



Mulch and Mulching



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What is Mulch?

Mulch is any material applied to the surface of the soil to protect it from the elements, suppress weeds, conserve soil moisture and prevent erosion. Commercially available mulches include pebbles, gravel, bark and coloured wood chips. Instead of buying mulch, you can easily make your own from materials generated from your garden or landscape.

What is Mulching?

Mulching or “sheet” composting simply mimics nature’s way of recycling nutrients within our ecosystem. Imagine a forest floor where leaves, twigs and branches fall to the ground. Over time, these break down and decay, and it is here, between the soil and the layers of mulch, where everything happens. The decaying material ultimately feeds an ecosystem of microorganisms, worms and insects but it also shelters and protects the soil and allows this diverse community of organisms to thrive. As the materials break down further, nutrients are released and become available to plants within the soil.



How do I use Mulch in My Garden?

Mulch can be used in any planting area or around trees and shrubs. Mulch can also be used to create paths and play areas within your garden. In general, finer mulch (up to 2” in size) can be used in annual planting beds and around smaller perennial plantings while coarser materials, e.g., wood chips (3-6” in size), can be stacked higher and used around larger shrubs and trees.

Mulch that is too small in size, like grass cuttings or coffee bean husks, and is applied too thickly can easily compact and become compressed. This can suffocate the soil and block water from soaking in. So in most cases, these types of mulches should not be applied more than 1-2” thick. Coarser materials such as wood chips can be stacked higher because they are good at allowing air and water in to the soil. The hardest part is getting an initial layer of mulch down. It can be a good idea to start with getting wood chips from a commercial source or local tree surgeon to get started. Then as you garden, you can simply add to this layer as you trim and generate clippings.

When applying mulch the following steps should be followed:

- Remove sod, unwanted vegetation and weeds.
- Determine type of mulch and thickness required for specific use or application.
- Determine the need for a weed barrier and install one if desired. Newspaper and cardboard can be used as a biodegradable barrier for 1-3 years while woven plastic will last 5-10 years.
- Spread mulch evenly over the entire planting area or in rings around individual plants out to the drip line (see following sections).
- Keep mulches away from plant stems and trunks.
- Replenish as needed.

What Materials Can Be Used as a Mulch?

There is an abundance of materials found around your home and neighbourhood that can be made into mulch. The choice of materials for mulch is important as some garden materials should not be used. For example, grass clippings from lawns recently treated with herbicides should be composted to allow the herbicides time to break down. Some plants, which contain substances that inhibit growth of other plants, should never be composted, e.g. eucalyptus, cedar and acacia. The table below lists common mulch materials, application thickness required and guidance notes.









What Materials Can Be Used as a Mulch?

Mulch Material	Application Thickness	Guideline/Caution Notes
Grass Cuttings	½-1"	<ul style="list-style-type: none"> can mat in thick layers and block water so apply thinly. keep away from plant stems. best used in annual planting beds. can be dug into the soil the following year prior to planting.
Leaves	1-3"	<ul style="list-style-type: none"> can be shredded with a mower to make fine textured mulch for annuals and smaller plants. use unshredded leaves on perennial beds in autumn to protect plants from the cold. can be used on annual beds and dug in before the next planting.
Bush, Hedge or Shrub Clippings	2-4"	<ul style="list-style-type: none"> shear 2-4" at a time so clippings can be used without further chopping or shredding. can be left under trimmed bushes.
Tree Trimmings	2-6"	<ul style="list-style-type: none"> use shredder to produce coarse mulch. tree surgeons can often deliver free chips. fine chips or particles should be applied no higher than 2-3". coarser chips can be applied up to 6" high. best used in perennial areas of trees & shrubs. can be used for making garden paths.
Pine Needles and Cones	2-4"	<ul style="list-style-type: none"> acidic, so apply around acid loving plants. whole pine needles can be used on perennial beds over winter to protect plants- remove in spring.
Stalks & Sticks	2-4"	<ul style="list-style-type: none"> chop, cut or shred into 2-6" lengths. use in perennial planting areas.
Husks & Shells	1-2"	<ul style="list-style-type: none"> grain/coffee husks & nut shells can be used as is in perennial areas.
Hay & Straw	1-6"	<ul style="list-style-type: none"> farmers may give away old or partially rotted hay. shred or chop for use in annual areas (1-2"). can be used as winter cover (4-6").
Paper & Cardboard	½"	<ul style="list-style-type: none"> can block water from penetration into soil. best used under wood chip mulch for paths or play areas as a weed barrier.
Wood & Bark	1-3"	<ul style="list-style-type: none"> must be shredded to produce useable mulch. uniform in colour for decorative look. best used in perennial tree and shrub areas or in play areas.
Wood shavings	1-2"	<ul style="list-style-type: none"> use coarse shavings only. use in perennial planting areas.
Unscreened Compost	1-3"	<ul style="list-style-type: none"> best used in annual planting and flowering perennial areas. in annual areas, can be dug into soil prior to next season's planting.



