This project book is designed to help senior level 4-H members learn and practice the skills necessary to compete in district, state, and national 4-H forestry judging contests. Forestry judging consists of the following:

- Tree identification
- Forest evaluation
- Tree measurements
- Insect identification
- Compass traverse
- Forestry written exam
- Topographic map reading
- Disease identification
- Forestry quiz bowl

To complete this project book, complete the score sheet provided in each section and participate in a forestry bowl or written exam.

**Contests**

Most Extension districts have a qualifying contest before the state contest. The location and date of these contests vary from year to year, but they are usually held in April and May. The state contest is usually held in May or June.

**Eligibility**

Forestry judging teams consist of 3 or 4 members. Senior members must be age 14-19 on January 1 of the contest year. Juniors must be age 9-13 on Jan. 1. Contact the 4-H Extension agent in your county before forming a team.

**National Contest**

The national contest is held at the West Virginia State 4-H Camp near Weston, West Virginia, the last week of July. The winning team at the state contest represents Virginia at this contest.

**For More Information**

Virginia Forestry Judging: [http://www.ext.vt.edu/resources/4h/environment/forjudging/](http://www.ext.vt.edu/resources/4h/environment/forjudging/)

National Forestry Judging: [http://www.aces.edu/N4HFI/](http://www.aces.edu/N4HFI/)

**Other Competitive Programs in Natural Resources**

Envirothon: [http://www.ext.vt.edu/resources/4h/environment/envirothon/](http://www.ext.vt.edu/resources/4h/environment/envirothon/)

Soils Judging: [http://www.ext.vt.edu/resources/4h/plantsoil.html](http://www.ext.vt.edu/resources/4h/plantsoil.html)

## OFFICIAL TREE IDENTIFICATION LIST

Contestants need to identify trees in their natural setting or from specimens. All trees will be taken from the official list.

### Monocotyledons
- cabbage palmetto

### Dicotyledons

#### Gymnosperms
*(Conifers or Softwoods)*
- balsam fir
- white fir
- noble fir
- incense-cedar
- Rocky Mountain juniper
- eastern redcedar
- tamarack
- white spruce
- blue spruce
- red spruce
- Sitka spruce
- lodgepole pine
- shortleaf pine
- pinyon pine
- sugar pine
- longleaf pine
- ponderosa pine
- red pine
- pitch pine
- eastern white pine
- loblolly pine
- Virginia pine
- Douglas-fir
- giant sequoia
- redwood
- baldcypress

#### Angiosperms
*(Broadleaf Trees or Hardwoods)*
- Pacific yew
- northern white-cedar or arborvitae
- western redcedar
- eastern hemlock
- western hemlock
- balsam fir
- white fir
- noble fir
- incense-cedar
- Rocky Mountain juniper
- eastern redcedar
- tamarack
- white spruce
- blue spruce
- red spruce
- Sitka spruce
- lodgepole pine
- shortleaf pine
- pinyon pine
- sugar pine
- longleaf pine
- ponderosa pine
- red pine
- pitch pine
- eastern white pine
- loblolly pine
- Virginia pine
- Douglas-fir
- giant sequoia
- redwood
- baldcypress
- box elder
- red maple
- silver maple
- sugar maple
- Ohio buckeye
- red alder
- yellow birch
- sweet birch
- paper birch
- river birch
- pignut hickory
- pecan
- shagbark hickory
- mockernut hickory
- hackberry
- flowering dogwood
- common persimmon
- American beech
- white ash
- honeylocust
- American holly
- butternut or white walnut
- black walnut
- sweetgum
- yellow-poplar or tuliptree or tulip-poplar
- cucumbertree
- southern magnolia
- red mulberry
- black tupelo or blackgum
- sycamore
- eastern cottonwood
- quaking aspen
- black cherry
- white oak
- scarlet oak
- southern red oak
- water oak
- bur oak
- northern red oak
- black oak
- live oak
- black locust
- black willow
- sassafras
- American basswood
- American elm

### Notes
# Tree Identification Score Sheet

<table>
<thead>
<tr>
<th>No.</th>
<th>Common Name</th>
<th>Correct + 5</th>
<th>Misspell - 1</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Contestant’s Score**
OFFICIAL LIST OF INSECTS AND DISEASES

