

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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The objective for this project is to conduct quality analyses on early generation materials in the Texas peanut breeding program. We proposed to get analyses done on oil content, sugar content, and protein percent, free fatty acid composition, peroxide values, flavor, and blanchability. By conducting these analyses at early generations we become more efficient in our selection program because we are able to eliminate lines that have undesirable quality traits before we have expended significant resources and time evaluating these lines for disease resistance and/or agronomic characteristics. Before NPB funding, we would get these quality analyses on a few materials that were essentially ready for release and in some cases near or past approval for release. With the NPB funding we are able to concentrate our efforts on lines that are high in quality traits.

During the 2007 funding period we were able to get analyses on approximately 3,500 lines for oil related traits, specifically, Oleic acid content. We were able to get more complete analyses run on approximately 80 lines from the Lubbock peanut breeding project.

We were also able to obtain shelling data on a large number of breeding lines in the disease screening nursery at the Stephenville location. The data we targeted included:

Shelling %	Splits %
Jumbo %	Oil stock %
Medium %	
US # 1 %	

This information above was used to make selections for further line testing in 2008, and we are still evaluating the data to make selections for further yield and other agronomic testing as well as for further crossing and backcrossing.

Acknowledgments

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Respectfully submitted,
Charles Simpson, Co-PI