

# Plant a Bee Lawn



## Turf Alternatives Series

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Creeping Thyme



Ground Plum



Self Heal

### What is a Bee Lawn?

Bee lawns are made of a mix of grasses and low-growing perennials that can be used and treated much like a regular lawn but also offer high-quality nutrition to pollinators.

### Why should I plant a Bee Lawn?

Pollinator populations have been declining in part due to habitat loss, pesticide use, and parasitic mites. Pollinators play essential roles in our ecosystems and help pollinate 1/3 of the food on our plates! Introducing flowers into a lawn not only helps bees and other pollinators, but can also increase the resilience of your yard by promoting deeper roots, increasing soil health, and reducing the need to fertilize.

### Where do you plant a Bee Lawn?

Turf areas that are not heavily used for recreational purposes or that are primarily aesthetic make great pollinator habitats. Examples include home lawns, boulevards, slopes that are steep or challenging to mow, and right of ways or easements.

### What plants make up a Bee Lawn?

**Shorter flowers:** These are flower types that cater to different bees with different pollen and nectar needs and access abilities. They are low growing and can tolerate being mowed to 3".

- White clover (*Trifolium repens*)
- Creeping thyme (*Thymus serpyllum*)
- Self heal (*Prunella vulgaris ssp. Lanceolata*)
- Ground plum (*Astragalus crassicaarpus*) in sandy soils

#### Grasses

- Fine fescues (*Festuca sp.*) have thin blades that give flowers the best chance to establish, and are longer-rooted and slower-growing than Kentucky bluegrass, needing less maintenance throughout the year.

**Taller flowers:** These bloom above typical mowing heights, but make can nice additions to gardens or border areas.

- Prairie Groundsel (*Packera plattensis*)
- Lanceleaf Coreopsis (*Coreopsis lanceolata*)
- Calico Aster (*Symphotrichum lateriflorum*)

## How do I make a Bee Lawn?

### Overseed a traditional lawn with pollinator friendly seeds

STEP 1: Mow your lawn very short—1 inch or less to improve seed to soil contact. Rake or remove grass clippings to expose as much soil as possible.

STEP 2: Optional. Aerating the lawn is recommended. It can be done with a hand aerator or machine and helps create good conditions for seed germination and healthy growth.

STEP 3: Spread seed at appropriate seeding rates:

- White clover at 1.1 ounces (2 ½ tablespoons) / 1000 ft<sup>2</sup>
- Self heal at 1.2 ounces (2 ½ tablespoons) / 1000 ft<sup>2</sup>
- Creeping thyme at .16 ounce (1 teaspoon) / 1000 ft<sup>2</sup>
- (Optional) Fine fescue at 4 lbs / 1000 ft<sup>2</sup>



Dutch White Clover

You can mix the small amounts of seed into compost and apply. Compost can be applied up to 40 lbs / 50 ft<sup>2</sup> of lawn. It improves seed to soil contact and germination rates.

### Build from the bottom up

STEP 1: To start from a blank slate you must remove existing grass. Please plan accordingly; a large area of bare soil is easily eroded by runoff, and provides fertile ground for weeds to easily grow. Herbicides are not recommended because of impacts to water quality. All methods have their pros and cons. Below are alternatives to chemical removal.

- Sheet mulching uses cardboard or newspaper to smother grass. A quick google search can tell you all you need to know.
- Sod cutter use is hard work, but non-chemical. You can lose a lot of organic matter though.
- Solarization is a method that covers the area with plastic and uses the sun and lack of water to kill grass. This uses a lot of plastic, takes time, plastic degrades and should be performed in sections rather than on a large scale to reduce the risk of runoff.
- 20% acetic acid or Phydura is an ecologically responsible alternative to glyphosate. It kills all vegetation but leaves roots for stabilization and reseeds easily.

STEP 2: Follow the directions above to aerate and seed with mix of fine fescue and flowers.

## Maintaining a Bee Lawn

If you mow, keep it at least 3" tall. Taller lawns shade the ground, preventing too much moisture from evaporating while also discouraging weed seeds from sprouting. You can choose to refrain from mowing while flowers are blooming to increase the amount of forage available for pollinators.

White clover fixes atmospheric nitrogen into the ground, so you will not need much fertilizer, if any. Herbicides won't be able to differentiate between the flowers you want to keep and those you want to remove, so hand tools will be the most effective at weeding.

