

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

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

The following tree species are suitable crop trees to target for crop tree release:

<i>Acer nigrum</i>	black maple
<i>Acer rubrum</i>	red maple
<i>Acer saccharinum</i>	silver maple
<i>Acer saccharum</i>	sugar maple
<i>Aesculus glabra</i>	Ohio buckeye
<i>Betula allegheniensis</i>	yellow birch
<i>Carya cordiformis</i>	bitternut hickory
<i>Carya glabra</i>	pignut hickory
<i>Carya laciniosa</i>	shellbark hickory
<i>Carya ovata</i>	shagbark hickory
<i>Celtis occidentalis</i>	northern hackberry
<i>Fagus grandifolia</i>	American beech
<i>Gleditsia triacanthos</i>	honeylocust
<i>Gymnocladus dioicus</i>	Kentucky coffeetree
<i>Juglans cinerea</i>	butternut
<i>Juglans nigra</i>	black walnut
<i>Liriodendron tulipifera</i>	tuliptree
<i>Nyssa sylvatica</i>	blackgum
<i>Platanus occidentalis</i>	American sycamore
<i>Populus deltoides</i>	eastern cottonwood
<i>Prunus serotina</i>	black cherry
<i>Quercus alba</i>	white oak
<i>Quercus bicolor</i>	swamp white oak
<i>Quercus coccinea</i>	scarlet oak
<i>Quercus ellipsoidalis</i>	northern pin oak
<i>Quercus macrocarpa</i>	bur oak
<i>Quercus muehlenbergii</i>	chinkapin oak
<i>Quercus palustris</i>	pin oak
<i>Quercus rubra</i>	northern red oak
<i>Quercus velutina</i>	black oak
<i>Salix nigra</i>	black willow
<i>Tilia americana</i>	American basswood
<i>Ulmus americana</i>	American elm
<i>Ulmus rubra</i>	slippery/red elm
<i>Ulmus thomasii</i>	rock/cork elm

All enhancement activities must meet the NRCS Michigan Forest Stand Improvement (666) conservation practice standard and all other applicable conservation practice standards in the eFOTG, Section IV.