

Plant Enhancement Activity – PLT07 –Hardwood crop tree release



Enhancement Description

Crop Tree Release (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.

Land Use Applicability

Cropland and forestland

Benefits

Crop Tree Release 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. Selection of crop trees looks at 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. Cutting or killing unwanted trees whose crowns are touching those crowns of crop trees, provides more space for crown expansion. Dead trees left standing provide wildlife habitat or when cut down become downed dead wood on the forest floor which is beneficial to wildlife and for nutrient recycling and improved soil quality.

Criteria

1. The CTR enhancement is applied to:
 - a. Young, pre-commercial stands (trees that are too small for market), with average stand size diameters ranging from 4 to 8 inches (measured at 4.5 feet above the ground)
 - b. Mature stands of trees with an overstocked understory
2. Development of a CTR plan that:
 - a. Prioritizes the most productive forest sites for treatment first
 - b. Identifies the number of crop trees to be retained, between 25-35 crop trees per acre.
 - c. Identifies targeted species as determined by NRCS state office, e.g. white and red oak or other species that have a high market value and provide wildlife benefits.
 - d. Incorporates the landowner's objectives for the forest
3. Crop tree release is accomplished by:
 - a. Identifying and marking crop trees from those trees to be removed. Selection is based on the impact of crowns touching the crop tree's crown on three or four sides
 - b. Marked trees will be cut for harvest or killed using approved methods within in the state
 - c. Trees that are below the crown of the crop tree or in-between and are not affecting the crown will be left to provide protection from wind damage, epicormic branching and maintain diversity for wildlife habitat.



United States Department of Agriculture
Natural Resources Conservation Service

2011 Ranking Period 1

Documentation Requirements

1. Copy of CTR
2. Map locating forested area (s) that CTR activities were performed
3. Representative digital images/photos of the area showing before and after treatment conditions

ALABAMA SUPPLEMENT TO ENHANCEMENT PLT07 HARDWOOD CROP TREE RELEASE

Name Of Crop Tree	Habitat	Wildlife Crop Tree Value
Black Cherry	Most commonly found on deep, rich, moist soils in mixed stands with oaks, ashes, hickories, and yellow poplar; less commonly on sandy soils.	Mast Production: Black cherry fruits are an important source of mast for many nongame birds, squirrel, deer, turkey, and other wildlife.
White Oak	Variable, but attaining largest size on moist, rich soil usually in admixture with other species; also found in commercial size and abundance on sandy soils and stony ridges.	Mast Production: White oak acorns are highly preferred though inconsistent source of food for songbirds, squirrel, raccoon, and deer.
Scarlet Oak	On dry, light, sandy soils in association with upland oaks and hickories.	Mast Production: Scarlet oak acorns are choice food for eastern gray squirrels, chipmunks, wild turkey, deer, and several species of birds – especially blue jays and redheaded woodpeckers.
Black Oak	An upland tree on dry slopes and ridges or on moist, rich soil in mixed stands, rarely on rich bottomlands.	Mast Production: In forest stands, black oak begins to bear fruit at age 20 and reaches optimum production at 40 to 75 years. It is a consistent seed producer with good crops of acorns every 2 to 3 years.
Chestnut Oak	A tree of hillsides and mountain slopes. On poor, dry, thin, rocky soils, forming pure open stands; on better sites, usually occurring in admixture with other species, notably numerous oaks and hickories.	Mast Production: Chestnut oak acorns are a preferred though inconsistent source of food for songbirds, turkey, squirrel, raccoon, and deer.

Other species include: Cherrybark oak, Northern Red oak, Willow oak, Water oak, Black Walnut, Shagbark hickory, Mockernut hickory, Pignut hickory, Yellow-Poplar, and Ash.

This list serves as a general guide for tree species to select from applying the Hardwood Crop Tree Release. Depending on your specific objective (timber, wildlife, or a combination of the two) some species should be favored over others. The specific site will also determine which species should be favored.

For additional information refer to the references below.

References:

Guide to Southern Trees, Ellwood S. Harrar and J. George Harrar, 1946.

Crop Tree Field Guide, USDA Forest Service, 2001

