

MULCH

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Sure, everyone has heard about mulch, but not many people actually know the important details that allow you to effectively use mulch. Depth of mulch, types, special considerations, and why you would actually mulch in the first place are typical questions, and we will try to address those here.

What is mulch? Mulch is anything that you spread on the soil surface. This may seem oversimplified, but the general definition of mulch is very broad, and includes many things that you wouldn't immediately think of.

Why should I mulch? Apart from just looking better, there are so many reasons to mulch, so here are a few.

To prevent weed growth. Mulch blocks out light, and smothers many weed seeds.

To conserve moisture. Most mulches are very efficient at holding moisture in longer than the soil below. Organic mulches tend to work best. A study done by the Weyerhaeuser Co. in 1969 showed a reduction in summer moisture loss of 21%, and a reduction in the soil temperature in the first 4 inches of soil by 10°F simply by using a 2" layer of bark.

To cool soil, and keep temperature consistent. Mulch tends to regulate soil temperature well in the warmer months, not only keeping the soil temperature cooler, but also more uniform.

To prevent erosion. A lot of work has been done in developing particular mulches that hold soil in place. Any mulch will work to some extent, but there are some synthetic options that really work exceptionally well, such as fabrics.

To add organic material. Organic mulches not only perform the other functions listed, but as they break down, they add valuable nutrients and help to build the soil health.

To protect plants in winter. Mulch adds an extra layer of insulation to the critical root area in cold winter months.

To keep fruits and vegetables clean. Mulch doesn't tend to splash mud up like bare ground, and so it keeps the dirt off of your produce.

To preserve soil structure. Mulch protects your valuable soil by shielding it from the elements. Simple rainfall can pound bare clay soil into a brick-like texture, but a layer of mulch will absorb most of this abuse.

How should I mulch? Carefully. Mulch, when placed correctly, can be a great thing. However, indiscriminately placed mulch can leave you with some severe problems. Here are a few rules:

You only need 2"-3" of mulch on any one area. There have been many interesting mulching methods used over the years, many of which were found to cause problems. One error was the "if 2 inches is good, 8 inches must be better" method. A thick layer of mulch can either hold way too much moisture in winter, or be bone-dry in summer. It can compact, keeping water and nutrients from passing through to the soil below. And in some areas, deep mulch can be a haven for rodents. You will usually need to refresh your mulch from time to time, but be wary of letting mulch build up to unhealthy depths.

Most plants don't appreciate mulch piled against their trunks. "Volcano mulching" has been used by some as a method of mulching, but don't do it! This involves piling mulch up against the trunks of plants, forming a tall mound, or "volcano". When the mulch holds moisture that close to the bark, it tends to rot the plants' bark, and can or will eventually kill the plant. Unless you are protecting a very tender plant for the winter, never place mulch against the trunk of a plant.

Add some nitrogen if putting on a dense organic mulch. Things like wood fiber (sawdust, wood chips), and straw or hay, take more nitrogen to break down than they give back to the soil. When using these mulches, your soil can be depleted of nitrogen quickly, robbing plants nearby of their food source. You can alleviate this by putting down 1 pound of actual nitrogen per 1,000 square feet at the time of mulching.

Think down the road before putting down a persistent mulch. Things like rock and landscape fabric work well, but think about removing them later when you change your mind. If you plan to keep an area the same, and want to forget about it, these mulches may be for you. If you like to change things around a lot though, you may want to consider an organic mulch that is more easily removed if necessary.

TYPES OF MULCH

Many types of mulch exist; the type you use will depend on your preferences, situation, and location. There are two generic types of mulches, organic and inorganic. Organic mulches are anything that are found in nature and can be broken down by soil organisms. Inorganic mulches are anything man-made, or anything like rock that cannot be broken down by soil organisms. Inorganic mulches will have a much longer life span than organic mulches, but will usually not have a very natural look or give anything back to the soil.

ORGANIC MULCHES

Bark: The classic northwest mulch. Many people from other parts of the country don't necessarily like or appreciate bark, but it is so abundant here it has become a staple. Bark can be had in different grades, from fine to coarse to chunks and anything in between. Douglas fir bark is most common. Hemlock barks are nice because they don't contain slivers.

Wood chips, shavings, and sawdust: Used a lot in play areas, or areas that get heavy foot traffic. These are not the best options for use in plantings, as they tend to pull a lot of nitrogen from the soil. Some wood products, like cedar chips and shavings, can even be toxic to plants! Great for pathways, utility areas, pet areas, and play areas.

Compost: Well-composted organic material can be a good yearly mulch, but must be reapplied often, as it breaks down into the soil quickly. Composted manures also work well around nutrient loving plants like roses.

Shells, hulls, other by-products: These are often specific to the area in which you live. Things like crushed nutshells, coffee grounds, rice hulls, and ground corncobs are often used in areas that produce an abundance of such by-products. Hazelnut shells are becoming more popular in this area because they are in abundant supply and very versatile. Nutshells are usually much more durable and color-fast than most other organic mulches. A good way to recycle otherwise unused materials.

Straw and hay: Good for winter protection and pathways. If you use this in summer, be sure to add extra nitrogen to the soil. Be aware that these can create a dense, impenetrable layer in neglected circumstances, and may sometimes carry weed seeds.

INORGANIC MULCHES

Rock: Not used as extensively here as in other parts of the country, rock makes an excellent long-lasting mulch. You can use lava rock, pea gravel, rock chips, and a multitude of other rock products.

Landscape fabrics: These are good for use on slopes, and under areas of groundcover or other permanent plantings that you don't want to have to mess too much with. The fabrics keep any weed seeds underneath from germinating, and help keep soil in place. This too is fairly permanent, and is a pain to remove later if you change your mind, so keep that in mind when making a decision.

Recycled materials: Not really big yet, but these will become more and more popular as time goes by. One product that is being used now is a mulch made from recycled tires.

CONVERSION CHART Determine how much soil or bark you need using dimensions of your area.

$$\begin{array}{ccccccc}
 \text{LENGTH} & & \text{WIDTH} & & \text{TOTAL AREA} & & \text{DESIRED DEPTH} & & \text{TOTAL PRODUCT NEEDED} & & \text{INCHES IN CUBIC FOOT} & & \text{CUBIC FEET NEEDED} \\
 \text{(in inches)} & & \text{(in inches)} & & & & & & & & & & \\
 \boxed{} & \times & \boxed{} & = & \boxed{} & \times & \boxed{} & = & \boxed{} & \div & \boxed{1,728} & = & \boxed{} \\
 \text{inches} & & \text{inches} & & \text{square inches} & & \text{inches} & & \text{inches} & & \text{inches} & & \text{cubic feet}
 \end{array}$$

Converting Cubic Feet to Cubic Yards – Divide Cubic Feet by 27

1 cubic yard will cover	
depth	square feet
1/4"	1296
1/2"	648
1"	324
2"	162
3"	108
4"	81
6"	54

1 unit (7.4 yds) will cover	
depth	square feet
1/4"	9600
1/2"	4800
1"	2400
2"	1200
3"	800
4"	600
6"	400

BAG SIZE

	1 cu ft	1.5 cu ft	2 cu ft
1" deep	12 sq ft	18 sq ft	24 sq ft
2" deep	6 sq ft	9 sq ft	12 sq ft