



MULCHES for the GARDEN



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Definitions and Examples

Mulches are materials used as a protective covering on the surface of the soil to retard weed growth, to keep fruits and vegetables clean, to slow down the loss of water, and to protect plant crowns and roots from extremes of heat or cold. Mulches may be loose materials such as sawdust, bark dust, shavings or straw, or they may be sheets of plastic film, foil, burlap, or paper. Mulches are used on annual and perennial plants and to help establish seeded lawns.

In addition to the materials listed above, leaves, lawn clippings, seaweed, pine needles, peat moss, and gravel or stone chips of all sizes are occasionally used as mulches. These materials may be spread on the ground to a depth of 2 to 6 inches, preferably after the plants are established.

As a safety precaution, combustible materials such as pine needles and straw should not be used to mulch plants near buildings. In some areas mulches may encourage propagation of mice and slugs.

Mulches are best used for ornamental shrubs, perennial flowers, bulbs, berries, grapes, and vegetables such as globe artichoke, asparagus, and rhubarb. Long-season vegetables such as melons, cucumbers, tomatoes, sweet corn, peppers, and potatoes also benefit from mulching.

How to Use Loose Organic Mulches

Loose organic mulches are best applied to shrubs, fruit plants, perennial flowers, and vegetables in the fall and winter. A mulch an inch or so deep is enough for crocus; a depth 3 to 4 inches is

best for daffodils and other tall-growing perennial flowers, vegetables, and strawberries. Shrubs, blueberries, cane berries, grapes, and trees benefit from even deeper layers of mulch. Plants grown from seeds or transplants are easiest to mulch after they are well established. Freshly seeded lawns may be lightly mulched with sawdust to conserve moisture and reduce crusting.

Organic mulches may rob the soil of nitrogen as they are decaying, since the bacteria (microscopic plants) which cause the decay draw heavily on the soil for their nitrogen. There is rarely enough nitrogen present for both the plants and the bacteria. Additional nitrogen should be applied to prevent this deficiency.

Loss of good green color from the leaves indicates that nitrogen is needed. Apply (broadcast) nitrogen fertilizers such as ammonium sulfate or ammonium nitrate at a rate of about 2 pounds to 100 square feet. The amounts and frequency of application depend on the season of the year. Mulches decompose more quickly during summer. Other variables include the moisture available and the kind and amount of mulching material. If growing plants do not respond to a nitrogen application and thorough irrigation after a few days, repeat the treatment until the desired growth response is observed.

How to Use Plastic Mulches

Plastic film of any color, thickness, or composition may be used as a soil cover. Black film is favored because it completely shades the soil and prevents growth of weeds. Since black absorbs light and heat, this material will raise the soil tempera-



This is one of a series of *Fact Sheets* reporting Cooperative Extension work in agriculture and home economics, Gene M. Lear, director. Printed and distributed in furtherance of Acts of Congress of May 8 and June 30, 1914. Oregon State University, Oregon counties, and U. S. Department of Agriculture cooperating.

ture if it is in close contact with the soil, giving some plants an important early start. Some of the reasons for beneficial growth and yield responses from the use of plastic mulches on certain plants have not been explained.

Plastic mulches are favored for certain vegetables such as muskmelon, cucumber, watermelon, and tomato. Not only do the mulches promote rapid growth and higher yields, but they keep the fruits clean. Of all the vegetables, muskmelons are most responsive to black plastic mulch.

Roll out sheets of plastic film 3 to 4 feet wide, any desired length, on a prepared seedbed. Anchor the edges and ends of the film by burying them in the soil to a depth of 3 to 4 inches. Place seeds or plants into the soil by cutting or punching holes through the plastic. Irrigation is still required where plastic mulches are used.

Slugs multiply rapidly under plastic mulches, and special attention must be paid to more frequent applications of poisoned baits.

Plastic mulch may be left in place for more than one season. Plastics deteriorate in light, but black plastic will last longer than clear plastic. They may be used in combination with loose organic mulches or gravel.

How to Use Other Materials

Gravel, crushed stone, or stone chips of all sizes, graded and washed, make a suitable ground protection where there is a great deal of foot traf-

fic, a steep slope, or danger of fire. Gravel may be substituted for any of the other materials mentioned and may be used in combination with plastics, especially on semi-permanent beds that do not require frequent tilling.

Aluminum foil is reflective and will provide a cooler soil where this may be desirable. It is used in the same way as plastic film but is more subject to tearing and puncturing. The heavy-duty grade is best.

Burlap sacking and cardboard may be used for mulching, but they are rather unsightly and deteriorate rapidly.

Newspapers which are ground up and macerated to a pulp in water make a novel sort of mulch that may be used where other materials are not available. Ten pounds of paper may be pulped in 45 gallons of water in a steel drum. Ten pounds of sawdust or shavings may be added, along with a vegetable dye if desired. Maceration is accomplished by a high-speed motor-driven impeller with teeth along the edges of the blades (an air-cooled outboard motor might work). Pour the resulting soup from pails onto the garden area to a depth of about 1 inch and allow to set and dry. Keep mulch away from the stems of very tender plants by placing a tin can or flower pot over them for about 10 minutes until the mulch sets. It is thoroughly dry in three days. This mulch is said to keep the soil cool, encourage earthworms, and last for an entire season.