZRO,VAR238(I12)).NE.0)VAR238(I8EF16)=VAR238(I12)
184      IF(LCCMC(4,MINZRO,VAR239(I12)).NE.0)VAR239(I8EF16)=VAR239(I12)
185      IF(LCCMC(4,MINZRO,VAR240(I12)).NE.0)VAR240(I8EF16)=VAR240(I12)
186      IF(LCCMC(4,MINZRO,VAR241(I12)).NE.0)VAR241(I8EF16)=VAR241(I12)
187      IF(LCCMC(4,MINZRO,VAR242(I12)).NE.0)VAR242(I8EF16)=VAR242(I12)
188      GO TO 913
189      915 CONTINUE
190      IF (IAFT16 .GE. 1) GO TO 820
191      IAFT16 = I12
192      GO TO 913
193      920 CONTINUE
194      C FOLLOWING FOR CASE OF MORE THAN ONE CARD 16 RECORDS FOR AFTER FIE.O.
195      IF(LCCMC(4,MINZRO,VAR236(I12)).NE.0)VAR236(IAFT16)=VAR236(I12)
196      IF(LCCMC(4,MINZRO,VAR237(I12)).NE.0)VAR237(IAFT16)=VAR237(I12)
197      IF(LCCMC(4,MINZRO,VAR238(I12)).NE.0)VAR238(IAFT16)=VAR238(I12)
198      IF(LCCMC(4,MINZRO,VAR239(I12)).NE.0)VAR239(IAFT16)=VAR239(I12)
199      IF(LCCMC(4,MINZRO,VAR240(I12)).NE.0)VAR240(IAFT16)=VAR240(I12)
200      IF(LCCMC(4,MINZRO,VAR241(I12)).NE.0)VAR241(IAFT16)=VAR241(I12)
201      IF(LCCMC(4,MINZRO,VAR242(I12)).NE.0)VAR242(IAFT16)=VAR242(I12)
202      913 CONTINUE
203      IF (IBASIC .EQ. 2) GO TO 200
204      WRITE (12,9501) P1, P2, P3, P4, P5, P6, P7, P8, P9, P10, P11,
205      1 P12, P13, P14, P15, I8EF16, P16, P17, P18, IAFT16, (S(K), K=1,80)
206      9501 FORMAT(14A4, A1, I5, 2A4, A2, I5, 5(/ 20A4))
207      C ABOVE FORMAT 9501 FOR CASE OF NO BASIC PERT. DATA ADDED
208      V196DI = -0.
209      V197DI = -0.
210      V198DI = -0.0
211      V200DI = -0.0
212      V201DI = -0.0
213      IF (I8EF13 .EQ. 0 .OR. IAFT13 .EQ. 0) GO TO 926
214      IF (LCCMC(4,MINZRO,VAR196(IAFT13)).EQ.0) GO TO 500
215      IF (LCCMC(4,MINZRO,VAR196(I8EF13)).EQ.0) GO TO 500
216      V196DI = VAR196(IAFT13) - VAR196(I8EF13)
217      500 CONTINUE
218      IF (LCCMC(4,MINZRO,VAR197(IAFT13)).EQ.0) GO TO 501
219      IF (LCCMC(4,MINZRO,VAR197(I8EF13)).EQ.0) GO TO 501
220      V197DI = VAR197(IAFT13) - VAR197(I8EF13)
221      501 CONTINUE
222      IF (LCCMC(4,MINZRO,VAR198(IAFT13)).EQ.0) GO TO 502
223      IF (LCCMC(4,MINZRO,VAR198(I8EF13)).EQ.0) GO TO 502
224      V198DI = VAR198(IAFT13) - VAR198(I8EF13)
225      502 CONTINUE
226      IF (LCCMC(4,MINZRO,VAR200(IAFT13)).EQ.0) GO TO 503
227      IF (LCCMC(4,MINZRO,VAR200(I8EF13)).EQ.0) GO TO 503
228      V200DI = VAR200(IAFT13) - VAR200(I8EF13)
229      503 CONTINUE
230      IF (LCCMC(4,MINZRO,VAR201(IAFT13)).EQ.0) GO TO 504
231      IF (LCCMC(4,MINZRO,VAR201(I8EF13)).EQ.0) GO TO 504
232      V201DI = VAR201(IAFT13) - VAR201(I8EF13)
233      504 CONTINUE
234      WRITE (12,9008) VAR196(I8EF13), V196DI, VAR197(I8EF13), V197DI,
235      1VAR198(I8EF13), V198DI, VAR200(I8EF13), V200DI, VAR201(I8EF13),
236      2V201DI, VA202A(I8EF13), VA202A(IAFT13), VA202B(I8EF13), VA202B(IAFT
237      313)
238      9008 FORMAT('CARD13',1X,2F4.0,2F5.0,2F5.1,4F5.1,4I3)
239      C ABOVE FORMAT 9008 IS FOR CARD 13 WHEN THERE IS COMPARABLE DATA
240      GO TO 927

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241      926 CONTINUE
242      WRITE (12,9009)
243      9009 FORMAT('CARD13')
244      C      ABOVE FORMAT 9009 HOLDS SPACE FOR CARD13 WHEN THERE IS NO
245      C      COMPARABLE DATA
246      GO TO 927
247      200 WRITE (12,9500) P1, P2, P3, P4, P5, P6, P7, P8, P9, P10, P11,
248      1 P12, P13, P14, P15, IREFN, P16, P17, P18, IAFN, (5(K),
249      2 K=1,100)
250      9500 FORMAT(14A4, A1, I5, 2A4, A2, I5, 5(/ 20A4))
251      927 CONTINUE
252      IF (LCCMC(4,MINZRO,NITBEF).EQ.0) GO TO 928
253      IF (LCCMC(4,MINZRO,NITAF).EQ.0) GO TO 928
254      NITDIF = NITAF - NITBEF
255      WRITE (12,9010) NITREF, NITDIF
256      9010 FORMAT('NITROGEN',2F5.2)
257      C      ABOVE FORMAT 9010 IS FOR NITROGEN DATA FROM EITHER CARD13 OR
258      C      CARD28 WHEN THERE IS COMPARABLE DATA
259      GO TO 929
260      928 CONTINUE
261      WRITE (12,9011)
262      9011 FORMAT('NITROGEN')