Leaf Feeders
European pine sawfly
redheaded pine sawfly
hemlock woolly adelgid
pine needle scale
locust leafminer
eastern tent caterpillar
fall webworm
forest tent caterpillar
gypsy moth
Japanese beetle
Douglas-fir tussock moth
whitemarked tussock moth

Meristem Feeders
white pine weevil
Nantucket pine tip moth

Bark Feeders
Ips engraver beetles
southern pine beetle
mountain pine beetle
Asian longhorned beetle
bronze birch borer
emerald ash borer
locust borer
red oak borer
smaller European elm bark beetle
twolined chestnut borer

Other Feeders
balsam woolly adelgid
beech scale
pales weevil
periodical cicada

Beneficial Insects
caterpillar hunter beetle
checkered beetle

Diseases of the trunk and stems
beech bark disease
black knot
chestnut blight
fusiform rust
Hypoxylon canker
Nectria canker
white pine blister rust
white trunk rot of birch

Diseases that appear on leaves
brown spot needle blight
dogwood anthracnose
Dutch elm disease
oak wilt

Diseases that appear as mushrooms
annosus root rot
artist conk
red heart

Other special growths
cedar-apple rust
dwarf mistletoe
lichens

Notes

____________________________________________________________________
____________________________________________________________________
____________________________________________________________________
____________________________________________________________________
____________________________________________________________________

____________________________________________________________________
Virginia 4-H ☺

4
# Insect and Disease Identification Score Sheet

<table>
<thead>
<tr>
<th>Team</th>
<th>Contestant’s Name</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>No.</th>
<th>Common Name</th>
<th>Correct + 5</th>
<th>Misspell - 1</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Contestant’s Score
COMPASS TRAVERSE

For this part of the contest you will need to pace off distances and determine your line of travel. A course will be set out for you at the contest.

Materials needed

• Compass (azimuth, 360-degree type is recommended)
• Calculator

Determine the length of one pace

Walk a 100-foot line. How many paces did it take you? ______________

How many feet are in one pace? (Divide by 100) ______________

Compass Traverse Score Sheet

<table>
<thead>
<tr>
<th>Team</th>
<th>Contestant’s Name</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Line</th>
<th>Azimuth or Bearing</th>
<th>Points (0-10)</th>
<th>Distance</th>
<th>Points (0-10)</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-B</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B-C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C-D</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D-E</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E-F</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total Score

Ten points are awarded for each correct answer, or 100 points total. Deduct 1/2 point for each degree error in azimuth or bearing, up to 10 points per line. Deduct 1/2 point for each foot of error up to 10 points per line.
TOPOGRAPHIC MAP CONTEST

For this part of the contest, you will be using a 7.5 Minute Series topographic map. You will 1) identify natural and man-made features, 2) determine the length of a line established between two points, 3) determine the true bearing between those points, using your compass, and 4) adjust or “correct” that bearing so you know the line of travel to take with a compass that does not adjust for declination.

<table>
<thead>
<tr>
<th>Team</th>
<th>Contestant’s Name</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Map Symbol or Feature</th>
<th>Possible Points</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>G</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>J</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>K</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>L</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Distance</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Map Direction</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Compass Direction</td>
<td>8</td>
<td></td>
</tr>
</tbody>
</table>

Contestant’s Score

Note: Answer distance to the nearest 100 ft. Points are awarded only for correct answers.
**Forest Evaluation Score Sheet**

Team | Total Score (400 possible)
--- | ---

### I. Site Evaluation
Circle applicable items for A, B, C, and D below. Stay in the same column as you progress through the table. Correct answers are worth 15 points each.

<table>
<thead>
<tr>
<th>A. Depth of Soil</th>
<th>Deep - 24 inches or more</th>
<th>Shallow - less than 24 inches</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>B. Slope Percent</strong></td>
<td>Rolling 0-20%</td>
<td>Steep 21-40%</td>
</tr>
<tr>
<td>NE</td>
<td>SW</td>
<td>NE</td>
</tr>
<tr>
<td><strong>C. Aspect</strong></td>
<td>NE</td>
<td>SW</td>
</tr>
<tr>
<td><strong>D. Slope Position</strong></td>
<td>Bottom</td>
<td>I</td>
</tr>
<tr>
<td>Lower 1/3</td>
<td>I</td>
<td>II</td>
</tr>
<tr>
<td>Middle 1/3</td>
<td>I</td>
<td>II</td>
</tr>
<tr>
<td>Upper 1/3</td>
<td>II</td>
<td>III</td>
</tr>
</tbody>
</table>