How Are Materials Prepared for Mulching?

The preparation of mulch depends on both the raw material and its final use. Some materials, such as leaves, wood shavings, husks & shells or grass cuttings, are ready to use as is. Other materials, such as tree trimmings, bark, stalks, sticks, or wood, require some cutting, chipping or shredding to be used. This can be done by with:

-  **Secateurs:** can be used to cut up small amounts of shrub or tree trimmings as you go. These can be left around the plant, used elsewhere in the garden as a mulch or added to the compost pile.
-  **A spade, hoe or machete:** using on a piece of wood (e.g. some plywood) as a cutting surface, chop up green stalks and use straight away or add to your compost pile.
-  **A rotary mower:** running this across dry leaves makes a fine-textured mulch ideal for annual and smaller plants.
-  **A small electric chipper:** makes a fine-textured mulch out of woody stalks and branches up to 1" thick.
-  **Petrol-powered shredders:** can handle materials up to 3" in diameter and can be rented from most plant hires or purchased in DIY stores.
-  **Bigger diesel-powered chippers:** able to handle materials up to 6" in diameter are commonly used by professional landscapers and tree surgeons.

The level of preparation and tools used to make mulch really depends on the types of materials you have and the quantity of mulch you need. Chippers and shredders produce great mulch products with a variety of particle sizes. Shredding can produce mulch from a variety of materials, as shown in the photo to the right including from top left and going clockwise: shredded branches, stalks, cardboard, evergreen trimmings, leaves and pine needles/cones.

Where and How to Apply Your Mulch

Different areas and plants in your garden can benefit from mulch. The following is a summary of information for specific types of areas where mulch can be used effectively. It repeats a lot of what has been detailed before but does provide specific information for different garden situations.

1. Annual Planting Beds

Mulch can be used to control weeds, stimulate plant growth, conserve moisture and improve soil quality over time in annual planting beds.

Appropriate Mulch Type: Soft fine-textured mulches such as grass clippings, leaves, or unscreened compost.

Application Thickness: 1-2"

Application Guidelines:

- Apply in spring or early summer when plants are well established (4-6" high).
- Be sure to keep mulch away from stems.
- Till or dig old mulch into soil prior to the next season's planting.
- Apply mulch again after new plants have been established.

2. Perennial Areas

Mulch can be used in perennial areas to control weeds, protect your plants over winter and stimulate plant growth by providing a healthy soil environment.

Appropriate Mulch Type: hard, woody and coarse mulches such as bush clippings, shredded tree trimmings, bark, chopped up stalks or sticks, husks & shells, pine needles and cones, wood shavings, or unscreened compost.

Application Thickness: 2-6"- Thin for smaller perennial plants and thicker for trees and large shrubs.

