

Additional Information

Native grass plantings are flammable in early spring and late fall. Maintain adequate fire breaks between the prairie and trees, shrubs, and buildings.

Seed sources vary from local remnant prairies to commercially grown cultivars which may have sources in other states. Using local seed sources helps to preserve the genetic biodiversity and supports local businesses.

Seeding rates vary—contact your supplier for recommendations. For a typical one-acre grass and wildflower planting, eight pounds of pure live seed grasses and 1/2 pound mixed wildflower seed will give good results. If you desire more color, seven pounds of grasses and one pound of wildflowers will result in a diverse and colorful prairie.

Although seed costs are more expensive than lawn grasses, a native grass and wildflower planting is less expensive to maintain and reduces pollution resulting from mowing, trimming, spraying, etc. Once established, they never need watering and should never be fertilized.

Be patient! Prairie plantings take 3 to 5 years to mature. Your native grass and wildflower planting will be unique and will vary from year to year as plants mature and naturally re-seed.

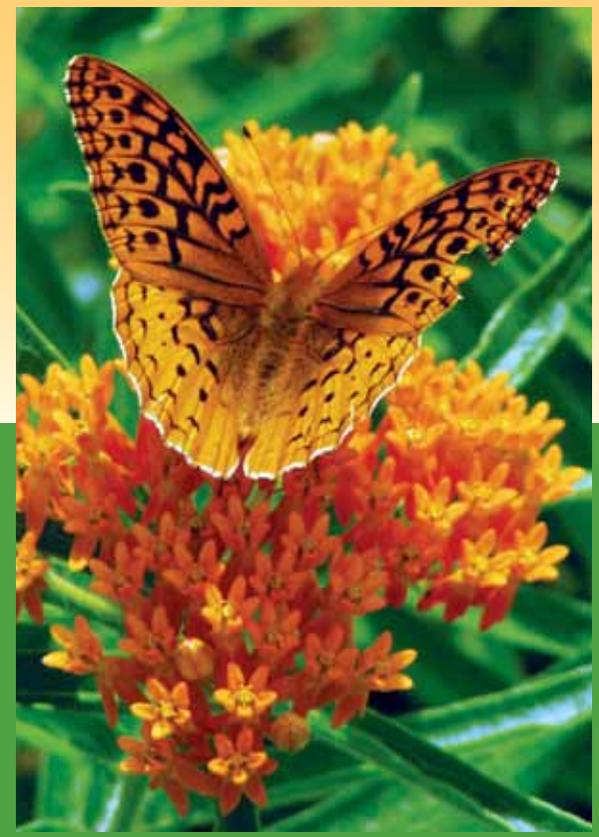
It is not usually a good idea to mix trees in with prairie plantings, Oak Savanna restorations being an exception to the rule.

For further information contact your local natural resources professional.

- MN Department of Natural Resources
- MN Soil & Water Conservation Districts
- local native seed and plant providers
- various sportsmen's & conservation clubs

Cover photo: Mike Halvorson MNDNR
© 2011 Minnesota Department of Natural Resources

ESTABLISHING Prairie Grasses and Wildflowers



Planting native prairie species has become increasingly popular in recent years for wildlife habitat, aesthetics, Farm Bill programs or lawn reduction.



Establishing Prairie Grasses and Wildflowers

This handout is designed to give a quick overview of the steps necessary to successfully establish native prairie species. Native seed and plant suppliers, natural resource professionals and landscaping companies will be happy to supply you with specific recommendations for your planting project.



Mike Halvorson MNDNR

A diverse mix of prairie grasses and wildflowers. Prairies are beautiful and attract many species of wildlife, yet require diligence and perseverance to establish.

Most important:

- pre-seeding weed control and site prep
- quality seed and installation

Diversity is crucial to the sustainability of the ecosystem. The more diverse your planting, the more wildlife your prairie will be able to support throughout the year. Diversity increases food and cover opportunities for wildlife and enhances the beauty of the site.

Site Selection

Prairie plantings will grow best if they receive full sunlight most of the day. Prairies will thrive on a variety of soils—wet, dry, fertile, nutrient poor, rocky, or sandy.

Site Preparation

Site preparation varies significantly depending on local soils and the current vegetation type. Old non-native pastures are the most difficult to prepare because of the intense weed pressure, whereas soybean stubble is the easiest.

The key to establishing prairies is to remove all existing vegetation before planting, either through conventional plowing and disking, prescribed burning, or herbicide application (glyphosate, i.e. Roundup®). A combination of the above methods may be used to increase the success of planting. Ideally, cultivated sites should be packed prior to seeding.

