

Wheat and Feed Grain Committee
Project Report for 2007

Project Title: Reproduction of peanut root-knot and cotton (southern) root-knot nematodes on commercial field corn varieties and their impact on yield.

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Objective:

1. Monitor the reproduction of the cotton and peanut root-knot nematodes on selected field corn varieties as well as other corn selections.
2. Compare the yield of each corn variety against the reproductive ratio of each nematode.

Summary: In-field reproduction of cotton root knot on 12 commercial and 9 other corn varieties was evaluated at the Brewton Agricultural Research Unit (BARU) and Plant Breeding Unit (PBU), while a similar study to assess the level of peanut root knot reproduction on the above corn varieties was conducted at the Wiregrass Research and Extension Center (WGREC). Since the final nematode counts for the above studies are not yet available, host suitability and impact of each nematode on yield was not determined. Initial larval counts at PBU and WGREC were high. Of the 12 commercial and 3 self-pollinated field corn varieties at the PBU, highest yields were recorded for Pioneer 31G66 and DKC 69-72. At BARU, yield of DKC-69-72 had higher than all varieties except Pioneer 31G66, Pioneer 31N26, Pioneer 33V15, Pioneer 31G97, Croplan 827, SS804 and SS783. Highest yield at WGREC were recorded for DKC 69-72, Pioneer 31G97, Pioneer 31G66, Croplan 827, and SS804, while the self-pollinated corn cultivars yielded less.