

# Glossary

**Acidic soil.** Soil that has a pH reading below 7. See **pH**.

**Alkaline soil.** Soil that has a pH reading above 7. See **pH**.

**Amendments.** Any additives intended to enhance drainage, aeration, fertility and other properties of the soil.

**Annuals.** Plants whose life cycle (vegetative growth, bloom, seed set) is completed in a single growing season. At the end of a single growing season, the entire plant dies. A new generation begins each year with the germination of seeds.

**Beneficial insects.** Beneficials may be pollinators (e.g., honey bees), decomposers (e.g., sow bugs), parasites (e.g., parasitic wasps) or predators (e.g., lady beetles). Predators labeled as beneficials consume other insects that are considered to be pests. To complete their development, predators must eat large quantities of their prey and will often arrive on the scene if populations of their prey are available. Other predators include: praying mantises, dragonflies, green lacewings, assassin bugs and spiders.

**Berm.** A rim of soil built up around a plant or group of plants to hold in water and to capture salts as the water evaporates. Salts appear as white deposits on the soil's surface. The salts are kept away from the plant roots for that growing season and can be skimmed off the soil, if desired. Traditional Native American planting practices in the Southwest often included the use of some type of berm.

**Bermuda grass.** A fast-growing, tenacious lawn grass that readily spreads to nearby flower and vegetable beds.

**Biennials.** Plants with a life cycle of two years. Flowering and seed formation usually occur in the second year, followed by the death of the entire plant.

**Biological control.** A living plant, animal or organism that manages or limits the damage done by a pest or other undesirable condition in the garden.

**Caliche.** Found in some soils of the Southwest, caliche is an impervious layer consisting of calcium carbonate (lime). Many gardeners believe they have encountered caliche, but it is more likely to have been very hard-packed clay soil. See **Hardpan**.

**Companion planting.** The concept of placing together plants that benefit each other. A mutually beneficial planting scheme might include plants that fix nitrogen in the soil, provide a natural trellis, are thought to repel certain pests or attract beneficial insects.

**Compost.** Made from the decomposed remains of organic matter such as plants, grass clippings, kitchen scraps and manure. The more frequently that piles are watered and turned to aerate and mix, the more quickly organic matter will break down and be ready for use.

**Cover crop.** A cover crop is planted to improve the soil for the next season's crop. It may do this by breaking up the soil with its extensive root system, "fixing" nitrogen in the soil, and/or adding organic matter when the crop is tilled under.



Most legume crops can fix nitrogen. Examples of cover crops include alfalfa, beans, buckwheat, clover, peas and hairy vetch.

**Crop rotation.** The process of rotating the locations where specific crops, or families of crops, are planted each season. The process promotes soil fertility and deters the buildup of soil-borne diseases.

**Cuttings.** The propagation of new plants using growth from existing stock. In this book we are referring to softwood cuttings (other methods apply to shrubs or trees with hardwood). A stem is cut below a leaf during the growing season. After removing the lower leaves, the stem is dipped in a rooting hormone and planted in any medium with good water penetration and drainage. Some cuttings can be simply suspended in water and rooted.

**Diatomaceous earth (DE).** Tiny, fossilized silica shells that are mined to create an insecticidal powder. The microscopic silica shards cut into the insect as it moves through them; the insect eventually dies from dehydration. DE is not specific to any insect and will kill beneficials as well. The DE used in swimming pools is from the same source but is a different grade.

**Division.** The process of segmenting certain perennials and plants grown from rhizomes, bulbs or tubers which over time become crowded and therefore less vigorous. Pull or cut apart smaller clumps or individual plants during dormancy (fall for spring or early summer bloomers; spring for late summer and fall bloomers). Many perennial herbs can be propagated in this manner.

**Drip irrigation.** An efficient and water-saving system that uses thin “spaghetti” tubing with attached emitters to provide a slow, steady flow, or drip, of water.

**Early.** A plant variety that is planted “early” in the growing season and has a relatively shorter period of time to reach maturity.

**Everlastings.** Flowers grown for use in dried arrangements.

**Fungal disease.** Some fungi can parasitize plants. Fungi reproduce by spores, which can be transmitted by wind or water. Fungal diseases can be controlled by fungicides and careful cultural practices, e.g., watering near the base of the plant, not on the leaves.