263      C      ABOVE FORMAT 9011 HOLDS SPACE FOR NITROGEN DATA WHERE THERE IS NO
264      C      COMPARABLE DATA
265      929 CONTINUE
266      V555DI = -0.
267      V557DI = -0.
268      V559DI = -0.
269      V558AD = -0.
270      V558BD = -0.
271      V558CD = -0.
272      V558DD = -0.
273      V558ED = -0.
274      IF (IREF23.EQ.0.OR. IAF23.EQ.0) GO TO 937
275      IF (LCCMC(4,MINZRO,VAR555(IAFT23)).EQ.0) GO TO 505
276      IF (LCCMC(4,MINZRO,VAR555(IBEFT23)).EQ.0) GO TO 505
277      V555DI = VAR555(IAFT23) - VAR555(IBEFT23)
278      505 CONTINUE
279      IF (LCCMC(4,MINZRO,VAR557(IAFT23)).EQ.0) GO TO 506
280      IF (LCCMC(4,MINZRO,VAR557(IBEFT23)).EQ.0) GO TO 506
281      V557DI = VAR557(IAFT23) - VAR557(IBEFT23)
282      506 CONTINUE
283      IF (LCCMC(4,MINZRO,VAR558(IAFT23)).EQ.0) GO TO 507
284      IF (LCCMC(4,MINZRO,VAR558(IBEFT23)).EQ.0) GO TO 507
285      V558DI = VAR558(IAFT23) - VAR558(IBEFT23)
286      507 CONTINUE
287      IF (LCCMC(4,MINZRO,VAR558A(IAFT23)).EQ.0) GO TO 600
288      IF (LCCMC(4,MINZRO,VAR558A(IBEFT23)).EQ.0) GO TO 600
289      V558AD = VAR558A(IAFT23) - VAR558A(IBEFT23)
290      600 IF (LCCMC(4,MINZRO,VAR558B(IAFT23)).EQ.0) GO TO 601
291      IF (LCCMC(4,MINZRO,VAR558B(IBEFT23)).EQ.0) GO TO 601
292      V558BD = VAR558B(IAFT23) - VAR558B(IBEFT23)
293      601 IF (LCCMC(4,MINZRO,VAR558C(IAFT23)).EQ.0) GO TO 602
294      IF (LCCMC(4,MINZRO,VAR558C(IBEFT23)).EQ.0) GO TO 602
295      V558CD = VAR558C(IAFT23) - VAR558C(IBEFT23)
296      602 IF (LCCMC(4,MINZRO,VAR558D(IAFT23)).EQ.0) GO TO 603
297      IF (LCCMC(4,MINZRO,VAR558D(IBEFT23)).EQ.0) GO TO 603
298      V558DD = VAR558D(IAFT23) - VAR558D(IBEFT23)
299      603 IF (LCCMC(4,MINZRO,VAR558E(IAFT23)).EQ.0) GO TO 604
300      IF (LCCMC(4,MINZRO,VAR558E(IBEFT23)).EQ.0) GO TO 604

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301      V553ED = V553E(IAFT28)-V553E(IBE28)
302      604 CONTINUE
303      WRITE (12,9017) VAR555(IBE28), V555DI, VAR557(IBE28), V557DI,
304      1VAR558(IBE28), V558DI, V558A(IBE28), V558AD, V558B(IBE28), V5
305      1583D, V558C(IBE28), V558CD, V558D(IBE28), V558DD, V558E(IBE2
306      8), V553ED
307      9017 FORMAT('CARD28(1)',1X,8F5.2,/'CARD28(2)',1X,8F5.2)
308      C      ABOVE FORMAT 9017 IS FOR CARD28 INFO. WHEN THERE IS COMPARABLE
309      C      CARD 28 DATA
310      C      GO TO 938
311      937 CONTINUE
312      WRITE (12,9018)
313      9018 FORMAT('CARD28(1)', / 'CARD28(2)')
