Relating error check files is a way of associating an error check file to a string, value, or range from another column. That column is called the Relate to Source Column. A Relate Source column has to be from direct ancestry or a column from the current file. There are two relate types, List and Range.

Any type of error check file may be related. When the error check is performed, The actual data that is stored in the Relate Source Column is checked against the valid entries defined in the relate file. If a match is found, the last column in the relate file contains the error check file name to be used for making the error check. A Separate Error Check File Name is required for each valid entry or range of the relate file. The same error check file name can be used for more than one relate valid entry.

In brief, a relate file is a list of Error Check Files Names to be used for making the error check based on the data present in another column.

We will be using the Forestry App created in the Creating a Basic Application for DataPlus Mobile and the Basic Error Checks for DataPlus Mobile will need to be done before relating errors can be done.

## Forest Error Check Files

Files will be created listing the names of forests. Because each region has its own unique forests within it, we can relate the Forest error check to the data entered in the Region column. This will ensure that only forests from the selected region may be entered. A list file containing the appropriate forests will be created for each region in the Region list file created in Lesson 4, page 24. These will be translated list so a code can be entered to store the abbreviation of the forest.
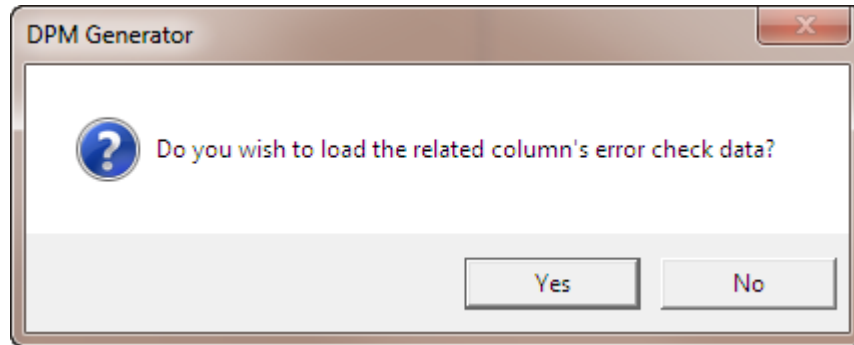
1. Verify that Stand is selected in the Hierarchy window. Select Forest in the Columns window.

2. Select the Error Checks under Column Tabs.

3. Click on the down arrow for Error Check Type and select List File.

4. Click on the Translated box.

5. Click on the down arrow for Relate Check Type and select List. A file listing forests will be created for each region.

