EFFICACY OF A NOVEL SEED TREATMENT FOR ROOT-KNOT NEMATODE CONTROL IN GREENHOUSE AND SMALL-PLOT FIELD TESTS

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Seed treatment with STAN, a novel nematicide, was evaluated for control of *Meloidogyne incognita* in both greenhouse and small-plot field trials during 2002 and 2003. In nematode-infested pots in the greenhouse, rates of STAN ranging from 10 to 100 g (a.i.)/kg cotton seed resulted in significantly taller plants, and rates of 75 and 100 g (a.i.)/kg seed resulted in greater fresh top weights in comparison with no seed treatment 38 days after planting (DAP). Nematode reproduction was lower on plants from seed treated with all rates of STAN at 38 DAP, and galling severity was lower following treatment with 50, 75, and 100 g (a.i.)/kg seed at this time. Plant fresh weight and root galling severity were also lower (75 and 100 g (a.i.)/kg seed) and galling was lower (all rates) at 58 DAP. In field plots in 2002, nematode population density was lower in the soil in plots where seed was treated with STAN (rates of 10, 50, 75, and 100 g (a.i.)/kg seed) than in control plots at 60 days after planting. There were no differences among treatments in nematode population, root galling severity, or cotton yield in this trial. In field trials in 2003, *M. incognita* population density was lower 7 DAP in plots receiving 100 g (a.i.) of STAN/kg seed, and where TEMIK 15G was applied at planting at 5 and 7 lb (formulated) per acre. There were no significant differences in population density in this trial at 14, 21, 28, or 35 DAP among treatments, but root galling severity was lower at 35 DAP where seed treated with STAN at 100 g (a.i.)/kg seed or where TEMIK (5 lb/a) was applied at planting. Although no significant differences in nematode population density at harvest or lint yield were found, a strong trend toward improved lint yield was seen where STAN was used at 100 g (a.i.)/kg and where TEMIK was applied at planting in comparison with untreated control plots.