

SPECIFICATIONS FOR

OAK SAVANNA

Site Conditions/Description: on till plain, typically mollisols, trees either as scattered individuals or scattered clumps; tree cover 10-70%; understory vegetation typical of wet or dry prairie depending on site conditions; currently some may still have tree component but herbaceous layer is primarily *Poa* or other introduced grasses due to grazing, lack of fire; similar to sand barrens found in Oak Openings region of northwest Ohio and barrens on older till in Adams County

Geographic Area: Part or all of Champaign, Clark, Crawford, Fayette, Franklin, Logan, Madison, Marion, Pickaway, Union, Wyandot counties; other areas in west central Ohio

Restoration Methods:

Degraded systems (some remnant species still present)

- Prescribed burning to encourage prairie species and eliminate undesirable trees.
- Cut or chemically treat unwanted brush; remove brush after it is killed.
- Remove excessive or unwanted trees.
- Plant areas opened by burning or tree/brush removal with desirable grasses and forbs.
- Plant trees of appropriate size and species, if lacking. Use the following list to select species. First consideration should be given to primary species from list below, if missing.
- Restore natural hydrology, if possible.

Bare ground

- Establish herbaceous vegetation—use following lists for species; mixes should include at least 4 species of grass; Use diverse mixes, locally adapted seed; relatively low rates of grasses (no more than 4-5 lbs PLS per acre); initially, forbs should be seeded at least 1 lb/acre
- Species selected must be adapted to site conditions, particularly drainage class
- Plant trees—use following lists for species, at least two species, more than 50% primary species; use large plants 3 feet, 0.5 in caliper minimum, low densities (25-40 per acre), plant both as scattered individuals and clumps
- Restore natural hydrology, if possible.
- Initial management using fire, herbicides, mowing or combinations

Management:

Fire is critical to these systems. If they cannot be burned, savanna establishment should not be seriously considered. Initially, burn every year (if sufficient fuel) then every 3-4 years; protect young trees until 3-6" dbh. Low intensity fires are best. Burning should be done during the dormant season. Burn areas may be rotated around the site after establishment is complete. Mowing or grazing are very poor alternatives, but can be used with intense management. If mowing is used, plant residue must be removed.

Recommended Species

Species will be selected based on adaptation to site conditions and likelihood that they were part of original plant community in that area. Sources of information may include local or regional experts, published information on oak savannas in the area and species present on remnant sites in the area.

Trees

Bur Oak*	<i>Quercus macrocarpa</i>
White Oak*	<i>Quercus alba</i>
Post Oak	<i>Quercus stellata</i>
Swamp White Oak	<i>Quercus bicolor</i>
Black Oak*	<i>Quercus velutina</i>
Red Oak	<i>Quercus rubra</i>
Shingle Oak	<i>Quercus imbricaria</i>
Pin Oak	<i>Quercus palustris</i>
Shellbark Hickory	<i>Carya lacinosa</i>
Shagbark Hickory	<i>Carya ovata</i>
American Elm	<i>Ulmus americana</i>
Persimmon	<i>Diospyros virginiana</i>

* Primary tree species; at least 50% of trees must be these species; on wetter sites, black and white oak may be replaced by pin and swamp white oak

Shrubs

Wild Plum	<i>Prunus americana</i>
Hazelnut	<i>Corylus americana</i>
Prairie Rose	<i>Rosa setigera</i>

Grasses

Big Bluestem	<i>Andropogon gerardii</i>
Little Bluestem	<i>Schizachyrium scoparium</i>
Indiangrass	<i>Sorghastrum nutans</i>
Switchgrass	<i>Panicum virgatum</i>
Sideoats Grama	<i>Bouteloua curtipendula</i>
Canada Wildrye	<i>Elymus canadensis</i>

Forbs

This is a partial list of species commonly expected to occur on oak savannas. More species may be selected based on other available information.

Nodding Wild Onion	<i>Allium cernum</i>
Indian Hemp	<i>Apocynum cannabinum</i>
Sullivant's Milkweed	<i>Asclepias sullivantii</i>
Butterfly Weed	<i>Asclepias tuberosa</i>
Whorled Milkweed	<i>Asclepias verticillata</i>
Aster	<i>Aster ericoides</i>
Smooth Aster	<i>Aster laevis</i>
New England Aster	<i>Aster novae-angliae</i>
Large White False-Indigo	<i>Baptisia leucantha</i>
Partridge-Pea	<i>Cassia fusciculata</i>
Tall coreopsis	<i>Coreopsis tripteris</i>
Tick-trefoil	<i>Desmodium canadense</i>
Illinois Tick-trefoil	<i>Desmodium illinoiense</i>
Spotted Joe-pye Weed	<i>Eupatorium maculatum</i>
Flowering Spurge	<i>Euphorbia corollata</i>
Giant Sunflower	<i>Helianthus giganteus</i>
Saw-toothed Sunflower	<i>Helianthus grosseserratus</i>
Bush Clover	<i>Lespedeza capitata</i>
Blazing Star	<i>Liatris scariosa</i>
Pale Striped Lobelia	<i>Lobelia spicata</i>
Wild Bergamot	<i>Monarda fistulosa</i>
Common Sundrops	<i>Oenothera fruticosa</i>
Obedient Plant	<i>Phytostegia virginiana</i>
Virginia Mountain-mint	<i>Pycnanthemum virginianum</i>
Prairie Coneflower	<i>Ratibida pinnata</i>
Black-eyed Susan	<i>Rudbeckia hirta</i>
Prairie Dock	<i>Silphium terebinthinaceum</i>
Whorled Rosinweed	<i>Silphium trifoliatum</i>
Gray Goldenrod	<i>Solidago nemoralis</i>
Stiff Goldenrod	<i>Solidago rigida</i>
Purple MeadowRue	<i>Thalictrum dasycarpon</i>
Glaucous Spiderwort	<i>Tradescantia ohioensis</i>
Blue Vervain	<i>Verbena hastata</i>
Western Ironweed	<i>Vernonia fasciculata</i>