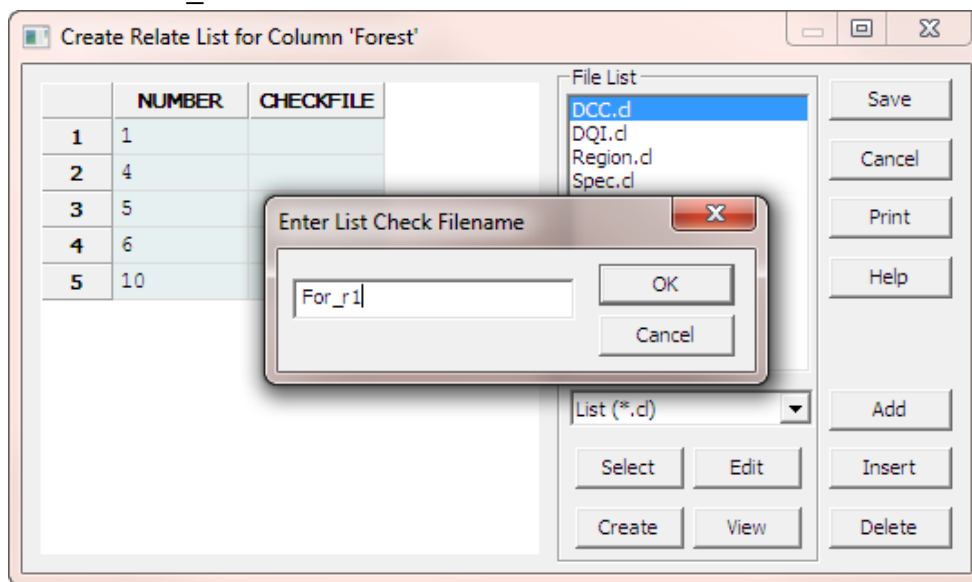6. Click on the down arrow for Relate to Source Column and select Stand.'Region'.
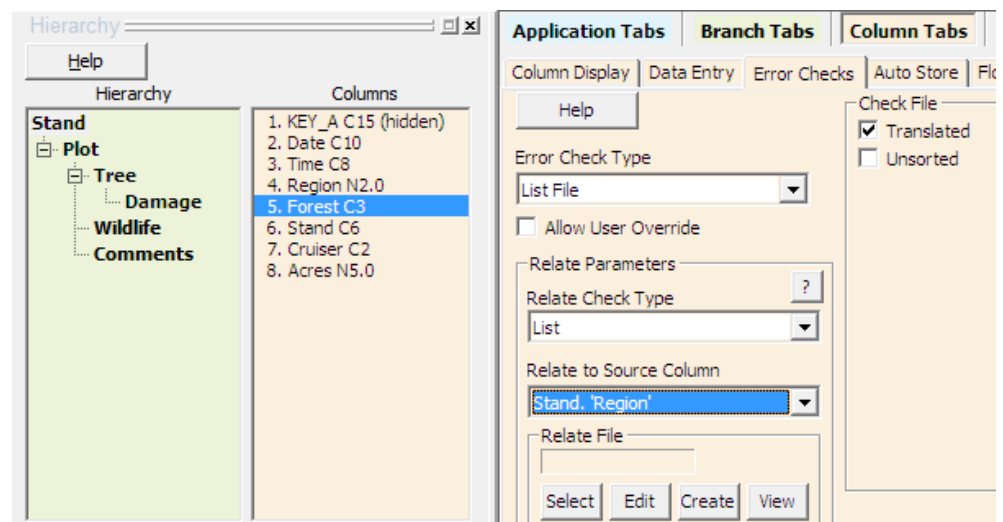
4. Click the Create button.

5. Click OK to accept Forest as the Relate file name.

6. Click Yes to load error check data from the Region column. This will load all of the Region options so the appropriate error check file can be created for each region.

**Enter Relate Filename**

Forest

OK

Cancel

**DPM Generator**

? Do you wish to load the related column's error check data?

Yes     No
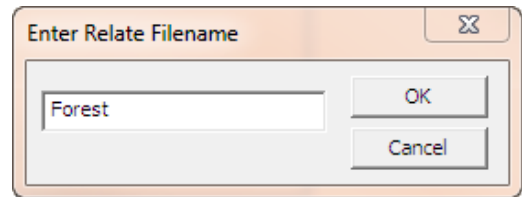
The Create Relate List for Column 'Forest' screen appears with the NUMBER column already loaded from the Region list file.  The CHECKFILE column will contain the file names of associated lists of forests for each region.  There will be five lists, one for each region.

10. Click Create and enter For_r1 as the first list file name.

**Create Relate List for Column 'Forest'**

| | NUMBER | CHECKFILE |
|---|---|---|
| 1 | 1 | |
| 2 | 4 | |
| 3 | 5 | |
| 4 | 6 | |
| 5 | 10 | |

File List
DCC.d
DQI.cl
Region.cl
Spec.cl

Save
Cancel
Print
Help

**Enter List Check Filename**

For_r1

OK
Cancel

List (*.cl)

Select     Edit     Insert
Create     View     Delete

Add
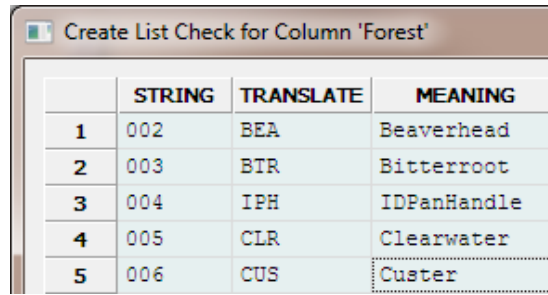
11. Click OK.

