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.*

Researchers: Charles E. Simpson¹, Mark D. Burow², and Michael R. Baring³

Agencies:

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**The Objectives of the project are:**

1. To run quality analyses on as many breeding lines as possible from each of the three projects, College Station, Lubbock and Stephenville.

2. When larger samples are not available, to run partial analyses on larger numbers of small samples to gain as much information as possible with the available funding.

*The cost of the flavor components has increased significantly because they now require an aflatoxin analysis before these are run for protection of the taste panel.*

**Results**

For the 2009 funding year we had analyses run on the following:

**College Station**

Two reps of three lines from three locations for a total of 18 samples were analyzed. These were run to confirm earlier tests on the breeding line that is high yielding, high grading, highly resistant to sclerotinia blight and is being written up for release as a new variety. The line tested acceptable.

**Lubbock**

A total of 20 lines were run for flavor analyses on the two early maturity lines that are being considered for release to confirm that they will be acceptable as varieties for the edible market. Both lines proved acceptable.

**Stephenville**

The Stephenville funding was used to run analyses on 22 samples from the two lines being considered for release that have the nematode resistance combined with the high Oleic acid trait. Tests concluded that either line will be acceptable to the edible market.

We will use these data in making selections for further testing and possible release of materials as germplasm or as cultivars.

Respectfully submitted:

Charles E. Simpson for the team Burow, Baring and Simpson
To the National Peanut Board  
through  
The Texas Peanut Producers Board

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The analyses we have been running include:  
- Fatty acid composition  
- Peroxide values  
- Free Fatty acid  
- Sugar %  
- Protein %  
- Flavor components*  
- Fat %  
- Blanchability

*The cost of the flavor components has increased significantly because they now require an aflatoxin analysis before these are run for protection of the taste panel.

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