Thanks to the following individuals and teams for providing research, information and feedback:

Madeline Seveland, Carver County Water Management Organization  
Bod Dahm, Organic Bob  
Douglas Owens-Pike, Energyscapes

Sam Bauer and the University of Minnesota Turf Lab  
James Wolfin and the University of Minnesota Bee Lab

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# Plant a Low Maintenance Lawn



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### What is a Low Maintenance Lawn?

A low maintenance lawn functions as a typical lawn but is made up of species that require less water and fewer inputs such as fertilizers, pesticides, and mowing than Kentucky bluegrass. Most low maintenance lawns are a mix of fine and/or tall fescues, both hardy cool season grasses. The benefits of fescues include:

- **Drought tolerant.** They need less water to stay healthy and green.
- **Less fertilizer.** They prefer 0.5lb /1000 ft<sup>2</sup>, (instead of 3 lb/1000 ft<sup>2</sup> for Kentucky bluegrass).
- **Slow growing; less mowing.** Mowing is typically done once in mid-summer to remove seed heads and once in late fall for a healthy spring lawn (shorter grass overwinters better). Metro Blooms recommends following the rule of 1/3 when it comes to mowing, where no more than 1/3 of the plant material is removed during a mowing event (i.e 6"- 4" or 4.5"- 3").
- **Adaptable.** Many species, such as creeping red fescue, do well both in shade and full sun.
- **Weed-suppressing.** Some fescues are bunch forming while others are creeping. Either way, they interlock to form a dense sod and prevent weeds from establishing, so pesticides aren't needed. Tall fescue and some species of fine fescue are even allelopathic, meaning they produce natural herbicides to suppress the growth of other plants. Built in weed control!

### Where to use Low Maintenance Turf?

Areas with moderate foot traffic. Home lawns (especially hard-to-mow areas), golf course roughs, street boulevards, and city parks.

### Where to NOT use Low Maintenance Turf?

Areas with high foot traffic, such as athletic fields, and areas with deep shade. Creeping red fescue has the best shade tolerance, or try sedges or path rush.

### What species to look for

Often the fescues used in low maintenance lawns are referred to as "low mow" or "no mow" grasses. Proprietary seed mixes usually include fine fescues like hard fescue, sheep fescue, chewings fescue, and creeping red fescue.



## How do I create a Low Maintenance Lawn?

### Overseed a traditional lawn with low maintenance species.

STEP 1: Mow your lawn very short—1" or less. Rake or remove grass clippings to expose as much soil as possible.

STEP 2: Aerating the lawn is recommended, but not required. It can be done with a hand aerator or machine to create good conditions for seed germination and healthy growth.

STEP 3: Spread fescue seed at a rate of 3 lbs / 1000 ft<sup>2</sup>. For best results, apply a very thin layer of compost (40 lbs / 200 ft<sup>2</sup>) along with or over seed to improve seed to soil contact, and/or a thin layer of straw to limit erosion.

STEP 4: Keep well-watered for 2 weeks until seeds sprout and begin to establish. Then, refrain from watering except in lengthy periods of hot and dry weather, and do not fertilize. The fine fescues will over time out-compete the existing turf.



### Build from the bottom up

STEP 1: To start from a blank slate you must remove existing grass. A large area of bare soil is easily eroded by runoff, and provides fertile ground for weeds to easily grow. Herbicides are not recommended because of impacts to water quality. All methods have pros and cons. Below are alternatives to chemical removal:

- Sheet mulching uses cardboard or newspaper to smother grass. A quick google search can tell you all you need to know.
- Sod cutter use is hard work, but non-chemical. You can lose a lot of organic matter though.
- Solarization is a method that covers the area with plastic and using the sun and lack of water to kill grass. This uses a lot of plastic, takes time, plastic degrades and may release toxins and is not practical on a large scale.
- 20% acetic acid or Phydura is an ecologically responsible alternative to glyphosate. It kills all vegetation but leaves roots for stabilization and reseeds easily.

STEP 2: Optional. Aerate the area with a hand aerator or machine. This helps air, water and nutrients get to where they're needed most.

STEP 3: Reseed with mix of fine fescue at a rate of 6lbs / 1000 ft<sup>2</sup>.

STEP 4: Water daily for 10-15 minutes to maintain moisture for a week, then every other day for a week to promote healthy germination and establishment. Water deeply weekly, as roots establish, then ensure your yard receives at least 1" water a month from rain or irrigation to maintain green.

