Prairie Species List[♣]

Grinnell College Athletic Complex Prairie Plantings

Common Name	Latin Name	Flower Color	Bloom Time
Shooting star	*Dodecatheon meadii*	Pink or White	May
White wild indigo	*Baptisia leucantha*	White	May-June
Ohio spiderwort	*Tradescantia ohiensis*	Pink/Purple	Late May-June
Tall thimbleweed	*Anemone virginiana*	White	June-July
Pale purple coneflower	*Echinacea pallida*	Lavender	June-July
Early sunflower	*Heliopsis helianthoides*	Yellow	June-July
Prairie brome	*Bromus kalmii*		June-July
Canada wild rye	*Elymus canadensis*		June-July
Leadplant	*Amorpha canescens*	Purple	Late June-July
Prairie coreopsis	*Coreopsis palmata*	Yellow	Late June-July
Yellow coneflower	*Ratibida pinnata*	Yellow	Late June-August
Partridge pea	*Chamaecrista fasciculata*	Yellow	July-August
Rattlesnake master	*Eryngium yuccifolium*	White	July-August
Flowering spurge	*Euphorbia corollata*	White	July-August
Purple prairie clover	*Petalostemum purpureum*	Purple	July-August
Compass plant	*Silphium laciniatum*	Yellow	July-August
Little bluestem	*Schizachyrium scoparium*		August
Side-oats grama	*Bouteloua curtipendula*		August
Prairie blazing star	*Liatris pycnostachya*	Purple	Late July-August
Rosinweed	*Silphium integrifolium*	Yellow	Late July-August
Common ironweed	*Vernonia fasciculata*	Purple	Late July-August
Smooth blue aster	*Aster laevis*	Lavender	Late August-September
New England aster	*Aster novae-angliae*	Purple	Late August-September
Upland white aster	*Aster ptarmicoides*	White	Late August-September
Rough blazing star	*Liatris aspera*	Purple	Late August-September
Stiff goldenrod	*Solidago rigida*	Yellow	Late August-September
Round-headed bush clover	*Lespedeza capitata*	White	August-September
Sky blue aster	*Aster azureus*	Lavender	September
Showy goldenrod	*Solidago speciosa*	Yellow	September
Northern dropseed	*Sporobolis heterolepsis*		September

Seeding. In November of 2001, 2.78 acres in patches in and around the athletic fields and along the RR tracks were seeded. Forty-one lbs of a prairie seed mix (containing the 31 species listed above) were hand-broadcasted into a cover crop of annual oats at a seeding rate of about 15 lbs per acre. The mix contained 26 lbs of native grass seed and 15 lbs of forb seed, a 2:1 ratio often recommended for prairie plantings.

Establishment. By late May of 2002, seedlings of 10 species were observed. Pale purple coneflower and yellow coneflower were most frequently observed and easily identified. By late June, nearly all of the 31 species were found in the plantings, except for white wild indigo, shooting star, and sideoats grama. These species were probably present but in low abundance, or in the case of the grama grass, difficult to distinguish from other grasses. As of July 2004, only wild indigo and shooting stars had not been observed. One wild indigo plant was observed flowering in June of 2005. All but 3 species have flowered.

[♣] L. Mottl, October 2005

Weed control. Generally, to establish prairie, mowing frequently in the first and second growing seasons is necessary to reduce aboveground competition between weeds and prairie seedlings for light. The prairie species are largely unaffected by the mowing, as they put most of their energy into developing deep root systems in the first year. When mowing stops, the prairie plants have sufficient energy stored to overtop and out-compete most of the annual and perennial weeds in their second growing season.

Very few weeds were present in early June of 2002 in the central island and peninsular areas where the oats had created a thick cover over winter. Since prairie seedlings were abundant and growing vigorously in these areas, pigweeds, lamb's quarters, horseweeds and knotweeds, among others, were hand-pulled. (Hand-pulling isn't usually feasible unless the planting area is small.) By not mowing these areas, many prairie species (along with foxtails) bloomed and set seed their first growing season, including spiderwort, early sunflower, prairie brome, Canada wild rye, prairie coreopsis, partridge pea, rattlesnake master, flowering spurge, little bluestem, and all of the asters. Although foxtails were abundant in 2002, very few can be found as of 2005. As annuals with shallow, fibrous root systems, they decreased in abundance over time.

In the larger swathes along the RR tracks and north end, as well as in the two smaller south islands, weeds formed a thick cover in 2002, requiring frequent mowing to a height of about 4-6" throughout the growing season. The plantings were mowed once in May of 2003, with no further mowing because the prairie plants successfully overtopped the weeds in June. Later that summer, a gas-powered brush cutter was used to "spot mow" flowering stems of white sweet clover (*Melilotus alba*), a biennial weed that can jeopardize prairie establishment. Sweet clovers have dwindled in abundance but will continue to be monitored each summer and hand-pulled or cut to prevent seed production.

Long-term maintenance. Additional species or more seed of some species may be added whenever time and funds allow. The area could support 2-3 times the number of species seeded thus far. The seed would be added after a burn in the fall or spring and would require that the area be mowed the following growing season.

Mowing or hand-pulling are done as necessary for weed control.

Prescribed burning was used to control cool-season weeds in the strip along the RR tracks and the central island in April 2004. The fire stimulated growth and flowering of the prairie species.

You are encouraged to walk the gravel trail and observe the establishment of these "reconstructed" prairies over time. As more species reach reproductive maturity and flower, they will attract a myriad of other organisms, including many insects and birds. Bat houses were installed in the spring of 2004 to provide roosting habitat for our mosquito-eaters. Bring your camera when you visit!

If you're interested in more information on planting prairie or would like to share your observations of the athletic complex prairie plantings, feel free to contact Larissa Mottl at the Center for Prairie Studies at 641-269-4717 or mottll@grinnell.edu or visit the CPS website at: http://www.grinnell.edu/academic/cps/.

Plant illustrations used with permission from Shirley Shirley and Mae Domack.