314      C      ABOVE FORMAT 9018 HOLDS SPACE FOR CARD 28 WHEN THERE IS NO
315      C      COMPARABLE CARD 28 DATA
316      938 CONTINUE
317      V236DI = -0.
318      V237DI = -0.
319      V238DI = -0.
320      V239DI = -0.
321      V240DI = -0.
322      V241DI = -0.
323      V242DI = -0.
324      IF (IBE16.EQ.0.OR. IAFT16.EQ.0) GO TO 939
325      IF (LCCMC(4,MINZRO,VAR236(IAFT16)).EQ.0) GO TO 508
326      IF (LCCMC(4,MINZRO,VAR236(IBE16)).EQ.0) GO TO 508
327      V236DI = VAR236(IAFT16) - VAR236(IBE16)
328      508 CONTINUE
329      IF (LCCMC(4,MINZRO,VAR237(IAFT16)).EQ.0) GO TO 509
330      IF (LCCMC(4,MINZRO,VAR237(IBE16)).EQ.0) GO TO 509
331      V237DI = VAR237(IAFT16) - VAR237(IBE16)
332      509 CONTINUE
333      IF (LCCMC(4,MINZRO,VAR238(IAFT16)).EQ.0) GO TO 510
334      IF (LCCMC(4,MINZRO,VAR238(IBE16)).EQ.0) GO TO 510
335      V238DI = VAR238(IAFT16) - VAR238(IBE16)
336      510 CONTINUE
337      IF (LCCMC(4,MINZRO,VAR239(IAFT16)).EQ.0) GO TO 511
338      IF (LCCMC(4,MINZRO,VAR239(IBE16)).EQ.0) GO TO 511
339      V239DI = VAR239(IAFT16) - VAR239(IBE16)
340      511 CONTINUE
341      IF (LCCMC(4,MINZRO,VAR240(IAFT16)).EQ.0) GO TO 512
342      IF (LCCMC(4,MINZRO,VAR240(IBE16)).EQ.0) GO TO 512
343      V240DI = VAR240(IAFT16) - VAR240(IBE16)
344      512 CONTINUE
345      IF (LCCMC(4,MINZRO,VAR241(IAFT16)).EQ.0) GO TO 513
346      IF (LCCMC(4,MINZRO,VAR241(IBE16)).EQ.0) GO TO 513
347      V241DI = VAR241(IAFT16) - VAR241(IBE16)
348      513 CONTINUE
349      IF (LCCMC(4,MINZRO,VAR242(IAFT16)).EQ.0) GO TO 514
350      IF (LCCMC(4,MINZRO,VAR242(IBE16)).EQ.0) GO TO 514
351      V242DI = VAR242(IAFT16) - VAR242(IBE16)
352      514 CONTINUE
353      WRITE (12,9019) VAR235(IBE16), VAR236(IBE16), V236DI,
354      1VAR237(IBE16), V237DI, VAR238(IBE16), V238DI, VAR239(IBE16),
355      2V239DI, VAR240(IBE16), V240DI, VAR241(IBE16), V241DI,
356      3VAR242(IBE16), V242DI
357      9019 FORMAT('CARD16',1X,14,8F4.0,6F6.2)
358      C      ABOVE FORMAT 9019 IS FOR CARD 16 INFO. WHEN THERE IS COMPARABLE
359      C      CARD 16 DATA
360      C      GO TO 940

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361      929 CONTINUE
362      WRITE (12,9020)
363      9020 FORMAT('CARD16')
364      C      ABOVE FORMAT 9020 IS FOR CARD 16 SPACE HOLDING WHEN THERE IS NO
365      C      COMPARABLE CARD 16 DATA
366      940 CONTINUE
367      WRITE (12, 9502)(S(K), K=101,540)
368      9502 FORMAT(20A4)
369      C      ABOVE FORMAT 9502 FOR USETAB INFORMATION
370      250 CONTINUE
371      END
END OF FILE

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1      C      THIS PROGRAM ("YIELDSOILADD") ADDS SOIL RESULT DATA RECEIVED
2      C      AFTER
3      C      THE INITIAL RUN OF THE PROGRAMS GENERATING THE CROP "MASTER" FILE
4      C      WITHOUT RECOMPUTING THE NON-SOILS RELATED INFORMATION. NO
5      C      SUBPROGRAMS
6      C      ARE CALLED. THE FORTRAN MONITOR MINUS ZERO FEATURE AND THE MFS
7      C      MFS
8      C      LOGICAL COMPARISON OF CHARACTERS (LCOMC) FUNCTION ARE USED.
9      C      INPUT UNITS ARE 5=*SOURCE* 11=TYPE28 13=TYPE16 9=TYPE13 AND
10     C      15=(OLD)"MASTER" FILE FOR CROP.
11     C      15=(OLD)"MASTER" FILE FOR CROP.
12     C      OUTPUT UNITS ARE 6=*SINK* AND 12=(NEW)"MASTER" FILE FOR CROP.
13     C
14     C      INTEGER VAR186, VA2024, VA2028, VAR187, VAR188, VAR189, VAR190
15     C      INTEGER VAR552, VAR232, VAR235
16     C      REAL NITPCG, NITBEP
17     C      INTEGER VAR191, VAR192, VAR193, VAR194, VAR195
18     C      DIMENSION VAR186(1150), VAR196(1150), VAR197(1150), VAR198(1150),
19     C      1 VAR199(1150), VAR200(1150), VAR201(1150), VA2024(1150),
20     C      1 VA2028(1150), VAR187(1150), VAR188(1150), VAR189(1150),
21     C      1 VAR190(1150), VAR191(1150), VAR192(1150), VAR193(1150),
22     C      1 VAR194(1150), VAR195(1150)
