



## GREAT GOOBERS - GROWING PEANUTS IN THE GARDEN



**Varieties:** Choosing the best peanut variety for the home garden is a matter of personal preference and the desired use. Some varieties are more suitable for green (boiled) peanuts, and others are best for dry peanut production (roasting or “parching”). The following descriptions should help you choose a variety that meets your needs.

**Virginia types** - Virginia type peanuts are the best all-around choice for both boiling and roasting.

These are the large podded “ballpark” peanuts which are often sold in the shell. Virginia type peanuts have high yield and excellent flavor.

**Gregory** - This variety has very large pods and a bright hull. Gregory also has moderate tomato spotted wilt resistance. Gregory has a high calcium requirement.

**NC 7** - This is a large-kerneled, bright-hulled peanut with excellent flavor. It has been a standard in the green peanut market despite not having the highest yield.

**NC V11** - High yield, good flavor, and some virus resistance. An excellent choice for boiling or roasting, but with a slightly smaller pod than NC 7.

**Perry** - Perry is a newly developed variety with high yield. This variety also has a smaller pod than NC 7 or Gregory. Perry has resistance to *Cylindrocladium blackrot* (CBR), a fungus which kills peanut plants (see disease control below).

**“Jumbo”** - These very large seeded peanuts are frequently grown by gardeners from saved seed. Although they have exceptional pod size; their flavor, yield, and disease resistance are generally inferior to other Virginia types.

**Valencia types** - For boiled peanuts, some consumers prefer the distinctive flavor, multi-kernel pod characteristics, and red seed coat of Valencia type peanuts. These are the peanuts that often have 3 to 5 seeds per pod. In general, Valencia peanuts have a smaller kernel size and lower yield than Virginia types.

**Georgia Red** - Tends to yield higher and have darker red seed coat than other Valencia types.

**Valencia A and Valencia C** - These two varieties are very similar in yield and pod characteristics.

**Runner types** - Runner type peanuts get their name from the fact that they tend to have a prostrate or running growth habit. These are the “peanut butter peanuts” and although they have excellent flavor, most varieties are too small for efficient hand-picking.

**C99R** - This variety has a large pod for a runner type and has the advantage of high yield and good resistance to tomato spotted wilt virus and leaf spot. A disadvantage is that this variety takes about 150 days to mature.

**Land Rotation:** If possible, it is best to maintain a minimum 3-year rotation (2 years out of peanuts or any other legume, 3 years better). Rotation is the basis for controlling pod diseases and controlling pod disease is the key to producing high yields and bright hulled peanuts.

**Planting Date:** The ideal time to plant peanuts in S. C. is the first week of May. This timing minimizes damage from tomato spotted wilt virus and gives the shortest production interval. It takes 90 - 100

days to grow boiling peanuts and about 140 days to grow fully mature dry peanuts in the S.C. coastal plain. Early planting or planting in more northern areas of the state requires a longer maturity period. Peanuts can be planted from April 1st to late June, but planting after June 1<sup>st</sup> will not allow enough time for dry peanuts to reach maturity. Also, see effect of planting date on virus management below.

**Seeding Rate, Depth:** Plant 5 seeds per row foot. Plant in moisture at about a 2"-3" depth. Peanuts have a large seed which can emerge through crusted soils. A good stand and rapid ground cover helps control tomato spotted wilt virus.

**Row Spacing:** Conventional row spacing for commercial peanut production is 36 - 38" but this is too wide for the space limitations of many gardens. A narrower row spacing (20" minimum) or twin-row production (twin rows, 7" apart on 36" centers) can save space and help to reduce tomato spotted wilt virus by allowing the peanut vines to cover the ground more quickly. Use 3 seed per row ft. on each twin row.

**Site Selection:** Peanuts prefer a well drained soil, ideally a sandy topsoil with a clay subsoil. With irrigation, peanuts do well on very sandy soils.

