

making a home for wildlife...

Establishing Native Plants



definitions

Native Plant — Trees, flowers, grasses or other plants that developed in a particular region. Plants that are adapted to and evolved naturally in an ecosystem along with native insects and other animals.

Grass — A family of plants which have long, narrow leaves, jointed stems, minute flowers and seed-like fruit. Grasses can be warm or cool season, meaning they grow best and flower during the hot summer months or the cooler spring and fall months. Warm seasons include Big bluestem, Indian grass, Switchgrass, Sideoats grama and many others.

Forb or Wildflower — A non-woody, non-grasslike, broad-leaved herbaceous plant. Examples of native forbs are Black-eyed Susan, Wild bergamot (shown above) and Grey-headed coneflower.

Prairie — A treeless, grass-covered plain. A diverse ecosystem composed of grasses and forbs that evolved with fire and grazing that once covered the majority of Iowa's landscape for the last 9,000 to 10,000 years before settlement.

Prairie Reconstruction — An area where prairie plants have been reintroduced to their native ecosystem, recreating a diverse natural community that balances itself over time, and is resistant to insects, disease and weedy invasions.



"Budding and brooding go together. The value of blooming plants is that they attract insects. A diverse mix of forbs is a field of dreams for hens with chicks who must eat insects during the first six weeks of their lives to build feathers."

— Kevin Andersen, DNR biologist.

benefits

Wildflowers complement our state's beautiful landscapes with flashes of vibrant colors, but they also serve another purpose: they attract wildlife.

A mixture of Iowa's native grasses and forbs provides excellent wildlife habitat for pheasant, quail, rabbit, many songbirds and other species. Native prairie plants provide nesting, feeding, loafing, and escape habitat. The benefits of native plants are many, but establishing such a stand takes planning and care.



This prairie is in its second year after planting. It's dominated by wildflowers. Grasses will be more prominent the third year after planting.



wildlife habitat

Whether for Conservation Reserve Program acres or one's own backyard, native plants provide a low-maintenance solution that benefits Iowa's environment. Once established, native grasses and forbs can save a landowner precious time and money in maintenance compared to non-native species.

One of Mother Nature's greatest gifts is the hundreds of native plant species that have evolved for thousands of years in our region. These plants are accustomed to Iowa's fluctuating seasons and weather conditions and can survive with minimal attention. They are also resistant to plant diseases and insects, making them attractive in more ways than one.

going native can:

- Provide vital habitat for area wildlife, including the insects that attract hens and young chicks.
- Beautify land with an attractive array of Iowa grasses and forbs.
- Pay you back! Native plants save landowners time and money with low maintenance, fertilizer and herbicide needs.
- Improve water quality by holding soil in place while taking up nitrogen and phosphorus.
- Improve soils. Prairie plants have deep root systems and abundant foliage that prevent erosion, add organic matter and increase soil permeability.

how to establish a prairie convert grassland to prairie

- In early September, mow, burn, or hay area and remove grass residue if possible.
- Chemically burn down the area with glyphosate from September through mid-October when weather cools and grass "greens up" to 4-6 inches of regrowth. Control any noxious weeds at that time also.
- Mow in early March, let grass green up to eight inches, then spray a second round of chemical to burn down in May. This eliminates any spots missed by fall application and also destroys any new weed seedlings that have germinated. It is important to get a good kill, or more mowing will be needed.
- Light disking may be necessary to insure good seed-to-soil contact.
- Use a native grass drill to cultipack (roll) and drill seed into the ground five to seven days after herbicide application.
- Cultipack after seeding to make good seed-to-soil contact.

seedbed preparation

A firm seedbed is essential for all planting methods. If the seedbed has been tilled:

- Prepare a fine firm seedbed at least 3 inches deep by rolling before and after seeding. This is critical for seeding establishment.

Tillage is not needed if seeding into bean stubble. If seeding into corn stubble, a light disking is needed so crop residue doesn't interfere with seed-to-soil contact.

establish prairie in a cropland

- After first flush of weeds, burn down area with glyphosphate-based product. If planted before the first flush of weeds, an additional mowing is needed.
- If the site was disked, roll or cultipack area to ensure a firm seedbed.
- Use broadcast seeder or drill seeds 1/8-inch deep. It is not unusual to see seed on the soil surface after drilling.
- Cultipack to make good seed-to-soil contact.



Above: Don't panic or disk up the field if you can't see the seedlings during the first year. That's normal. By the second or third year, you'll start to see forbs emerge and produce seed, like these grey-headed coneflowers.

dormant seeding

Dormant or frost planting will stratify forb seed, breaking seed dormancy.

