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INFLUENCE OF TEMIK RATES ON THRIPS CONTROL IN UNR COTTON

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Abstract

A 2-year (2000 and 2001) study evaluating the use of soil insecticides and seed treatments for early season insect control in ultra narrow row (UNR) cotton (9.5 inch rows) was conducted on a Catalpa silty clay soil, Verona, MS. The experimental design was a randomized complete block with 4 replications. Treatments included: a check (no insecticide); Gaucho (imidacloprid) at 0.25 lb ai/100 lb of seed; a combination of Gaucho at 0.25 lb ai/100 lb of seed and Temik (aldicarb) at 1.05 lb ai/A; and Temik at 0.53, 1.05, 1.50 and 2.1 lb ai/A. Temik was applied in-furrow at planting. Gaucho was applied to the seed and mixed until the seed were thoroughly coated. Appropriate UNR production practices for optimum yield were applied to the entire study. SG 501BR cotton cultivar at 150,000 seed/A was planted no-till on a spring prepared seedbed with a vacuum planter in late May and early June. Ammonium nitrate at 90 lb N/A was broadcast 3 weeks after planting.

Thrips (*Fankliniella sp*.) counts were made 26 and 24 days after planting in 2000 and 2001, respectively. Five plants were cut from each plot, placed in plastic bags, and taken to a laboratory where insects were washed from the plants into micro-sieves, placed on filter paper and counted under a microscope.

Mid and late season insecticide applications were made when pests were at or above threshold levels, based on twice weekly scouting. Cotton was defoliated and desiccated prior to stripper harvest each year. The center 9 rows of each plot were harvested with a stripper equipped with a stalk remover. The seed-cotton samples from each plot were ginned with a state of the art mini-gin equipped with a stalk remover, to determine gin turnout and lint yield. All data were statistically analyzed with analysis of variance procedure and treatment means were separated using Fisher's Protected LSD at the 5% probability level.

Immature thrips populations, 24 to 26 days after planting ranged from 0 to 2 per 5 plants in 2000, and 0 to 8.25 per 5 plants in 2001. There was no difference in thrips populations among all treatments in 2000. In 2001, thrips populations were lower than the check for all treatments with Temik. Gaucho without Temik showed no difference in populations compared to the check or Temik at 0.53 lb ai/A.

Lint yields ranged from 1192 to 1404 lb/A in 2000, and 953 to 1070 lb/A in 2001. In 2000, all treatments produced higher yield than the check, and there was no difference between Temik rates, Gaucho, or the Gaucho/Temik combination. In 2001, only Temik at 0.53 or 1.50 lb ai/A produced higher yield than the check. Both years, Temik at 0.53 lb ai/A produced yield equal or greater than all other treatments. Results indicate that rates of Temik above 0.53 lb ai/A are not necessary and no yield increase is expected from the Gaucho/Temik combination.