

# Prairies Are Spectacular On Golf Courses

By Tom Schwab

Some people think prairies on golf courses are just a fad. Other people think they are hard to establish. I'm no prairie guru, but I think they are not that difficult to establish. What they add is a spectacular new dimension to your landscape. Prairies add different textures in the spring, a ton of color in the summer, a golden feeling with mellow colors in the fall, and a differentiation in the winter landscape. To be successful, one needs to do some planning, start small, and enlist the help of some local enthusiasts. I learned some basic steps by planting a prairie at Monroe Country Club (MCC), doing some reading, and talking to people. Some books I found helpful are "The Prairie Garden" by J. Robert and Beatrice S. Smith, "The Vegetation of Wisconsin" by John T. Curtis, and the catalog and growing guide from "Prairie Nursery" in Westfield, WI. Another great resource person you already know is Mark Grundman from "Medalist America Turfgrass." He's been doing prairie consulting for years. He recommends that you purchase seed that was grown within 200 miles of your site. I have a list of 40 native plant nurseries that you can get from me at the Noer Facility.

The main thing I have learned researching prairies is to start planning for your prairie long before you plant the first

seed. The main thing to determine is what type of soil you will be working with. Are the soils mainly sand, loam, or clay? That will determine what type of plants to use, when to plant, and later maintenance practices. Next, determine how much of the day's sunlight your site will receive. Most prairie plants need 70-100% of the day's sunlight. If you want to plant in a shady spot, many prairie nurseries also carry woodland plants.

To determine what type of plants to buy, decide how you want to use your prairie. Do you want mainly prairie grasses or prairie wildflowers? You should plant more grasses if your goal is to establish a more authentic native Wisconsin prairie or to attract more birds. There are about thirteen different prairie grasses that grow natively in Wisconsin. Don't plant too much big bluestem because it can dominate. Plant more wildflowers if you want more season-long variation of colors. Plant some grasses, 10-30%, to get that golden color in the fall and winter. Grasses will add different textures giving your wildflower prairie more interest. We planted mostly wildflowers at MCC because I wanted to give the golfers more color. The golfers wouldn't know the difference between native prairie and native bent anyway.



Initially area treated with glyphosate.



Preparing seedbed with rototiller.



Placing light cover of straw over planting.



MCC Staff, Green County Prairie Association and volunteers.

There are two times you can plant your prairie. I'll refer to them as "in-season" planting and "dormant" planting. In-season planting is done late spring to early summer or from about May 15 to July 15 for our area. Most prairie plants are warm season plants that need warm soils to germinate. In-season planting needs warm soil for germination and allows enough time for plants to establish before winter. With in-season planting you have to artificially expose seed to winterlike conditions to prime it. More on this will come later. Dormant planting takes place from late August to snowfall. Dormant planted seeds won't germinate until the following spring. The seed has to be exposed to winter conditions to break dormancy.

After you decide to go ahead with the prairie, you have to start preparing your site. First lay out the boundaries. Create a free flowing shape of gentle turns and curves. The prairie will look more natural and aesthetic. Angles and straight lines look manipulated. A paint gun or roll of string is a good way to lay out the shape because it's easy to change if you don't like what you have drawn.

For in-season planting, the best time for killing off your existing vegetation (weeds) is the fall before you plant. Weeds are any plants that will interfere with the success of your prairie. Perennial cool season grasses like Kentucky bluegrass, brome and quack can be the most persistent weeds to a prairie. Their roots and rhizomes can haunt you if they aren't dealt with. The best way to prepare your site is to use an application of glyphosate herbicide. After the herbicide has killed the vegetation, cultivate the soil to fallow any remaining plant parts. We cultivated with a rototiller behind a tractor and went 4" deep. Any weeds that come up again in the spring should be retreated and recultivated one more time so that you're ready to plant by about June. Cultivate shallower this time so you don't expose more weed seed. For dormant planting, treat and cultivate twice over the summer so that you're ready to plant in the fall.

The best time to purchase your seed is in winter or early in the spring. This is because most prairie seeds are harvested in the fall. So your best selection is soon after harvest. Try to select plants that bloom at different times of the year. This will make your prairie interesting because something will always be blooming. Nurseries have catalogs with indexes of flower color and time of bloom. Use the expertise

of the nursery. We also sought the help of a local prairie club. Not only did they give invaluable advice but they helped in planting and giving follow up care.

If you choose to plant in-season, the prairie seed has to be primed to break its dormancy. This is called stratification. There are two methods of stratification, dry and moist. Use dry stratification for prairie grasses and moist stratification for wildflowers. In dry stratification the seed is exposed to cold and dry conditions for a month or longer. This is all that the prairie grasses need to break dormancy. Moist stratification for wildflowers requires mixing the seed with an equal amount of vermiculite or clean sand and refrigerating it for three or four weeks. Plant the seed right after you bring it out of the refrigerator to keep it from going back into dormancy. Moist stratified seeds need a light watering about every other day for a month to get best results. If you're dormant seeding in the fall, you don't have to stratify the seed at all. The moist cool conditions which the seed encounters overwintering is natural stratification. Dormant seeding works very well, unless your site is prone to erosion.

