

Raised Bed Composition

By Mike Olijnyk

Raised beds are advantageous for gardening because you can control the soil quality better than the regular soil in the garden, which can consist of dense clay and require serious amending to become productive. Raised beds also warm up sooner than the rest of the garden soil. This allows earlier planting and longer growing seasons into the fall.

Many people fill their raised beds with expensive premium brands with enhanced nutrients. However, that soil can become depleted after a growing season and will require future amending to maintain productivity at that level. Maintaining raised beds becomes a pricy endeavor with replenishing or replacing the top layer.

Let me present this example:

1. To fill a new 4x4 foot x 10 inch deep raised bed, you will need 13.3 cubic feet of soil.
2. Soil bags typically contain 0.75 cubic feet per bag.
3. At that volume, you will need 18 bags to fill that raised bed to the top!
4. At about \$5 per bag, you just spent \$185 sent on making a single 4x4 bed.

People joke about the input costs of growing a single 39 cent pepper, but this is the result of using big box garden store solutions to problems that our ancestors already solved centuries ago.

Instead of spending money on premium soil, you can build a garden bed based on Hügeltkultur methods. This has been used for centuries in Eastern Europe and Germany, using decaying materials as the foundation for a garden bed. Chopped up branches, wood chips and logs line the bottom of the bed. This will take years to break down but will provide superb moisture retention to the roots of the plants above. The greater the mass, the greater the water retention. The wood acts like a sponge, storing rainwater to release during drier times. The soil is self-aerating over time. As woody material breaks down, tiny air pockets open in the crumbling soil, aerating the plant roots at the same time. It also provides nutrients and an environment for a healthy soil ecology for bacteria, insects, worms and fungi.

A layer of autumn leaves or grass clippings fills the intermediate level of the bed, providing a faster decomposing organic matter that will compress and lower the depth of the bed as the growing season continues.

Finally, the top layer is only 2-3 inches deep and can be done with much less expensive top soil, mixed with compost, vermiculite and peat for soft, workable soil and nutrients. What required 18 bags to fill can now be done with just 4 bags of soil spread across the top.

Each year, the depth of the raised bed will sink, and may even drop to half its original depth by fall. So instead of discarding your autumn leaves with the trash, lay them thick on top of the soil in the bed and let the snowpack of winter compress them for you.

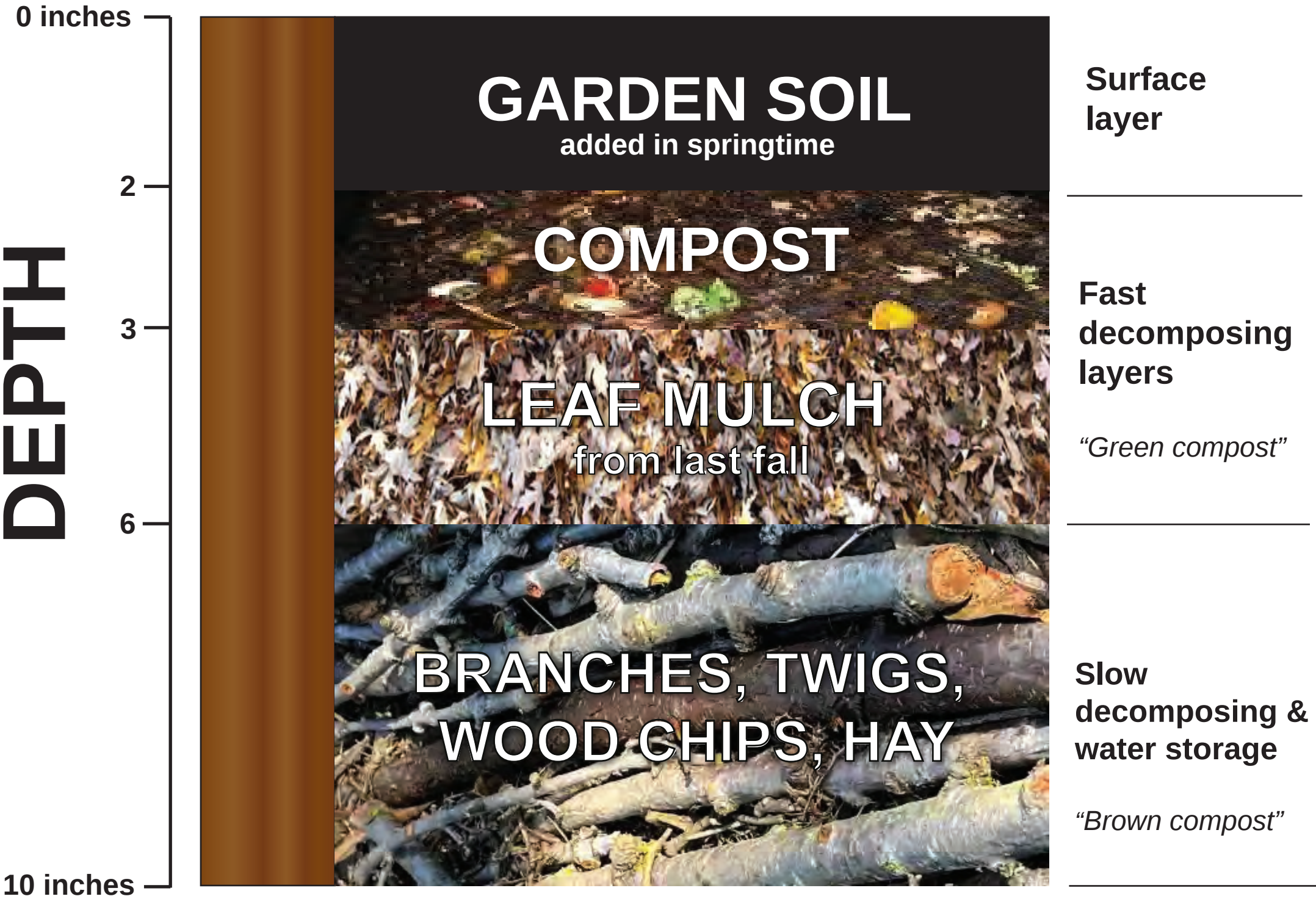
Come spring, add more soil on top of the decomposing leaves once again, flush to the edges of the raised bed. Your bed is replenished for another year. This continuous approach requires no digging, which disturbs the ecosystem of the bed. Hügelkultur beds allow for a natural process to take place below the soil, mimicking a forest filled with decaying material. The heat-producing composting process below ground warms the soil for a somewhat longer growing season too. The decaying woody matter at the bottom is also a source of long-term, slow-release nutrients and keeps excess nutrients from seeping into the groundwater.

From year to year, this method dramatically reduces the amount of work and upkeep for the raised bed. Keeping a layer of mulch on top like straw or grass clippings will further promote moisture retention in the raised bed.

A word of warning about using grass clippings where the lawn was treated with synthetic chemicals for weed or pest control. Those clippings could be toxic to your garden and kill your otherwise healthy plants. To follow this method, you need to adhere to natural lawn maintenance too.

Here is an illustration that shows how my raised beds are made to be sustainable and less costly to maintain from year to year.

RAISED BED COMPOSITION



Hügelkultur (German)

Gardening technique where raised beds are constructed using logs, branches, and other woody materials as a base layer, which then decomposes and enriches the soil. This method provides a nutrient-rich, well-draining, and moisture-retentive environment for plants. Layering resembles natural forest bed ecology.

Add mulch, leaves and soil each year since soil level drops during the growing season. No tilling, digging or turning over soil required, just add to the top.

