

Iowa Native Prairie Planting Guide

Planting Native Prairie Into Cool Season Sod

(*Brome, Orchard, Fescue, Bluegrass*)



1. **Late Summer** - Start the sod to prairie conversion process. Mow existing grass (4-6" ht.) between Aug. 2 and Sept.1. (*The earlier, the better to ensure time for regrowth during dry conditions. Haying is preferred over mowing, but follow program rules.*)
2. **Early Sept. to Mid Oct.** - Apply glyphosate herbicide at 2 quarts/acre when the active ingredient is 41%. Use 3 quarts for hard to control species such as Canada thistle, clovers, reed canary grass, and fescue. Follow the label for specific rates, adjuvants, etc. Adding 2,4-D Ester can help with difficult to kill perennial broadleaves, i.e. clovers. Apply after there is 6-8 inches of regrowth. Good growing conditions are required (overnight lows 40F+, daytime high 60F+) when and after you spray for 2-3 days.
3. **Early Spring (optional)** - Burn off dead plant material in early spring with fire. This will:
 - a. encourage a flush of regrowth from any living brome in the Spring;
 - b. encourage a flush from seed bank (i.e. red clover, annual weeds);
 - c. remove duff layer;
 - d. allow better herbicide contact;
 - e. make it easier to plant into;
 - f. allow you to see hazards such as: ant hills, badger holes, and tile breaks. *Use combination of disk and blade to smooth those areas.*
4. **Late May** - Apply glyphosate herbicide to the area to be planted after green up.

Spraying in the spring is not sufficient to kill the existing perennial vegetation. If you are starting this process in the spring, spray and then leave the ground fallow for the first growing season.



5. **(Option 1) Late May to Early June** - Plant mixed native grasses and forbs with a native no-till drill 7+ days after the herbicide application. *Chemicals need time to translocate into the root system of emerged vegetation. Cutting up sprayed grass could affect the performance.*
 - a. Drill shallow: 1/8" for forbs, 1/4" for grass.
 - b. Broadcast and roll only if > 50% of soil is exposed.
5. **(Option 2 - Preferred) Leave area fallow for the growing season**
 - a. Spray 1-2 times during the summer when majority of weeds are < than 12" tall. **Caution:** Don't let weeds get too tall. They will be harder to kill, and you don't want them to add seed to the seed bank. Weeds in a fallow field left unchecked can produce a tremendous amount of weed seed.
 - b. Spray again in September – first ½ of October
 - c. Complete a dormant seeding by drilling (or broadcasting if 50% or more soil is exposed).



Fall/Dormant Seeding

Fall/Dormant seedings can be conducted Nov. 15 through April 1, or until the freeze/thaw season ends.

- » Advantageous to the forb component. Germination increases for many forb species if they go through freeze/thaw cycles.
- » Need > 50% of soil exposed.
- » In diverse forb mixes, recommended seeding: 0.25 lbs. (4 oz. or 1.0 seed/ft²) each of Big Bluestem, Indiangrass and Switchgrass. Dormant seedings are not as conducive as a spring planting for the tall warm season grasses.
- » Broadcast and then roll. If the ground is frozen, don't roll.
- » Don't broadcast seed on ice covered ground, snow crusted ground, or when snow cover is > than 4".

Other Considerations:

- » Seed forbs on the surface or a shallow depth (up to 1/8" depth). Grasses do fine planting up to 1/4" depth. *Some seed on the surface is ok.*
Tip: When using a native grass drill, disconnect every other tube on the forb box, so seed lands on the ground.
- » If you are trying to complete a seeding in an area with reed canary, develop a long-term plan to kill it completely (very difficult) and a proper seed mix that will compete with it.
- » Do not use fertilizer because it will only help the weeds out-compete your seeding.
- » When broadcasting, rolling will help with seed to soil contact and to reduce predation of seed from birds, mice, and night crawlers.
- » When seeding small areas or when broadcasting seed, add a carrier to help ensure you don't run out of seed (i.e. rice hulls, cocoa shells, pell lime, ground cobs). Consider broadcasting the area twice to ensure good coverage.
- » On small areas (< 2 acres), you can seed from a bucket.
 - Flag off lines every 50' to help stay in line.
 - Use sand as a carrier — 2 parts damp sand to 1 part seed, minimum.
 - Weigh seed and separate into buckets.
- » Adding ½ - 1 bu. of oats to spring seedings can reduce erosion in spring plantings.

If Tillage Is Necessary

- » Tillage is only recommended when the field is very rough from gophers, etc.
 - » Several tillage passes will be required to prepare an acceptable seedbed.
 - » The downside of tillage is that it can increase weed pressure.
1. If you decide to till, follow steps 1 and 2 from the previous page. If the field is too rough to mow, then skip step 1 and go to step 2.
 2. Perform Tillage
 - » If spraying occurred, complete tillage in the spring to smooth the area.
 - » If no spraying occurred, deep tillage will be required in the fall to kill the cool season stand using a plow or chisel plow, followed up in the spring with a disk and a field cultivator.
 3. Seedbed must be rolled 1-2 times before planting to create a firm seedbed.
 4. Drill or broadcast, and then roll again.
- » **For High-end Seedings** (pollinator/CP-25 /prairie reconstruction):
 - Ideal mix is: 25-50% grass/50-75% forbs.
 - Strive for diversity.
 - Tall warm season grasses (i.e. Big Bluestem, Indian Grass, Switchgrass) are important and establish quickly, but limit them to avoid out-competing forbs. Recommended seeding rate: 0.1 (1.6 oz. or 0.4 seeds/ft²) to 0.25 lbs. (4 oz. or 1.0 seeds/ft²) each for Big Bluestem, Indian Grass, and Switchgrass. Other native grasses are not as competitive.
 - » Native grasses are an important component of the tall grass prairie. Less favorable grasses such as woolly cupgrass, smooth brome, tall fescue and quack grass will take over if native grasses are excluded.
 - » Consider Iowa ecotype seed (originated from prairie remnant plants) for long-term to permanent seedings.
 - » Use high end seedings around the farmstead for added beauty.

If you have additional questions, contact your local NRCS Field Office, Iowa Department of Natural Resources (DNR) biologists, or Pheasants Forever biologist for further guidance.