**Fungicide.** An agent applied to plants or soil to kill or control a fungal disease.

**Green manure.** A plant grown specifically to produce bulk for compost.

**Gypsum.** A mineral, calcium sulfate, which is often added to alkaline Southwestern soil to improve the soil’s structure. It pulls sodium away from soil particles and allows it to be washed away, thus helping water and air to move through the soil more effectively.

**Harden off.** The process of helping plants that have been started indoors, under cover or in a greenhouse, to survive outdoors in direct sun and wind. One way is to daily place the potted plants outdoors for increasing lengths of time one to two weeks before planting in the ground.

**Hardpan.** A hard layer found in some soils. Compacted, and often clayey, it hampers root penetration and drainage. See **Caliche**.



**Hardy.** Hardiness refers to a plant's ability to resist frost or freezing temperatures. A half-hardy plant may withstand some cold temperatures but will probably freeze if temperatures are severe.

**Hardiness zone.** Determined by the USDA based on average annual low temperature. Many other factors (altitude, wind, soil) can impact plant growth. Some garden reference works have their own, more detailed, zone mapping.

**Heirloom.** A plant variety that has been open-pollinated for at least three generations. That is, there has been no cross-pollination between varieties via human or other intervention. Thus, seeds will produce a replica of the parent plant.

**Herbicide.** An agent that kills plants.

**Hybrid.** Plants produced by the cross-pollination of two different parent varieties. Seeds from hybrid plants will not mature into plants identical to the parent.

**Inorganic.** Composed of material other than plant or animal.

**Integrated pest management (IPM).** IPM is a method for examining all options available for dealing with pests, including doing nothing at all. The use of pesticides is considered only after careful monitoring and lack of success with natural control factors. IPM allows the gardener to consider all options for the easiest, least costly and most environmentally friendly way to control pests.

**Laser tubing.** Drip irrigation tubing that has tiny, laser-generated holes spaced evenly along its length, allowing for even and efficient watering.

**Late.** A plant variety that is planted later in the growing season or requires more days to reach maturity, resulting in a harvest toward the end of the growing season.

**Layering.** A propagation method that roots a branch while it is attached to the parent plant. The parent provides nutrients until the branch forms its own roots.

**Leaching.** Usually refers to the application of enough water to the soil to move excess salt accumulations below the root zone. Unfortunately, nutrients can also be lost in this manner.

**Macronutrients.** These six nutrients are needed in fairly large amounts for healthy plant growth and development. Nitrogen, phosphorus and potassium often need to be added to soil in the form of fertilizers. Calcium, magnesium and sulfur may also need to be added, usually in the form of soil amendments such as gypsum (calcium sulfate).

**Micronutrients.** Sometimes called trace elements, these are needed for plant growth in addition to macronutrients. They usually exist in sufficient quantity in the soil, air and water, but may need to be supplemented. They are boron, chlorine, copper, iron, molybdenum, and zinc.

**Mulch.** Loose material placed over the soil to insulate it from rapid temperature changes, decrease water evaporation, deter weeds, prevent mud from splashing onto vegetation, feed the soil through decomposition and to increase the beauty of the garden. Mulch is usually thought of as organic (bark, sawdust, clippings, leaves), but small rock can also serve some of these purposes in ornamental beds.



**Nematodes (Root Knot).** Nematodes are microscopic roundworms. There are beneficial nematodes as well as harmful ones. Generally, we are referring to root knot nematodes that live in the soil and feed on plant roots, interfering with the plant's ability to take up water and nutrients. General failure to thrive can be a symptom of infestation; when the roots are examined, they appear to have warts if these nematodes are present.

**Nitrogen.** One of the three major elements required by plants, the others being phosphorus and potassium. Its chemical symbol is "N." Nitrogen promotes growth and a healthy green color.

**Nutsedge.** Sometimes called nutgrass, this perennial weed's bright green leaves are about 1/4-inch-wide and have a highly visible midvein. The roots have small tubers (nutlets) attached. It spreads vigorously by these tubers and by seeds.

