

Many of your favorite ornamental plants can be shifted from place to place until you hit on the ideal conditions. But a fruit tree, once it is planted, staked, and trimmed, can only be moved with difficulty; choosing the right spot is critical. Perhaps the most important requirement is good drainage.

Plant fruit trees only where excess water can drain out of the soil freely so tree roots don't suffocate. If you are planning an orchard, you can get a good idea of drainage conditions by observing your selected spots for several months. If water sits in puddles after a rainfall or if the side yard resembles a lake during the spring, then drainage is poor and must be corrected.

Take a close look at a sample of soil. Squeeze a handful and then check to see whether it crumbles easily. A clay soil will remain a compact mass, and an overly sandy soil will disintegrate into granules. Clay feels somewhat slimy when moist, and sandy soil feels gritty. Both are unsatisfactory: clay resists water and sand cannot retain moisture. In short, a suitable soil will have an open, friable (crumbly) structure that allows moisture to pass through but, at the same time, retains enough to provide a constant supply to roots.

Don't give up hope just because soil conditions aren't ideal. There's a lot you can do to improve drainage and soil structure so your fruit garden can thrive. Nothing beats organic matter for bringing soil up to snuff. By working compost, sphagnum peat moss, and manure into the top eight inches of topsoil, structure will improve dramatically and nutrients essential for healthy plant growth eventually will be plentiful. If drainage problems are severe, special drainage tile or pipe might be the only answer.

Good soil structure by itself isn't enough. Trees and plants also need essential nutrients in order to grow, blossom, and later explode into bushels of succulent fruit. The big three when it comes to growing things are nitrogen (essential for leaf growth and chlorophyll formation); phosphorus (necessary for fruit and root development); and potassium (to strengthen stems and contribute to disease resistance). Although these are the chief elements, calcium, magnesium, and sulfur are needed in lesser amounts. There is also a need for the trace elements, including molybdenum, iron, boron, manganese, zinc, copper, and chlorine.

It's evident these elements are necessary because they are found in the tissues of plants. But to juggle each one would mean becoming entangled in the complex rigors of chemistry. The best approach combines conscientious observation with a carefully thought out program of soil management. Fertilizer is worth little or actually is harmful if not used properly. Read labels carefully, and spend enough time in the garden to become aware of what plants need for good growth.

There are two ways to get needed nutrients into the soil. You can mix organic materials, such as dried blood, bone meal, cottonseed meal, or manure into the topsoil, or you can purchase chemically prepared fertilizer. Chemical fertilizers are quicker acting and offer greater convenience. Organic materials are slower to release their nutrients and may be difficult to obtain. But manure and other organic materials are unsurpassed for their

ability to improve soil structure. Whether fertilizer is organic or inorganic makes no difference to the fruit tree. The decision is yours. However, organic fertilizers alone are not balanced sources of nutrients without additional juggling, and their contents of the three major elements is low.