**2011 National FFA Forestry CDE**

Forest Management Evaluation - Timber Stand Improvements (TSI) and/or Thinning Practicum

Mr. J.G. Smith has a wooded property that he is managing primarily for high quality hardwood timber production. It is a mixed hardwood forest. The primary crop species are red oak, white oak and black walnut. His secondary objective is wildlife habitat consideration since he is an avid squirrel and turkey hunter.

The stand in question is currently overstocked, with a heavy maple understory. As Mr. Smith’s forester, you need to determine whether the marked trees should be:

A. Harvested (harvest – utilize the tree)

B. Leave (the tree should remain for good reason, left to grow)

C. Deaden (undesirable trees, not merchantable or beneficial to wildlife, should be deadened or cut down and left in the woods)

**Landowner Objectives:**

• Manage for oak and walnut for current and future hardwood markets.

• Reduce the maple understory in the stand to increase growth of future crop trees.

• Open the canopy to encourage oak regeneration.

• Increase the quality of wildlife habitat.

**Markets Available**

The markets available in this region include hardwood veneer and saw logs. There is no pine or pulpwood market in this region. Black walnut and oak have the highest timber value. Maple, ash, hickory, and yellow poplar have medium timber value. Cottonwood, elm, and pine have little to no timber value. With the decline in new housing starts, homeowners have turned to remodeling their houses. Therefore the yellow poplar market has increased to provide trim for the remodeling projects.

**Wildlife considerations**

Tree species that produce hard mast (nuts) are very important to turkeys, squirrels and other wildlife. The nuts (acorns, hickory nuts, walnuts) provide an excellent food source for many animals in the forest.

**Management plan**

The minimum merchantable dbh (diameter at breast height) for quality hardwoods in this area is 16” and greater. Any trees with a dbh less than 16“ cannot be harvested with the exception of yellow poplar. The trim market is accepting yellow poplar 12” dbh and up.

The boundaries of this stand are marked with blue and white striped flagging. There are twenty marked trees in the stand. Each tree will be numbered (with both a sign and pink flagging with the number written on it) which corresponds to the number on the answer sheet.

Marked tree diameters are included on the back of this sheet.

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Diameters (dbh) of marked Trees

|  |  |
| --- | --- |
| Tree # | Tree dbh |
| 1 | 25" |
| 2 | 14" |
| 3 | 21" |
| 4 | 38" |
| 5 | 23" |
| 6 | 2" |
| 7 | 23" |
| 8 | 4" |
| 9 | 10" |
| 10 | 6" |
| 11 | 4" |
| 12 | 4" |
| 13 | 16" |
| 14 | 9" |
| 15 | 20" |
| 16 | 11" |
| 17 | 9" |
| 18 | 12" |
| 19 | 14" |
| 20 | 20" |

|  |  |  |
| --- | --- | --- |
| Tree Number | Tree dbh | Management Decision |
| 1 | 25" | Harvest |
| 2 | 14" | Leave |
| 3 | 21" | Harvest |
| 4 | 38" | Harvest |
| 5 | 23" | Harvest |
| 6 | 2" | Deaden |
| 7 | 23" | Deaden |
| 8 | 4" | Deaden |
| 9 | 10" | Deaden |
| 10 | 6" | Deaden |
| 11 | 4" | Deaden |
| 12 | 4" | Deaden |
| 13 | 16" | Harvest |
| 14 | 9" | Deaden |
| 15 | 20" | Harvest |
| 16 | 11" | Deaden |
| 17 | 9" | Deaden |
| 18 | 12" | Leave |
| 19 | 14" | Deaden |
| 20 | 20" | Harvest |

**KEY**