

Peanut Response to Twin-Row Planting Patterns in North Carolina

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Statewide, twin-row planting patterns (rows spaced 7-9 inches apart on 36- to 38-inch centers) account for less than 10% of acres but are popular in some counties. For example, in Gates County approximately 40% of growers use this planting pattern. Although more expensive than single row patterns because of slightly higher seeding rates and increased *Bradyrhizobia* inoculant and in-furrow insecticide costs, growers indicate that using this planting pattern increases yield by 200 to 400 pounds per acre and also results in slightly higher market grade factors (percentages of extra large kernels and sound mature kernels). According to growers indicate that planting in twin-row patterns hastens canopy closures on the sandy soils common in this county and results in cooler soil temperatures in the pegging zone that is more conducive to early peg survival and pod set resulting in earlier and more uniform pod maturation is cited as possible advantages to this planting pattern. Growers also suggest that peanut in both single and twin rows respond similarly to the plant growth regulator prohexadione calcium. Lower incidence of tomato spotted wilt was suggested as another reason twin-row patterns are used. Availability of planters that place seed precisely compared with older units accommodates planting crops other than peanut (corn, grain sorghum, and soybean for example) enabling farmers to extend investment costs for twin-row planters across more acres. Historically, peanut planted in twin row patterns required use of units that were less precise in seed placement and had limited utility for smaller-seeded crops. Research at North Carolina State University supports some of the suggestions made by farmers. Less tomato spotted wilt has been documented and yields in some instances are greater in twin rows compared with single rows. Although twin rows can result in suppression of weeds, the level of suppression does not negate the need for an effective herbicide program. Peanut yield response in twin and single rows can be different based on variety selection. Research also suggests that row visibility within a few weeks prior to digging can be lower in twin rows compared with single rows but this response can be variety dependent.