23     C      ABOVE DIMENSION FOR CARD TYPE 13
24     C      DIMENSION VAR552(1100), VAR553(1100), VAR554(1100), VAR555(1100),
25     C      1 VAR556(1100), VAR557(1100), VAR558(1100), VA558A(1100),
26     C      2 VA558B(1100), VA558C(1100), VA558D(1100), VA558E(1100)
27     C      ABOVE DIMENSION FOR CARD TYPE 28
28     C      DIMENSION VAR232(660), VAR233(660), VAR236(660), VAR237(660),
29     C      1 VAR238(660), VAR239(660), VAR240(660), VAR241(660),
30     C      2 VAR242(660)
31     C      ABOVE DIMENSION FOR CARD TYPE 16
32     C      DIMENSION S(420)
33     C      DATA MINZRO/ZROGOO0000/
34     C      CALL FTNCMD('SET MINUSZERO=ON',16)
35     C      WRITE (6, 1001)
36     C      1001 FORMAT(1X,'ENTER ICDS16 (FORMAT=I5)')
37     C      READ (5,1000) ICDS16
38     C      1000 FORMAT(I5)
39     C      WRITE (6, 1002)
40     C      1002 FORMAT(1X,'ENTER ICDS28 (FORMAT=I5)')
41     C      READ (5, 1000) ICDS28
42     C      WRITE (6, 1003)
43     C      1006 FORMAT(1X,'ENTER ICDS13 (FORMAT=I5)')
44     C      READ (5, 1000) ICDS13
45     C      WRITE (6, 1009)
46     C      1009 FORMAT(1X,'ENTER NUMBER OF CT13 FORMAT 1 CARDS (FMT=I5)')
47     C      READ (5, 1000) ICFCP1
48     C      WRITE (6, 1003)
49     C      1003 FORMAT(1X,'ENTER NUMBER OF CASES FOR CROP (FORMAT=I5)')
50     C      READ (5, 1000) ICOM
51     C      DO 900 I3=1,ICDS13
52     C      IF (I3.GT. ICFCP1) GO TO 901
53     C      READ (9,9003) VAR186(I3), VAR187(I3), VAR188(I3), VAR189(I3),
54     C      1 VAR190(I3), VAR191(I3), VAR192(I3), VAR193(I3),
55     C      1 VAR194(I3), VAR195(I3), VAR196(I3), VAR197(I3), VAR198(I3),
56     C      1 VAR199(I3), VAR200(I3), VAR201(I3), VA2024(I3), VA2028(I3)
57     C      9003 FORMAT(3X,I5,A4,1X,2A4,2A3,2A4,A3,A4,F3.0,F4.0,F4.1,F4.2,2F4.1,
58     C      1 2I2)
59     C      ABOVE FORMAT 9003 IS FOR CARD TYPE 13 FORMAT 1
60     C      GO TO 900

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61      901 CONTINUE
62      READ (9,9004) VAR186(I3), VAR187(I3), VAR188(I3), VAR189(I3),
63      1 VAR190(I3), VAR191(I3), VAR192(I3), VAR193(I3),
64      1 VAR194(I3), VAR195(I3), VAR196(I3), VAR197(I3), VAR198(I3),
65      1 VAR199(I3), VAR200(I3), VAR201(I3), VA202A(I3), VA202B(I3)
66      9004 FORMAT(3X,I5,A4,1X,2A4,2A3,A4,1X,A4,1X,A3,A4,F4.0,F5.0,F5.1,F5.2,
67      1 2F5.1, 2I3)
68      C      ABOVE FORMAT 9004 IS FOR CARD TYPE 13 FORMAT NO. 2
69      900 CONTINUE
70      READ (11,9006)(VAR552(I5),VAR553(I5),VAR554(I5),VAR555(I5),
71      1 VAR556(I5), VAR557(I5),
72      1 VAR558(I5), VA558A(I5), VA558B(I5), VA558C(I5), VA558D(I5),VA558E(
73      1 I5), I5=1,ICDS28)
74      9006 FORMAT(3X,I5, A4, 1X, A4,9F5.2)
75      C      ABOVE FORMAT 9006 IS FOR CARD TYPE 28
76      READ (13,9007)(VAR232(I11), VAR235(I11), VAR236(I11), VAR237(I11),
77      1 VAR238(I11), VAR239(I11), VAR240(I11), VAR241(I11), VAR242(I11),
78      2 I11=1,ICDS16)
79      9007 FORMAT(3X,I5,9X, I4,4F4.0,3F6.2)
80      C      ABOVE FORMAT 9007 IS FOR CARD TYPE 16
81      DO 250 NOCASE=1,ICCM
82      READ (15,1004)((S(I), I=1,20), P1, IFN, (S(I2), I2=21,98))
83      1004 FORMAT(20A4, / A3, I5, 18A4, 3(/20A4))
84      READ (15, 1005)(S(I), I=99,419)
85      1005 FORMAT(/// 16(/20A4))
86      IREF13=0
87      DO 907 I5=1,ICDS13
88      IF (VAR186(I5) .EQ. IFN) GO TO 908
89      GO TO 907
90      908 CONTINUE
91      IF (IREF13 .GE. 1) GO TO 907
92      C      ABOVE CAUSES ONLY FIRST CARD 13 RECORD TO BE USED IF MORE THAN
93      C      ONE ARE PRESENT FOR A CASE
94      IREF13=I5
95      907 CONTINUE
96      IREF28 = 0
97      IF (IFN .EQ. 0) GO TO 457
98      GO TO 458
99      457 CONTINUE
100     C      FOLLOWING FOR CASE OF NO CARD 1 INFORMATION (NO FIELD NUMBER)
101     IREF13 = 0
102     IREF16 = 0
103     IREF28 = 0
104     GO TO 459
105     458 CONTINUE
