

Preparing the Soil

There are three types of beds that you may have when planting your new design.

1. Brand New Beds

Once the existing vegetation is dead, use a spade/shovel or garden fork to turn the bed over. A tiller can also be used but only as a last resort as it will destroy the soil composition. With a new bed it may be difficult to get your tiller to break into the soil so turning the bed over first with a spade or shovel may be best. When working the soil, you want the soil to be damp, but not wet. If the soil is too wet, it will clump when you turn it over. If the soil is too dry, it will be very difficult to dig and harmful to the soil. If you turn over a spade full of soil, it should break apart and look moist without sticking to your tools or dripping water.

A tiller will often turn the soil to a depth of 6 to 8 inches. It is good to get down at least 12 inches (the depth of a spade or shovel) when turning over a bed, another point in favor of the shovel. If you are really motivated turning over the soil to a depth of 18 inches is even better, although it is a lot of work. This is often called double digging.

If you are concerned that there just doesn't seem to be enough soil, you can purchase top soil and mix it into what you already have.

Once you have turned over the soil, spread a layer of organic matter or compost 2 to 3 inches thick over the bed and then turn the soil over again to mix the compost into the soil. Adding compost will improve the soil by adding nutrition and improving soil structure. Avoid extremely fine compost or bagged amendments with a sand-like consistency as they tend to breakdown too quickly. You want something that has both large (1") chunks as well as smaller particles. Use material from your compost pile if you have one or check with your local garden center. Then rake the surface of the soil to level the soil.

Turning over the soil will expose weed seeds that were previously buried to light, causing germination. You can control the germination of these seeds by applying a thick mulch like pine needles or bark products over the bed or you can treat your bed with a weed and feed product to help deter germination. If you do treat with weed and feed, be sure to read the directions and apply correctly. Some weed and feed products can damage roots below the soil if applied incorrectly. Also, do not directly sow flower or vegetable seeds into the soil when using a weed and feed product as they will not germinate. Weed and feed products kill all germinating seeds, not just the weed seeds. If you use a weed and feed product, you will want to install plants already growing in pots or packs to fill your bed the first spring. By fall the chemicals should have broken down and you will be able to direct seed if you want.

You can also wait until the weeds come up and simply pull them. This can be more time consuming than chemical applications, but it is organic in addition to being good exercise. After you plant the bed you may

still want to add a layer of compost to the top of the soil. A layer of mulch or compost on the top of the soil will help keep weeds from growing, makes for a neater look overall and will also help maintain moisture in the soil.

Rules of Thumb for Brand New Beds:

- 1. Work the soil when it is moist, but not wet.**
- 2. Turn the soil over to a depth of at least 12 inches.**
- 3. Add 2-3 inches of compost and turn it into the bed.**
- 4. Either cover the bed with a thick (3-4") layer of mulch or use a weed and feed to help keep weed seeds from germinating.**
- 5. Top dress with another layer of compost to keep down weeds and preserve moisture.**

2. Existing Beds

The second type of bed is an existing bed that has nothing in it. In other words, you are replanting the same area you used last year. With this type of bed, you can treat it similarly to the new bed. In either fall or spring or in both seasons, put a 2 to 3 inch layer of compost on the bed and then turn the compost into the soil.

If you are concerned that there just doesn't seem to be enough soil, you can purchase top soil and mix it into what you already have.

The single best thing you can do for your soil is to consistently add organic matter. This will enrich the soil and help you grow better plants. Once again, you only want to work the soil when it is moist, not wet or dry. To check your soil moisture content, pick up a handful of soil and squeeze it. If you squeeze out water the soil is too wet to work. If the soil stays in a ball in your hand and then breaks apart when tapped, it is perfect. If the soil is too dry to form a ball, it is too dry to work. If you work soil when it is too wet, you will cause it to clump and become compacted. If you work soil when it is too dry, you harm the soil structure.

Working soil when it is moist will help maintain good air porosity and soil structure.

After you add the compost layer, you will want to turn the compost into the soil. As before, you can use a tiller, shovel or garden fork to do this. I prefer to use a shovel so I can get at least 12 inches deep. Double digging will again be optimum, but any incorporation of organic matter will be beneficial. After turning this compost into the soil, you may want to put another layer on top of the soil to act as mulch. If you add

organic matter in the fall, it isn't necessary to add more in the spring. However, if you have poor soil adding compost twice a year can help improve the soil much more quickly. Remember that this organic matter gets used up each year and needs to be replenished to keep plants performing their best.

Rules of Thumb for Existing Beds that are Empty:

- 1. Add 2-3 inches of compost and turn it into the bed.**
- 2. Work the soil when it is moist, but not wet.**
- 3. Turn the soil over to a depth of at least 12 inches.**
- 4. Top dress with another layer of compost to keep down weeds and preserve moisture.**

3. Existing Beds with Plants

The third type of bed is one that already contains some perennials, bulbs and/or shrubs. These beds can be a bit trickier. You can't simply broadcast a thick layer of compost and then turn it under. You will need to be careful when working around the established plants that you don't harm their roots. You do still want to add organic matter. This can be done either in spring or fall, or in both spring and fall. Add a couple inches of compost around existing plants, work this into the top layer of soil a bit, if possible, but do not dig deep enough to harm the roots. **Do not allow the compost to come into contact with the stems of the plants as this can promote disease.** Even left mostly on top of the soil the compost will break down over time releasing valuable nutrients into the soil while preserving moisture and protecting the surface of the soil.

Established beds will often have open areas where plants have died or where annuals are added each spring. In these areas, go ahead and turn over the soil to incorporate the organic matter and then plant.

Rules of Thumb for Existing Planted Beds:

- 1. Add 2-3 inches of compost and work it into the top layer of soil, if possible**
- 2. Work the soil when it is moist, but not wet.**
- 3. Do not allow compost to come into contact with plant stems.**
- 4. Top dress with a layer of mulch or compost to keep down weeds and preserve moisture.**

Preparing the soil in your beds doesn't have to be difficult, although it is great exercise.

Adding organic matter is the one thing that all soils can benefit from whether your soil is sand or clay based. The addition of organic matter is beneficial, even if you are blessed with loam soil. Are there more in-depth steps that can be taken? Sure. However, this is a good place to start.

You may also be asking where you can get compost or organic matter. You can make your own, you can buy it from your local garden centre or many municipalities have compost for sale or even for free. Check with your local government for programs in your area.