

Grand Mere Native Plant Establishment and Management



One of the great things about living in Grand Mere is the community's integration with its natural surroundings. Below is a list of helpful tips to establish and manage the natural grass stands that are desirable as a buffer between manicured lawns and the golf course or between manicured lawns and existing native landscapes. We'd like to thank Dr. Clenton Owensby of Kansas State for putting together a complete document explaining each of these steps.

A short primer listing the major steps involved in establishing a native stand follows.

When seeding an area to native, use the Grand Mere Mix produced by Star Seed Company, Osborne, KS (785-738-8415). Most local landscape contractors can supply this mix, but be sure and insist on the Grand Mere Mix rather than a generic "native grass" or "CRP" mix.

Seed the mixture in mid April to mid May.

Seeding should be at a 1 inch depth using 6-8 lbs of live seed per acre if done with a special grassland drill. If broadcasted by hand use 9-12 lbs of seed.

Do not mow area until the following spring.

Do not use any herbicides the first year.

Have patience! Weeds will be crowded out by native grass and forbs in about 3 years.

The details of why and how the process works are as follows.

Seeding Time. The best time to seed the mixture is in mid April to mid May. That insures that there is the best chance for the soil to remain wet after germination which allows for roots to sprout and establish a seedling. Supplemental irrigation will greatly enhance establishment if feasible on small areas. If seeding occurs in June, then without supplemental irrigation failure is

likely. There should be no seeding after June. Fall and winter seeding will not produce as good a stand as spring seedings and may be total failures.

Seedbed Preparation. Success of the seeding is determined largely by the amount of competition from annual weeds, particularly grassy annuals. The best seedbed generally has some vegetative litter on the surface and minimal disturbance prior to seeding. Disturbance such as tillage immediately prior to seeding light treats unwanted annual seeds and leads to an enormous increase in their germination and competition. Seeding with a special drill through the undisturbed litter layer increases seeding success. The litter reduces evaporation from the upper portion of the soil and improves germination and establishment. If an area is so small that using a grassland drill is not practical, the mix can be broadcast seeded into a clean tilled area followed by raking to bury the seed. Fall seeding of annual ryegrass will protect the area from erosion. The following spring, the annual ryegrass should be killed using glyphosate (Roundup) followed by seeding through the dead litter with a grassland drill.

Seeding Depth. Grass seeds are very small and therefore must be planted at a 1-inch depth. Deeper plantings will reduce establishment, and very shallow plantings will cause the plant to germinate and be killed when the soil dries rapidly.

Seeding Rate. The recommended rate for seeding native mixes using a grassland drill is 6-8 lbs. of pure live seed per acre. Pure live seed is calculated by multiplying the germination times the purity. If the area is to be broadcast seeded, the seeding rate should be increased by 50%.

Management Following Seeding. The general rule of thumb for managing a native plant seeding is to do nothing. Initially, in the summer following seeding, the area will look like a weed patch, and the tendency is to believe it is a failure. You may even want to control the weeds by using a herbicide or mowing. Neither of these will improve the chances for a successful seeding. Indeed, they likely will reduce the native plant establishment. The next spring in mid March, mowing of the old growth will speed the establishment of the native species. Because there are native forbs in the mixture, mowing later than that will reduce their amount in the stand. By the end of the 3rd year, the native warm-season grasses will be the dominant plants there. The word here is patience. Just because you do not see the native grasses, that does not mean they are not there. They take time to fully establish. Each spring in mid March, the old growth should be removed. There should not be any other mowing during the first three years.

Management of an Established Stand. After the first three years, the greatest threat to the stand is allowing too much old growth to accumulate. That will cause the stand to thin and allow erosion between established plants. It is necessary for the plants to get light to their bases to stimulate tillering which thickens the stand and protects against erosion. Plants grow by using carbon compounds fixed by the leaves. If an area is mowed frequently, then the native species will be replaced by weedy grasses and herbaceous dicots. The area can be mowed once prior to mid July, however, there should be no mowing during the last half of the summer. Native plants store food reserves for next year's growth in the late summer. If the area is

mowed in mid August to mid September, the stored reserves will be used to grow new leaves in the late summer and fall and the native grasses will go into the winter with a very low food reserve and may die or have very slow growth the next spring and will not be able to compete with weedy invaders.

There is a decided potential for native vegetation to be invaded by woody plants. Any woody plant invasion should be treated with a herbicide while there are few plants there. Once they have developed a large colony, they are difficult and expensive to kill. Do not use a non-selective herbicide such as glyphosate. Non-selective herbicides will also kill the native grass and native wildflowers. It is best to contact the Riley County Agricultural Extension Agent for herbicidal recommendations unless you know exactly what the invasive plant is and how to deal with it.

The tallgrass prairie had fire as a natural part of management during its development. If your area is contiguous with the native areas surrounding the golf course, it would be advantageous to work with Colbert Hills to include your native area in any burns they may do in the future. Any burn activity must be permitted by the Manhattan Fire Department.

In summary, a management plan for established native grass should look like this:

Mow to 6-8 inches in late spring.

Selectively treat invasive woody plants and other unwanted plant materials with proper herbicide as directed by manufacturer's labels.

Appendix:

Grand Mere Native Plant Seeding Mixture.

	pls (lb/acre)
• Kaw Big Bluestem	1.5
• Cheyenne Indiangrass	1.5
• Cimarron little Bluestem	1.0
• El Reno Sideoats Grama	1.5
• Blackwell Switchgrass	0.5
• Upright Prairieconeflower	0.1
• Maximilian Sunflower	0.1
• Purple Prairieclover	0.1
• Blackeyesusan	0.1
• Grayheaded Coneflower	0.1