Application Guidelines:

- Application can happen any time of year.
- Weed area prior to applying mulch.
- Spread evenly throughout the planting area keeping mulch away from stems and trunks.
- Reapply new mulch every couple of years or slowly add materials as they are generated to keep the mulch layer thick enough.
- Pine needles and oak leaves make a good mulch for acid loving perennials such as rhododendrons, azaleas, blackberries, raspberries and blueberries.
- Please note that thick mulches are harmful to shallow-rooted plants such as azaleas or rhododendrons, so a 1-2" application would work.



Where and How to Apply Your Mulch (Continued)

3. Around Individual Trees and Shrubs

Mulch can be used around individual plants and trees to encourage growth. Nutrient absorbing roots from trees and shrubs are typically found in the top six inches of soil. By removing competition from grass and weeds, mulching trees and shrubs allows the soil to breathe and for water to get easily to the roots. At the same time, mulch protects roots from the extremes of weather as well as supplies critical nutrients as they break down. Lastly, the protective mulch circle keeps mowers, trimmers and weed whackers away from damaging plant trunks and stems.

Appropriate Mulch Type: hard, woody and coarse mulch such as bush clippings, shredded tree trimmings, bark, chopped up stalks or sticks, husks & shells, pine needles and cones.

Application Thickness: 2-6" - Thin for shrubs and thicker for trees. Also depends on mulch used.

Application Guidelines:

- Can be done once tree or shrub has been planted or any time after.
- Clear weeds and grass from under the tree out to drip line.
- If additional protection from weed sprouting is desired, spread commercial weed barrier (eg., woven plastic) over the soil surface before applying mulch. Plastic film is not recommended because it prevents water from penetrating into the soil and reaching tree roots.
- Start 4-6 inches away from trunk to prevent crown rot or insect damage, then spread a thick layer of mulch under the tree or shrub and out just past the drip line.
- Create a raised ring around the outside perimeter of the mulch circle to hold in moisture and prevent erosion.
- Replenish the mulch around each tree or shrub as needed every couple of years.





4. Winter Cover

Mulch can be used on winter fallow vegetable or flower garden areas to protect the soil from erosion or frost. In perennial areas, mulch can be applied around or on top of plants to insulate them from the cold winter weather.

Appropriate Mulch Type: straw/hay, leaves and pine needles.

Application Thickness: 3-6"- leaves 3-4" and pine needles and straw 4-6".

Application Guidelines:

- Clear planting bed of annuals and trim perennials down.
- Place mulch on top in late autumn (wet leaves work better than dry ones).
- In early spring, dig in thin layers of leaf mulch or rake off thick layers of straw or pine needles and add to compost pile or reuse as mulch.
- Once perennials start growing or the bed is planted with annuals, add mulch around plantings as detailed above.

5. Path Material or in Play Areas for Adults and Children

Mulch can be used to create paths in your garden as well as create play areas for adults and children alike. Bark, shredded tree trimmings or wood chips can be used to create an outdoor play area, or they can be used around jungle gyms, slides, swings or trampolines.

Appropriate Mulch Type: woody hard and coarse materials such as shredded tree trimmings, bark, chopped up stalks or sticks, or husks & shells.

Application Thickness: 3-6"

Application Guidelines:

- Cut away vegetation and remove weeds.
- Place commercial weed barrier or cardboard down first.
- Cover with 3-6" of mulch.
- Replenish mulch annually as needed.





6. Erosion Control

Mulch can be used on slopes to stabilise soil and prevent erosion.

Appropriate Mulch Type: woody hard and coarse materials such as shredded tree trimmings, bark, chopped up stalks or sticks, or husks & shells.

Application Thickness: 2-4" depending on plant type and mulch used.

Application Guidelines:

-  Remove weeds, sod and unwanted vegetation.
-  If a new planting area, consider using a woven plastic weed barrier. Place it over the sloped area, cutting large circles in it to accommodate the plants.
-  Apply 2-4" of mulch keeping mulch away from plant stems and trunks.
-  Replenish mulch annually or as needed.

