Table 1   Sample Profile file.

```
'drk200.pro'
'Dan Krieg HS 200'
'05/24/94'
'05/14/94' '09/28/94'
'krieg94.act' 'lubb90.hot'
'              ' 'drk200.irr'
'amar4.hyd' 'krieg94.int'
'drk94.pgr' '              '
'              ' 'dkvar200.map'
    35   4.600     0    32     0    14
'artnm86.cld' 'lubb90.hot' 'longterm.nor' ' '
     0  0.600     5
'00/00/00'
     0     0     1     0
     0 '00/00/00' '00/00/00'     1
'07/07/94' '07/07/94'
    1  1  1  1  1  0  0  1  1  1  1  0  0  0  0  0  0  0  0  0  1  0  0
```

1st line = Profile file name (FILNAM)

2nd line = Profile file description (DSCRIP)

3rd line =Emergence date

4th line: Date for start and stop of simulation run
    columns: 1 = Starting date of simulation
            2 = Stop date of simulation

5th line: Weather filenames
    columns: 1 = Actual weather file of simulation
            2 =Future weather file of simulation

6th line: Weather and irrigation/fertilizer filenames
    columns: 1 = Predicted weather file of simulation
            2 = Irrigation and Fertilizer file of simulation

7th line: Soil hydrology and initial soil fertility filenames
    columns: 1 = Soil hydrology file of simulation
            2 = Initial soil feritlity file of simulation

8th line: Plant growth regulator and insecticide filenames
    columns: 1 = Plant growth regulator file of simulation
            2 =Insecticide file of simulation

9th line:Fungicide and Plant map filenames
    columns: 1 =Fungicide file of simulation
            2 =Plant map file of simulation

10th line: cultural data

    columns: 1 = Latitude

        2 = Number of plants per linear foot

        3 = Width of skip row, in.

        4 = Row spacing, in.

        5 = Number of acres planted, ac

        6 = Variety code

11th to 41th line: Data for COMAX run

15th to 16th line: Frequence and dates for soil and fruit maps

17th line: Output flags

Table 2. Sample soil hydrology data file.

```
'VICMIX2.HYD'
'Victoria-mix clay, King Ranch, TX, TAMU (FDW)'
   2
      0.2999E-04  0.1890E+00  0.7163E+02  0.4190E+00
      0.3420E+00  0.1840E+00  0.1700E+00  0.1530E+01
      0.2999E-04  0.1890E+00  0.7163E+02  0.4190E+00
      0.3420E+00  0.1840E+00  0.1700E+00  0.1530E+01
   47. -0.3170E+00  0.0000E+00  0.1000E+01 -0.3300E+00  999  1000
   25  0.2999E-04  0.1890E+00  0.7163E+02  0.4190E+00
      0.3420E+00  0.1840E+00  0.1700E+00  0.1530E+01  20   60  1000
  201  0.3303E-05  0.1810E+00  0.1119E+03  0.3170E+00
      0.2890E+00  0.1790E+00  0.1770E+00  0.1720E+01  00   00  1000
```

1st line = Soil hydrology data file name (FILNAM)

2nd line = Soil file description (DSCRIP)

3rd line = Number of soil horizons (LYRSOL) i.e., 2

4th line: Data for cultivated condition (will be used in CULVAT routine)
columns: 1 = Diffusivity at -15,000 cm potential (DIFF0C), cm^2day^{-1}
          2 = Volumetric H_2O content at -15,000 cm potential (THTA0C), $cm^3H_2O\ cm^{-3}soil$
          3 = Hydraulic conductance (BETAC), $cm^3H_2O\ cm^{-3}soil$
          4 = Saturated volumetric water content (THETASC), $cm^3H_2O\ cm^{-3}soil$

5th line: Data for cultivated condition (continuation)
columns: 1 = Volumetric water content at field capacity (FCINIC), $cm^3H_2O\ cm^{-3}soil$
          2 = Residual volumetric water content (THTARC), $cm^3H_2O\ cm^{-3}soil$
          3 = Volumetric water content at 'air dry' (AIRDRC), $cm^3H_2O\ cm^{-3}soil$
          4 = Bulk density (BDC), $Mg\ m^{-3}$

6th and 7th lines: Data for wheel traffic condition (same as 4th and 5th lines)

8th line: Data for handling water table presence in the profile
columns: 1 = 'Time days' factor for calculating movement of water table (TD)
          2 = Volumetric water content at field capacity (THETAI), $cm^3H_2O\ cm^{-3}soil$
          3 = Boundary theta slope for calculating movement of water table (BDSLOP)
          4 = Boundary ratio for calculating movement of water table (BDRATO)
          5 = Water potential at field capacity (PSISFC), $cm^3H_2O\ cm^{-3}soil$
          6 = Depth to water table from soil surface (WATTBL), cm
          7 = POINTR

