UNIVERSITY OF MINNESOTA | EXTENSION

Help Pollinators by Planting a Bee Friendly Lawn

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Bees play a key role in American agriculture through pollination; the U.S. grows more than one hundred crops that either need or benefit from pollinators with an economic value estimated at $20 billion in 2000. The Upper Midwest states, including MN, ND and SD, are the top honey producing states in the nation. Pollinators are essential to healthy ecosystems. Examples of pollinators include: honey and native bees, wasps, flies, ants, butterflies and moths, beetles and some birds.

Pollinators have suffered dramatic population declines in recent years, due to habitat loss from monocultures, increased housing and development, pesticide usage, parasitic mites, and disease. Some turf areas, such as those in home lawns not used for recreational purposes; out-of-play roughs on golf courses, cemeteries, large commercial properties and boulevards, are rarely used by people and primarily serve an aesthetic purpose could become pollinator habitats. Having a bee lawn at home is one way you can support our pollinators**!** Plant and encourage flowering plants, that supply pollen (protein) and nectar (carbohydrates) to pollinators.

At Minnesota Landscape Arboretum, we worked with Ian Lane, entomology graduate student; Dr. Marla Spivak, Dept. of Entomology and Dr. Eric Watkins, Department of Horticultural Science on the University of Minnesota Twin Cities campus to develop appropriate ways for home owners to help pollinators with bee friendly flowers in their lawns. Our goal is to enhance habitat for pollinators, and provide land managers new ways to increase bee forage in human-dominated landscapes. Our specific objective is to make recommendations for creating a flowering lawn that can withstand mowing and provide critical floral resources for bees and other insect pollinators.

The Bee Lawn Demonstration at the Arboretum shows five ways we are comparing how to add flowers into a lawn:

1. Overseed with 3 kinds of flowers to existing turf
2. Scalp grass to 1", then add 3 kinds of flower seed
3. Remove grass; seed fine fescue and 3 kinds of flower seed to bare soil
4. Scalp grass to 1"; then aerate; overseed with fine fescue and 3 kinds of flower seed
5. Aerate grass; then overseed with fine fescue and 3 kinds of flower seed

Seeding Rates:

Grass seed:

Fine fescue, *Festuca brevipila*- 4 lbs/1000 sq ft

Flowers:

White clover, *Trifolium repens*- 3.2 ounces (7 tablespoons or .069 lbs)/1000 sq ft; most local garden centers sell seed of white clover

Thyme, *Thymus serpyllum* - 1 ounce (2 tablespoons or .01 lbs) /1000 sq ft;
Seed source: http://www.outsidepride.com/seed/ground-cover-seed/creeping-thyme/creeping-thyme-groundcover-seed.html.

Self-heal, *Prunella vulgaris*- 3.6 ounces (7.5 tablespoons or .076 lbs)/1000 sq ft; seed source: https://www.silverfallsseed.com/seed/Oregon-Native-Seed/Heal-All.html.

We applied these small amounts of flower seed by mixing them with an organic fertilizer, such as Sustain (http://www.sustane.com/pdf/Label/Bolster4-4-4.pdf). We used 10 lbs Sustain (4-4-4) per 1,000 sq ft. Milorganite or other organic fertilizer could also be used as a carrier to bulk up the seed so it is easier to apply. We watered almost daily for two weeks to encourage germination of the seed. We mow to 3-4 inches and mow when the grass gets to about 6 inches. No additional water, pesticides, or fertilizer is used. Spot treatment for unwanted weeds may be used in future years.

For more information see:
Flowering Lawns:
https://www.beelab.umn.edu/sites/beelab.umn.edu/files/floweringlawninfoenrtflogo.pdf

Turf and Bees: What's the Buzz on Pesticides in Lawns?
http://blog-yard-garden-news.extension.umn.edu/2014/10/turf-and-bees-what-buzz-on-pesticides.html

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LOCATION AT ARBORETUM:
The Arboretum Bee Lawn is located on 3-mile drive just before the Hedge Collection parking lot. It is marked with a sign and the 5 individual plots are labeled. About half way around the drive, you will pass the Service Drive (sign indicating no entry except to Arboretum Staff), look for the Bee Lawn sign as you make the next turn heading east. There is a small pull off area just after the Bee Lawn, or park at the Hedge Collection parking lot about 1,000 feet ahead. The Bee Lawn is open and accessible any time the Arboretum is open.