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
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.

Documentation Requirements

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

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Reference:

666 – Forest Stand Improvement

The following is a list of target species for Crop Tree Release (CTR). There may be other species appropriate for this enhancement. Verify with the local Field Office regarding tree species not included on this list.

Scientific Name	Common Name
Hardwoods	
Acer saccharum	sugar maple
Betula papyrifera	paper birch
Carya cordiformis	bitternut
Carya ovata	shagbark hickory
Fraxinus nigra	black ash
Fraxinus pennsylvanica	green ash
Juglans nigra	black walnut
Populus balsamifera	balsam poplar
Populus tremuloides	aspen
Prunus serotina	black cherry
Quercus alba	white oak
Quercus macrocarpa	bur oak
Quercus rubra	northern red oak
Quercus ellipsoidalis	northern pin oak
Tilia americana	basswood (American linden)