



BASICS

Mulches for Home Grounds

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Quick Facts...

A mulch is any material that provides protection and improves the soil when applied to the soil surface.

There are two types of mulches: organic and inorganic.

Depending on the type, mulches:

- Reduce surface evaporation.
- Improve water penetration and air movement.
- Control soil temperature fluctuations.
- Protect shallow-rooted plants from freeze damage and frost-heave.
- Improve soil structure and nutrient availability.

There are two types of mulches, organic and inorganic. Organic mulches include wood and bark chips, straw, grass clippings and seed hulls. Inorganic or inert mulches include weed-barrier fabrics, gravel and rock.

The ideal mulch does not compact readily. It does not retard water and air movement into the soil, it is not a fire hazard, and it breaks down slowly. In addition, the ideal mulch is uniform in color, weed-free, attractive and does not blow away.

Selection

The selection of a mulch depends on its intended use (Table 2). If appearance is the main goal, inorganic or inert mulches may be the best choice.

If soil improvement is the major goal, consider an organic mulch that gradually breaks down. Also consider the size of the area in relation to the cost of materials and availability (Table 1).

If the area is used primarily for annual flowers, it often is more practical to use a temporary organic mulch that can be turned under each fall.

When to Apply Mulches

Mulches used to enhance appearance and control weeds may be applied at any time. If the mulch will be used to protect fall transplants by keeping soil temperatures above freezing longer into the fall (permitting better root growth), apply soon after transplanting.

If the mulch is meant to reduce frost heave and delay spring growth, apply after the ground has frozen. This type of mulch often is used to protect small bulbs such as squill and crocus and to prevent early emergence.

Depth of Mulches

Except where weed-barrier fabrics are used alone or in combination with chips, stones, or other material, apply most mulches to a depth of 3 to 4 inches. Apply straw, dried leaves and similar materials to a depth of 4 to 6 inches.

Some mulches, particularly straw and loose leaves, may harbor rodents. When using these mulches, do not place them closer than 6 inches to the base of woody plants. When these types of mulches are placed next to the plant, rodents living in the mulch may chew the bark of the plants, girdling and killing them. In windy areas, gravel or rock mulch may be preferred over organic mulches.

Preventing Nitrogen Deficiency

As organic mulches decompose, some of the soil nitrogen in contact with the mulch is used by the breakdown organisms. Consequently, nitrogen

Table 1: Area covered to a given depth by one cubic yard of mulch.

Area (sq. feet)	Depth of mulch (inches)
80	4
100	3
160	2
325	1

deficiency may occur. A sign of nitrogen deficiency is a yellowing, primarily of the lower leaves. When this occurs, add nitrogen fertilizers.

For every 100 square feet of mulched area, add 2 pounds of a complete fertilizer, such as 10-6-4, or 1/4 pound of ammonium sulfate. Never use a “weed-and-feed” type of fertilizer in mulched areas.

Table 2: Types of mulches and their advantages and disadvantages.

Mulch type	Advantages	Disadvantages	General Comments
Organic Mulches			
Cocoa-bean hulls	Long lasting, dark brown color. Expensive.	Compact; forms a crusty surface. Harmless if stirred to break crust.	Molds may form on surface.
Crushed corncobs	Uniform in color.	May retain too much moisture at surface or compact if kept wet.	Cobs dyed various colors. Availability limited in some areas.
Grass clippings	Readily available.	Must be applied loosely, in thin layers to reduce matting.	Allow grass to dry before applying as a mulch.
Hops Leaves (composted)	Attractive color. Nonflammable. Readily available.	Disagreeable odor until dry. Not very attractive. May become matted.	May be available from local brewery. Good soil amendment.
Leaves (fresh dried)	Readily available.	Not very attractive. May blow away. Fire hazard. Wet leaves compact into slimy mats.	Most appropriate in naturalized gardens or shrub masses.
Manure (strawy)	Usually available.	Unpleasant odor. Weed seeds.	Better soil amendment than mulch. Should be aged and/or heat treated.
Newspaper	Readily available.	Don't use color inserts or red ink.	Use 3 to 6 sheets thick and cover with organic mulches.
Peat (sphagnum)	Usually available in bulk amounts.	May crust on surface. May blow away.	The only acid-forming peat, but even this is variable with source. Best used as a soil amendment, not as a mulch.
Pine needles	Attractive. Do not compact.	Difficult to obtain in quantity. Can be a fire hazard.	Best for winter protection of fall-transplanted material.
Shredded bark, bark chips, chunk bark Straw	Long-lasting, attractive (chips more attractive than fine shreds). Readily available.	Cost relatively high. Shredded bark may compact. Blows easily. Highly flammable. Weed seeds often present.	Use for informal walkways. Best used as a temporary mulch around plants needing protection in winter. Anchor with wire mesh.
Wood chips, shavings, pole peelings, recycled shingles	Long lasting. Readily available.	Texture and color not uniform.	Rustic but usually attractive. Will not compact readily.
Inorganic, inert mulches			
Clay aggregates (heat treated)	Gray/brown colors available. Lighter than gravel, easier to transport. Weed-free.	Expensive.	Brand names available (Turface, Terragreen).
Weed-barrier fabrics	Reduces weeds. Allows air and water penetration. Long lasting if covered with mulch. Easy to apply.	Some may be costly. Most deteriorate in sunlight unless covered with another mulch material such as wood chips.	A good substitute for black plastics.
Gravel, stone.	Available in colors to match or complement the architecture. Inexpensive.	Will not prevent growth of some weedy grasses.	Use black polyethylene beneath to prevent weeds.

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