



Sheet Mulch Gardening (SMG) Guide For Raised Beds

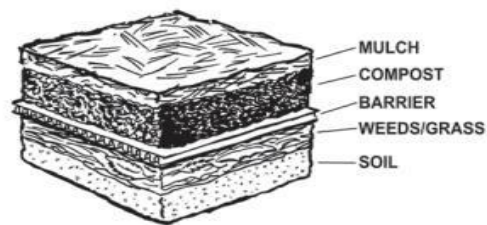
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This is the handout for the CEC Workshop, *Sheet Mulch Gardening*. Workshop Description: Sheet Mulch Gardening is a gardening technique to transform a lawn or any empty lot into a garden plot in less time, with little cost and minimal effort. It mimics the way nature gardens on forest floor. It is the quickest way to build a raised bed for growing flowers and veggies, or to create a permanent garden path with less soil compaction. Thickness of all layers will depend on availability of materials. Multiple layers will enhance biodiversity of decomposing organisms, the key to a successful organic gardening.

What is Sheet Mulch Gardening (SMG)?

Sheet Mulch Gardening is a no-dig gardening technique that attempts to mimic the way nature gardens on forest floor, by piling up organic material in layers and creating a living ecosystem of nutrients, moisture and organisms that benefit plants.

Sheet mulch can be as simple as cardboard topped with ½" to 1" of straw or woodchips, or it can be a more elaborate stack of humus-building layers of bulk organic waste. It is popularized as 'lasagna gardening' and as the most sustainable startup garden to convert lawns into instant raised bed garden.



The Basic Technique of Sheet Mulch Gardening

Here is the basic technique:

1. Select and plan the garden site. Flatten the target area by trimming down existing plants, grass or lawn.
2. Lay out the permanent path where a simple layer of cardboard and 3"-6" of woodchips is applied.
3. Wet the area to facilitate the activity of decomposers. Optional: add rough cornmeal to invite earthworms.
4. Cover the soil with a layer (about ½" thick) of slowly decomposing material typically cardboard or newspaper sheets. This layer will serve primarily as weed barrier and an inviting nursery for earthworms. Wet the layer.
5. Add a layer (about 6" thick) of weed-free finished compost or humus. Moisten this layer and the following layers.
6. Add a layer (about 6" thick) of woody and leafy mulch (not woodchips), peat moss or coir, untreated sawdust.
7. Add a thin layer of manure or barn litter or nitrogen-rich mulch.
8. Alternate layers of finished compost, leafy mulch, and nitrogen-rich material to about a total of 2 ft. deep.
9. Make the top most two layers to be leafy mulch and compost where seeds or seedlings can be planted.
10. Apply moisture conservation at the very top layer. Do not till or mix layers. Poke holes to let beds breathe.

Variations and Considerations

- To ensure root penetration of newly planted seeds or plants, apply the weed barrier a few months before planting.
- Incorporate composting principles and processes in steps 4 through 8.
- Sheets of newspaper and clothing can be used instead of cardboard to conserve and hold moisture.
- Before step 4, an initial layer of organic matter rich in nutrients (manure) may be added to bolster decomposition.
- One variation of mulching, called *hugelkultur*, involves using buried logs and/or branches as the first layer of the bed.
- For permanent garden paths, use layers of weed barrier followed by a 3-6" layer of wood chips.

Advantages & Disadvantages

Advantages: -healthier and more productive plants, water and nutrients retention, stable biochemical cycles (like the forest), reduced labor and cost, minimize soil compaction.

Disadvantages: -weeds may come out, presence of slugs, roaming pests can disrupt the mulch, the system needs periodic re-supply of organic material during early stages, may involve little or no sweat.

