

**SURVEY OF *MELOIDOGYNE INCOGNITA*  
POPULATIONS FROM TEXAS  
FOR AGGRESSIVENESS ON  
RESISTANT COTTON GENOTYPES**  
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**Abstract**

Resistance is one of the most effective strategies for control of root-knot nematodes. Multiple cotton genotypes with resistance to *Meloidogyne incognita* have been released in recent years. To estimate the durability of the nematode resistance, the occurrence of virulent nematode populations must be determined. Aggressiveness of 57 populations of *M. incognita*, collected from 10 counties throughout the cotton production region of the Southern High Plains of Texas in August and September of 1996, were tested for ability to gall roots of the resistant cotton genotypes M-315, Acala Nemx, and Stoneville LA887 in six greenhouse tests. The susceptible cotton Deltapine 90 was included as a control. Numbers of galls on each cotton genotype by each nematode population were counted 60 days after inoculation with 10,000 eggs/plant. Deltapine 90 had the greatest number of galls, ranging from a mean of 65 to a mean of 373 galls per root system in the different tests, whereas M-315 consistently had the fewest galls for each nematode population and were less than 12% of those on Deltapine 90. Numbers of galls on Acala Nemx and Stoneville LA887 were usually intermediate, ranging from 12% to 34% of those on Deltapine 90, and were more variable in number. For each separate test, analysis of variance by the SAS general linear model indicated that the effects of nematode populations, cotton genotypes and population by genotype interaction were significant ( $p \leq 0.05$ ). Despite the variability in root galling observed among populations of *M. incognita*, no population appeared to be highly aggressive on any of the resistant cotton genotypes tested.