Late dormant seedings offer an excellent opportunity to establish a diverse stand. Dormant seedings tend to favor forbs and there is less competition with other planting activities. Dormant seeding exposes seed to predation by wildlife. Seed late enough that the seed will not germinate in the fall.

Small, smooth seeds readily frost-seed into the soil and stratification is assured.

spring seeding

If spring seeded, forbs may not grow the first growing season. They will grow the following winter after going through the stratification process.

seed mix

Planting at a rate of three pounds of pure live seed (PLS) of grass/acre and one to two pounds of PLS of forbs/acre. Contact the DNR for help developing a seeding plan.

Seeding Dates

- **Spring Seeding:**
March 1 - June 1
- **Dormant Seeding:**
November - freeze up
- **Frost Seeding:**
Feb. 1 - March 15



maintenance

Patience is necessary when seeding native plants into your landscape. Remember, it takes about three years for these grasses and forbs to mature — one to sleep, one to creep and one to leap!

One thing you can plan on, mowing. While weeds hold the soil in place, they also compete with newly emerging seedlings for sunlight, water and soil nutrients. Mowing is your most effective tool to prevent weeds from taking over your native plantings. Do not worry about cutting the tops off or crushing the seedlings. Mow frequently so cuttings do not smother emerging seedlings. Use a string trimmer on small plantings or steep areas.

what you can expect each year

- **first growing season**
Patience. Seedlings will be small. It's important to manage weed competition. This allows light penetration to new seedlings and enhances seedling survival. Mowing may be necessary depending on weed competition and your location. No mowing may be needed in extreme southern Iowa where soil fertility is lower. In fertile northern Iowa, frequent mowing may be necessary. Consult your DNR grassland expert for specific guidance on maintenance. Generally mow three times during the first growing season. Mow down to a height of six inches after vegetation height reaches 12 inches. Mow so that cut material is not windrowed. If vegetation gets beyond 12 inches, it may have to be mowed again. Try to time the last mowing so weeds can grow to about eight inches before winter to protect young seedlings from frost.

- **second growing season**
This is the year when forbs start to flourish. You may start to see wildflowers bloom and the diversity of your seeding. Now is the time to add native grass and forb plugs. Mow during the early growing season, then spot spray noxious weeds like Canada thistles. This will allow for regrowth to provide winter cover and fuel for upcoming spring burn (see Prescribed Burn fact sheet). Mow any weed problems before weeds set seed. One or two mowings should be enough the second year. The best time to mow is when any Musk or Canada thistles are blooming.

- **third growing season**
Burn during late April and May to stimulate plant growth and warm up soil temperature (See Prescribed Burn fact sheet). This is the year your forbs start to expand their range and put out seed. They will fill in the remaining area, controlling weeds.

The Iowa DNR has management and private lands biologists who know prairie plants and can help you develop a plan that will meet your needs. Right: Maury Muhm helped Gary Staake improve his land for wildlife habitat.



seeding residential areas

Introducing native plantings into your yard or acreage is a great way to provide beautiful, almost maintenance-free vegetation. Plan to save time and money with reduced mowing, weeding, mulching and fertilizing. You will still see a changing array of flowers and grasses that attract songbirds and butterflies.

However, perennial seedlings take about three years to reach their potential. Using greenhouse-grown plugs and potted plants can bring quicker results. Select grasses and forbs that are suitable for the shade

and moisture conditions on your site just as you would for a more traditional garden. Be patient as prairie plants take time to become established.

buying seeds

Most commercially sold wildflower mixes contain plant seeds that are not adapted to local conditions. When selecting seeds or plants, choose unimproved local plant stock (not hybrids) from a local plant source.

Although most cost-shared plantings have minimum species requirements, there are hundreds of species to choose from. You will reap more wildlife and aesthetic benefits by planting more species. And the more diverse your prairie, the more resistant it will be to onslaughts of disease or insects.

Choose plants based on your soil types and site conditions. For instance, short grass prairie species will do best on dry, gravelly sites, while tall grass species will thrive in the prairie pothole area in northern Iowa. The DNR has wildlife biologists available to help you make plant selections. Many county conservation boards and the Natural Resource Conservation Service also have specialists who can help plan native seedings.



Above: There are hundreds of plants to choose from. The more variety in your planting, the more stable it will become over time. From the top: Rattlesnake master, Purple prairie clover, Sideoats grama, Indiangrass.

information and plant sources

Iowa Native Plants Web site
www.prrcd.org/inl/index.htm

DNR Attracting Wildlife Brochure
www.iowadnr.gov/wildlife/privatelands/

DNR Biologists
www.iowadnr.gov/wildlife/privatelands/advice.html

Iowa Prairie Network
www.iowaprairienetwork.org/

IPN Local Seed Sources
www.iowaprairienetwork.org/mgmt/seeddealers.htm

