

PREPARING & IMPROVING GARDEN SOIL .10

UtahState
UNIVERSITY

WEBER CO.
extension

Weber County
1181 N Fairgrounds Dr
Ogden, UT 84404
(801) 399-8200

Summary: Keeping plants healthy and productive starts with the soil. Good garden soil should be deep, workable, fertile, and contain some organic matter. Most native soils in the Intermountain area need to be amended and improved to become as productive as possible. Both sandy and clay type soils can become workable and fertile by adding organic materials annually to improve their condition and become easier to work. Organic materials include manures, sawdust, compost, wood chips, leaves, and other materials. Incorporate them into the soil in the fall or early spring with a nitrogen fertilizer to help break the materials down without robbing the soil of nutrients.

A few basic steps help improve most soils.

1. Timing: Work the soil in the fall or the spring when it is moist, but not wet. Test the moisture content by taking a handful of soil 3 inches deep from the garden. Squeeze it firmly and drop it on the sidewalk. If the ball shatters it is a good consistency to work.

2. Organic Material: Adding organic matter to soil does the most to improve the soil structure, workability, and productivity. Look for inexpensive organic matter such as leaves gathered in the fall, needles from conifers, sawdust, bark chips, and composted materials. Manure can be used, but may contain weed seeds. Peat moss is effective, but can be expensive.

3. Rototilling: When the soil is dry enough to work, spread a thick layer (2 to 6 inches) of organic material and some nitrogen fertilizer over the soil. A rule of thumb for nitrogen is 1 quart of ammonium sulfate (21-0-0) per 100 square feet of area, per inch of organic material. Rototill to a depth of 6 to 8 inches. Do not over-work the soil until it resembles fine dust. Leave marble-sized particles, and then use a rake to pulverize large clods and level the area.

4. Soil Amendments: Lime should never be added to our alkaline soils in Utah. It is used in humid areas to help neutralize acidic soils. Gypsum is sometimes promoted as an alkali cure. It has its place in reclaiming sodic soils, but will not greatly alter soil structure or workability. The best soil amendment is organic material.

5. Hauling Soil: It is generally better to work with the soil you have. Soil brought in may have other more severe problems and may bring in weed seeds or cause interface problems in the garden. To raise or cover an area, inspect the fill soil, if possible, to make sure it is desirable.

POSSIBLE ORGANIC MATERIAL	POSSIBLE SOURCES
1. Sawdust and/or Manure	Horse Stables Cabinet Shops Saw Mills
2. Leaves	Fall leaf collection Neighbors
3. Wood chips	Tree care companies Garden centers Landfills
4. Compost	Landfills Garden centers Backyard pile
5. Peat Moss	Garden centers