E. Forest Land Capability Class (Circle one of the following):

- I = Excellent
- II = Good
- III = Fair
- IV = Poor

Part I Score (75 possible): __________

### II. Stand Evaluation
Check all that apply. A - E are worth 10 points each. F is worth 20 points.

<table>
<thead>
<tr>
<th>A. Grazing Damage?</th>
<th>Grazed _____</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ungrazed _____</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>B. Fire Damage?</th>
<th>Unburned _____</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wildfire _____</td>
<td></td>
</tr>
<tr>
<td>Prescribed burn _____</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>C. Size Distribution</th>
<th>(may be more than one answer)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reproduction _____</td>
<td></td>
</tr>
<tr>
<td>Sapling _____</td>
<td></td>
</tr>
<tr>
<td>Pole _____</td>
<td></td>
</tr>
<tr>
<td>Sawtimber _____</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>D. Forest Type</th>
<th>Hard Pine _____</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oak-Hickory _____</td>
<td></td>
</tr>
<tr>
<td>White pine-hemlock_____</td>
<td></td>
</tr>
<tr>
<td>Cove Hardwoods _____</td>
<td></td>
</tr>
<tr>
<td>Oak-Gum-Cypress _____</td>
<td></td>
</tr>
<tr>
<td>Northern Hardwoods _____</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>E. Stand Origin</th>
<th>Seedling _____</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sprout_____</td>
<td></td>
</tr>
<tr>
<td>Mixed _____</td>
<td></td>
</tr>
<tr>
<td>plantation _____</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>F. Stocking</th>
<th>Under Stocked _____</th>
</tr>
</thead>
<tbody>
<tr>
<td>Well Stocked _____</td>
<td></td>
</tr>
<tr>
<td>Over Stocked _____</td>
<td></td>
</tr>
</tbody>
</table>

Part II Score (70 possible): __________
III. Forest Inventory: 1/10 acre plot (37.3-foot radius). Each column is worth a maximum of 30 points.

<table>
<thead>
<tr>
<th>Tree #</th>
<th>Species</th>
<th>Crown Class*</th>
<th>DBH (2” class)</th>
<th># Logs**</th>
<th>Bd.-Ft Vol.***</th>
<th>Tree Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Plot Values

Per-acre Values (30pts ±5%; 25pts ±10%; 20pts ±15%)

* Crown Class: D = dominant; C = co-dominant; I = intermediate; and S = suppressed
** Minimum 1 log; measure to the nearest 1/2 log; minimum top = 8”.
*** Use volume table provided by your leader.

Part III Score (180 possible): __________

IV. Practices Recommended for Landowner’s Objectives: Fill in the blank or check all that apply.

Which species would you favor on this site? ________________________________

___ Protect the area from wildfire. Report any fire by calling 911
___ Clear-cut the stand and plant with a desirable species
___ Conduct a shelterwood or seed-tree harvest
___ Use Best Management Practices and Sustainable Forestry Guidelines
___ Manage stand for nontimber products
___ Conduct a selection harvest
___ Manage stand for wildlife habitat improvement
___ Stand is not yet merchantable, leave alone to grow
___ Conduct a prescribed burn
___ Clear-cut the stand and allow for natural regeneration
___ Manage stand for recreational opportunities
___ Conduct a salvage or sanitation cutting
___ Fence the area from livestock
___ Conduct a thinning

Part IV Score (75 possible): __________
These two events require knowledge and understanding of forestry. The most important facts, laws and definitions are listed below. You should also study the 4-H Forest Program Guide, Unit A (Trees) and Unit B (Forests), both available from your Extension agent.

Forestry Facts
1. Trees depend upon water, soil nutrients, sunlight, and air for growth.

2. Climate, soil, and topography influence the natural range and distribution of forest communities.

3. America’s forests cover about 737 million acres, or 32% of the nation’s land area.

4. Private individuals own about 59% of the U.S. forest land base; local, state, and federal governments own about 27%; and the forest products industry owns about 14%.

5. Growth rates exceed harvest rates in American’s forests by a wide margin. In 1992, net growth was 21.6 billion cubic feet vs. harvest of 16.3 billion cubic feet.

