Field Evaluations for Resistance to S. rolfsii in Peanuts. (C01-gorbet112820-Poster)

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Abstract:

Southern stem rot, caused by S. rolfsii, is a major soil born disease problem in U.S. peanut (A. hypogaea) production. Advanced lines from the University of Florida peanut breeding program were evaluated in field tests at the Marianna Research Center (1999-2001) for resistance. Irrigated field studies of early, medium, and late maturing breeding lines and cultivars were inoculated at 55-65 DAP with virulent strains of S. rolfsii that were grown on a grain (oats, corn) based media in the laboratory. Peanut lines were grouped into three tests based on maturity. Also split-plot field tests were conducted with paired comparisons of inoculated vs uninoculated. The late maturing genotypes consistently showed the overall highest level of resistance with greater pod yields. The early and medium genotypes had similar yields but some medium maturing entries had greater yields and resistance than any early genotypes. The mean pod yield values for the early, medium and late tests were 2697, 2780 and 4301 kg ha-1, respectively. The mean disease ratings on a 1-10 scale (1= no disease) were 4.6, 4.4, and 3.4, respectively for the three maturity groups. The yield loss to S. rolfsii in the split-plot test was 706 kg ha-1. New cultivars with resistance have been released in 2002 from this material.

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