

## Plant Management and Wildlife Enhancement Activity – PLT07 – Hardwood Crop Tree Release



### **Crop Tree Release (CTR) in Hardwood Stands**

CTR is a silvicultural technique used to enhance the health and productivity of individual trees, while improving other resources such as wildlife habitat, recreation, timber value, and aesthetics.

### **Benefits**

CTR is a practice that shortens the harvest rotation of desirable crop trees by selectively cutting or killing less desirable competing trees in younger, overstocked forests. Additional wildlife benefits include increased mast and forage production, and habitat diversification both at ground and canopy levels.

### **Land Use Applicability**

This enhancement is applicable on forest land

### **Criteria for Crop Tree Release**

The CTR enhancement is applied to young, pre-commercial stands (trees that are too small for market), with diameters ranging from 4 to 8 inches (measured at 4.5 feet above the ground). In older larger diameter forest stands it is a commonly used commercial practice that is not included in this enhancement.

CTR should be applied to the best forest sites, with a suitable number of desirable trees retained. Usually between 25-35 crop trees per acre are needed to merit application of the activity. Suitable species may vary by state or region or according to the landowner's objective. However, species found within the white and red oak groups traditionally have a high market value and wildlife value and should be top priority for retention and release.

Crop tree release is achieved by cutting or killing all trees whose crowns touch the crown of the crop tree on three to four sides. Special note: cut/kill only those trees whose crowns are affecting the crop trees. Trees that are in-between or below and not affecting the crop trees should be retained. These additional trees help to protect crop trees from wind damage, epicormic branching (unwanted branching on the lower bole) and provide diversity for wildlife habitat.

It is important to identify crop trees with good future growth potential. This includes desirable species, with good form (straightness) and grade (lack of defects). Crop tree crowns should be in the upper level of the forest canopy, and not suppressed by other tree crowns. Availability of sunlight is often the most limiting factor for tree growth. When crowns of adjacent trees touch each other, growth rate is reduced. By cutting/killing unwanted trees whose crowns are touching the crown of crop trees, more space is created for crown expansion. Dead trees may be left standing to provide wildlife habitat or cut down to become downed dead wood on the forest floor

which is beneficial to wildlife and for nutrient recycling and improved soil quality. However, the dead trees should not be removed from the forest.

**Documentation Requirements for Crop Tree Release (CTR)**

- Identify the objectives for the treatment, i.e. what trees will be retained for crop trees.
- Brief written documentation detailing the pre-treatment conditions and the post-treatment conditions.
- Representative digital images/photos of the area showing before and after treatment conditions.