NEW OPTIONS FOR MANAGING THRIPS IN THE UPPER SOUTHEAST

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<u>Abstract</u>

In 2012, a series of six small plot (4 rows by 50 ft.) tests replicated four times near Suffolk, VA (3 tests), and Rocky Mount (2 tests) and Plymouth (1 test) NC were conducted to evaluate the potential utility of 1) commercial seed treatments, 2) a multiple insecticide seed treatment, 3) an ultra high seed treatment rate, 4) the potential phytoxicity of commercial adjuvants used with an organophosphate for thrips control and 5) an in-furrow liquid insecticide for thrips control in the upper Southeast Region of the Cotton Belt. An additional test of 4 rows by approximately 700 ft. was conducted in Wilson, NC to evaluate the efficacy of an in-furrow spray with a commercial seed treatment compared with the seed treatment alone and an untreated check.

Averaged over two tests in Rocky Mount and Plymouth, no significant differences were found in reduction of immature thrips levels between the seed treatments Avicta Complete, Poncho/VOTiVO/Aeris, and Acceleron N at both 3 and 4 weeks after planting. However, in this same test, the 8x rate of imidacloprid showed significantly fewer immature thrips at 3 and 4 weeks after planting than any of the above commercial seed treatments. In a comparison of Admire Pro at 8.5 and 9.0 oz. of product/acre and Avicta Complete seed treatment at Plymouth and Rocky Mount, respectively, the levels of immature thrips was the same for both treatments. In a Suffolk test, Admire Pro at 8.5 oz. of product/acre in furrow showed significantly better thrips damage ratings (i.e., less damage) than either Orthene liquid at 16 oz. or Verimark liquid at 13.5 oz. product/acre.

In the larger scale test in Wilson County, Admire Pro at 9.0 oz. product/acre plus a seed treatment showed 1) statistically lower immature thrips at both 3 and 4 weeks after planting, 2) high plant weights at 4 weeks after planting and 3) numerically or statistically taller cotton seedlings from 2 to 6 weeks after planting. In an final test in Suffolk, a number of common commercial spray adjuvants (Induce, Factor, Response, Agri-Dex, and Dyne-Amic) at suggested rates tank mixed with Orthene at 4.0 oz./acre showed no greater seedling damage that Orthene alone at the same rate.

Our preliminary observations indicate that 1) ultra-high seed treatments looked promising and that 2) Admire Pro at 8.5 to 9.0 oz./acre plus a seed treatment significantly out-performed the seed treatment alone, demonstrating excellent thrips activity, excellent persistence and the potential for a "one and done" (at-planting in-furrow spray plus seed treatment without a follow-up foliar spray – rare in this area of the Cotton Belt) approach to managing thrips in the upper Southeast.