12. Click Yes to use a description column.

**DPM Generator**

? Do you wish to use a description column?

Yes     No     Cancel

2
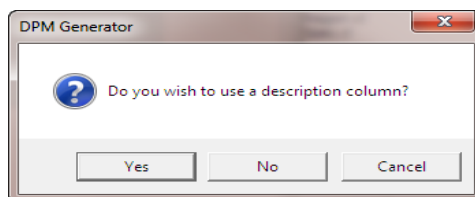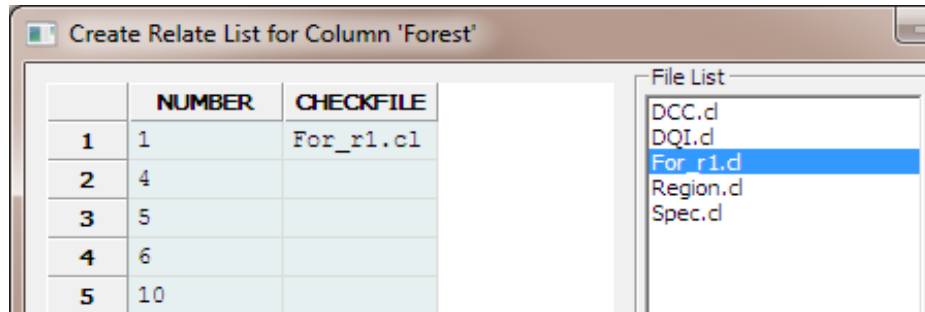
13. Key in the first five rows.

14. Click Save.

**Create List Check for Column 'Forest'**

| | STRING | TRANSLATE | MEANING |
|---|---|---|---|
| 1 | 002 | BEA | Beaverhead |
| 2 | 003 | BTR | Bitterroot |
| 3 | 004 | IPH | IDPanHandle |
| 4 | 005 | CLR | Clearwater |
| 5 | 006 | CUS | Custer |

**Create Relate List for Column 'Forest'**

| | NUMBER | CHECKFILE |
|---|---|---|
| 1 | 1 | For_r1.cl |
| 2 | 4 | |
| 3 | 5 | |
| 4 | 6 | |
| 5 | 10 | |

File List
DCC.cl
DQI.cl
For_r1.cl
Region.cl
Spec.cl

The list file name is shown in the CHECKFILE column and also in the File List window.

15. Press the down arrow to CHECKFILE record 2.

16. Start creating the remaining check files based on the figures on the next page.

17. Click Save.  The relate file is stored as Forest.rcl.

| | NUMBER | CHECKFILE |
|---|---|---|
| 1 | 1 | For_r1.cl |
| 2 | 4 | For_r4.cl |
| 3 | 5 | For_r5.cl |
| 4 | 6 | For_r6.cl |
| 5 | 10 | For_r10.cl |

