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Organic Mulches for Your Garden

Organic mulch, or mulch made from plant materials, can make a big difference in your garden. It can improve your soil, lock in moisture, prevent weeds, and act as insulation that prevents soil temperatures from getting too high. Not all mulch, however, has the same impact on your garden. Before mulching it is important to understand how mulches differ in longevity, density, size, water retention, and color.

The longevity of mulch depends on how fast it decomposes. Materials like leaves, grass clippings, paper, or straw will break down quickly, which is a bonus for those looking to improve their soil quality and add more nutrients. Woodchips will generally take longer to decompose; cedar and cypress take the longest to decompose and can last three or more years.

Decomposition time is also dependent on the size of the mulch particles. Larger wood chips will take longer to decompose than smaller ones. That does not mean you should reach for the finest mulch you can get if you want fast decomposition. Very fine mulches like sawdust or thin wood shavings can compact, creating a seal over the surface of the soil. This will limit air movement and reduce water infiltration, causing more problems for your garden.

As long as your mulch does not compact, you will see increased moisture retention. Mulch traps water that would normally run off the soil during larger rains, increasing how much water infiltrates your soil. Mulch then retains the water by protecting the surface of the soil from the sun and heat, reducing water evaporation from the soil. While mulch reduces irrigation needs, it will not eliminate your need to water, especially for plants with shallow roots.

Surprisingly, the color of your mulch can also impact your soil and its temperature. In general, mulch acts as a layer of insulation, preventing the sun from heating up the soil. Darker color mulches will absorb more heat, providing less protection from the heat than lighter-colored mulches. Many mulches are dyed a certain color for aesthetic purposes. Although many gardeners worry about the impact of the dye, there is not any evidence that the dyes used in mulch have any impact on plants or soils.

When using mulch, there are a few considerations. First is the depth. Wood chip mulch should be 3 to 4 inches deep. Too much mulch can stop water and air from reaching the soil. Grasses or leaves should be applied more sparingly, as thick layers of these materials can promote mold. Piling up mulch around the bases of trees or shrubs is also not recommended, as it traps moisture against the bark and can cause crown or root rot. Instead, create a donut shape of mulch around larger woody plants.

The second consideration is your nitrogen levels. While wood or bark is decomposing, it draws in nitrogen to help with the decomposition process. If you mix your mulch and soil together, it can pull nitrogen away from plants. Mulching on the soil surface will draw nitrogen away from only the top layer. Perennials with deep roots are not likely to be affected, but annuals or plants with shallow roots can require supplemental nitrogen.

Further reading:

<https://extension.colostate.edu/topic-areas/yard-garden/mulches-for-home-grounds-7-214/#:~:text=Organic%20mulches%20include%20woodchips%2C%20bark,and%20it%20breaks%20down%20slowly.>

<https://catalog.extension.oregonstate.edu/ec1629/html>