

Guidelines for Establishing a Prairie

"Low maintenance." It is a phrase often associated with prairies and other restored natural areas and the reason many individuals, corporations and agencies choose this type of landscape. Prairies, however, are not completely low maintenance until they are mature. This takes about three years, during which a number of important steps must take place. Starting with site selection and continuing through the first years of management, careful attention to these steps will ensure a successful landscape, providing low-maintenance beauty for years to come.

Site Selection

Prairies thrive in sunny, open areas. When selecting a site, look for areas with maximum sun exposure and lack of competition. Trees, especially those with a high surface root density like maple and basswood, shade out prairie species and compete for soil nutrients and water. Spruce and most other conifers are not good in prairies.

Site Preparation

The amount of ground preparation needed depends on what is growing on your site. The primary objective is to clear the site of existing vegetation. If you are starting with a clear site, simply rake the open soil lightly. This improves the condition of the seed bed, giving seeds a better chance to germinate and grow.

Seeds broadcast into existing vegetation have relatively little chance of success. If weeds, turf or other vegetation currently exist on your site, they will need to be eliminated. The most effective way to clear the site is with a Glyphosate herbicide such as Roundup. Because it is a non-residual, contact herbicide, Roundup does not continue its herbicidal activity in the soil. Be sure to follow all label directions.



Allow 10 to 21 days after herbicide application before disturbing the vegetation with other procedures. If the existing vegetation was tall and/or dense it will be necessary to remove the dead plant material. It can be burned off or it can be mowed and then mulched or raked away. To create a seed bed of freshly worked soil, roto-till the area to a depth of 1-4 inches.

At this point, you can rake the soil to create a smooth, firm seed bed. However, weed seeds frequently lie dormant beneath the soil surface and germinate after they have been exposed. If your area was initially densely populated with weeds, especially problem weeds such as quack grass, thistle, leafy spurge or sweet clover, we recommend you repeat the spray/till process to further eliminate these weeds before planting. After the first tilling, allow the weed seeds to germinate and begin growing. Then repeat the spraying and tilling process as described above. This second round is optional, but does produce a cleaner seed bed. Finally, rake the soil to create a smooth, firm seed bed.

Seeding and Planting Dates

Prairie seed can be planted in the spring or fall. The best time to seed in Minnesota is from spring thaw through early August. In the fall, seeding can take place from September 20 through freeze-up. On prepared seed beds on sites with little competition, winter seeding can also be effective.

Potted seedlings can be planted anytime from spring thaw to freeze-up, although those planted in mid-summer may require supplemental watering.

Seeding

Hand broadcasting is the simplest and most reliable method of seeding. Adjustable hand-held spreaders may work with the grass seed although they tend to get plugged. Wildflower seed should always be hand broadcast.



The key to a successful seeding is seed to soil contact. Soil contact helps the seeds retain moisture, which is necessary for germination, and provides a substrate for seedling growth. Spread grass seed first. To ensure even coverage, divide the seed in half and broadcast the first half over the entire area. Work slowly. Broadcast the second half at a perpendicular angle to the first seeding. Lightly rake the grass seed into the soil.

Wildflower seed should be broadcast last and can be spread evenly or concentrated in bands or swaths across your prairie area. Much of this seed is quite small. Spreading it thinly will produce the best results. Do not rake in the flower seeds. Watering at this point is helpful but not necessary.

Planting

If you are including potted seedlings in your prairie landscape, these should be added after seeding. Seedlings can be planted throughout the site or in designated areas of the

project. Ideally, natural rainfall will provide enough water, but dry weather during the first 10 days may necessitate supplemental watering.

Mulching

While mulching is not required, it does provide some erosion control and aids in soil moisture retention. Mulch lightly (soil visible through mulch) with clean oat or wheat straw. Make sure not to use hay, because it contains seeds you do not want to introduce to your area. Cover crops of oats or wheat can also be used to reduce erosion and discourage competitive weeds the first year.

Maintenance

A prairie landscape takes time to develop, requiring patience and careful management the first few years. However, if your prairie was planted correctly and you follow these maintenance instructions, your prairie will mature into a unique, self-sustaining natural landscape.

Year one

Most prairie plants are perennials. Although perennial seeds will germinate the first year, the young seedlings' root growth will be two to three times their above-ground growth, and they may not flower until the second or third year. While this lack of visual growth can be frustrating, keep in mind that it is the strong root system of prairie perennials which enables them to be nearly maintenance-free at maturity.



During this early stage of growth, weeds will take advantage of the lack of above-ground vegetation and appear on your site. To minimize the effects of tall weeds shading prairie seedlings and to prevent these weeds from setting seed, you should plan to cut your planting one, two, or even three times during its first growing season. This is generally done on 30-day intervals using a scythe, mower or line trimmer. Scything is often best, as the cutting height should be kept between five to eight inches. Mowing is also effective, but it is important to keep the blade set as high as possible. Hand weeding is also useful during the first growing season, especially to remove individual noxious weeds. These and invading woody plants may have to be treated with spot spraying. At no time should fertilizers be used. Prairie plants are well-adapted to their environment and do not need fertilization. This expensive, time-consuming and often environmentally unfriendly procedure is not only unnecessary on a natural landscape but is detrimental because it can encourage weeds and other undesirable vegetation.

Year two

During the second season, residual seeds from the first season will germinate and some of the faster-growing native plants will flower and produce seed. There might still, however, be a need for weed control and one mowing might be necessary sometime between mid-June and mid-August. The height and density of the weed cover should help determine if and when to mow. In areas where weeds are especially dominant, the advantages of cutting the weeds and preventing them from setting seed offset any disadvantages of cutting prairie plants. Spot spraying might still be necessary this year.



Year three

By the third year (and in the years to follow) your patience will begin to pay off. Both grasses and flowers will be mature, providing beautiful, low-maintenance returns. One cutting per year can be used as a clean-up procedure. The best time to cut off old prairie vegetation is in early May or late November (after you've enjoyed the gold, lavender, russets, and maroons of an autumn prairie). In areas where prairie plants were especially tall and dense, mulch or rake away the dead plant material.

Fire is another method of removing old prairie thatch. In natural prairie ecosystems, fire not only gets rid of accumulated thatch, it also helps reduce woody plant invasion and stimulates the growth of many native grasses and wildflowers. Rotation between prescribed burns and cutting is ideal for prairies and savannas. Keep in mind that a controlled burn is a useful maintenance tool, but requires some expertise. Be certain to check local regulations and permit procedures and, when burning, always use caution. If you would like to have your prairie burned, but prefer not to do it yourself, give us a call and we will discuss doing the burn for you.