

Summary

122
TX-38
919
2010

A Report to the National Peanut Board
through
The Texas Peanut Producers Board

Title of Project:

**Peanut quality evaluations of Texas Peanut Breeding lines
(in developing new Varieties with Early Maturity and/or Resistance to Root-knot
Nematode, Sclerotinia blight, Southern blight, Leafspot, and Tomato Spotted Wilt
Virus and with High O/L.)**

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Technical Report

When we are making selections for a new peanut variety, high yield is always on or near the top of the list of importance. Rarely will we push a line for release that is not higher yielding than our current varieties. Even so, another important part of a peanut breeding program is selection of materials for potential release that have high quality in addition to high yield and the other traits being bred for, such as early maturity, resistance to sclerotinia, southern blight, tomato spotted wilt, leaf spot, or root-knot nematodes. The funding of these quality analyses is helping us to eliminate undesirable materials earlier in the breeding process.

One thing that changed during this year's project is the purchase of a piece of equipment for the Lubbock laboratory which allows us to conduct a large number of the oil analyses samples "in house." This reduces the cost per sample significantly but we still have the cost for labor to operate the machine and supplies to run the tests. Thus, a portion of the funding for this year was used to purchase supplies for that laboratory to conduct the analyses.

Other than these costs, we had samples run in the J. Leek laboratory for verification of data on the breeding lines, PR 2 and TX 1304, the first of which will be submitted for release as a high O/L, nematode resistant line derived from the same source as COAN and NemaTAM. Both lines were deemed as "acceptable" for use in the food industry. Blanching was conducted by the J. Leek firm and at the Universal Blanchers plant near

Dublin, TX. for the PR 2 line. Again both lines were rated as “acceptable.” Several other lines were run at the same time as companion samples and all but one was rated as “acceptable.” We also ran complete analyses on two of the high grading breeding lines that we had selected. These two lines did not perform up to our expectations.

As mentioned above more of our testing will be done “in house” in the future. A complete analysis has become very expensive when we send it out because in order to get flavor testing done now and aflatoxin test is required. This adds about \$100 dollars to the cost of each sample. However, even with the high cost, some complete analyses are necessary before we can release a breeding line as a new variety.

Respectfully submitted for the Burow, Baring, Simpson team:

Charles E. Simpson, Co-PI