Producing Peanuts for Home Use [1]

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Peanuts can be grown in the home garden for several uses. The nuts can be eaten raw or boiled while "green" (nondried) or they can be dried and stored for eating raw or roasting (either in-shell or shelled). Nuts can be fed to squirrels, birds, or other animals. Since peanuts are relatively easy to grow, students can use them to learn about plant growth and development. Peanut plants have above-ground flowers, with nut development underground, making it an interesting plant. Peanuts can be grown organically or with commercial fertilizers and pesticides.

Soil Selection

If peanuts are grown in the home garden, soil selection and location options will be limited. However, peanuts should be grown on well-drained soils and in a sunny location. Excessive shade may result in lower yields, slower growth, and more diseases. If your garden is subject to flooding or if the soil stays wet for long periods of time, growth may be retarded, pods may not form, or pods may have a considerable amount of rotting and decay from diseases. On the other hand, if the soil is too sandy or excessively drained, plant growth and yield may be reduced from dry weather stress. Likewise, compacted clay soils are not conducive to good peanut growth or pegging, and water is often repelled from these areas. Peanuts should be grown in rotation with plants resistant to nematodes and soil-borne diseases, such as southern blight. Plants of the grass family, such as corn, bahiagrass, or turf grass, would be suitable for rotations with peanuts, while most legumes and some vegetables are not suitable as the preceding crops. At least two years should elapse between peanut crops on the same soil.

Lime and Fertilizers

A soil test should be used to determine the lime and fertilizer needs for peanuts. A soil pH of near 6.0 would be optimum for peanuts, but the crop can produce well over a wide pH range. If lime is needed, broadcast the recommended amount and incorporate with the soil well in advance of planting.

Peanuts respond better to residual fertility than to direct fertilization. If a well-fertilized crop precedes peanuts, direct fertilization may not increase yield or quality of the peanuts. If fertilizer is needed, broadcast and incorporate to the soil prior to land preparation. High levels of potassium and certain other nutrients in the pegging zone could result in poor calcium uptake, which can cause unfilled pods ("pops") or increased levels of pod rot. Therefore, do not apply potassium fertilizers after the peanuts have emerged unless it is on extremely sandy soil that is low in potassium. Foliar sprays of nutrients are generally ineffective or not economically feasible except to prevent or correct some micronutrient deficiencies. Boron is often the only micronutrient that might need to be added for peanuts but can often be found in the fertilizer applied prior to planting.

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Most soils contain nitrogen-fixing bacteria that fix nitrogen in a symbiotic relationship with peanuts. Being a legume, association with these bacteria provide adequate levels of nitrogen used by the peanut plant. Consequently, peanuts seldom respond to nitrogen fertilization. If needed, inoculant for peanut or cowpea contain these bacteria and can be applied to the seed at planting.

If soil calcium levels are low or if large-seeded varieties are grown, it would be advisable to apply 800 lb/A of gypsum over the potential pegging zone (a band about 18" wide over the row of peanuts) as soon as the plants begin to flower. Gypsum contains a readily available source of calcium that will help ensure good pod fill and may help prevent pod rot.

Soil Preparation

Seedling diseases, southern blight, and other diseases can attack peanuts if the weeds or previous crop is still green when peanuts are planted into it. If there are large amounts of residue, incorporate it at least a month before planting peanuts. This early incorporation will allow the residue to rot prior to planting. Many farmers use strip tillage on peanut which, only provides tillage in row with mulch or residue left in row middles to help hold soil moisture and moderate temperature.

The soil surface should be smooth and free of clods of soil or plant residue prior to planting. Disking, rototilling, or even raking can be used as the final preparation of the soil before planting. If a herbicide, insecticide, or nematicide needs to be incorporated with the soil prior to planting, it can be done with a rototiller or disc. A strip till rig is often run twice over the same row if no tillage is done to provide a smooth seedbed for planting peanuts.

Variety Selection

There are four major types of peanuts to use in the home garden. A fifth type could be included if the jumbo varieties were separated from the Virginia varieties. Individual preferences and seed availability will determine which variety should be grown. Any variety could be used in the green or dry stage.

Valencia peanuts are often the preferred type for home gardens because they mature early, have 3 or 4 kernels per pod, are easy to pick because the pods form near the taproot, and have a good flavor. Seed are usually readily available.

