

# Garden Soil



Good soil is essential for growing healthy plants. Soil anchors plants and provides nutrients and water that are taken up by the roots. Soils can vary widely in composition. There are 4 basic types of soil:

<b>Sand</b> <ul style="list-style-type: none"><li>• Large particles that don't bind together.</li><li>• Doesn't hold water or nutrients well.</li></ul>	<b>Silt</b> <ul style="list-style-type: none"><li>• Intermediate size particles.</li><li>• Drains better than clay.</li><li>• Holds more nutrients than sandy soil.</li></ul>
<b>Clay</b> <ul style="list-style-type: none"><li>• Tiny particles that stick together.</li><li>• Holds nutrients and water.</li><li>• No space between particles for oxygen, so roots may suffer.</li></ul>	<b>Loam</b> <ul style="list-style-type: none"><li>• A combination of sand, silt, &amp; clay.</li><li>• The Goldilocks soil - often considered the ideal soil for most gardening.</li></ul>

Almost no-one in the Bay Area has perfect loamy soil. In most of the Bay area, soil tends to be clay; A few areas, such as Alameda, may have sandy soil.

## How to improve Soil

1. **Add organic matter** - Whether you have clay or sand, amending your soil with composted organic matter will improve soil. Added to clay, organic matter lightens the structure of soils, allowing for better air penetration and drainage. Added to sandy soil, organic matter improves fertility and water retention. We recommend using:
  - a. **Bumper Crop** or **Gold Rush** for perennials, shrubs, and trees.
  - b. **Paydirt** for vegetables and annuals.
  - c. **Eureka Planting Mix** for California native plants. Use no more than 1/3 amendment.

Blend the amendment into the soil so that the final mixture is 1/3 to 1/2 added organic matter. This can be done with a tiller, cultivating fork, or shovel, and may be done to an entire planting bed or to individual planting holes.

We never recommend digging a hole and replacing the soil with different soil. Doing so is just like sinking a pot in the ground; When the roots contact the hard sides of the planting hole, they will start circling, and you'll end up with a rootbound mass, instead of roots that reach deep into the soil. Instead, create a transition zone between the fluffy potting medium and the less inviting native soil.

**Note: You may occasionally hear that it is best not to amend. We think this advice is based on studies done where native soils are better than ours. Most of us in the nursery who are gardeners always amend before planting.**

2. **Prevent compaction** – Walking on or digging in wet clay soil compresses the soil particles, worsening air penetration and drainage. Avoid walking in your garden or planting after heavy rains.
3. **Mulch** – Mulch is organic matter, usually bark chips or compost, that is spread on the soil surface of a garden. Mulch performs the following functions:
  - a. Saves water by preventing evaporation and keeping soil cooler.
  - b. Looks attractive, making a garden appear tidy and finished.
  - c. Helps control weeds.
  - d. Prevents compaction by absorbing impact of foot traffic.
4. **Avoid tilling** – Once you've planted an area, try not to cultivate or disturb the soil in that area. Healthy soil is full of beneficial organisms including bacteria, fungi, protozoa, and invertebrates. These organisms break down organic matter into nutrients plants can use, contribute to soil structure, and form associations with plant roots which make plants more drought resistant. Tilling disturbs the established ecosystem within the soil and can bring the microbial activity within the soil food web to a complete halt.

## Soil for Containers

Gardeners use pots or other containers for lots of reasons. Maybe we have a small yard with room for just a few containers, or we want to be able to move a plant from place to place. Perhaps we like the ease of gardening using raised beds. One of the great advantages of gardening in containers is that you can choose your soil.

- **For most indoor and outdoor plants**, including flowers, shrubs, and trees, we recommend *Professional Potting Soil*. It has the perfect balance of moisture retention and drainage for most plants. We've tested "Pro Pot" against many other potting soils, and it always emerges as the clear winner.
- **For acid lovers**, such as blueberries, ferns, conifers, azaleas, camellias, and gardenias, we recommend *Azalea, Camellia & Gardenia Planting Mix*.
- **For plants that require fast drainage**, such as citrus, daphne, and California native plants, *Eureka Planting Mix* is best.
- **For filling raised beds**, we recommend *Raised Bed and Potting Mix*. It's a little heavier and won't break down as quickly as potting soil.
- **For cacti and other succulents** we recommend *Cactus & Succulent Mix*, which is very fast draining.
- **For cannabis** we recommend *Recipe 420 Potting Soil*.