**Open-pollinated.** Seeds produced from plants that were pollinated naturally via wind, insects or water. Plants of the same species often need to be kept separate if one plans to collect seeds, so that cross pollination (if not desirable) will not occur. For example, sweet peppers are usually kept in an area apart from hot peppers (chiles).

**Organic matter.** The decayed remains of formerly living plants or animals. Organic matter is incorporated into desert soils to improve drainage, aeration and fertility. It will not, however, provide all essential plant nutrients, nor are nutrients immediately available for the plant's use unless the material is well decomposed before application.

**Perennials.** Plants with a life cycle of two or more years. Some perennials will lose the top growth at the end of each growing season, but many perennial plants keep their foliage year round.

**Perlite.** A volcanic mineral that is heat-treated to puff up into lightweight white granules. It is often added to prepared potting soil mixtures to provide aeration and drainage in the soil.

**Permeability.** A measure of how readily soil allows a liquid or gas to flow through.

**Pesticide.** An agent that kills a pest.

**pH.** A measure of the soil's acidity or alkalinity, rated on a logarithmic scale from 0–14; 7.0 is neutral, lower numbers are acidic and higher numbers are alkaline. Southwestern soils are typically alkaline.

**Phosphorus.** One of the three major elements required by plants, the others being nitrogen and potassium. Its chemical symbol is "P." Among other things, phosphorus promotes flower and fruit production.

**Potassium.** One of the three major elements required by plants, the others being nitrogen and phosphorus. Its chemical symbol is "K." Potassium promotes hardiness, vigor and disease resistance. There is generally ample potassium available in alkaline soils so there is no need to add it.

**PVC (polyvinyl chloride) pipe.** White, lightweight plastic pipe often used for irrigation systems.



**Rhizome.** A thick modified stem. A rhizome grows horizontally under the soil surface, producing new growth as it extends. Examples of plants that spread with rhizomes are nutsedge, iris and violets. See **Stolon**.

**Root bound.** When plants have grown beyond the capacity of their containers, the roots will begin to circle around the inside of the pot, eventually circling back onto themselves. Root-bound plants can only be grown successfully if the encircling roots are untangled or cut before planting in the ground.

**Side dress.** The application of supplemental nutrients to the soil above the plant's root zone, away from the stem to avoid burning.

**Soaker hose.** A hose that "weeps" water along its entire length, allowing for slow, even soaking.

**Soil structure.** The manner in which the soil's basic elements are bonded together and the resulting amount of pore space between the particles; that is, its permeability or ability to retain water and nutrients.

**Soil sulfur.** A naturally occurring mineral used to lower alkalinity in the soil.

**Soil texture.** The relative proportions of sand, silt and clay particles that make up soil.

**Solarization.** A process designed to kill disease, nematodes and weed seeds by pasteurizing or heating the top six or so inches of soil. In early summer, prepare the bed for fall planting and then cover with clear plastic for several weeks. Do not recultivate soil before planting as there is a risk of bringing untreated soil into the growing zone.

**Square foot gardening.** A method of intensive gardening that is based on densely planting in one-foot-square grids, creating savings in space, water, labor and amendments. The principle is to create beds that are small enough to be worked from the side so that no time or money is spent amending soil that will be used as a path and so the gardener never steps on the planting beds.

**Stolon.** A stolon is a creeping stem, above ground, that roots along the path of growth and sends up a new plant at each place it roots. Examples of plants that spread by stolons are Bermuda grass and strawberries. See **Rhizome**.

**Systemic.** Any chemical that a plant absorbs and distributes throughout its system to kill a pest or the plant itself.

**Thinning.** The removal of plants so that the remaining seedlings are spaced at a distance that will provide adequate growing room. Distances are usually provided on the seed packet.

**Treated seeds.** Seeds that have been treated to aid germination, prevent disease or provide some other beneficial feature. Most treated seeds are color-coated.

**Untreated seeds.** Seeds that have not been coated with fungicides or undergone other kinds of special treatments.

**Vermiculite.** A mineral, mica, is heated, causing it to puff up to form lightweight granules of vermiculite. Used in potting soils to improve water retention and aeration.