18. To edit the relate file click Edit on the Error Checks tab.

19. To edit a related list file, select the file in the File List window and click Edit.

Relate File
Forest.rcl

| Select | Edit | Create | View |

3
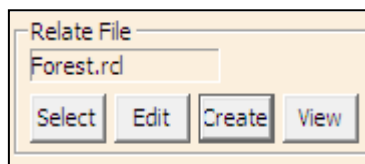
## For_r1

| | STRING | TRANSLATE | MEANING |
|---|---|---|---|
| 1 | 002 | BEA | Beaverhead |
| 2 | 003 | BTR | Bitterroot |
| 3 | 004 | IPH | IDPanHandl |
| 4 | 005 | CLR | Clearwater |
| 5 | 006 | CUS | Custer |
| 6 | 009 | DRL | Deer Lodge |
| 7 | 010 | FLH | Flat Head |
| 8 | 011 | GAL | Gallatin |
| 9 | 012 | HEL | Helena |
| 10 | 014 | KOO | Kootnai |
| 11 | 015 | LWC | Lewis&Clar |
| 12 | 016 | LOL | Lolo |
| 13 | 017 | NEZ | Nez Pierce |

## For_r4

| | STRING | TRANSLATE | MEANING |
|---|---|---|---|
| 1 | 001 | ASH | Ashley |
| 2 | 002 | BOI | Boise |
| 3 | 003 | BT | Bridger-Teton |
| 4 | 005 | CAR | Caribou |
| 5 | 006 | CHA | Challis |
| 6 | 007 | DIX | Dixie |
| 7 | 008 | FIS | Fishlake |
| 8 | 009 | HUM | Humbolt |
| 9 | 010 | MAN | Manti-Lasal |
| 10 | 012 | PAY | Payette |
| 11 | 013 | SAL | Salmon |
| 12 | 014 | SAW | Sawtooth |
| 13 | 015 | TAR | Targhee |
| 14 | 017 | TOI | Toiyabe |
| 15 | 018 | UIN | Uinta |

## For_r5

| | STRING | TRANSLATE | MEANING |
|---|---|---|---|
| 1 | 001 | ANF | Angeles NF |
| 2 | 002 | CNF | Cleveland NF |
| 3 | 003 | ENF | El Dorado NF |
| 4 | 004 | INF | Inyo NF |
| 5 | 005 | KNF | Klamath NF |
| 6 | 006 | LNF | Lassen NF |
| 7 | 007 | LPF | Las Padres NF |
| 8 | 008 | MNF | Mendocino NF |
| 9 | 009 | MDF | Modoc NF |
| 10 | 010 | SRF | Six Rivers NF |
| 11 | 011 | PNF | Plumas NF |
| 12 | 012 | BDF | SanBernadinoNF |
| 13 | 013 | SQF | Sequoia NF |
| 14 | 014 | SHF | Shasta-Trinity |
| 15 | 015 | SNF | Sierra NF |

## For_r6

| | STRING | TRANSLATE | MEANING |
|---|---|---|---|
| 1 | 001 | DES | Deschutes |
| 2 | 002 | FRE | Fremont |
| 3 | 003 | GIP | Gifford Pinch |
| 4 | 004 | MAL | Malheur |
| 5 | 005 | MBS | Mt.Baker-Snoq |
| 6 | 006 | MTH | Mt. Hood |
| 7 | 007 | OCH | Ochoco |
| 8 | 008 | OKA | Okanogan |
| 9 | 009 | OLY | Olympic |
| 10 | 010 | ROR | Rogue River |
| 11 | 011 | SIS | Sikiyou |
| 12 | 012 | SIU | Siuslaw |
| 13 | 014 | UMA | Umatilla |
| 14 | 015 | UMP | Umpqua |
| 15 | 016 | WAW | Wallowa-WhitM |

## For_r10

| | STRING | TRANSLATE | MEANING |
|---|---|---|---|
| 1 | 001 | CHA | Chatham |
| 2 | 002 | STI | Stikine |
| 3 | 003 | KET | Ketichikan |

# Damage Error Check Files

Files will be created listing types of damage for each category. Each file will relate to a line in the **DCC** list file created in Lesson 4, page 25.

