

SUMMARY / IMPACT REPORT TO NATIONAL PEANUT BOARD - 2009 South Carolina Project - Jay W. Chapin, Principle Investigator

Disease Screen:

- 1) In 2009 we screened 37 entries. Among these, N08075olCT demonstrated the best disease resistance and yield performance of experimental high oleic lines.
- 2) We also measured the relative disease resistance of released virginia and runner lines.
- 3) Over the past four years (2006-09) we found virginia type varieties with significantly improved resistance to spotted wilt, white mold, and late leaf spot. This has promoted the release of two resistant lines: Bailey and Sugg.
- 4) Equally important, we documented high levels of disease susceptibility in many experimental lines, discouraging their release.

Variety Challenge:

- 1) Runners: Georgia Greener had the highest dollar return and looks to be the best overall runner for S. C. conditions. Ga. O6G, TifGuard also top performers.
- 2) Virginias: Bailey and Georgia 08V are the most promising released lines for 2011. Sugg does not have Bailey yield or quite as good resistance, but better than current large Virginias.

Uniform Peanut Performance Test:

N05006 was the best performing experimental virginia line and UF08301 was the best yielding experimental runner type at the S. C. site (Blackville) for this regional test of advanced experimental lines. UPPT report available for detailed results.

Peanut Variety Quality Evaluation Test:

Thirty-seven experimental Virginia type lines were evaluated for quality characteristics and agronomic performance in this three-state (NC, VA, SC) test. The S. C. site was located at Florence.

Early Planted Resistant Variety Test:

- 1) A highly disease resistant variety (Bailey) produced optimum yields with a 1 May planting date and reduced fungicide input vs. a mid-May planting with full fungicide protection for NC-V 11.
- 2) Bailey reduced white mold incidence by 93%
- 3) Bailey yields were 829 lb (21%) greater under intense white mold pressure.
- 4) Bailey with no soil fungicide outyielded NC-V 11 with 4 soil fungicide applications by 567 lb/ac!