

Wheat and Feed Grain Project Summary, 2007

TITLE: Root-knot management for corn in Alabama

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Evaluation of potential nematicides for management of southern root-knot nematode (*Meloidogyne incognita* race 3) on corn hybrids were conducted at the Plant Breeding Unit and at the Brewton Experimental Field. Five tests were established evaluating the fumigant, Telone II, the seed treatments, Avicta, AERIS, Vydate CLV, Lanate 90 SP, and N-Hibit, the granular formulations Counter 15G and Mocap 15G, and the biological NemOut. Rainfall was the limiting factor in the 2007 season thus root-knot nematode pressure was low under these conditions at both locations. In the Telone II trial, corn plant height and fresh root weights were increased ($P \leq 0.10$) by Telone II at 7 weeks after planting as compared to the granular insecticides and the control. Numbers of root-knot eggs per gm of root were very low and were only reduced ($P \leq 0.10$) at 30 DAP by Vydate CLV, Lanate 90 SP, and Counter 15 G. Over all tests, corn yields were increased only numerically. Telone II treatment yields were 10.5 bu/A greater than the control at Brewton. The seed treatments Avicta and AERIS numerically increase yields 3.2 and 12.1 bu/A, respectively, over two locations. Experimental seed treatments, Vydate CLV and Lanate 90 SP also numerically increased yields 12.3 and 6.3 bu/A at the PBU. Counter 15 G the insecticide/nematicide increased yields numerically in 3 of 5 tests with an average 5.9 bu/A increase over the untreated control. Further testing will be necessary to determine differences in yield responses due to the nematicides under normal environmental conditions.