

Sheet Mulching Made Easy



What is sheet mulching?

Sheet mulching is a relatively simple technique for creating gardens rich in organic matter. The basic concept is to place layers of a variety of nitrogen and carbon rich materials on top of the soil, allowing them to break down naturally over time –in essence, composting right in the garden itself. Sheet mulching in various forms has been practiced for hundreds of years by small farmers world-wide and has been making a come-back in North America in recent years. Sheet mulching also goes by the names of sheet composting, lasagna gardening and permaculture gardening.

Why sheet mulch?

Sheet mulching has several very useful applications for the urban environment. It is a very effective way of transforming unwanted lawn space into growing areas for vegetables, perennials, shrubs and trees. It is also a very effective way of dealing with very weedy areas as the weeds themselves are decomposed in the process, adding their nutrients to the soil. Sheet mulching is a relatively inexpensive, quick and physically less demanding way of converting lawns as it does not require digging and turning of the soil. Sheet mulching is also an excellent way to make use of a large amount of organic waste materials and has the benefits of other mulching techniques such as water retention in the soil and the prevention of soil compaction.

What materials can be used in a sheet mulch?

Just like in a compost pile, it is important to have a balance of nitrogenous (nitrogen rich) and carbonaceous (carbon rich) materials. **Suitable nitrogenous materials include:** grass clippings, green prunings and other yard waste; manures; coffee grounds; alfalfa meal or pellets; kelp meal; blood and bone meal, etc..

Suitable carbonaceous materials include: newspapers (but not colored flyers); corrugated cardboard (with the tape removed); dried leaves; shredded woody materials such as raspberry canes, small branches, etc.; wood chips or bark (for the top layer only); weed free straws; etc.. Some finished compost is also recommended to introduce composting bacteria, fungi and other organisms into the sheet mulch.



How do you create a sheet mulch?

Follow these basic steps:

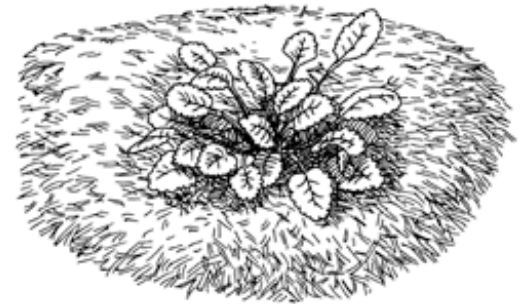
- 1. Prepare the area to be mulched.** Begin by trampling or slashing any taller vegetation and leave it to lie on the ground. If the ground is heavily compacted, poke holes with a garden fork every foot or so to a depth of 6-12 inches. Soak the area well with a garden hose or sprinkler.
- 2. Add soil amendments (optional).** If your soil requires amendments such as dolomite lime, rock phosphate, or other minerals, add them now. Soils in the Edmonton area may benefit from the addition of lime to break up clay but do not generally need any other amendments.
- 3. Layer of nitrogenous material** – Add grass clippings, manure, etc. to a depth of 1 inch. Wet down with garden hose.
- 4. Newspaper or cardboard** – Provide a ¼ inch layer of newspaper and/or corrugated cardboard, overlapping sheets by a minimum of 6 inches. This layer ensures that the weeds or grasses will not grow through the mulch. If the area is very weedy, this layer can be increased to ½ inch in thickness. Wet down thoroughly with a garden hose.
- 5. Layer of nitrogenous material** – Provide another 1 inch layer of green materials, manure, etc. You have now “sandwiched” the carbon (newspapers) between two nitrogen layers, ensuring that your soil does not become depleted of nitrogen while breaking down the newspaper. Wet down with a garden hose.
- 6. Additional carbon materials** – Now add a 1-3 inch layer of leaves, straw, finely shredded branches, etc. and wet down thoroughly once again.
- 7. Compost layer** – A 1-3 inch layer of compost will ensure that you are introducing sufficient beneficial bacteria, fungi and other microbes into the sheet mulch. This layer also allows you to plant some plants into the sheet mulch without cutting through the newspaper layer. Wet down with a garden hose.
- 8. Soil layer (optional)** – If you have it available, you can add a 1-3 inch layer of soil on top of the compost. If you chose to add this layer, be certain that the soil is relatively free of weed seeds. Moisten with a garden hose.



- 9. Finishing layer** – For aesthetics, moisture retention, and to reduce new weeds from germinating, add a 2" cover layer of wood chips, bark mulch, or another material. Compost can also be used as a finishing layer though it will be more prone to germinating new weed seeds. Leaves can be used as an effective top layer if they are in a protected area and will not be prone to blowing around.

How do you plant into a sheet mulch?

Plant trees and shrubs prior to sheet mulching and work the sheet mulch around them (Do not allow sheet mulch materials to come into direct contact with the trunk of trees or shrubs). Perennials and annuals can be planted into the compost and soil layer or pockets of soil can be added into the sheet mulch to accommodate them. Their roots will soon penetrate through the carbon layers. It is best to transplant seedlings rather than seeding directly into the mulch as seeds can get lost in the coarse materials.



What happens in a sheet mulch as time goes by?

The introduction of all of this organic matter creates a feast for soil microbes and soil animals. Earthworms and other critters soon begin to feed on the newspaper and other materials, fertilizing and aerating your soil in the process. In no more than two years, the newspaper and cardboard will have disappeared and the weeds will have decomposed as well. Some people chose to continually add new layers to the sheet mulch over time, employing a "no till" method of gardening.