**Fertility:** The target **soil pH** is in the 5.8 - 6.2 range.

**Nitrogen** - Like all legumes, peanuts use a symbiotic bacterium (*Rhizobium*) to make nitrogen available for plant growth. These bacteria produce available nitrogen in nodules which are easily visible on the peanut roots. Land which has not been planted in peanuts within the previous four years is unlikely to have enough of the required bacteria to make adequate nitrogen for plant growth. In this case, be sure to inoculate the seed at planting with an inoculant specifically for peanut. These inoculants are available at seed stores. Yellow peanut plants are an indication of inoculant failure. In this case apply 3 - 4 lbs. of ammonium nitrate (34-0-0) per 1000 ft<sup>2</sup>. Healthy peanuts have the roots covered with productive nodules. You can check to see if nodules are producing nitrogen by pinching them in half with your fingernails. Productive nodules are pink to bright red inside. Unlike some crops, peanuts do not respond well to green manure fertilization. If organic fertilizers are used, they should be incorporated in the fall.

**Phosphate and Potash** - Peanuts respond best to residual rather than spring-applied fertilizer. Phosphate (P<sup>2</sup>O<sup>5</sup>) and potash (K<sup>2</sup>O) should be applied in the previous fall using a soil test (available from your county Extension office). In the absence of a soil test, apply 10 lb. of 0-14-14 per 1000 ft<sup>2</sup> in the fall. If potash is applied in the spring, it should be turned under to a depth of at least 6 inches to get it below the pod zone. Having a high concentration of potash in the pod zone will reduce calcium uptake by the pods, which in turn causes podrot and "pops" (empty pods).

**Calcium** - High soil calcium is critical to reduce pod rot and increase yield, especially for Virginia types. Apply 50 lbs. of landplaster (calcium sulfate) per 1,000 ft<sup>2</sup> at first bloom. Fall liming is also beneficial in maintaining high soil calcium and a calcium to potash ratio of at least at least 3:1 in the pod zone.

**Boron** - Trace amounts of boron (only 0.01 lb boron per 1,000 ft<sup>2</sup>) prevent "hollow heart" (hollowed out kernels). Boron is available in micronutrient supplements for gardeners. Excessive foliar boron is toxic to the plant, and shows up as burned leaf margins.

**Zinc toxicity** - Peanuts are very sensitive to zinc. Soil test Zinc levels as low as 5 lb/ac can cause toxicity when the soil pH is below 6.0. Stunted plants with split stems are a sign of zinc toxicity.

Zinc toxicity occurs on old building sites or around old stock pens which had galvanized roofs. Zinc leaches out of the galvanized metal over time and contaminates the soil. Liming to increase soil pH can reduce Zinc toxicity in Zinc contaminated soils.

**Irrigation:** Green peanuts' greatest need for water is from pegging until a week before digging. For dry peanut production, the critical period is from early pegging until about 100 days after planting. A rule of thumb is to supply 1.5 - 2 inches per week minus whatever rainfall you get. Frequent wetting of the foliage should be avoided as much as possible because this promotes fungal diseases. Irrigate in the morning so that the sun can dry the leaves or use drip tape.

**Weed Control:** Straw mulching can be used to control weeds. Narrow rows also help suppress weeds by shading the ground more quickly. Several herbicides labeled for use on peanut are also available to the home gardener. Poast (sethoxydim 1.5 lb/gal) applied at 1.5 tablespoons per 1000 ft<sup>2</sup> can be used for control of grasses. Basagran (bentazon 4 lb/gal) applied at a rate of 1.0 tablespoons per 1000 ft<sup>2</sup> controls yellow nutsedge and some broadleaf weeds. Be sure to read the label, calibrate carefully, and always obey preharvest intervals for pesticides.

**Disease Control:** Diseases are often the major limiting factor in home garden peanut production because none of the most effective peanut fungicides are labeled for use by the home gardener. **Green peanuts are less susceptible to disease loss** than dry peanuts, simply because the growing season is shorter for green peanuts.

**Tomato spotted wilt virus (TSWV)** - This virus is transmitted to peanuts by tiny insects called thrips. TSWV reduces yield and causes shriveled, misshapen pods with a dull, slightly rusty hull color. Infested plants are stunted, and have yellow or bronzed terminal leaves on the main stem. Some leaves will have characteristic yellow or white circular rings.

**TSWV Control - Everything you can do is done at planting:**

1. Varietal Resistant - The only partially resistant varieties which are suitable for the green market are Gregory, NC V11, and C99R.
2. Planting Date - Planting during the first two weeks of May reduces TSWV injury. Early April plantings are especially susceptible to this virus.
3. Seeding Rate - 5seeds / row ft. Adequate plant populations cover the ground more quickly and reduce virus levels by making the plants less attractive to thrips.
4. Narrow rows or twin-rows - Here again, faster ground cover means less virus.
5. **Spraying insecticides** to kill thrips **will not control** TSWV and it will often cause spider mite and worm outbreaks.

