Building a Pollinator Garden

How to Eliminate Existing Vegetation

There is no minimum size for a garden to benefit pollinators. Even a few containers of plants can help. University of Kansas experts with the Monarch Watch program recommend a minimum of 100 square feet to create a garden filled with diverse pollen and nectar sources and host plants for insect larvae.

How to get started? In the home landscape, most pollinator gardens are installed where there is an existing lawn. The lawn must first be eliminated to build a pollinator garden.

Prepare the site

Smothering removes sunlight which kills the existing plants and creates space and opportunity for the desired plants to grow. A variety of materials can be used to smother existing vegetation to prepare a garden site for planting.

Fall leaves

Rake or mow fallen leaves into the area to establish a native plant bed 6 to 12 inches deep. Allow leaves to remain until spring, and then remove and spread out leaves so they are 2 to 4 inches deep. The leaves become a mulch layer and pollinator plants can be planted directly into the soil.

Rain-style pollinator garden site. Photo by Amy Lefringhouse, University of Illinois Extension.

Arborist woodchips

Trees grow well in Illinois, and there are often sources of woodchips in communities as arborists and other tree care professionals perform routine maintenance or tree removal. Sometimes woodchips are even free. Apply 4 to 6 inches deep. This will smother most weeds. However, tenacious perennials can grow through the mulch but can be easily pulled.

When ready to plant, reduce the mulch depth to 2 to 4 inches deep. Arborist woodchips are coarser and allow better water and air exchange to the soil. Shredded wood mulch typically knits together forming a shell over time. Shredded wood mulch will need to be cultivated periodically to prevent a shell from developing.

Silage tarp

The black plastic material prevents light from reaching the soil surface, killing living plants and inhibiting seed germination. Gardeners can scalp the vegetation with a mower, then lay down the plastic. Or till and rake out a prepared soil surface to then cover. Tilling creates an opportunity for seed germination. Covering after tilling kills germinating seeds creating a stale seedbed. Remove plastic before planting.

Cardboard

If smothering is the only goal, cardboard is another possible material. Remove any tape, labels, staples, or other shipping and packing material. Remove cardboard before planting. Cardboard can become hydrophilic or hold excess water, making it a less efficient option than mulch.

Paper

Large rolls of biodegradable paper designed for garden use can be found at many garden centers. If using newsprint, avoid glossy paper.

Straw

A thick layer of straw can help suppress existing lawn and can be directly planted into with transplants.

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Physical removal preparation of a pollinator site with a tiller. Image by Christopher Enroth, University of Illinois Extension.

Chemical and mechanical removal

Herbicides

Spraying a herbicide will often give the quickest results with the least amount of effort to eradicate existing plant material. There are different types of broad-spectrum herbicides that can be used. When selecting a chemical, ideal products have a low persistence or shorter period of time that the herbicide is considered active in the soil, so users can quickly plant following application.

Glyphosate is an example of a common active ingredient that binds to the organic matter in the soil, is not prone to movement in the environment, and breaks down quickly. Before using herbicide, read the entire label and follow the directions specified. Depending on what existing vegetation is present, multiple herbicide applications may be needed.

For assistance in using herbicides, find your local extension professional at go.illinois.edu/ExtensionOffice.

Physical removal

Physical removal of turfgrass is always an option but may be the most labor-intensive method.

Sod can be removed using a sharp digging shovel and a flat-bottom shovel. Using shallow, slicing movements with the digging shovel, strip off the upper layers of soil and roots to remove existing turf. The flat-bottom shovel can be used to lift up sod or smoothing out the exposed soil. Be sure to go deep enough to get all roots, yet shallow enough to minimize the removal of topsoil.

Be mindful of what to do with the rolls of sod. Consider patching bare spots elsewhere in the lawn or place into a compost pile.

Lawns can also be removed using a sod cutter. Local landscapers can be hired to perform this task or consider renting a sod cutter from an equipment rental company. This method is a quick way to get a nice clean surface to start with.

Tilling

A lawn space can also be tilled to remove the sod for planting. Till to a depth that removes the grass roots. If soil amendments are desired, incorporate to a depth of 6 to 10 inches. Rake out the tilled lawn and dispose of grass and roots in a compost pile. Multiple passes with the tiller and rake may be required to remove all vegetation.

Tilling concerns:

- Over-tilled or pulverized soil has smaller soil particles that dry out quicker and can easily develop a crust on the soil surface.
- Tilling releases carbon dioxide into the atmosphere.
- Tilling or lifting the soil exposes dormant weed seeds that will now germinate.

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