

SO, YOU WANT TO PLANT A PRAIRIE



To begin a prairie restoration project, you need to understand the seasonal ecology and habitat requirements of the area you are restoring. You need a clear understanding of how plants adapt to their environment and what conditions plants need to survive each season in order to select plants that are suitable for your site.



A site analysis can help determine the exact form a restoration takes. No two prairie communities are exactly alike, varying in species composition and arrangement as they respond to the soil, slope, location, and seed sources that created the conditions on that particular site. Analyzing the site helps you discover which plants will be best suited to the area.



Prairie plants have different seasonal periods of growth, flowering, pollination, and seed dispersal to avoid competition and to adapt to weather cycles. From mid-April through October, you can enjoy a changing scene of colors, scents, textures, and wildlife attracted to the area for food and home-building. In a natural prairie's growing season approximately one new prairie plant blooms each day.



Most prairie plants are long-lived perennials adapted to their environment. They can slow down their growth rates to share water, light and minerals with their crowded neighbors and create a rich mixture of vegetation. Perennials are herbaceous plants that die back to the ground at the end of each growing season.



The prairie is not just the surface view, though. Below the soil surface is a dense system of roots, interlacing, creating a complex and biologically active world. Prairie plant roots are often twice as large as the above-ground portion of the plant. Besides the roots, there is a complex collection of organic matter that sheds off the roots each year and creates highly fertile soil.



To start, make a map of the physical area that will be your future prairie site. Map the current conditions: physical objects like buildings and hard surfaces, existing vegetation, slopes and their direction, traffic patterns, patterns of shade/sun, and underground utilities. You may want to know historical usage of the land (check your local historical society for surveys and plat books). Take soil samples in various spots. It's also important to consider how changing the landscape will affect rainwater. Will it increase runoff or improve infiltration?



In selecting your plants, consider vista and close-up views. A vista approach looks over a distance at a panoramic view. A close-up view looks at parts nearest you or nearest to your viewing station, such as your living room window. Do you want drifts of color and forms of varying heights that wave in the breeze? Do you want contrasts, texture, and variety? Vertical and erect or layers? Bright sections or single flowers? Use nursery catalogs and prairie plant books to find species for your specific needs. Make a list and pencil plant placements into your site map. **A good rule of thumb is a minimum of 15 forbs (flowering plants) and 3 grasses for a prairie restoration.** Your goal is to have a new flower come into bloom every week during the growing season, or about 30 forbs plus the grasses. Forbs provide visual interest, food for wildlife, and diversity. Grasses provide structural support for the forbs, hold the soil with their roots, and provide food and cover for wildlife. Note that forbs are pricier than grasses. Design with up to 60% grasses if cost is an issue.



Your prairie mix should include some fast-maturing "pioneer" species such as bee balm, black-eyed Susan, yellow coneflower, and vervain. These hold the soil and provide early interest. You may want to include the "pioneer" grass Canada wild rye as a cover crop to help reduce weeds.



Once you've chosen your plant species, you determine how to plant your area: with seeds, transplants or a combination of the two. Planting seeds requires about 40-60 seeds per square foot or 20 pounds of seed per acre (0073 ounces per square foot). Using transplants, figure about one to two plants per square foot. Consulting with a prairie seed company is a big help in these decisions.



Site preparation is important to successful planting. Methods for removing existing vegetation include cultivating, smothering with plastic or organic mulch, herbicide treatment, burning, sod removal, and/or use of a cover crop. There are advantages and disadvantages to each technique depending on existing vegetation, soil conditions, topography, time, and cost.



Sowing the seed can be done by one person in small areas or many in large areas. It's important that all areas are covered with seed, but that no areas get too much seed. Seeds can be raked in or danced in, if you're inclined; but for best germination, all seeds must have good contact with the soil. Transplants are best planted before sowing seeds. Be sure to mark them sufficiently so they aren't stepped on as seed is sown.



In the first year of growth, prairie seeds will germinate, but weeds will dominate the site. Prevent the weeds from going to seed and spreading further by topping the plants. In the second year, the "pioneer" plants will begin to bloom, but weeds such as Queen Anne's lace, sweet clover, thistle and mustards may be evident. Action to control these invaders is necessary. By the third year, your site will begin to look like a "real" prairie with many of your prairie plants blooming.

Resources:

[Restoring the Tallgrass Prairie: An Illustrated Manual for Iowa and the Upper Midwest](#) Shirley (2002)

[Prairie Plants of the Midwest: Identification and Ecology](#) Kirt (2000)

[An Introduction to the Tall Grass Prairie of the Upper Midwest](#) Mirk (1997)

[Wildflowers of the Tallgrass Prairie-The Upper Midwest](#) Runkel (2009)

[Begin with a Seed: The Riveredge Guide to Growing Wisconsin Prairie Plants](#) Riveredge Nature Center-Larson (1999)

[Grasses-An Identification Guide](#) Brown (1992)

[Prairie Seedlings Illustrated: An Identification Guide](#) Dittmer (1997)

[Wildflowers and Weeds-A Field Guide in Full Color](#) Courtenay & Zimmerman (1992)

[The Tallgrass Restoration Handbook: For Prairies, Savannas, and Woodlands](#) Packard (1997)

[The Prairie Garden-70 Native Plants You Can Grow in Town or Country](#) Smith (1980)

<http://www.botany.wisc.edu/wisflora> Vascular Plant Species of the WI State Herbarium

<https://www.prairiemoon.com/blog/resources-and-information> Resources & Information | Prairie Moon Nursery

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