

Title: A Survey of Peanut Diseases, Nematodes and Insects and Their Relationship to Pre-harvest Aflatoxin Contamination Risk

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Objectives for 2010:

- 1) identify growers and field sites for which cultural practices (i.e., planting date, cultivar, etc) information, soil samples and yield data can be obtained;
- 2) monitor fields and record relative occurrence(s) of foliar and soil-borne diseases, including tomato spotted wilt;
- 3) determine soil characteristics and nematode densities from soil samples from each field;
- 4) determine pre-harvest insect damage and/or relative abundance of peanut pests;
- 5) obtain yield samples, as well as yield and possibly grade information from monitored fields;
- 6) assay yield samples for aflatoxin contamination;
- 7) estimate the impact of diseases and pests on aflatoxin contamination and peanut yield; and
- 8) refine and post relevant risk index maps for potential aflatoxin problems.

Results.

Twenty-six field sites were identified in throughout south Alabama, with most sites in Baldwin, Houston, and Mobile Counties. Soil samples were collected from each of these fields were sampled for determining nematode densities and soil attributes; selected fields in southwest AL were also monitored for insect densities. Risk maps for aflatoxin contamination continued to be available on the web at <http://www.awis.com/Misc/Peanut/Peanut.htm>.

Using the Aflatoxin Risk Index for Peanuts, cumulative points for sampled fields ranged from 58 to 93. This range of index values is broader, and reflected slight and moderate risk of aflatoxin contamination in peanuts. Fifty percent of sampled fields were found to have pod contamination > 20 ppb; average aflatoxin content was 160 ppb. These risk index values and aflatoxin levels are higher than those seen in preceding years, providing proof that this index works. No changes were made to the risk index.

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