106     DO 910 I10=1,ICDS28
107     IF (VAR552(I10) .EQ. IFN) GO TO 911
108     GO TO 910
109     911 CONTINUE
110     IF (IREF28 .GT. 0) GO TO 800
111     IREF28 = I10
112     GO TO 910
113     800 CONTINUE
114     C      FOLLOWING FOR CASE OF MORE THAN ONE CARD 28 RECORD FOR BEFORE
115     C      FIELD. DATA FROM SUBSEQUENT RECORDS FOR FIELD IS PUT IN ARRAY AT
116     C      LOCATION OF THE FIRST RECORD FOR THE FIELD
117     IF(LCCMC(4,MINZRC,VAR555(I10)).NE.0)VAR555(IREF28)=VAR555(I10)
118     IF(LCCMC(4,MINZRC,VAR556(I10)).NE.0)VAR556(IREF28)=VAR556(I10)
119     IF(LCCMC(4,MINZRC,VAR557(I10)).NE.0)VAR557(IREF28)=VAR557(I10)
120     IF(LCCMC(4,MINZRC,VAR558(I10)).NE.0)VAR558(IREF28)=VAR558(I10)

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121 IF(LCCMC(4,MINZRO,VA558A(I10)).NE.0)VA558A(I8EF28)=VA558A(I10)
122 IF(LCCMC(4,MINZRO,VA558B(I10)).NE.0)VA558B(I8EF28)=VA558B(I10)
123 IF(LCCMC(4,MINZRO,VA558C(I10)).NE.0)VA558C(I8EF28)=VA558C(I10)
124 IF(LCCMC(4,MINZRO,VA558D(I10)).NE.0)VA558D(I8EF28)=VA558D(I10)
125 IF(LCCMC(4,MINZRO,VA558E(I10)).NE.0)VA558E(I8EF28)=VA558E(I10)
126 910 CONTINUE
127 NITREF = -0.0
128 IF (I8EF13 .EQ. 0) GO TO 919
129 IF (LCCMC(4,MINZRO,VAR199(I8EF13)).EQ.0)GO TO 919
130 NITREF = VAR199(I8EF13)
131 919 CONTINUE
132 IF (I8EF29 .EQ. 0) GO TO 921
133 IF (LCCMC(4,MINZRO,VAR556(I8EF29)).EQ.0)GO TO 921
134 NITREF = VAR556(I8EF29)
135 921 CONTINUE
136 IREF16 = 0
137 DO 913 I12 =1,ICDS16
138 C FINDS CARD 16 FOR BEFORE AND AFTER FIELDS OF PAIR
139 IF (VAR232(I12) .EQ. IFN) GO TO 914
140 GO TO 913
141 914 CONTINUE
142 IF (IREF16 .GE. 1) GO TO 910
143 IREF16 = I12
144 GO TO 913
145 910 CONTINUE
146 C FOLLOWING FOR CASE OF MORE THAN ONE CARD 16 RECORD FOR BEFORE
147 C FIELD
148 IF(LCCMC(4,MINZRO,VAR236(I12)).NE.0)VAR236(I8EF16)=VAR236(I12)
149 IF(LCCMC(4,MINZRO,VAR237(I12)).NE.0)VAR237(I8EF16)=VAR237(I12)
150 IF(LCCMC(4,MINZRO,VAR239(I12)).NE.0)VAR238(I8EF16)=VAR238(I12)
151 IF(LCCMC(4,MINZRO,VAR239(I12)).NE.0)VAR239(I8EF16)=VAR239(I12)
152 IF(LCCMC(4,MINZRO,VAR240(I12)).NE.0)VAR240(I8EF16)=VAR240(I12)
153 IF(LCCMC(4,MINZRO,VAR241(I12)).NE.0)VAR241(I8EF16)=VAR241(I12)
154 IF(LCCMC(4,MINZRO,VAR242(I12)).NE.0)VAR242(I8EF16)=VAR242(I12)
155 913 CONTINUE
156 450 WRITE (12, 1004)((S(I), I=1,20), P1, IFN, (S(I2), I2=21,98))
157 I3 = IREF13
158 IF (I8EF13 .EQ. 0) GO TO 400
159 GO TO 401
160 400 WRITE (12, 8000)
161 8000 FORMAT(1X, '13')
162 GO TO 450
163 401 CONTINUE
164 WRITE (12, 5004) VAR136(I3), VAR197(I3), VAR188(I3), VAR139(I3),
165 1 VAR190(I3), VAR191(I3), VAR192(I3), VAR193(I3),
166 1 VAR194(I3), VAR195(I3), VAR196(I3), VAR197(I3), VAR198(I3),
167 1 VAR199(I3), VAR200(I3), VAR201(I3), VA202A(I3), VA202B(I3)
168 5004 FORMAT(4X,I5,A4,1X,2A4,2A3,A4,1X,A4,1X,A3,A4,F4.0,F5.0,F5.1,F5.2,
169 1 2F5.1, 2I3)
170 C IN OUTPUT (WITH ONE ADDITIONAL SPACE)
171 C ABOVE FORMAT 5004 IS FOR CARD TYPE 13 FORMAT NO. 2
172 450 CONTINUE
173 I4 = IREF16
174 IF (I8EF16 .EQ. 0) GO TO 402
175 GO TO 403
176 402 WRITE (12, 8001)
177 8001 FORMAT(1X, '16')
178 GO TO 451
179 403 CONTINUE
180 WRITE (12, 5007) VAR232(I4), VAR235(I4), VAR236(I4), VAR237(I4),

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181      1 VAR238(I4), VAR239(I4), VAR240(I4), VAR241(I4), VAR242(I4)
182 5007 FORMAT(4X,I5,9X, I4.4F4.0,3F5.2)
183 C      ABOVE FORMAT 5007 IS FOR CARD TYPE 16
184 C      IN OUTPUT (WITH ONE ADDITIONAL SPACE)
185 451 CONTINUE
186      IS = IREF29
187      IF (IREF29 .EQ. 0) GO TO 404
188      GO TO 405
189 404 WRITE (12, 8002)
190 8002 FORMAT( 1X, '28')
191      IF (IFN .EQ. 0) GO TO 460
192      GO TO 452
193 405 CONTINUE
194      WRITE (12, 5006) VAR552(I6), VAR553(I6), VAR554(I6), VAR555(I6),
195      1 NITREF, VAR557(I6),
196      1 VAR558(I6), VA558A(I6), VA558B(I6), VA558C(I6), VA558D(I6),
197      2 VA558E(I6)
198 5006 FORMAT(4X,I5, A4, 1X, A4,9F5.2)