6. About 33% of America’s forests are preserved in wilderness areas, national parks, wildlife refuges, and other parks where no commercial activity is permitted.

7. The United States is a net importer of wood and wood products.

Forestry Laws
1. Multiple Use - Sustained Yield Act of 1960 - Established a policy of multiple use, sustained-yield management for the renewable resources of the National Forest System.

2. Clean Air Act of 1963 - Gave the federal government enforcement powers over air pollution.

3. Wilderness Act of 1964 - Established the National Wilderness Preservation System by setting aside sections of federal forest land as wilderness.

4. National Environmental Policy Act of 1969 - Required federal agencies to prepare environmental impact statements for any actions significantly affecting the environment.


Glossary

Aspect - A compass reading taken facing down a slope in the direction water would run.

Clinometer - Height measuring device.

Conservation - Gifford Pinchot, a forester closely associated with Teddy Roosevelt, applied this word to describe a natural resource philosophy. It means “wise use.”

Crown Classes -

- Dominant - Trees with crowns that extend above the average of the tree crowns and receive light from directly above and some from the sides.

- Co-dominant - Trees with crowns that form the general level of the crown cover and receive full light from the top, but very little from the sides.

- Intermediate - Trees that are shorter than the two preceding classes but with some branches extending into the general crown cover. Receive little light from above and none from the sides.

- Suppressed - Trees with crowns entirely below the general crown level. Receive no direct light either from above or below.

Cull - Tree or log of merchantable size, but no market value.

DBH - Diameter of a tree at breast height or 4-1/2 feet above ground.

Duff - Freshly fallen leaves, twigs, and slightly decomposed organic matter, leaf litter.

Germination - When a viable seed meets favorable conditions and begins to grow.

Girdle - To chop or remove a strip of bark or a section of wood containing the food-carrying tissue of a tree in an even strip from the perimeter of the tree or twig.

Multiple Land Use - A term used to indicate the management of timber, wildlife, and recreation in an integrated, consolidated program.

National Forests - National lands that are managed for multiple uses and sustained yield. Timber, water, wildlife, recreation, and grazing are compatible uses.

National Parks - National lands that are managed primarily for recreation and preservation.
Glossary (continued)

Pole Timber - A young tree that is 3” to 12” in DBH.

Reproduction - A natural establishment of seedlings or sprouts 0 to 1” DBH.

Sanitation Cutting - The removal of dead, damaged or susceptible trees; essentially to prevent the spread of pests or pathogens and so promote forest hygiene.

Sapling - A young tree 1” to < 3” DBH.

Seedling - A tree grown from seeds.

Silviculture - The establishment, development, care, and reproduction of forests.

Sprout - A tree originating from a root or stump.

Stocking - A measure of the proportion of the area actually occupied by trees.

Streamside Management Zone (SMZ) - A buffer of land adjacent to a water body or stream where soils, organic matter, and vegetation are managed to protect water quality.

Sustained Yield - Forest management for a constant supply of timber and revenue.

Timber Stand Improvements (TSI) - A practice designed to improve a stand of timber by removal of vines, culls, and undesirable species.

Wildfire - Fires burning out of control regardless of how or why they were started.

Wolf Tree - A tree that occupies more than its fair share of growing space.

Indicate the date(s) of forestry bowls, written exams, field days, or contests you have participated in:

_____________________________________________________________________________

_____________________________________________________________________________

_____________________________________________________________________________

_____________________________________________________________________________

_____________________________________________________________________________

_____________________________________________________________________________

_____________________________________________________________________________

_____________________________________________________________________________

_____________________________________________________________________________

_____________________________________________________________________________

_____________________________________________________________________________

_____________________________________________________________________________

_____________________________________________________________________________

_____________________________________________________________________________

_____________________________________________________________________________

2004  420-125

Virginia Cooperative Extension programs and employment are open to all, regardless of race, color, religion, sex, age, veteran status, national origin, disability, or political affiliation. An equal opportunity/affirmative action employer. Issued in furtherance of Cooperative Extension work, Virginia Polytechnic Institute and State University, Virginia State University, and the U.S. Department of Agriculture cooperating. Judith H. Jones, Interim Director, Virginia Cooperative Extension, Virginia Tech, Blacksburg; Lorenza W. Lyons, Administrator, 1890 Extension Program, Virginia State, Petersburg.