

# Low and No-Till Gardening

Tilling your garden likely feels like a natural part of the spring gardening agenda. Its one of the most common ways to prepare a clean, weed free garden bed, ready for planting. But tilling has some significant downsides and it's not as challenging as you might think to switch up the routine.

## Why try this approach?

UNH says it best:

*"Tillage of the soil, especially deep tillage, weakens and disrupts both the physical and biological properties of the soil. Tillage weakens the soil's microbial community that metabolizes and holds nutrients, sequesters and holds carbon, and absorbs and holds water. This can mean reducing the soil's water holding capacity, promoting surface crusting, increasing erosion potential, and speeding up the loss of organic matter through accelerated decomposition. Tilled soil is still bacterial rich, but un-tilled garden soil is also rich in fungi. Fungi helps your plants become more productive, and your garden will be more productive without disrupting the fungal community within your garden's soil."*

-UNH Extension, *Low and No Till Gardening*



## How do I do it?

*You can really begin low or no- till gardening at any point. If you start in the fall, once your plants naturally die back and remove all of the above ground vegetation to the soil line. Over the late fall, winter and early spring, the root material will add organic matter and nutrients to the soil. In the spring, whatever is left of any stems can be removed by hand. Then, use a broad fork or even small hand tools in localized areas to alleviate compaction, incorporate soil amendments and prepare the bed for planting. A key concept of no and low-till gardening is soil coverage. Your garden should always have either mulched crops, a cover crop, or at least a layer of mulch on top. Compost, straw, grass clippings, chopped leaves, or any other suitable organic material available to you are great mulch options.*

*A rake will be a very useful tool in a low or no-till garden. While direct seeding may still benefit from tillage, transplanted seedlings will not need it at all. If you are considering making the switch, you could start with just tilling sections where you will be direct seeding.*

*Keep in mind, if this is a brand new practice to you, it may take some time for you and your garden to adjust and really reap the benefits. Start slow, be curious and stay optimistic.*

## What are the benefits?

### Saves time and energy.

While some time and energy may be required to bring in mulch or plant cover crops, it is typically much less labor intensive than tilling the whole garden bed. This practice also saves time in the long run by reducing the need to water, weed, manage pests and more.

### Overall healthier soils.

Low and no till gardens are typically much more resilient to disease and pests because the soil is healthier. The undisturbed sub-surface environment is full of organic matter, naturally well-aerated and the fungal communities are allowed to thrive. This reduces the need to apply fertilizers, pesticides or herbicides.

### Conserves water.

With the soil covered, water can easily pass through, but the soil is shaded so less water is lost through evaporation. Healthier soils maintain moisture longer reducing the need for watering. Healthier soils also reduce the risk of erosion and run off during heavy rainfall and instead acts as a sponge, absorbing the water.

### Sequesters carbon.

Tilling the soil speeds up the breakdown of organic matter, which can release carbon. Not tilling allows the organic matter to break down slowly which provides a steady, slow release of nutrients is more beneficial to plant growth and safely stores carbon in the soil.

### Reduces the need to weed.

Low and no-till gardening significantly reduces the need to weed. When a garden is tilled, dormant weed seeds from beneath the soil surface are exposed to light and germinate. Without tilling, these seeds remain dormant indefinitely. Of course, weed seeds can still travel by bird or wind, but typically those weeds can be removed easily by hand early in the morning after watering.



### Sources:

<https://extension.unh.edu/blog/2020/10/low-no-till-gardening>

<https://learn.eartheasy.com/articles/no-till-gardening/>