**Leafspot** - Leafspot is characterized by brown to black spots on the foliage. Some of these spots have distinctive yellow halos around the outside of the dark spot. Infected leaves fall off and plants can be completely defoliated before harvest. Avoid wetting the foliage unnecessarily to reduce leafspot. Chlorothalonil (Daconil) applied at 30, 45, 60, and 75 days after planting controls leafspot. Daconil is most effective when applied the day before irrigation or rain.

**White mold** - This disease is characterized by a white mold-like mycelial growth on lateral plant stems near the crown of the plant. Tiny yellow "BBs" can be seen in the white mold. These BBs are hard when rolled between your fingers. White mold causes death of the plant and loss of all peanuts in the affected row lengths. No effective chemical control for white mold is available to the home gardener. Rotate peanut land with nonlegume crops such as sweet corn.

**Rhizoctonia limbrot** - Limbrot isn't noticed until the crop is dug. Good pods will be rotted off in the soil due to peg infection and deterioration. These can be recovered by the gardener. The

lateral stems may also rot off. Any physical injury to the peanut vines such as stepping on them or driving a garden tractor over them will increase limbrot. No effective chemical control for limbrot is available to the home gardener.

**CBR** - *Cylindrocladium* black rot is caused by a soil fungus which occurs in the same areas from year to year, often in low spots. Crop rotation helps reduce CBR. Perry has some resistance to CBR.

### **Insect Control:**

**Thrips** - Thrips are tiny yellow (immature nymphs) or black (adult) insects that stunt seedling peanuts by feeding in the folded terminal leaves. Damaged leaves are shriveled, and have pale feeding scars. To verify thrips stunting, unfold the terminal leaflets and look for the yellow nymphs crawling about. Sevin can be used to reduce thrips damage, but make only one application when stunting is noticed within two weeks of seedling emergence. Repeated applications will cause spider mite problems.

**Soil Insects** - Peanut pods are attacked by wireworms, lesser cornstalk borers, southern corn rootworm, and granulate cutworms. Dursban (1% granular chlorpyrifos) lightly incorporated in a 12" wide band at planting, using a rate of 1.5 lb granular per 100 linear ft. of row, is highly effective in reducing pod damage. Unfortunately this product will soon be unavailable to home gardeners. In the absence of chemical control, the best solution is to throw out the damaged, rotted pods. Irrigation helps to compensate for insect pod damage.

**Foliage caterpillars** - Corn earworms typically attack peanuts around the last week of July to first two weeks of August. Irrigation and a vigorous plant is the best solution. Healthy peanuts which have covered the ground with their vine growth can withstand 8 foliage feeding worms per row ft. Sevin is labeled, but spraying for worms usually causes more problems (spider mites) than it's worth.

**Spider mites** - A healthy, vigorously growing plant and avoidance of foliar insecticides are the best defense against spider mites.

**Harvest: Green peanuts** typically mature in 90 to 110 days after planting. Valencia types require a shorter season than Virginia types. Pods which aren't filled by the kernel are too young and pods with dark internal hull color are too mature. Dig peanuts when most pods are within this range or when you're too hungry to wait any longer. Some people prefer more mature, firmer boiled peanuts, while others like mushy, less mature kernels.

**Dry peanuts** are ready for harvest in 130 to 150 days or when at least 65% of the pods have dark internal hull color when cracked open. Another technique to test maturity is to scrape the middle or "saddle" of the pod exterior with a knife. Harvest for roasting when 40% of the pods have a dark brown to black color in this scraped area. As peanuts mature, the hull color in this scraped-away saddle area changes from white to yellow, to orange, to brown, to black.

The best way to hand-pull peanuts is to straddle the row, grab the lateral stems on each side, and keep pulling parallel to the row. After picking off and washing the pods, you're ready for the best part - cooking and eating.

**Beginner's Recipe:** Fill a 6-quart pan 3/4 full with peanuts, cover with water, and add 1/4 cup of salt. Boil for 1 1/2 hrs. with occasional stirring. Let cool, drain, and enjoy. The longer they cool in the water, the saltier they get.