Virginia type peanuts are also popular for boiling and roasting because of their large size and good flavor. They require a longer period to mature than valencia varieties. Seed may not be readily available.

Spanish and runner varieties can also be selected. Georgia 06G is the predominate runner type grown in the southeast but others like TUFRunner 511, FloRun 107, Florida-07, Georgia 09B are readily available along with several other runner varieties that produce high yields. Spanish varieties are used more often for roasting than for boiling. Spanish varieties are small-seeded, early maturing, and generally produce pods near the taproot, and seeds are not readily available in the Southeast.

Planting

Obtain sound, mature, and disease-free seeds that have been treated with a fungicide to help prevent seedling diseases. Space seed 2 to 4" apart in rows that are 30 to 36" apart for ease of planting, digging, and harvest. Seeding depth should be 2 to 3" in sandy soils and 1½ to 2" in finer textured soils. After they are covered, the top of the seed row should be level with, or slightly above, the middle to provide good drainage. A provision for drainage is especially important in wetter locations.

Planting can occur in early spring as soon as the danger of frost is over, while summer plantings should allow enough time for the peanuts to mature before the first frost of winter. Peanuts are harvested for boiling at an earlier maturity stage than for roasting. Also, early-planted peanuts will require more time to mature than crops planted during the warmer periods. Valencia peanuts harvested for boiling may produce a crop in as little as 75 to 85 days under ideal conditions. Virginia or runner varieties may require 135 to 150 days for full maturity if harvested for roasting.

Pest and Disease Management

Weeds, diseases, nematodes, and insects may reduce yields and quality of the nuts. Various pesticides can be used and should be selected based on label recommendations and suitability for the situation, i.e., home garden use. See the appropriate pest control guides for information. Be sure to follow all label directions when using pesticides.

Weeds can also be controlled by cultivation, hoeing, or pulling. Cultivation should be shallow with sweeps that do not throw dirt on the peanut vines. Also, do not move soil onto the vines while hoeing. Soil moved onto the vines can

increase the risk for some diseases. Pull weeds before they are large, as less damage is done to the developing nuts.

Squirrels, birds, raccoons, rats, and other animals may also eat peanut seed as they germinate and plants emerge. These animals along with wild hogs may also dig or eat peanuts as they form on the vines. Protect your peanuts from such damage.

Harvesting

Peanuts flower over a long period of time and, therefore, all pods do not mature at the same time. Consequently, judgement is necessary when determining when to harvest the peanuts for whatever use that will be made of them.

When peanuts reach the desired stage of maturity for boiling, they may be pulled by hand, lifted by a spade-fork or shovel, or dug with a commercial peanut digger pulled by a tractor. After picking by hand, the pods can be washed and are then ready to be boiled.

For roasting purposes, peanuts are not usually harvested until about 75% of the hulls have a dark interior surface. The peanuts can be dug by one of the methods mentioned above. However, instead of picking the nuts off while green, the plants can dry in the sun for a few days to allow partial drying. If facilities are available for forcing heated air through the nuts, they may be picked off and artificially dried to about 10% moisture. If such facilities are not available, stack the vines with the nuts on stackpoles for drying. Stackpoles are simply posts with cross members nailed a few inches above the ground to prevent spoilage to the peanuts. The peanuts should stay on the stackpoles until the nuts contain 10% or less moisture. They are then picked off and stored in a dry location until they are used. If the peanuts are picked off the vines before they are dry enough for storage, they can be air-dried by spreading them in shallow layers in protected areas.

Whatever method of drying is used, be sure that mold or rot does not develop on the peanuts. Flavor and food safety of the nuts can be affected by molds because of toxins produced by certain fungi. Also, protect the peanuts from squirrels, birds, rodents, and other animals while they are drying.

Storage

Dried peanuts should not exceed 10% moisture content in storage or molds may develop. Insects and rodents are attracted to peanuts, so protective measures should be taken. To delay rancidity, keep the peanuts in a cool, dry location. Plan to use the peanuts in a few months after harvest before flavor and taste declines. Peanuts that are high in oleic acid content, such as TUFRunner 511 should retain their flavor for a longer period of time than other varieties.

Boiled peanuts may be frozen for later consumption. Flavor and taste will also decline in boiled peanuts even if they are frozen.