STEP 5: Pull any weeds as they become apparent. Watch out for broadleaf weeds as well as crab grass.

## Maintaining a Low Maintenance Lawn

If you mow, leave the lawn at least 3" tall. Taller lawns shade the ground, prevent too much moisture from evaporating and discourage weeds. When seeding from scratch, there will be weeds, so you will need to weed and re-seed bare spots during establishment. To maintain green through growing season, the lawn should receive 1" of water per month (compared to 1" water per week for Kentucky bluegrass).

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# Plant Perennial Ground Cover



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**With so much of our urban and suburban environment covered by impermeable surfaces** (roofs, streets, parking lots, etc.), what we choose to plant in the remaining patches of soil **has drastic consequences for water and habitat quality.**

### About Perennial Ground Cover

Though many things can technically be considered perennial ground cover, we use the term to mean a matrix of tightly-knit grasses and forbs that take the place of traditional turf grass. If you have low-use areas and welcome a non-traditional look, a biodiverse perennial ground cover offers maximum ecological impact—though it generally requires more investment of planning and money and has higher maintenance needs while establishing than other turf alternative options. The back of this sheet offers a starter list of options that have been recommended for their hardiness, ecological benefits, and relative low-growing nature and ease of maintenance. Of course, if ordinances allow, you could go further and convert your yard into a native meadow or prairie.

### Planting and Establishing Perennial Ground Cover

Planting plugs is the fastest way to establish perennial groundcover, but can be expensive over a large area. Other options are to work in phases, or to choose a combination of plugs and seeding. While plants spread, keep an eye out for weeds. It may require a trained eye or some research to spot the difference between a beneficial plant and an unwanted one. Once established, the ground cover should be thick enough to inhibit weed germination and hardy enough to compete with most intruding weeds.

Visit [bluethumb.org/turf-alternatives](http://bluethumb.org/turf-alternatives) for more information, or [bluethumb.org/plants](http://bluethumb.org/plants) for more plant options.

## Perennial Ground Cover for Yards and Boulevards

	Common Name	Scientific Name	Bloom	Height	Sun/Shade	Soil	Native
Flowers	Calico Aster	<i>Symphotrichum lateriflorum</i>	white	24"	both	mesic	Yes
	Common Blue Violet	<i>Viola sororia</i>	purple	4"	both	mesic	Yes
	Creeping Thyme	<i>Thymus serpyllum</i>	purple	2-4"	sun	dry	No
	Dutch White Clover	<i>Trifolium repens</i>	white	6-12"	both	dry	No
	Ground Plum	<i>Astragalus crassicaupus</i>	purple	12"	sun	dry to mesic	Yes
	Lanceleaf Coreopsis	<i>Coreopsis lanceolata</i>	yellow	12-24"	sun	dry	Yes
	Prairie Groundsel	<i>Packera plattensis</i>	yellow	12-16"	sun	dry	Yes
	Prairie Smoke	<i>Geum triflorum</i>	pink	8"	sun	dry to mesic	Yes
	Pussytoes	<i>Antennaria plantaginifolia</i>	white	12"	sun	dry	Yes
	Self-heal	<i>Prunella vulgaris ssp. lanceolata</i>	purple	2-12"	both	mesic	Yes
	Sweet White Violet	<i>Viola blanda</i>	white	6"	shade	mesic	Yes
	Woodland Strawberry	<i>Fragaria vesca</i>	white	6-10"	shade	mesic	Yes
Grasses/Sedges	Blue Grama	<i>Bouteloua gracilis</i>	n/a	12"	sun	dry	Yes
	Fine Fescues	<i>Festuca sp.</i>	n/a	1-8"	both	dry	Some
	Ivory Sedge	<i>Carex eburnea</i>	n/a	6"	shade	dry to mesic	Yes
	Path Rush	<i>Juncus tenuis</i>	n/a	6-12"	sun	dry to mesic	Yes
	Pennsylvania Sedge	<i>Carex pensylvanica</i>	n/a	8"	both	dry to mesic	Yes
	Prairie Junegrass	<i>Koeleria macrantha</i>	n/a	24"	sun	dry	Yes
	Sideoats Grama	<i>Bouteloua curtipendula</i>	n/a	24"	sun	dry to mesic	Yes