Native remnant prairies should never be plowed or sprayed! These sites need special management. To learn how to identify or manage a remnant prairie please call your local DNR office for information.

The goal of site preparation is to remove weed problems *before* planting. The biggest problem weeds include thistles, quack grass, brome grass and reed canary grass. Two years of tillage and/or chemical applications may be necessary on these sites to bring these perennial weeds under control.

Annual weeds generally are not a problem with a well-managed mowing regime and will usually drop out by the third year.



MNDNR

In established prairies, burn no more than 1/3 to 1/2 of the available habitat.

Basic Steps for Native Prairie Establishment

(timing is approximate)

- **Year 0**
Site prep to remove perennial vegetation.
- **Fall Year 0**
Seed native grasses and flowers.
- **Spring/Summer Year 1**
Seed grasses and flowers (stratified seed*) if not seeded the fall before. **MOW! MOW! MOW!** Keep site mowed to a height of 6 inches.
- **Spring Year 2**
Clip to a height of 6-8 inches at least once when growth reaches 12 to 16 inches. Do not let weeds produce seed.
- **Fall Year 2**
Mow fire breaks 3 times the height of the prairie vegetation (approximately 15 feet wide), between planting and adjacent, flammable areas.
- **April 15-May 15 Year 3**
Burn or mow area before growth begins.
- **Future Years**
Spot treat perennial weeds, burn or early mow every 3-5 years, or burn one-third of the site each year.

* **Stratified seed:** seed that has been exposed to a period of moist cold to encourage spring germination (fall seeding will have the same effect).

Maintenance

Your prairie planting will need help the first few years to compete with undesirable weeds. Most of the growth of prairie plants will be underground the first couple years, and the small plants can easily be shaded out if weed growth is not controlled.

The first growing season, mow the site whenever growth reaches 10 to 14 inches. You should *plan on mowing the site three times*. On small plots, use your lawn mower set at the highest setting, about 6 inches. On a large acreage, use a flail or rotary mower for best results. If your mower leaves a heavy trail of debris, consider removing it through haying or raking.

During the second growing season, clip to about 6 inches in early summer. A second mowing may be required if weed pressure is great.

In the spring of the third year, the entire site should be burned. Burning should be timed as weeds and quack grass are just starting to green up. Prairie plants are resistant to burning and will not be killed even if they are partially green. Normal burning dates in Minnesota are early April to mid-May.

Make sure to obtain permits, follow all burning regulations and have adequate equipment on hand to control your fire. The liability of the prescribed fire lies with the landowner. Prescribed burn training and equipment may be available from your local DNR office.

If burning is not an option, you may mow the entire site before growth begins in the spring. **The duff layer that results should be removed** by raking or haying if the seedlings below are being shaded out.

Your prairie's vigor can be maintained in future years by burning or mowing every 3 to 5 years. A burning or mowing regime will normally control most weed problems. Should deep rooted perennial weeds—such as thistle—become established, they can be controlled by spot spraying with a non-residual herbicide.

Remember—these instructions are only general guidelines. There are many variables such as soil type, topography, water table depth and past history of the site which may effect the outcome of your planting. It is recommended that you seek additional information before undertaking a native grass and wildflower planting.



Broadcast seeding a large field planting.

David Breyfogle MNDNR

Mike Halvorson MNDNR

Planting

Normal planting dates for Minnesota range from October 15 to freeze-up and May 15 to July 1. Purchase a diverse mix of high quality, local origin seed. Many wildflower seeds need a period of cold, moist conditions before they germinate. Fall planting is often used for this reason. Spring planted flower seed should be treated so germination will take place the first growing season. Contact your supplier for details.

On small sites, seed can be hand sown and lightly raked into the soil about 1/8 inch deep. Large field plantings can be planted with grass drills capable of handling bearded native grass seed or broadcast seeders that have sufficient agitation to spread native seed. Flower seed works through the planter faster than grass seed. To remedy this, sprinkle your flower seed into the grass seed periodically as you are planting. This will ensure wildflowers are seeded evenly across the site. Different soil types will require different species of plants.



Prairie smoke

When fall planting, seed can be broadcast onto bare soil or drilled into crop stubble. Lightly drag or pack after planting if seed has been broadcast.

To increase the diversity of your prairie planting, you may wish to add wildflower seedlings for some species that are difficult to grow from seed (i.e. prairie smoke).