RESPONSE OF ROOT-KNOT NEMATODE RESISTANT AND SUSCEPTIBLE VARIETIES TO TELONE II APPLICATION IN A ROOT-KNOT, COLUMBIA LANCE, AND LESION NEMATODE INFESTED FIELD

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Abstract

Nematodes cause annual yield losses exceeding 5% in South Carolina cotton production. Varieties with proven levels of resistance to Southern root-knot nematode (SRKN), *Meloidogyne incognita* are now available. However, no information is available on their performance in fields infested with SRKN, Columbia lance nematode (CLN) *Hoplolaimus columbus*, and lesion nematode, *Pratylenchus* spp. Our goal was to evaluate performance of the SRKN resistant varieties in the presence of CLN and lesion nematodes. We planted six replications of 4 varieties on June 1 in paired plots either nontreated or treated with 3 gal./acre of Telone II. On July 28 SRKN could be recovered from soil only in the nontreated plots of DP 1646 B2XF. Very high levels of SRKN (450/gram dry weight of root) were recovered from DP1646 B2XF, but recovery of SRKN from roots of PHY 480 W3FE, DP 1747 B2XF and NG 5007 B2XF were reduced almost 90%, indicating the resistance was highly effective. Telone II application reduced mean recovery of CLN from soil (80%) and roots (90%) across varieties. Lesion nematodes could not be recovered from soil on July 28 but recovery from roots was 80% less in Telone II treated than nontreated plots. Varieties did not appear to differ in their levels of susceptibility to CLN or lesion nematodes. Yields were almost 100 lbs./acre higher for Telone II treated than nontreated plots. This indicates that SRKN-resistant varieties perform as expected against SRKN, however, where CLN or lesion nematodes are present significant yield losses may occur.