



PARK MAINTENANCE  
— INSTITUTE —

# Convert Turf into a Productive Garden with a “No-Till” Approach

by Brian “BK” Koehler

In a case of taking “the grass is always greener” a bit too literally, many citizens and public officials have long strived to make lawns and turf areas brighter, lusher and more velvety than surrounding areas.

However, many traditional turf management practices can do substantial harm to the environment. Birds, for instance, may ingest berries and seeds that have absorbed pesticides from the ground. Likewise, rainwater runoff from treated turf can carry pesticides and fertilizers into rivers, lakes, streams and oceans via the sewer system. This can poison fish and other aquatic animals or harm humans who swim, surf or eat contaminated seafood.

Fortunately, a growing number of homeowners and public land managers are converting part or all of their lawns and nonathletic turf areas into more sustainable landscapes. While the “no-mow” movement has been growing in popularity, not all municipalities have public policies that encourage full adoption. Luckily there are many beautiful options for commercial and residential landscapes that require a similar amount of maintenance to managing turf while providing additional benefits. Converting turf into productive garden plots and pollinator borders is a great example. The remainder of this article highlights the process and benefits of using a “no-till”

approach to create ecological change in our communities.

## Why Use a “No-Till” Approach?

There’s no getting around the fact that digging is hard work and rototillers are difficult to maneuver, but conventional wisdom says it’s worth it. Traditional logic suggests that tilling helps you to incorporate nutrient-boosting organic matter such as compost, while creating looser, fluffier soil for sowing and planting. But does it?

Consider the components of soil life that are disrupted every time we dig, from bacteria to earthworms, beneficial insects to fungi. Turning the soil disrupts the web of life, setting back natural processes that lead to healthy soil. Leave soil undug, and soil organisms can thrive undisturbed. This is good news for plants and allows for a more natural balance between soil pests and their predators.

## Benefits of “No-Till” Garden Beds

- **Reduced Maintenance.** By using natural mulch and a no-till method, weeds are nearly eliminated, and therefore so are weeding chores! Combine this with

a use of cover crop in the fall, and weeds are kept at bay for the following year too.

- **Better Soil and Better Harvests.** Using simple crop rotation, cover crops, mulch and compost consistently will amend the soil naturally each growing season. This reduces or even eliminates the need for expensive fertilizers and pesticides.
- **Less Watering.** The raised bed setup keeps plants protected and insulated. That means less watering, and better root structure development for plants.

## Establishing New Beds

- Always remember to define “function” before “form.” Plan ahead, and establish bed location and size depending on your intended function. For example, vegetable gardens and certain types of pollinator gardens may require more direct sunlight for longer periods of the day, while other species of native shrubs and wildflowers may not. Once you have established *what* you want to grow, we are ready to move onto *how* to start.
- Begin by clearing the defined surface area of any debris and any rocks larger



than a hen's egg. Mow down grass or cut back weeds to the ground. Lay down a thick layer of paper or cardboard over the cleared ground. Aim for beds no wider than 4 feet (1.2 meters) and you'll never need to step on the soil inside. This helps to prevent the soil from becoming compacted, which lessens still further the need to reach for the spade. If you are working with larger areas of space, plan to include stepping stones or small pathways to allow for walking access.

- Thoroughly wet the cardboard to help it break down. The cardboard will serve as a further barrier to weeds, exhausting and eventually killing most of them. Once the growing season gets underway, you'll find that any weeds that do manage to make it through will be much easier to remove.
- Now add a thick layer of well-rotted organic matter. This will suppress the growth of the weeds beneath by blocking out light, and provide nutrient-rich material for roots to grow into. Lay it at least 4 inches (10 centimeters) deep. Suitable organic matter includes compost, or manure from a trusted source where you can guarantee no herbicides have been used.
- Next add a layer of wood chips about 2 inches (5 centimeters) deep, taking care not to mix the two layers. You can

also use alternative materials such as leaf mold, hay, grass clippings, straw and sawdust in place of wood chips. It is important to remember all mulches need to be weed seed-free, so they're not self-defeating.

- The secret behind any no-till garden lies in regular mulching with organic matter. Mulches cover the soil surface, protecting it from erosion, locking in soil moisture and suppressing weeds. As they decay, they add fertility to the soil while at the same time improving its structure, without the need to dig. In no-till gardening, mulching replaces digging.
- As a final step, mark out pathways between and around beds using thick cardboard laid with generous overlaps. This will help to kill off the weeds between growing areas. This eliminates a large portion of the garden areas from ever having to be maintained.
  - Cover the cardboard with bark chips or similar organic surface material like straw, leaves or anything else available locally and inexpensively. By mulching these nongrowing areas permanently, you immediately reduce a huge amount of work in a traditional garden. An area that is never needed for growing shouldn't need to be maintained often, if at all.

### Small Steps Can Lead Toward Big Change

While an established no-till landscape can be beautiful and eventually save time and



money, it takes seasons to develop. Developing small areas over the course of time may be an appropriate approach. It may take a few years to establish community support and understanding about the benefits of reduced turfgrass areas.

Some community members may not appreciate any deviation from the usual look of the neighborhood or may feel that your choice of plants looks "messy" or "weedy." Educate them. Use signage that explains what you are doing, and explain the benefits. Ensure that neat borders are kept. Community members just might love what you're doing and look to you for advice for their own properties.

Our community landscape is part of the natural world. How it is developed and maintained matters. Replacing turfgrass, without too much trouble, creates an opportunity for all citizens to foster healthier watersheds and ecosystems as we create beautiful, enjoyable, wildlife-friendly landscapes that require less maintenance, water and chemicals.

#### Resources:

- Carignan, Christa. (2019). "Lawn Alternatives – Ways to Reduce Your Lawn," [extension.umd.edu/resource/lawn-alternatives](http://extension.umd.edu/resource/lawn-alternatives).
- "No-Till Gardening." (2018). University of Maryland Extension Home and Garden Information Center, [www.youtube.com/watch?v=pqXI61U6hxU&feature=youtu.be](http://www.youtube.com/watch?v=pqXI61U6hxU&feature=youtu.be).
- Hammonds, Tara. (2016). "No Till, Permanent Beds for Organic Vegetables," [smallfarms.cornell.edu/2016/01/no-till-permanent-beds](http://smallfarms.cornell.edu/2016/01/no-till-permanent-beds).
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Brian "BK" Koehler is the director of the Park Maintenance Institute. He can be reached on LinkedIn at [www.linkedin.com/in/koehlerbrian](http://www.linkedin.com/in/koehlerbrian) or emailed at [bk@prps.org](mailto:bk@prps.org) — [www.prps.org/maintenanceinstitute](http://www.prps.org/maintenanceinstitute).

Photos provided by Brian Koehler