If you are in-season planting, the best time to plant between May 15 and July 15 will be determined by your soil type. As stated, you need warm soils for germination. Some of the prairie grasses need soil temperatures as high as 85 degrees. With sandy soils you can plant earlier because they warm up quicker than other soils. Also sands generally have less weed problems that may be bothersome to other soils when planting early. With clay soils you should wait a little longer in the spring because clays warm up slower than other soils.

Seeding by hand works great if you have enough people to help. People spread the seed in a more natural pattern than a machine would. After seeding, just like with turf, it's best to rake the seed lightly under the soil. Then roll over it to get good seed soil contact. The planting could benefit from placing a light cover of clean straw over it, especially if you're on a sand or clay soil. Sand dries out too quickly and clay could become impenetrable to seedlings, if allowed to dry too much. Watering every other day, as mentioned, should suffice. You don't need to water with a dormant seeding because the seed needs to overwinter to germinate first. Follow all the rest of the planting techniques though.

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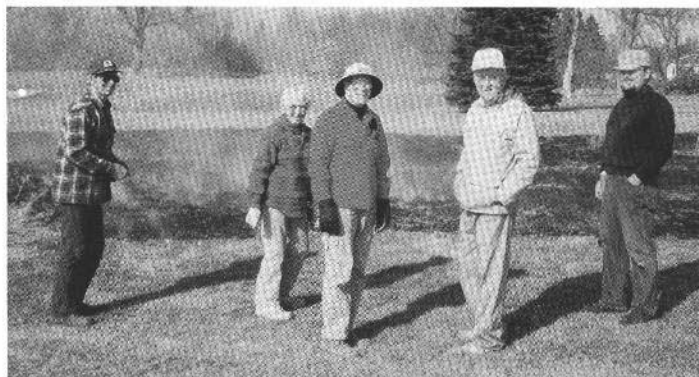
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Weed control is very important the first two years. The first year (year of seeding) keep the area mowed to a height of about four to six inches. Most native wildflowers and grasses won't grow more than that their first year so they will not be damaged. Mowing will keep the taller faster growing weeds from producing seed or getting a foot hold. We used an agricultural type flail mower. It mowed very nice at the tall height and we were able to catch the clippings in a hay wagon to keep them from smothering the young desirables. I made the mistake of letting the weeds get too tall, though. If I had gone in earlier I could have gotten by with a turf type flail mower and could have probably let the clippings lay without smothering plants.

The first year (year of seeding) it's not recommended to pull weeds because you could disturb the roots of the young prairie seedlings. Often when you pull weeds up, you just expose more weed seed anyway. Just keeping the whole site mowed to a four to six inch height is the best technique. Our prairie came up almost all crabgrass which I found out was not much of a problem because the second year the prairie shaded out the crab and we never saw it again. We may have lost a couple prairie plants by not mowing earlier that first year. It still turned out pretty nice.

Early in the spring of the second year, mow the area right to the ground. This is a way to warm the soils and encourage germination of any dormant prairie seed. Burning will also expose the soil for warming but that tends to encourage more weeds to germinate. If weeds still persist that second year they could be mowed back to about four to six inches again. Do this in early summer when the weeds are in full bloom. The prairie plants shouldn't be tall enough yet to be damaged. That should set the weeds back or kill them, especially the biennial weeds. At MCC, because we had planted a small site (1/4 acre), we opted for spot removal of the weeds. We used lopping shears and a small string trimmer to chop the weed right down to the ground.



Prairie Pyros! New Glarus superintendent Dick Beutel (right) helps out.



My next article will be on how to grow crabgrass!

There are some good reasons to start small with prairie restoration. The seed is expensive because most of it has to be hand harvested at the nurseries. So you want to make sure the seed you choose works well in your soils before you expand. You can harvest your own seed to expand the site or to start a new prairie area. If you start too large you may not be able to do the maintenance that is needed those first couple of years.

The only long term management you need to do the third year and beyond is to occasionally burn. Burning is needed to keep aggressive weeds or trees from getting reestablished. If burning is not allowed then mowing right down to the ground works OK. Burning works best, so if your community doesn't allow burning, try to apply for a special permit. Burning is usually conducted mid-spring, except on sandy soils. Mid-spring is about the time cool season weed-grasses like quack, brome and Kentucky bluegrass growth has begun, and burning will set them back. That'll expose the soil for earlier warming to favor the warm season prairie plants. The crown of the prairie plants is still in the soil early in the spring so burning doesn't hurt them. A sandy soil prairie has earlier blooming wildflowers so burn them very early in the spring or maybe in the fall so you will not destroy those early bloomers.

Burning should be conducted about every third year. Burning every year will favor the prairie grasses to dominate over the wildflowers. The most reasonable approach I read was to divide the site in thirds and burn one section each year in rotation. That will present the overall site with various levels of maturity and interest. It will also save some butterflies and moths from all being destroyed in a complete burn. Lastly, it'll prevent any single species from gaining overall dominance and preserve those great traits of the prairie which are diversity, variability, and year round interest. Your native Wisconsin prairie will give the golf course a spectacular new landscape asset that will last for years. 🌿



Third year. I wish these pictures could be in color.



Even the most pessimistic golfers fell in love with the prairie.