1. Select Damage in the Hierarchy window and DQC in the Columns window.

2. Select the Error Checks under Column Tabs.

3. Click the down arrow for Error Check Type and select List File.

4. Click the down arrow for Relate Check Type and select List. A file listing forests will be created for each region.

5. Click the down arrow for Relate to Source Column and select Damage.'DCC'.
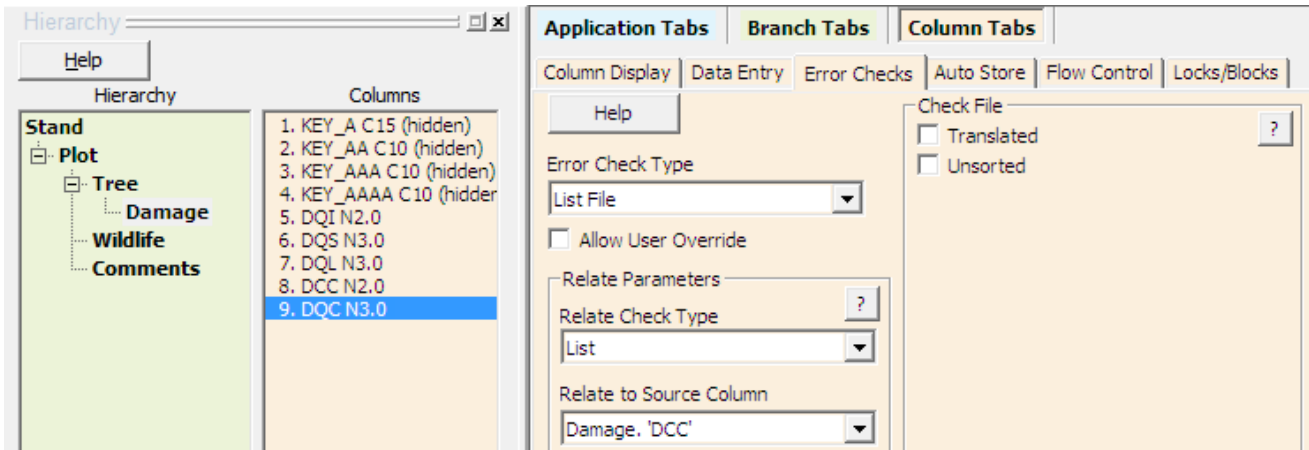


6. Click the Create button.

7. Click OK to accept DQC as the relate file name.

8. Click Yes to load error check data from the DCC column.





5
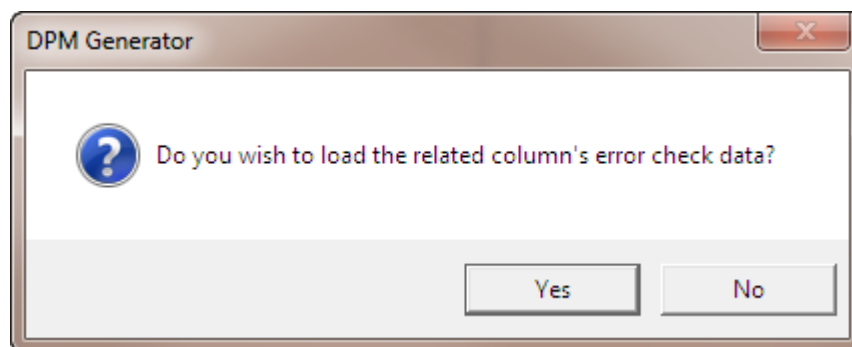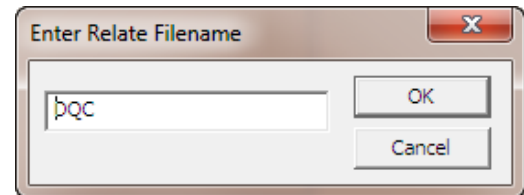
The Create Relate List for Column 'DQC' screen appears with the NUMBER column already loaded from the DCC list file. Each row represents a category. For each category, a file will be created listing possible causes of damage. The CHECKFILE column will have the file names of these lists.