199 C      ABOVE FORMAT 5006 IS FOR CARD TYPE 28
200 C      IN OUTPUT (WITH ONE ADDITIONAL SPACE)
201 452 CONTINUE
202      IF (.NOT.(VAR240(I4) .GE. 0.01 .AND. VAR241(I4) .GE. 0.01))
203      1 GO TO 513
204      RKI = (VAR240(I4) / VAR241(I4)) * 1.7
205      IF (LCOMC(4,MINZRO,VAR242(I4)) .EQ. 0) GO TO 614
206      RKR = 1.7 * VAR240(I4) / (VAR241(I4) + (0.6375 * VAR242(I4)))
207 C      RKI ("RKI") AND RKR ("RKR") ARE MEASURES OF THE LIBERATION OF SILICA
208 C      BY SILICATES FOR CLASSIFICATION OF SOIL AS "ALITIC" OR "SIALITIC".
209 C      THE CONSTANTS COME FROM DIVISION OF THE PERCENT OF EACH COMPOUND
210 C      BY THE MOLECULAR WEIGHT OF THE COMPOUND.
211      LATOS = 0
212      IF (RKI .GE. 1.23 .AND. RKI .LT. 1.82) LATOS = 1
213      IF (RKI .GE. 1.82 .AND. RKI .LT. 2.50) LATOS = 2
214 C      LATOS IS A CODE FOR SEPARATION OF LATOSOLS AND PODSOLS. 1=LATOSOL,
215 C      2=PODSOL, 0=DATA AVAILABLE BUT OUTSIDE OF RANGE. (SEE GUIMARAES,
216 C      RASTOS AND LOPES. 1970: 94)
217      GO TO 615
218 613 RKI = -0.00
219      LATOS = -0
220 614 RKR = -0.00
221 615 CONTINUE
222      IF (LCOMC(4,MINZRO,VA558A(I6)) .EQ. 0) GO TO 610
223      IF (LCOMC(4,MINZRO,VA558B(I6)) .EQ. 0) GO TO 610
224      IF (LCOMC(4,MINZRO,VAR557(I6)) .EQ. 0) GO TO 610
225      IF (LCOMC(4,MINZRO,VAR558(I6)) .EQ. 0) GO TO 610
226      SEX = VA558A(I6) + VA558B(I6) + VAR557(I6) + VAR558(I6)
227 C      SEX IS THE SUM OF EXCHANGEABLE BASES
228      IF (LCOMC(4,MINZRO,VA558C(I6)) .EQ. 0) GO TO 611
229      IF (LCOMC(4,MINZRO,VA558D(I6)) .EQ. 0) GO TO 611
230      T = VA558A(I6) + VA558B(I6) + VAR557(I6) + VAR558(I6) + VA558C(I6)
231      1 + VA558D(I6)
232 C      T IS TOTAL CATION EXCHANGE CAPACITY
233      IF (T .LE. 0.001) GO TO 650
234      V = (SEX / T) * 100.0
235 C      V IS POTENTIAL BASE SATURATION
236      GO TO 612
237 610 SEX = -0.00
238 611 T = -0.00
239 650 V = -0.
240 612 CONTINUE

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241      NITROG = NITREF
242      GO TO 617
243      618 NITROG = -0.00
244      619 CN = -0.
245      GO TO 620
246      617 CONTINUE
247      IF (LCCMC(4,MINZRO,VAR555(I6)) .EQ. 0) GO TO 619
248      IF (LCCMC(4,MINZRO,NITROG) .EQ. 0) GO TO 619
249      CN = VAR555(I6) / NITROG
250      C   CN IS THE CARBON/NITROGEN RATIO. 8 TO 14 IS THE NORMAL RANGE.
251      C   LOWER VALUES INDICATE MINERALIZED ORGANIC MATTER
252      620 IF (LCCMC(4,MINZRO,VAR555(I6)) .EQ. 0) GO TO 621
253      CM = 1.7162 * VAR555(I6)
254      C   CM IS ORGANIC MATTER
255      GO TO 622
256      621 CM = -0.00
257      622 CONTINUE
258      IF (I6 .EQ. 0) GO TO 455
259      WRITE (12, 6000) VAR552(I6), VAR553(I6), VAR554(I6), RKI, RKR,
260      1 LATOS, NITROG,
261      1 CM, CN, SEX, T, V
262      6000 FORMAT(3X, I5, A4, 1X, A4, 2F5.2, I2, 2F5.2, F4.0, F5.2, F6.2,
263      1F4.0)
264      C   ABOVE FORMAT 6000 FOR RISCILCALCS
265      GO TO 456
266      460 WRITE (12, 2001)
267      2001 FORMAT(1X, 'SC')
268      C   ABOVE FORMAT 2001 FOR SCIL CALCS PLACE HOLDER IN CASES
269      C   WITH NO FIELD NUMBER
270      GO TO 456
271      455 CONTINUE
272      WRITE (12, 6001) RKI, RKR, LATOS, NITROG, CM, CN,
273      1 SEX, T, V
274      6001 FORMAT(17X, 2F5.2, I2, 2F5.2, F4.0, F5.2, F6.2,
275      1F4.0)
276      C   ABOVE FORMAT 6001 FOR SCIL CALCS INFORMATION WHEN THERE IS
277      C   NO CARD 29 RECORD FOR THE CASE
278      45A CONTINUE
279      WRITE (12, 2000) (S(I), I=99,418)
280      2000 FORMAT(20A4)
281      250 CONTINUE
282      END

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END OF FILE

