

Installation and Maintenance of Native Seed

Whether you're utilizing plugs or seeds for installation, starting with a clean weed-free site is the first vital step. All existing perennial plants should be killed or removed prior to installation. This is most effectively performed with a glyphosate-based herbicide. Areas that have been old fields or pastures typically have difficult perennial weeds such as Canada thistle, smooth brome, quackgrass, or Canada goldenrod. Eradicating these weeds requires 3 to 4 herbicide treatments over the course of an entire growing season.

Seeding season

Native seeds are best installed as a dormant sowing in late fall or early winter. Dormant sowing allows the seed to naturally moist stratify in the soil. The seed may then germinate early in the spring as soon as soil temperatures are sufficiently warm, enabling the plants to become well established prior to the hot dry spells of summer.

The second acceptable time to install native seed is spring from late March until mid June. Soil moisture is typically sufficient for germination and establishment during these months. Species that require a long period of moist stratification or cool soil temperatures for germination may not germinate until the second year if they are sown in the spring.

Sowing native seed in late summer or early fall is generally not recommended. Slow developing prairie seedlings may have sufficient time to germinate, but will not be well established before winter which may jeopardize their survival.

Seed Installation

For areas that are one acre or larger, seed installation is best performed with a no-till prairie seed drill. These implements are pulled behind a tractor and designed to handle the various seed types and low seeding rates that characterize native seed mixes. They typically have three seed boxes designed to sow cover crop, fluffy grass seed, and small, dense forb seed. Each box must be calibrated independently according to the owner's manual. The drill should be set to sow as shallow as possible, as most prairie seed germinates best in the top ¼ inch of soil. If sowing onto bare soil, the tubes leading from the forb seed box may be removed to allow the seed to drop directly on the soil surface for optimal germination.

Native seed may also be effectively broadcast sown on a firm prepared seed bed. The seed should then be firmed in to the soil utilizing a roller or a culti-packer. Make sure the broadcast equipment will handle the fluffy prairie grass seed. Broadcast sowing is most effectively performed in two passes, one for the large fluffy seed and one for the small forb seed.

Maintenance

Year 1

During the first growing season, it is vital to begin a maintenance program to encourage establishment of the native seedlings and discourage weed growth. Mowing the installation at a height of 4 to 6 inches monthly, or each time weed growth reaches 10 inches in height, is ideal. Spot herbicide application is generally not recommended in year one as most the weed pressure will be annual weeds that do not represent a long-term threat to the prairie. At the end of the growing season, the installation may be mown down to 3 inches in height.



Forb seedlings at the end of the first growing season including Yellow Coneflower (*Ratibida pinnata*) and Bergamot (*Monarda fistulosa*).

Year 2

At least one mowing should occur in the first half of May in the second year. This will remove the flowers and seed heads from cool-season weeds and any remaining cover crop. If weed pressure is light, the planting may be allowed to grow for the remainder of the season. If there are significant quantities of biennial and perennial weeds such as sweet clover, Queen Anne's lace, or Canada thistle, monthly mowing should continue through August. The planting should be mowed to 3 inches in height during the dormant season following the second growing season.

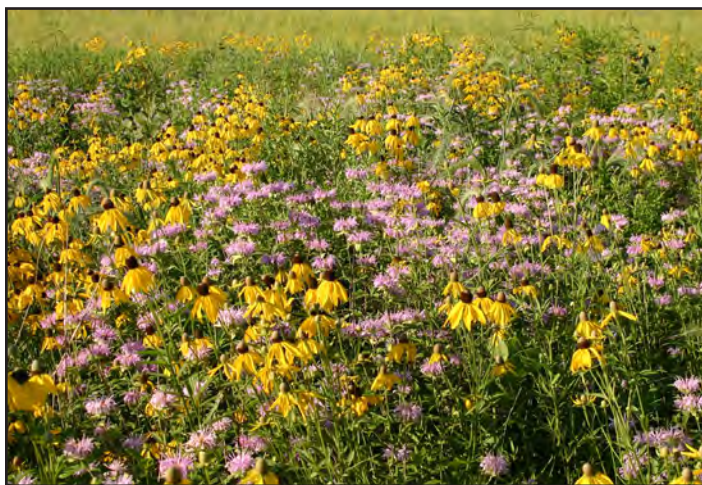


Prairie in mid-summer of the 2nd growing season showing Mountain Mint (*Pycnanthemum virginianum*), Canada Wild Rye (*Elymus canadensis*) and Yellow Coneflower (*Ratibida pinnata*)

Year 3

By the third growing season, the prairie should be sufficiently established to allow it to grow without mowing. If there are small patches of problematic perennial weeds, this is the time when selective herbicides may be utilized to control them. For example, selective broadleaf herbicides may be utilized on aggressive species like Canada thistle.

If burn maintenance is an option, there is typically sufficient fuel after three growing seasons to enable a prescribed fire. Please remember that burning is a regulated activity that requires air quality permits and trained, experienced crews to perform safely.



Prairie in mid-summer of the 3rd growing season showing Yellow Coneflower (*Ratibida pinnata*), Bergamot (*Monarda fistulosa*), Canada Wild Rye (*Elymus canadensis*), and Rosinweed (*Silphium integrifolium*).

Year 4 and beyond

While the planting is considered mature at this stage, it will continue to evolve for the first decade. During this mature stage, the planting should be monitored for invasive plant species and unwanted woody plant recruitment twice a year, typically in late spring and again in early fall. This monitoring will allow targeted applications of selective herbicides while weed infestations are small, limiting damage to the desired plant community. Unwanted woody species should be cut and treated with an appropriate herbicide in early fall each year.

Herbaceous communities may be maintained by burning or mowing. Burning is more effective because it removes the thatch. In urban areas where burning may not be an option, raking and removing the clippings following mowing every third year will help prevent thatch buildup. Thatch accumulation is much greater on a tallgrass planting, so this removal may not be necessary for lower stature plantings that generate less thatch. Burning or mowing should be performed during the dormant season between November 1st and April 1st. Spring burns are not recommended as they favor the dominance of warm season grasses,



Mature prairie in mid-summer of its 8th growing season showing Culver's Root (*Veronicastrum virginicum*), Yellow Coneflower (*Ratibida pinnata*), and Compassplant (*Silphium laciniatum*) in the background.