



Mulching Vegetables

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Few jobs in the vegetable garden are as rewarding as mulching. Time spent applying mulch to peppers, tomatoes, squash, eggplant and other vegetables means extra dividends at harvest time. Mulch prevents loss of moisture from the soil, suppresses weed growth, reduces fertilizer leaching and cools the soil. Mulch also serves as a barrier between the plant and the soil, helping prevent fruit rots that sometimes occur when vegetables touch the ground.

Mulches are excellent conservation agents. They reduce cultivation labor, the need for tillage and the use of weed-control chemicals since emerging and small weeds perish under the dark barrier. Mulched soil absorbs water better than un-mulched soil, and conserves water by reducing the evaporation of soil moisture by lowering the soil temperature. In addition, mulching prevents the formation of soil crusts and decreases soil loss from heavy rain and wind.

Mulch is an excellent insulator that prevents drastic fluctuations in soil temperature. Mulch keeps the soil cooler in summer and warmer in winter, improving both root growth and nutrient availability. At the end of the growing season, organic mulches can be tilled into the soil to further increase the soil's organic matter content and water-holding capacity. Finally, mulches impart a neat, trim look to gardens and reduce the incidences of mud-splashed flowers and vegetables after heavy rains, which can lead to disease problems.

Choosing the Right Mulch

Mulch should be easily obtained, inexpensive and simple to apply, although availability and cost vary from region to region. You can usually find mulching materials in your own yard, at garden centers or from tree-service firms. A suggested depth is 3 to 4 inches, bearing in mind that too little mulch will give limited weed control and too much will prevent air from reaching roots. Lighter

mulches, such as pine straw, may need to be deeper – perhaps 5 inches – since they tend to settle rapidly after becoming moist. A list of mulching materials follows, with emphasis on their advantages and disadvantages.

Bark: Small pieces of bark are preferred over large chunks. Bark mulches vary, but all are attractive, durable and suitable for vegetable gardens. The high carbon-to-nitrogen ratio of bark requires prior application of nitrogen fertilizer.

Cocoa shells: Cocoa shells are brown, light, easy-to-handle and relatively noncombustible. They have some value as a fertilizer and resist blowing in the wind. Their high potash content harms some plants, so they should not be applied deeper than 2 inches. Cocoa shells may have an offensive odor. They are available in some areas of Georgia.

Coffee grounds: Coffee grounds cake badly; thus, a depth of 1 inch is recommended. Coffee grounds contain some nitrogen.

Compost: An especially good mulch, compost has fertilizer value and a soil-like appearance. Finished compost (humus) is also a good organic amendment for tilling into the soil after the growing season ends. Unfinished compost works best as a top mulch around plants.

Corncobs: Ground corncobs are a good mulch, although some gardeners find their light color objectionable. Other uses for ground corncobs, such as in feeds and mash, tend to limit the supply for mulching.

Leaves: Leaves are free, readily available in many areas, release some nutrients upon decomposition and spread easily; however, they have a tendency to form a soggy, impenetrable mat. This problem can be overcome by mixing leaves with fluffy materials, such as hay or straw, or by shredding the leaves with a lawn mower.

Newspaper: Newspaper is certainly readily available and economical but somewhat difficult to apply. The high carbon-to-nitrogen ratio necessitates the prior application of nitrogen fertilizer. A good use for newspaper is as an undermulch; that is, place two to three sheets under a thin layer of an attractive, organic mulch.

Peanut shells: (*Not recommended*) Peanut shells are attractive and easy to apply, contain nitrogen and are long-lasting. However, peanut shells are carriers of *Sclerotium rotfsii*, also known as Southern blight and white mold, which can be a major problem in the garden. Peanut hulls may also be infested with nematodes and nutsedge seeds and/or tubers. Peanut hulls are not currently recommended as a mulch.

Peat moss: Peat moss mulch is attractive and easy to handle but somewhat expensive. Dry peat moss requires considerable time and water to become moist, so it should be applied only to a 3-inch or less depth and avoided in areas subject to drought. Its acidic pH makes it especially desirable for acid-loving plants.

Pine needles: Pine needles have an aesthetic appeal and are not prone to forming a soggy mat, as are leaves. They are especially good for acid-loving plants.

Polyethylene film: Polyethylene film is one of the few readily available mulches that are economical enough to be used for larger-scale commercial applications. Polyethylene allows the passage of gases such as nitrogen, oxygen and carbon dioxide. Holes or slits facilitate planting seeds or plants and water entry. It

can last several years if it is undamaged by machinery. Usually, it is used as black film. Clear film is sometimes used, but it offers limited weed control since light passes through it (unless an herbicide is applied before mulching). Earlier crops can be produced with the clear and, to a lesser degree, black plastic mulch because the soil warms.

Straw/hay: Straw and hay are both lightweight and easy to apply, but their appearance restricts their application mostly to vegetable gardens. They are used more frequently as a winter mulch for protection. They are not long-lasting and frequently contain weed seeds. Coastal Bermuda hay is propagated vegetatively and makes an excellent hay mulch.

Sawdust: Aged or partially rotted sawdust makes a satisfactory mulch that lasts a long time. Since it is prone to caking and has a high carbon-to-nitrogen ratio, apply it only 2 inches deep after adding nitrogen fertilizer to the soil.

Wood chips: Since wood chips are moderately priced (or sometimes free), attractive, readily available and easy to apply, they make an excellent mulch. However, their high carbon-to-nitrogen ratio requires a prior application of nitrogen fertilizer. Wood chips can last about two years. Like bark mulch, woodchips can be a vector for termites.

For additional information on mulches, see Extension Circular 816, *Composting and Mulching: A Guide to Managing Organic Landscape Refuse.*

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