

TILLAGE

Peanuts can be produced successfully with many different tillage systems, but in any system, they do better on a slight bed. If subsoiled and bedded, knock the bed down so that at least a 16" wide flat bed is available (lower than typical cotton bed). If land is disked flat, throw up a bed with coulters on the planter. Bottom plowing is not recommended unless necessary to bury residue and reduce disease and burrower bug pressure on non-rotated fields. Bottom plowing can also reduce resistant pigweed pressure.

Strip-tillage has given equivalent yields on lighter soils and we have been able to control weeds without preplant incorporated (PPI) herbicides under irrigated strip-tillage conditions. Strip-tillage into a cover crop or other crop residue reduces tomato spotted wilt. Use coulters on the strip-till planter to establish a slight planting bed. Planting between the previous rows is recommended to minimize roots and stalks in the pegging zone. In general there are fewer worm problems in strip-till peanuts.

PLANTING

Planting Date: The best planting window for peanuts in S. C. has been from about 5 – 25 May. Large acreages (300 and up) should be spread out over a 2-week planting interval to spread harvest maturity. Peanuts do well planted the first week of May, but tomato spotted wilt risk increases with early May or late April planting (see virus management below). **The availability of improved disease resistance may increase early planting.** Fields with high CBR risk should be planted last to maximize early season soil temperatures. We have enough growing season to finish planting during the first week of June if absolutely necessary, but **harvest conditions usually deteriorate rapidly after 1 Nov.** Lower temperatures and shorter days severely limit drying time and combining hours. See the discussion on cold injury.

Soil Temperature: Should be at least 65° F at 4" depth, but soil temperature is seldom a concern for May planting in S. C.

Seeding Rate and Plant Population: Our goal is to get a uniformly emerged stand of 4 plants per row ft. to help control tomato spotted wilt virus. A seeding rate of 6 per row foot is recommended for runners (at least 5 per ft. for virginia types due to greater seed cost).

Seed Quality: Low germ. peanut seed not only require higher rates to achieve adequate stands, but can also produce plants with reduced vigor and lower yield potential. CBR is seed-transmitted - know your seed source.

**Peanut Seeding Rates
(Lbs of Seed Per Acre)***

Seed size (seed/lb)	4 seed per row ft.	5 seed per row ft.	6 seed per row ft.
450	122	153	183
500	110	138	165
550	100	125	150
600	92	115	138
650	85	106	127
700	79	98	118
750	73	92	110
800	69	86	103
850	65	81	97
900	61	76	92

*Based on 38" rows. For 36" or 30" rows, multiply seed per ft by 0.95 or 0.789 respectively to get the seed spacing for the same seed population per acre. Conversely, to maintain the same seed population per row ft on 36" or 30" rows, you would have to multiply the poundage by 1.05 or 1.27 respectively.

Seeding Depth: Plant into consistent moisture up to a maximum depth of 3 inches assuming good seed quality. Under good moisture conditions, 1.5” depth is ideal and there is no need to plant shallower unless the seed have very poor vigor. Planting shallower than 1.5” will increase the risk of Valor injury and also increase risk of inoculant failure in marginal soil moisture.

Row Spacing: Conventional row spacing is 36 - 38", but twin-rows (7” on 36-38” centers) help to reduce tomato spotted wilt virus by covering the ground more quickly. **Twin rows** can increase yield even in the absence of TSWV, but a GPS guidance system is recommended to allow digging of twin-row virginia types. On each twin row plant 3 seed per row ft.

FERTILITY

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pH: The traditional recommended pH range for liming peanut land is 5.8 - 6.2. However given the critical need for Ca in virginia type peanuts we recommend a bias toward 6.2. A 6.4 pH increases the probability of Mn or B deficiency, but decreases potential Zn toxicity problems. Mn or B needs can be met with foliar application where needed.

N and Inoculants: Peanut is a legume and as such can get most of its N needs from nitrogen-fixing bacteria (*Bradyrhizobium*) colonizing the plant’s roots. To provide these needed bacteria you absolutely must inoculate all “new” peanut land, and should also inoculate strip-tillage fields and land that has been out of peanut production for 3 years. **Use a liquid in-furrow inoculant.** In-furrow granular inoculants are less effective than liquids and usually stop-up in the delivery tube. Seed treatment inoculants are not recommended due to having much lower bacterial counts. Seed treatment inoculants have been much less effective and consistent than in-furrow liquids. Inoculants are living organisms; treat them with care. Make sure the inoculant is not out-of-date.

Inoculant Rules:

- Use only liquid in-furrow inoculants. Granulars & seed treatments are less reliable.
- Do not expose to heat.
- If inoculant sits in the tank overnight, treat it as water and add a fresh batch.
- Use a minimum of 5 gal water per acre; 8 gal probably better.
- Make sure the inoculant stream hits exactly in the center of the open furrow, not the dry furrow walls. Tips knocked out of alignment cause yellow peanuts. Trash caught in strip tillage rigs can deflect the inoculant stream.
- Don’t plant too shallow (less than 1.5”). Inoculant must hit moist soil or it will die.
- Do not use chlorinated water.
- Apply with a steady stream, not a pulsing pump.
- Twin rows require a full inoculant rate in each row (on new land).
- On new land, consider using a “fail-safe” backup plan – add a half rate of a different brand of liquid inoculant, or add a granular in-furrow inoculant.

Poorly inoculated fields usually will not show any yellowing until about 45 DAP. Inoculation can be checked by using a shovel to uproot plants. Simply pulling up plants will cause the lower taproot to break off and result in a low count. The presence of large (1/8” or larger) nodules on the taproot indicates successful inoculation. An average of 15 large nodules per taproot at 45 DAP is considered good; less than 10 per taproot is marginal and less than 5 indicates poor inoculation. If only small