9th line: Data for first soil horizon
columns: 1 = Depth of the layer (LDEPTH), cm
          2 = Diffusivity at -15,000 cm potential (DIFF0), cm^2day^{-1}
          3 = Volumetric H_2O content at -15,000 cm potential (THETA0), $cm^3H_2O\ cm^{-3}soil$
          4 = Hydraulic conductance (BETA), $cm^3H_2O\ cm^{-3}soil$
          5 = Saturated volumetric water content (THETAS), $cm^3H_2O\ cm^{-3}soil$

10th line: Data for first soil horizon (continuation)
columns: 1 = Volumetric water content at field capacity (FCININ), $cm^3H_2O\ cm^{-3}soil$
          2 = Residual volumetric water content (THETAR), $cm^3H_2O\ cm^{-3}soil$

3 = Volumetric water content at 'air dry' (AIRDR), cm^3H_2O cm^{-3}soil

4 = Bulk density (BD), Mg m^{-3}

5 = Percent sand (IPSAND)

6 = Percent clay (IPCLAY)

7 = POINTR

11th line: Data for second soil horizon (same as 10th line)

Table 3. Sample initial soil fertility data file.

```
'DUNDEE1.INT'
'                    '
5    5    1.390000    100
3    7    1.110000    100
3    12   0.840000    100
2    18   0.630000    100
7    16   0.580000    100
8    20   0.580000    100
0    0    0.00E+00     100
0    0    0.00E+00     100
0    0    0.00E+00     100
0    0    0.00E+00     100
0    0    0.00E+00     100
0    0    0.00E+00     100
```

1st line = Initial soil fertility data file name

2nd line = Comment or description

3rd to 14th line: Initial soil ferility and moisture status
    Columns: 1 = Residual ammonium content, lbs N acre[-1]
           2 = Residual nitrate content, lbs N acre[-1]
           3 = Percent organic matter content
           4 = Water content % field capacity

Table 4. Sample Irrigation and Fertilizer data file.

'COLE90.IRR'
'Inputs for Coleman 1990 4th cultivation'
'07/02/90'
  0.000   0.000   0   2   0.750   0
  0.000 30.000 0.000   0.000   1   8   6

1st line = Agricultural inputs data file name

2nd line = Description

3rd line = Calendar date

4th line: Irrigation application and cultivation data
    Columns: 1 = Amount of irrigation water applied, in
             2 = Cost of irrigation water applied, $
             3 = Method of irrigation application used
               Code: 0 = Sprinkler
                     1 = Furrow
                     2 = Drip
                     3 = Alternate Furrow
                     4 = Alternate Drip
             4 = Depth of cultivation, in
             5 = Cost of cultivation, $
             6 = Tire width, in

5th line: Fertilizer applications data
    Columns: 1 = Amount of NH4 fertilizer applied, lbs N acre^{-1}
             2 = Amount of NO3 fertilizer applied, lbs N acre^{-1}
             3 = Amount of urea fertilizer applied, lbs N acre^{-1}
             4 = Total cost of fertilizer applied, $
             5 = Method of fertilizer application used
               Code: 0 = Broadcast
                     1 = Sidedress
                     2 = Foliar
                     3 = Broadcast not incorporated
                     4 = Fertigation
             6 = Horizontal placement of side-dressed fertilizer, in
             7 = Vertical placement of side-dressed fertilizer, in
             8 = Pointer

Table 5. Sample Plant Growth Regulator data file.

```
'kranch97.pgr'
'King Ranch 1997 Precision Farming Project'
'08/15/97'
'PREP'      2     0  0.000  2.000      3
            2     0  0.000  0.000      1
            2     0  0.000  0.000      1
            2     0  0.000  0.000      1
            2     0  0.000  0.000      1
            2     0  0.000  0.000      1
            2     0  0.000  0.000      1
            2     0  0.000  0.000      1
            2     0  0.000  0.000      1
            2     0  0.000  0.000      1
       0
```

1st line = Plant growth regulators data file name

2nd line = Description

3rd line = Calendar date

4th to 13th line: Plant growth regulator applications data
    Columns: 1 = Chemical applied, string
             2 = Method of plant growth regulator application used
                Code: 0 = Banded
                      1 = Sprinkler
                      2 = Broadcast
             3 = Band width of application, in
             4 = Cost of plant growth regulator, $
             5 = Rate of plant growth regulator application
             6 = Units of applied plant growth regulator
                Code: 0 = pts/ac
                      1 = gal/ac
                      2 = oz/ac
                      3 = lb/ac
                      4 = a/lb
                      5 = ac/gal

14th line = Pointer

Table 6. Sample weather data file.

Julian day	Calendar day	Solar Radiation ly	Temperature Max	Min °F	Daily Rainfall in	Wind Run miles d-1
187	'07/06'	513	90	73	0.00	72.30
188	'07/07'	313	83	73	0.02	58.66
189	'07/08'	580	94	73	0.00	58.47
190	'07/09'	642	97	76	0.00	95.90
191	'07/10'	665	97	77	0.00	113.30