

D
Preparing and Fertilizing

GARDEN SOIL



**Cooperative Extension Service
Oregon State University, Corvallis**

Extension Circular 605

Revised June 1969

GARDEN SOILS need to be worked at the proper time and given some fertilization in order to produce a crop.

When to prepare the soil

If the soil is worked before it is dry enough, it will become hard and unproductive. In judging the time to work your soil, take a handful of freshly dug soil, squeeze gently, and then release it. If it breaks apart readily when dropped, it is ready to be worked.

How to prepare the soil

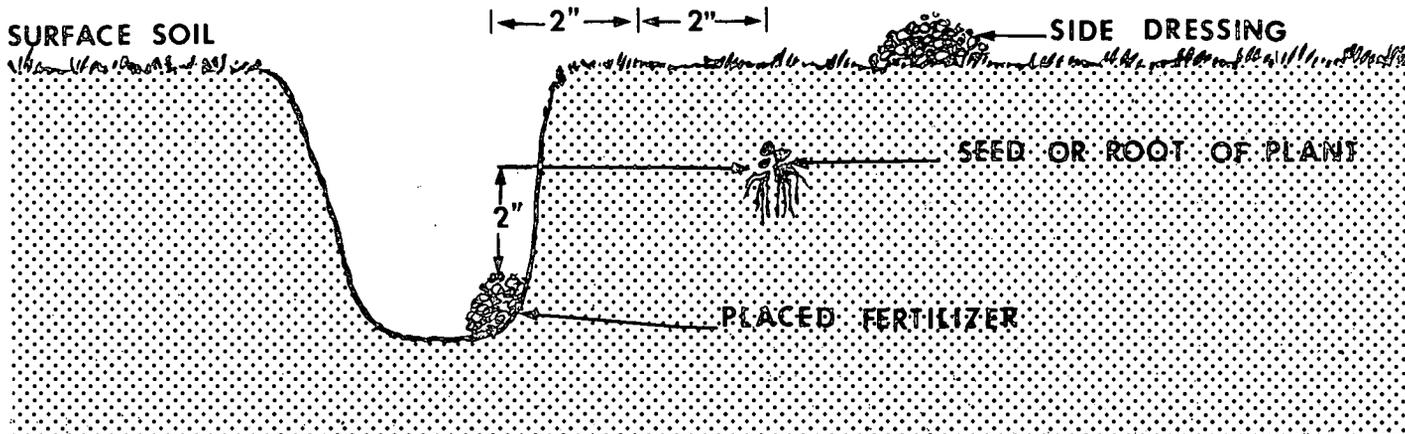
The soil should be turned and broken up into small pieces to a depth of approximately 8 inches. This can be done with a plow, a rototiller, a shovel, or a spading fork. If manure, compost, peat moss, sawdust, or other organic material is to be added to improve the soil structure, this should be done before the soil is turned and worked. The organic matter will then be more uniformly mixed with the soil. Large amounts are required, however, to make any substantial soil improvement.

When to fertilize

Most fertilizers are applied at planting time. When manure is used, spread it on the garden before working the soil. General garden fertilizers should be used just prior to seeding or setting out plants. Soluble fertilizers, quickly available to the plants, should be used after plants are up if growth is unsatisfactory.

How to apply fertilizer

Complete fertilizers such as manures can be spread over all of the garden surface area and worked into the soil. This takes about twice as much fertilizer as for placement. Placement before planting is done by making a trench beside the row where plants will go or seeds will be planted. Put some fertilizer in a pan or bucket and spread it by hand, using the approximate amounts suggested below. Starter fertilizer can be mixed with water and poured along the rows. For this type of application, add a rounded tablespoon of the fertilizer to a gallon of water and use a cupful per plant or to each 6 inches of the rows.



What to use and how much

Barnyard manure is a good general fertilizer and soil conditioner. Annual applications help improve heavy soils and maintain fertility. Spread 2 to 4 inches deep and mix in thoroughly as you work the top 6 inches of soil. Rabbit and poultry manures can be used at one half of this amount.

Complete garden fertilizers sold in stores are plainly marked with the percent of available nitrogen, phosphoric acid, and potash. Some common products have formulas of 8-24-8, 10-16-8, and 16-20-0. A large handful for each 3 to 4 feet of row, placed 3 inches down and 2 inches out from the row, will be helpful. (See the drawing for fertilizer placement.) For broadcast application, use 10 pounds of fertilizer for 1,000 square feet of soil.

Starter or quickly available nitrogen fertilizers, such as ammonium sulfate and ammonium nitrate, are usually scattered alongside the row about 2 inches away from the plants. Use a handful to each 12 to 15 feet of the rows. Avoid getting the material on the plants. It is best to use these fertilizers when the air is quiet and the plant foliage is dry. For broadcasting, use 2 pounds of the fertilizer on 1,000 square feet of soil. Water the fertilizers in after application.

These fertilizers are often mixed with water and used on flats or banded plants the day before they are set out. This mixture should never be used on plants suffering for moisture, however, as they would be injured.

Poor growth of plants in home gardens is more often the result of inadequate water than a lack of fertilizer.

**Your county Extension agent
has leaflets on many garden crops
and can give you advice on
varieties to plant and disease and
insect control for your area.**