9. Click Create and enter DQC0 as the first list file name.
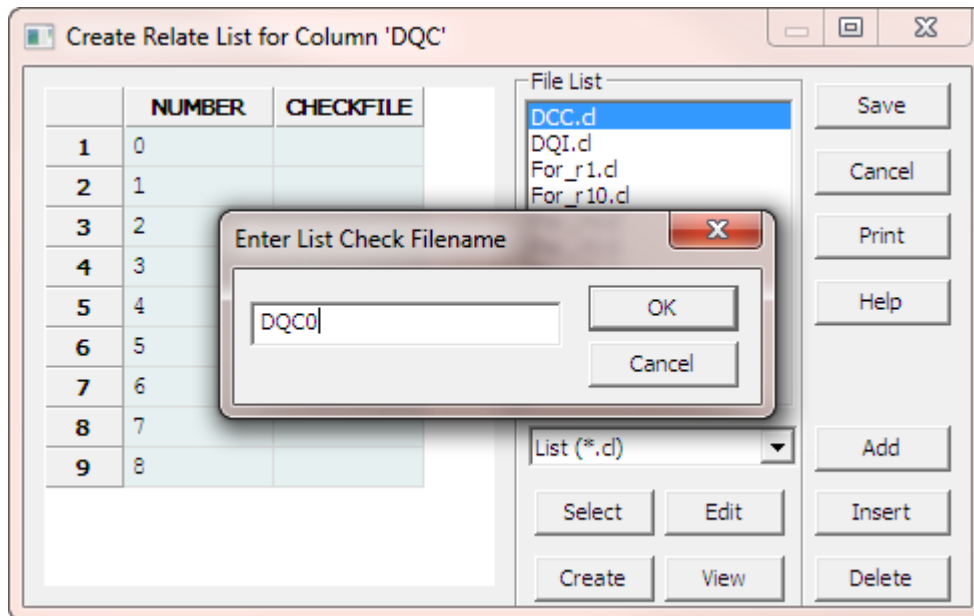


10. Click OK.

11. Click Yes to use a description column.

12. Start creating a file listing damages for category 1. Type "0" in the NUMBER column and "N/A'" in the MEANING column.



13. Click Save.

14. Press the down arrow in the DQC file to record 2.

15. Start creating the remaining check files based on the figures below.



6

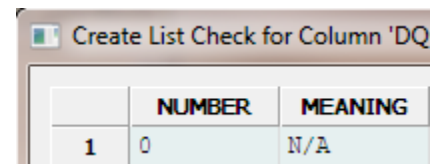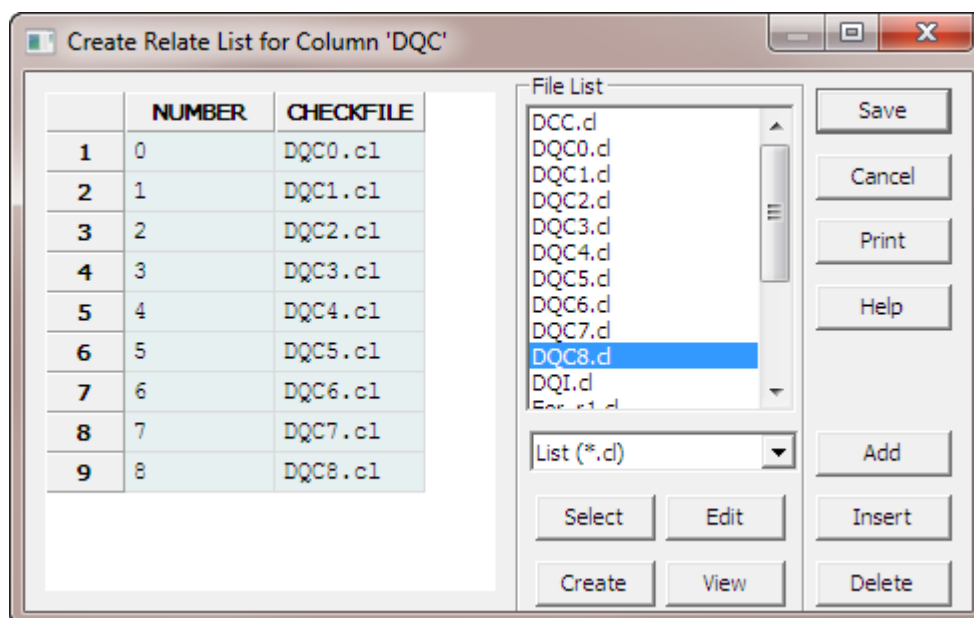16. Click Save. The relate file is stored as DQC.rcl.

