

# Implementation Guide Series

# Maintenance of a Large- Scale Prairie Planting

## Inside:

Planting and maintaining large-scale prairie is a big commitment and it's important to know what steps to take to ensure a healthy prairie. Inside you will find tips on what to do before you plant, during the first few years of establishment and for long-term maintenance.



# Maintenance

## Getting started...

So, you have spent the last year reading all you can about prairie establishment, selecting your sites, preparing the soil, seeding grasses and forbs (wildflowers), and now you are waiting patiently for the first signs that all your hard work will come into fruition. But to your horror, the first seedlings to burst through the soil are not from any seeding that you did. You frantically search field guides and line drawings when it dawns on you: weed seedlings! What are you going to do? What happened to all those native species that you so painstakingly prepared for?

Every planting is unique and will present a different challenge to those providing the maintenance. As each site's available moisture, soil composition, species planted, and site preparation will vary, management plans will need to be flexible and adaptable over time. This guide outlines some common tools and techniques for maintaining a prairie planting. There are also many resource professionals in your area who are willing to help you consider the options for a particular site, including your local Natural Resource Conservation Service (NRCS), your county conservation board, roadside manager, Trees Forever Field Coordinator or members of a local Iowa Prairie Network chapter. Any of these individuals will tell you, though, that the following guidelines are a good place to start when you are formulating your maintenance strategies.

## Patience and Education

Keys to successfully establishing a large-scale prairie planting are patience and education. Though these things may not seem like establishment practices, cultural acceptance of a planting, in reality, is a big factor in determining its failure or success. This is particularly true for plantings at highly visible locations- community entry ways, for instance. Prairies are a work in progress, and the process can be frustrating and disappointing, especially the first few years. You will no doubt receive some comments from your friends, neighbors and others in the community about the "weed patch" that they think you have planted, so be prepared by arming yourself with as much prairie education as you can get.

## Signs and Articles

It's always a great idea to use signage at a new planting site to explain what is going on there. Educational articles in a local newspaper can help explain the process, and also serve as a recruiting tool to encourage other community residents to become involved. It is never too early to start this public education; articles published in the newspaper before any seed goes in the ground can begin to educate citizens on what is to come. Don't wait until after negative comments circulate throughout town about the appearance of a planting to begin a public education campaign. Give residents something positive to think about: the benefits of using native plants, showy prairie pictures, color photos of individual wildflowers they can expect to see, etc.

## The Early Years: Establishment

Like it or not, the first few years of prairie maintenance is all about competition control.

**Year One:** A common way to control weeds is to keep the planting mowed to a height of about 4-6 inches. As mentioned above, most native wildflower and grass seedlings will not grow taller than 6 inches in their first growing season as they concentrate most of their energy into developing massive root systems, and are seldom damaged by mowing. Some flowers, such as Black-eyed Susan, do get taller than 6 inches, and can flower the first year. It is hard to mow off these showy gold blooms, but in the long run it is better to lose the early show of flowers than to let weeds get established.

The planting should be cut back in the first year when it reaches a height of about 12 inches. Allowing the weeds to get taller than 12 inches will shade out your seedlings and produce very heavy litter when you do mow. You can expect to mow roughly once a month in the first year, though the actual mowing frequency will depend upon rainfall in any given year and weed density and height. Keeping weeds cut back in the first year also prevents annual weeds such as foxtail and ragweed from going to seed, which



Patience and education are keys to establishing large-scale prairie plantings.

limits their populations in the second year. **Mowing weeds on a regular basis in the first year of establishment is one of the most critical steps in the success of your prairie planting.** Do all you can to keep weeds from ruining all the hard work you have put into your project- the rewards down the road will be so satisfying!

**Year two:** Additional mowing will likely be necessary in the second year; the frequency, amount, and height may be very similar to the first year or quite different. Biennial weeds, such as burdock, wild parsnip, bull thistle, and Queen Anne's Lace can be competitive in the second year, as can perennials such as Canada thistle. Mowing them to a height of one foot just before they are in full bloom (usually early to late June) will set them back severely. The prairie plants are seldom more than a foot tall in June of the second year, and will experience minimal damage, if any. 'Spot mowing' can be done on patches of pesky weeds, such as Canada thistle, at any time to limit their growth. If annual weeds are still a major problem, it may be appropriate to follow the same mowing regime as you did in the first year.

## The Later Years: Maintenance

As you work on establishing a prairie, the intensity of maintenance practices will be high in the first few years, but over time will lessen as your prairie matures. A carefully planned schedule of burns or mowing rotated throughout your prairie planting every other year should ensure a healthy and vigorous planting, providing a maximum amount of landscape diversity with a minimum of maintenance year after year.

**Burning, Mowing, and Bailing.** Burning removes the accumulated plant litter from the previous year's growth and exposes the soil surface to the warming rays of the sun. Since most prairie plants are warm season plants, they respond favorably to the warmer soil temperatures by exhibiting increased growth, flowering and seed production. Mowing and bailing which also removes the plant litter, is a good alternative to burning. A key idea is vary your management, in terms of both the amount and frequency that you burn and mow.

Rotational burning or mowing of one quarter to one third of your prairie is a good general guideline for a variety of reasons. First, the burning or mowing of different portions of your planting will give a varied look and feel of the overall areas, thus increasing the landscape interest and diversity of habitat for wildlife. Second, leaving sections untouched preserves overwintering insects and other invertebrate pupae and eggs, as well as early season nests built by pheasants and songbirds that would otherwise be destroyed by burning. Third, variation in management prevents any given species from gaining dominance in the planting, thus maximizing species diversity.

The frequency of burning or mowing is an additional key component in any management policy, as intervals of three years or longer between burns tend to allow the establishment of trees and shrubs in the prairie. This can result in increased maintenance in order to remove woody plants that become established in the prairie. In general, spring burns tend to favor grasses, while fall burns will give a competitive edge to flowers. A cautionary note: if you have never experienced a prairie burn, you must get more information from your local county conservation board, roadside manager, NRCS, local fire department, and/or your local Iowa Prairie Network chapter.

With a little hard work, and a lot of patience, the results of a properly maintained prairie planting will reward you with a glimpse of what our landscape once was, and will provide an educational experience for future generations to enjoy.



Carefully planned prairie burns can help ensure a healthy and vigorous planting.



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## About Trees Forever

*Our mission – to plant and care for trees and the environment by empowering people, building community, and promoting stewardship – is fulfilled through cutting-edge programs and innovative practices. Through these, our trained and experienced staff has assisted community leaders and landowners across Iowa and Illinois with thousands of planting projects. Each year, on average, we work with and engage more than 7000 volunteers who give generously of their time and talents. To date, they have helped us plant more than 3 million trees and shrubs throughout Iowa and Illinois.*