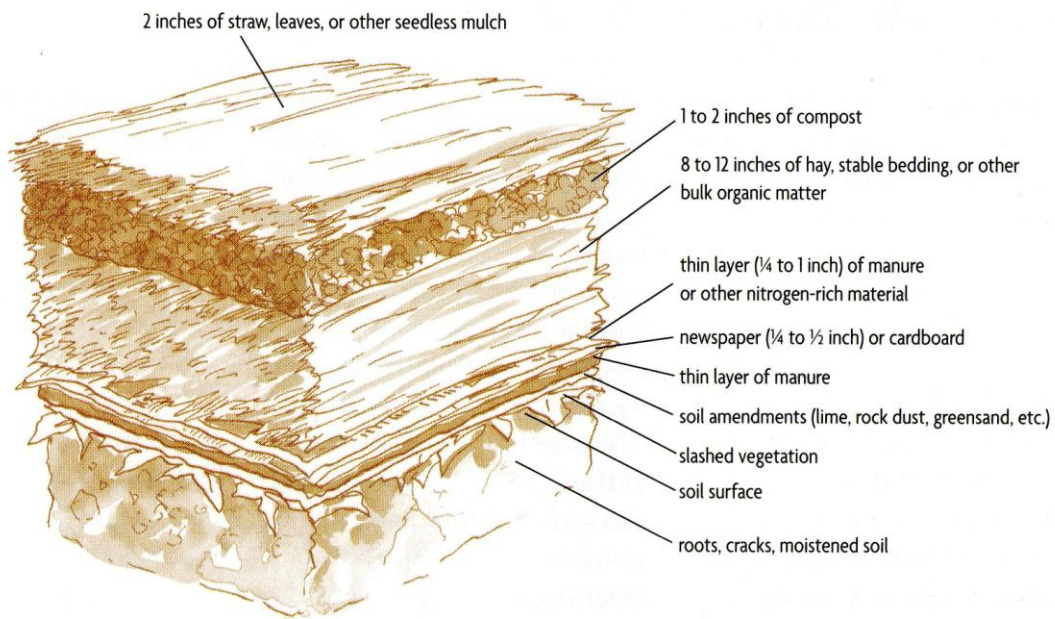
Readings

Masanobu Fukuoka, *The One Straw Revolution*. 1978.

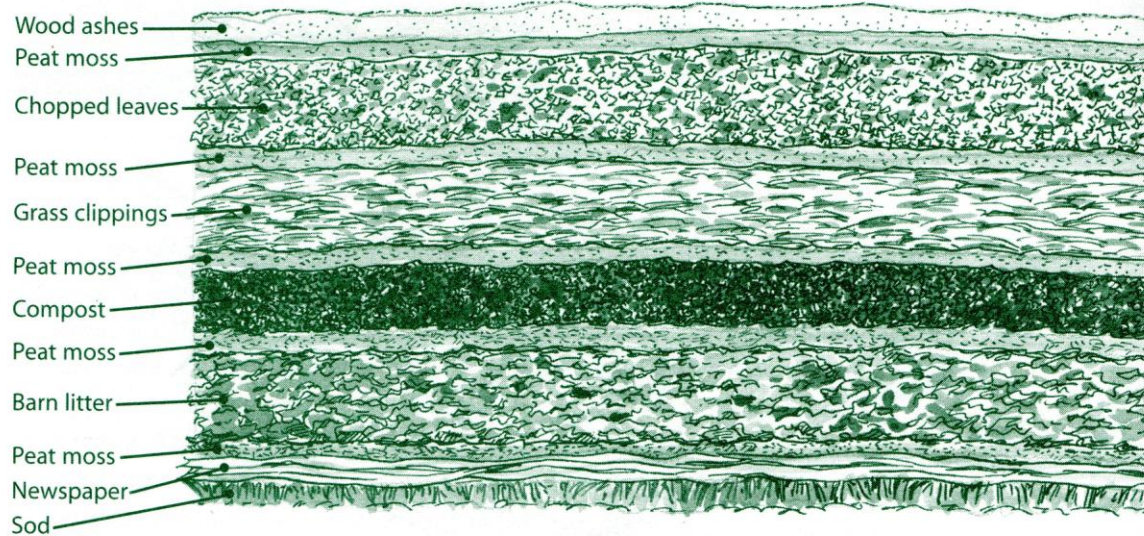
Patricia Lanza, *Lasagna Gardening*, Rodale, 1998.

Ruth Stout, *Gardening Without Work*. 1963.

Jeff Lowenfels and Wayne Lewis, *Teaming with Microbes: The Organic Gardener's Guide to the Soil Food Web*, 2010.



The ultimate sheet mulch. Sheet mulch can be as simple as cardboard topped with a foot of straw, or it can be a more elaborate stack of soil-building layers, as shown here.



Lasagna Garden Layers. Here's an example of what a finished lasagna bed might look like in cross section, with alternating layers of peat moss and organic materials. The exact materials you use to create your own lasagna beds will probably be different, depending on what you have readily available.