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1      C
2      C   THIS PROGRAM ('BOOKKEEP') TABULATES SOIL RESULTS RECEIVED,
3      C   MISSING AND NOT REQUESTED FROM THE LABORATORY. OUTPUT CODES
4      C   ARE: 1=MISSING, 2=RECEIVED AND 3=NOT REQUESTED. NO SUBPROGRAMS
5      C   ARE CALLED. THE FORTRAN MCNITCR MINUS ZERO FEATURE IS USED, AS
6      C   IS THE MTS LOGICAL COMPARISON OF CHARACTERS (LCOMC) FUNCTION.
7      C   INPUT UNITS ARE: 5=SOURCE* 11=TYPE28 13=TYPE16 9=TYPE13
8      C   AND 15=TYPE31. OUTPUT UNITS ARE: 6=**SINK* AND 7=OUTPUT FILE.
9      C
10     REAL*4 SUFA, SUFB, SUFBL, SUFFIX
11     INTEGER VAR233, VAR243, VAR138, VA202A, VA202B, VAR554, VAR559,
12     I VAR560
13     DIMENSION VAR189(1123), VAR196(1123), VAR199(1123), VA202A(1123),
14     I VA202B(1123)
15     C   ABOVE DIMENSION IS FOR CARD TYPE 13
16     DIMENSION VAR554(1832), VAR555(1832), VAR556(1832), VAR557(1832),
17     I VAR558(1832), VA558A(1832), VA558B(1832), VA558C(1832),
18     I VAR558D(1832), VAR559(1832), VAR560(1832)
19     C   ABOVE DIMENSION IS FOR CARD TYPE 28
20     DIMENSION VAR233(1170), VAR239(1170), VAR242(1170), VAR243(1170)
21     C   ABOVE DIMENSION FOR CARD TYPE 16
22     DATA SUFA, SUFB, SUFBL/'-A', '-B', ' ' /
23     DATA MINZRC/Z800000000/
24     CALL FTNCMD('SET MINUSZERC=CN',16)
25     WRITE (6, 1006)
26     1006 FORMAT(1X, 'ENTER ICDS13 (FORMAT=15)')
27     READ (5, 1000) ICDS13
28     WRITE (6, 1009)
29     1009 FORMAT(1X, 'ENTER NUMBER OF CT13 FORMAT 1 CARDS (FMT=15)')
30     READ (5, 1000) ICFOR1
31     WRITE (6, 1001)
32     1001 FORMAT(1X, 'ENTER ICDS16 (FORMAT=15)')
33     READ (5, 1000) ICDS16
34     1000 FORMAT(15)
35     WRITE (6, 1002)
36     1002 FORMAT(1X, 'ENTER ICDS28 (FORMAT=15)')
37     READ (5, 1000) ICDS28
38     WRITE (6, 1003)
39     1003 FORMAT(1X, 'ENTER ICDS31 (FORMAT=15)')
40     READ (5, 1000) ICDS31
41     DO 900 I=1, ICDS13
42     IF (I.GT. ICFOR1) GO TO 901
43     READ (9, 9003) VAR188(I), VAR196(I), VAR199(I), VA202A(I),
44     I VA202B(I)
45     9003 FORMAT(12X, I5, 25X, F3.0, 8X, F4.2, 3X, 2I2)
46     C   ABOVE FORMAT 9003 IS FOR CARD 13 FORMAT 1
47     GO TO 900
48     901 CONTINUE
49     READ (9, 9004) VAR188(I), VAR196(2), VAR199(I), VA202A(I),
50     I VA202B(I)
51     9004 FORMAT(12X, I5, 27X, F4.0, 10X, F5.2, 10X, 2I3)
52     C   ABOVE FORMAT 9004 IS FOR CARD 13 FORMAT 2
53     900 CONTINUE
54     READ (11, 9006)(VAR554(I), VAR555(I), VAR556(I), VAR557(I),
55     I VAR558(I), VA558A(I), VA558B(I), VA558C(I), VA558D(I), VAR559(I),
56     I VAR560(I), I=1, ICDS28)
57     9006 FORMAT(12X, I5, 9F5.2, 17X, 2I3)
58     C   ABOVE FORMAT 9006 IS FOR CARD TYPE 28
59     READ (13, 9007)(VAR233(I), VAR239(I), VAR242(I), VAR243(I),
60     I I=1, ICDS16)

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61 9007 FORMAT(3X, I5, 20X, F4.0, I2X, F6.2, I3)
62 C ABOVE FORMAT 9007 IS FOR CARD TYPE 16
63 WRITE (7, 7003)
64 7003 FORMAT(1X, 'SAMPLE', 3X, 'FIELD', 2X, 'PROFILE', 2X, 'GROUP', 2X,
65 1 'UNDS. DE LABORATORIO', 2X, 'PROTOCOLOS', 4X, 'BF', 2X, 'C',
66 2 3X, 'N', 3X, 'CA', 2X, 'MG', 2X, 'NA', 2X, 'K', 3X, 'H', 3X, 'AL'
67 3 , 2X, 'CR-', 1X, 'LA-', 'NOTE', / 1X, 'NUMBER', 3X, 'NO.', 4X,
68 4 'NO.', 5X, 'NO.', 4X, '(FERTILIDADE BASICA)', 3X, '(LEVANTAMENTO)'
69 5 , 38X, 'AN', 2X, 'TO', 1X, 'L 2')
