



Photo by Gene Barickman, USDA, Natural Resources Conservation Service

Introduction:

Savannas are characterized by widely spaced, open grown trees with a prairie-like understory. Although this community may have been more common in the northern two-thirds of the state, savanna or open woodland was present throughout much of Illinois. This job sheet will provide the information necessary to restore the plant species appropriate for your site and the management necessary for the savannas' health.

Species selection and sources:

Attached is a specification sheet with the trees, shrubs, grasses, and forbs (wildflowers) to be planted and the seeding and planting rates for each species. These species have been selected for the specific type of savanna that is being restored and for the soil, moisture and other characteristics of the site. Do not substitute species without making sure that it is an appropriate substitute. There are at least two tree species, 5 grasses and 10 forbs to provide some of the diversity of the savanna type that is being restored. More species make it an even more diversified community closer to that of a native Illinois savanna.

Seed should originate from within a 100-mile radius of the site where possible. Commercial sources specializing in locally collected and propagated seed are listed in the publication *Prairie Establishment and Landscaping* by William E. McClain, 1997. Technical Publication #2. Illinois Department of Natural Resources. An updated version of this list can be accessed at:

<http://dnr.state.il.us/conservation/naturalheritage/prairie/appen2.htm>.

Seedbed preparation and seeding:

Soil tests and supplemental fertility such as lime and fertilizer are not required for this practice. Seeding will be performed within the seeding dates listed on the attached specification sheet. It is recommended that the forbs be planted first during late fall and early winter when soil and air temperatures will remain cold enough to prevent germination. It is recommended that the grass component be seeded one year after the forb seeding using the no-till method. This allows the forbs to establish without competition from aggressive tall grass species.

Conventional seedings

Prepare a smooth, firm seedbed at a minimum depth of three inches using tillage methods most suited to the soils of the site. Place seed at a depth not to exceed two times the seed diameter, with a grassland drill equipped with a double disc opener, depth control mechanism, and seed covering device(s). Grain drills and cultipacker-type seeders are acceptable if the seed delivery mechanism is designed to handle the type of seed being planted.

No-till seedings for spring, and dormant seeding periods

Approved burndown herbicides shall be used to kill or suppress existing vegetation where necessary. A seed drill designed for no-till seedings will be used. No-till grain drills are acceptable if the seed delivery mechanism is designed to handle the type of seed being used.

Tree stock and planting:

Tree planting stock will be at least 3 feet tall with at least ½-inch caliper. The large initial size is required to facilitate their protection from fire, and reduce competition from grass. It is recommended that container grown air root pruned stock be used because these seedlings have thick fibrous roots as opposed to a large taproot, which may be difficult to plant. Seedlings will be planted by hand or using an auger at least 12 inches in diameter. Soil will be firmly packed around seedling roots. Weed barrier fabric squares (4 feet by 4 feet or larger) can be used to control competing vegetation. Planting will occur between October 1 and when the ground freezes. Planting may continue in early spring as soon as the ground can be worked and no later than April 25th.

Management recommendations:

The first growing season mow when necessary to control weeds. Keep mowing height above seedlings. After the first year, the prairie part of the savanna is best managed by the use of prescribed fire. Savanna is a plant community that developed with and is maintained by fire. Prescribed burning may be conducted the first few years, if there is enough fuel to carry a fire, to stimulate the prairie plants and control weeds and volunteer woody plants. After this period, prescribed burning should be conducted every three to four years. For wildlife considerations, divide the area into smaller management units and burn only 20 -30 percent of the area each year. Vegetation should be controlled within a two-foot radius of the trees to reduce competition. The planted trees must be protected from fire until they reach

a size resistant to fire, usually four to six inches in diameter at breast height. To protect small trees during a prescribed burn rake the fuel away from the trees and/or carefully "burn out" an area around the trees. Use burning techniques such as the "backfire" method to keep flame heights low and further protect small trees. Prescribed burning shall take place during the dormant season (late fall to early spring). Burn only with an approved burn plan. Use spot mowing or spraying to control noxious weed problems. Woody vegetation not part of the savanna restoration should be controlled and not allowed to shade out the prairie plants or overtop the trees selected to become part of the savanna.

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Sketch of the planting site (or attached map/aerial photograph)