17. To edit the relate file, click Edit on the Error Checks tab.

18. To edit a related list file, select the file in the File List window and click Edit.

### DQC1

|   | NUMBER | MEANING |
|---|--------|---------|
| 1 | 1 | Bear |
| 2 | 2 | Deer |
| 3 | 3 | Elk |
| 4 | 4 | Porcupine |
| 5 | 5 | Rabbit |
| 6 | 6 | Beaver |
| 7 | 7 | Livestock |
| 8 | 8 | Cattle |
| 9 | 9 | Rodents |

### DQC2

|   | NUMBER | MEANING |
|---|--------|---------|
| 1 | 10 | Weed Competition |
| 2 | 11 | Component |
| 3 | 12 | Understory |
| 4 | 13 | Overstory |

### DQC3

|   | NUMBER | MEANING |
|---|--------|---------|
| 1 | 14 | Unspecified Fungus |
| 2 | 15 | Fomes Pini |
| 3 | 16 | Fomes Laricis |
| 4 | 17 | Indian Paint |
| 5 | 18 | Sap Rot |
| 6 | 19 | Top Rot |
| 7 | 20 | Cubical Root Rot |
| 8 | 21 | Fomes Annosus |
| 9 | 22 | Poria/Phellinus |
| 10 | 23 | Cronartium r. |
| 11 | 24 | Cronartium h. |
| 12 | 25 | Mistletoe |
| 13 | 26 | Swiss Needle Cast |
| 14 | 27 | Botritis |
| 15 | 28 | Septoria |

### DQC4

|   | NUMBER | MEANING |
|---|--------|---------|
| 1 | 29 | Bark Beetle |
| 2 | 30 | Tip Weevil |
| 3 | 31 | Pales Weevil |
| 4 | 32 | Shoot Weevil |
| 5 | 33 | Wooly Aphid |
| 6 | 34 | Spruce Bud Worm |
| 7 | 35 | Defoliators |
| 8 | 36 | Spruce Weevil |
| 9 | 37 | Aphids |
| 10 | 38 | Big Bud |
| 11 | 39 | Moth |

### DQC5

|   | NUMBER | MEANING |
|---|--------|---------|
| 1 | 40 | Fire |
| 2 | 41 | Natural |
| 3 | 42 | Silvicultural |
| 4 | 43 | Nursery Lifting |
| 5 | 44 | Planting Error |

### DQC6

|   | NUMBER | MEANING |
|---|--------|---------|
| 1 | 55 | Herbicide |
| 2 | 56 | Nutritional |
| 3 | 57 | Genetic |
| 4 | 58 | Landform |

### DQC7

|   | NUMBER | MEANING |
|---|--------|---------|
| 1 | 59 | Unspecified |
| 2 | 60 | Unassessed |

### DQC8

|   | NUMBER | MEANING |
|---|--------|---------|
| 1 | 46 | Frost |
| 2 | 47 | Snow & Ice |
| 3 | 48 | Sun |
| 4 | 49 | Lightning |
| 5 | 50 | Desiccation |
| 6 | 51 | Wind |
| 7 | 52 | Flooding |
| 8 | 53 | Spray Damage |
| 9 | 54 | Salt Intrusion |