70 DO 100 I1=1, ICDS1
71 READ (15, 7002) IV580, IV581, IV582, IV583, IV584, IV585A, IV5853,
72 1 IV586A, IV586B, IV587A, IV587B, IV588A, IV588B, IV589, IV590
73 7002 FORMAT(3X, I5, I2, 1X, A4, A4, I2, 8A3, I2, I3)
74 C ABOVE FORMAT 7002 IS FOR CARD TYPE 31
75 IBF = 1
76 ICARR = 1
77 NIT = 1
78 ICA = 1
79 MG = 1
80 NA = 1
81 K = 1
82 IMYDRO = 1
83 IAL = 1
84 IGRAN = 1
85 LAT = 1
86 IF (IV584 .GE. 1 .AND. IV584 .LE. 3) GO TO 200
87 IF (IV584 .EQ. 4 .OR. IV584 .EQ. 5) GO TO 204
88 IF (IV584 .EQ. 6 .OR. IV584 .EQ. 7) GO TO 202
89 WRITE (6, 7013) IV584
90 7013 FORMAT(1X, 'ERROR: GROUP', 1X, I2, 2X, 'NOT RECOGNIZED')
91 GO TO 203
92 200 CONTINUE
93 C FOR GROUP 1 (YIELDS OF FIRST 400 SAMPLES & OLD AREA SAMPLES)
94 C AND GROUP 2 (RETURN SAMPLES) AND GROUP 3 (USED / VIRGIN COMPARISONS)
95 C AND YIELDS AFTER FIRST 400 SAMPLES
96 IGRAN = 3
97 LAT = 3
98 GO TO 204
99 202 CONTINUE
100 C FOR GROUP 6 (REPEATED SERIES) OR "OTHER" (GROUP 7)
101 ICARR = 3
102 NIT = 3
103 ICA = 3
104 MG = 3
105 NA = 3
106 K = 3
107 IMYDRO = 3
108 IAL = 3
109 IGRAN = 3
110 LAT = 3
111 204 CONTINUE
112 C FOR GROUP 4 (PROFILES OF EROSION PLOTS) AND GROUP 5 (PROFILES IN
113 C SOIL SURVEY)
114 DO 101 I2=1, ICDS13
115 ISUF13 = 0
116 IF (VA202A(I2) .EQ. 2 .OR. VA202B(I2) .EQ. 2) ISUF13 = 1
117 IF (VA202A(I2) .EQ. 3 .OR. VA202B(I2) .EQ. 3) ISUF13 = 2
118 IF (VAR188(I2) .EQ. IV580 .AND. ISUF13 .EQ. IV581) GO TO 205
119 GO TO 101
120 205 IF (LCORC(4, MINZRC, VAR196(I2)) .NE. 0) IBF = 2

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121      IF (LCCMC(4, MINZRC, VAR199(I2)) .NE. 0) NIT = 2
122 101 CONTINUE
123      DO 102 I3=1, ICDS16
124      !SUF16 = 0
125      IF (VAR243(I3) .EQ. 1) ISUF16 = 1
126      IF (VAR243(I3) .EQ. 2) ISUF16 = 2
127      IF (VAR233(I3) .EQ. IV530 .AND. ISUF16 .EQ. IV581) GO TO 206
128      GO TO 102
129 206 IF (LCCMC(4, MINZRC, VAR239(I3)) .NE. 0) IGRAN = 2
130      IF (LCCMC(4, MINZRC, VAR242(I3)) .NE. 0) LAT = 2
131 102 CONTINUE
132      DO 103 I4 = 1, ICDS28
133      ISUF28 = 0
134      IF (VAR559(I4) .EQ. 1 .OR. VAR560(I4) .EQ. 1) ISUF28 = 1
135      IF (VAR559(I4) .EQ. 2 .OR. VAR560(I4) .EQ. 2) ISUF28 = 2
136      IF (VAR554(I4) .EQ. IV580 .AND. ISUF28 .EQ. IV581) GO TO 207
137      GO TO 103
138 207 IF (LCCMC(4, MINZRC, VAR555(I4)) .NE. 0) ICAR8 = 2
139      IF (LCCMC(4, MINZRC, VAR556(I4)) .NE. 0) NIT = 2
140      IF (LCCMC(4, MINZRC, VAR557(I4)) .NE. 0) NA = 2
141      IF (LCCMC(4, MINZRC, VAR558(I4)) .NE. 0) K = 2
142      IF (LCCMC(4, MINZRC, VAR558A(I4)) .NE. 0) ICA = 2
143      IF (LCCMC(4, MINZRC, VAR558B(I4)) .NE. 0) MG = 2
144      IF (LCCMC(4, MINZRC, VAR558C(I4)) .NE. 0) IHYDRO=2
145      IF (LCCMC(4, MINZRC, VAR558D(I4)) .NE. 0) IAL = 2
146 103 CONTINUE
147      SUFFIX = SUFFAL
148      IF (IV581 .EQ. 1) SUFFIX = SUFFA
149      IF (IV581 .EQ. 2) SUFFIX = SUFFB
150      WRITE (7, 7004) IV580, SUFFIX, IV582, IV583, IV584, IV585A,
151      1 IV585B, IV586A, IV586B, IV587A, IV587B, IV588A, IV588B, IBF,
152      2 ICAR8, NIT, ICA, MG, NA, K, IHYDRO, IAL, IGRAN, LAT, IV589, IV590
153 7004 FORMAT(1X, I5, A2, 3X, A4, 4X, A4, 4X, I2, 6X, 2A3, 4X, 2A3, 5X,
154      1 2A3, 1X, 2A3, 3X, I2, 10(2X, I2), I2, I3)
155      100 CONTINUE
156      203 CONTINUE
157      END
END OF FILE

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