

Upland Wildlife Habitat Management-

Mast Tree Release NH Job Sheet

NH-645

Scenarios:

This practice can be planned on a per acre basis (at least 20 trees released per acre) which is typical for Oak stands, or planned as each tree (upland wildlife habitat), which is more applicable for apple trees where 6 or so trees may be scattered in the woods.

Mast Tree Release Requirements Checklist

- ✓ Expose as much of the crown's surface area to sunlight as possible
- ✓ Productive sites with good soils
- ✓ Healthy trees with large crowns that are dominant or co-dominant (figure 1).
- ✓ 20 trees or more per acre or use "each" scenario
- ✓ Develop groups the same species
- ✓ Focus on trees 10-20" dbh for release (6" dbh minimum).
- ✓ Space spacing should be at least 20-30 feet apart but not more than 100 ft
- ✓ For pole stands 4-9" dbh use forest stand improvement
- ✓ Avoid stands well stocked with straight saw timber trees- (Ash, Sugar Maple, Yellow Birch, Black Birch, Paper Birch, Oak, and White Pine)
- ✓ Remove canopy competition on 3-4 sides (see figure 2)
- ✓ Focus on oak, black cherry, hickory, apples, and disease free beech
- ✓ select areas where native understory shrubs will benefit
- ✓ select areas where hard wood regeneration especially of oak is a goal.
- ✓ refrain from this practice if it will encourage invasive plants in the understory.
- ✓ Don't cut cavity trees or snags, retain perch trees for raptors
- ✓ Retain seed trees of other desired species, White Pine, Yellow, Black, or White Birch, Sugar Maple, Red Spruce, Balsam Fir. Opening from this practice will improve regeneration of these species.
- ✓ Focus on Beech trees with claw marks and which are relatively free of beech bark disease. Diseased stands don't produce mast for more info see: *VT ANR Management Guidelines for Optimizing Mast Yields in Beech Mast Production Areas*

Release Techniques and Guidelines

1. Look up into the canopy at the mast tree you want to release.
2. Identify undesired competing trees, those with crowns that are touching or within a couple feet of the mast tree's crown. (Focus on cutting poor quality trees, crooked, diseased, or other trees with low commercial value).

3. Released mast trees should have at least 10-20 feet of open area around them at least on three sides. Clumps of two or three similar species are ok.

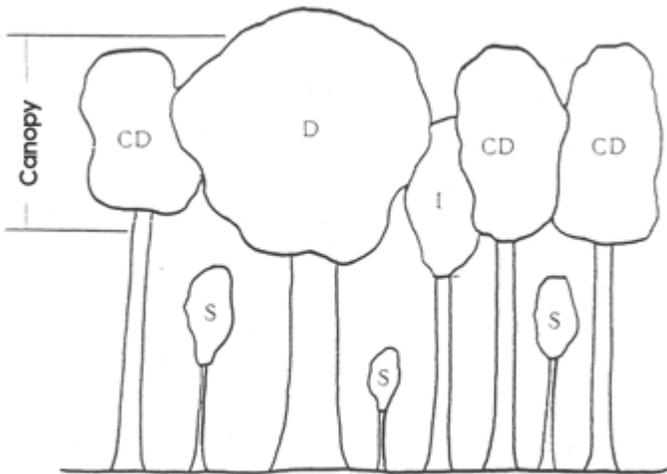


Fig. 1 - Crown Classes (Maryland DNR Image)

Dominant (D) – Trees receive full sunlight from above and some from the sides, crown extends above canopy

Co-dominant (CD) – Trees receive full sunlight from above and partial sunlight from the sides, forms the general level of the canopy crown cover

Intermediate (I) – Shorter than D and CD, little direct sunlight from above and usually none from the sides

Suppressed (S) – Crowns entirely below canopy, little to no direct sunlight

Above: Focus on cutting Dominant and Co-dominant species > 12” dbh to release mast. Suppressed and Intermediate species should be cut if regeneration of different species is a goal or to improve mast production of understory shrubs.

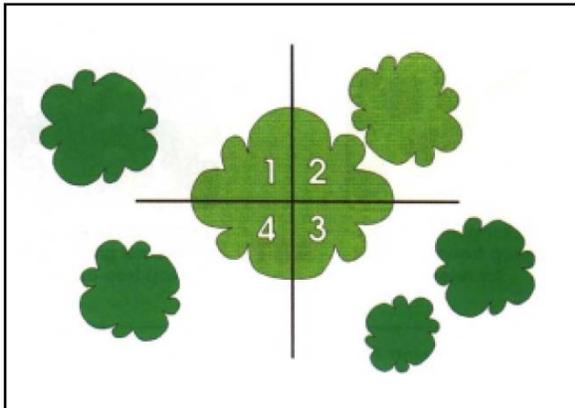


Figure 2 left shows the mast tree with four quadrants drawn, where the only competition is in quadrant two. This tree is released on “three sides” and does not need further release. (Image USFS Crop Tree Management in Eastern Hardwoods).



Left – Dual crown of mast trees that was released on all four sides (2 crowns treated as one)
Right – Mast tree which is released on two sides and needs at least one of the co-dominant competing trees removed. - USFS