# Test Related Error Check Files

1. Click the Compile button.

2. Click the Test button.

3. Click OK on the DPM Test Defaults. Press any key.

4. Verify that Region is selected.

5. Press F2.  A list of choices appears.

6. Press ENTER to select Region 1.

7. Verify that Forest is selected.

8. Press F2.  A list of forests for Region 1 appears.

9. Select  forest and press ENTER.

10. Repeat steps 4 – 8 several times, selecting other regions.  Observe how a different list of forests appears for each region.

```
Date 05/22/2015
Time 07:49:43 Region  5
Forest        Stand
Cruiser       Acres       0

    NU|MEANING
    1|Region 1
    4|Region 4
    5|Region 5
    6|Region 6
   10|Region 10
      < Choices:5 >



 F1-Help F4-Exit F5-Advance
```

```
Date 05/22/2015
Ti  STR|TRA|MEANING
Fo  002|BEA|Beaverhead
Cr  003|BTR|Bitterroot
    004|IPH|IDPanHandle
    005|CLR|Clearwater
    006|CUS|Custer
    009|DRL|Deer Lodge
    010|FLH|Flat Head
    011|GAL|Gallatin
    012|HEL|Helena
    014|KOO|Kootnai
    015|LWC|Lewis&Clark
    016|LOL|Lolo
    017|NEZ|Nez Pierce
       < Choices:13 >
 F1-Help F4-Exit F5-Advance
```

11. Type data into the Stand field.

12. Press the F5 key to move to level 2.

13. Type a Plot number.

14. Press the F5 key to move to level 3.  Press ENTER to select Tree.

15. Type a Tree number.

16. Press the F5 key to move to Damage level 4.

17. Press F2 for a DQI list.

18. Select a damage indicator code and press ENTER.

19. Press ENTER twice to move to the DCC field.

20. Press F2 for a DCC list.

22. Select a damage category code and press **ENTER**.

23. Press **F2** for a corresponding **DQC** list.

24. Select a code and press **ENTER**.

25. Press the down arrow to add a new line.

```
┌────────────────────────────┐   ┌────────────────────────────┐
│ Plot│  1│Tree│   1│Spec│   │   │ Plot│  1│Tree│   1│Spec│   │
│ MerchHght│ 0│                │   │ MerchHght│ 0│                │
│ DQI│DQS│DQL│DCC│DQC│          │   │ DQI│DQS│DQL│DCC│DQC│          │
│   1 ┌─NU│MEANING──────────┐  │   │   1 ┌─NUM│MEANING─────────┐  │
│     │█0│N/A              │  │   │     │█ 1│Bear            │  │
│     │ 1│Animal           │  │   │     │  2│Deer            │  │
│     │ 2│Competition      │  │   │     │  3│Elk             │  │
│     │ 3│Disease          │  │   │     │  4│Porcupine       │  │
│     │ 4│Insect           │  │   │     │  5│Rabbit          │  │
│     │ 5│Mechanical       │  │   │     │  6│Beaver          │  │
│     │ 6│Other            │  │   │     │  7│Livestock       │  │
│     │ 7│Unknown          │  │   │     │  8│Cattle          │  │
│     │ 8│Weather          │  │   │     │  9│Rodents         │  │
│     └──< Choices:9 >─────┘  │   │     └──< Choices:9 >────┘  │
│                             │   │                             │
│   Damage Category (F2)      │   │   Cause of Damage (F2)      │
│                             │   │                             │
└────────────────────────────┘   └────────────────────────────┘
```

26. Press **ENTER** three times to move to the **DCC** field.

27. Repeat steps 19 – 24 several times, selecting other **DCC** codes.  Observe how different corresponding **DQC** lists appear.

28. Press **F4** or **Esc/Y** until you return to the Application Generator.

29. Click **Application/Exit** to save application **CRUISE** and close the Application Generator.