MANAGING THRIPS WHERE IT REALLY MATTERS: DIFFERENT OPTIONS FOR EARLY AND LATE PLANTED COTTON IN VIRGINIA AND NORTH CAROLINA

D. Ames Herbert, Jr. Sean Malone Virginia Tech Suffolk, VA Jack S. Bacheler Dan Mott North Carolina State University Raleigh, NC

Abstract

Field trials were conducted in Virginia and North Carolina to assess efficacy of selected insecticides for management of thrips populations in early and late planted cotton. We expected that early planted cotton would be subjected to higher levels of thrips pressure, and for a longer period of time, so some treatments included higher amounts of active ingredient compared with late-planted cotton. Immature thrips levels with both early (late April) and late (late May) planting dates were lower than mid planting dates (early to mid May) in both NC and in VA. The VA tests indicated the maturity of the late planted test had already matched that of the early planted test at 10+ wks. after planting. In both the VA and NC tests, yields trended higher in the later planted tests. In the late planted test in NC, because of both rapid growth and exposure to low thrips levels, none of the at-planting treatments out-yielded the untreated check.

Results

Because the 3 and 4 week after planting immature thrips assessment in the Virginia "late" planting test (May 11) was taken during a period of high thrips establishment and reproduction, immature thrips levels were higher than in the early planted test (April 27).

In the North Carolina tests, because the "early" planted test was essentially the same as the VA "late" test (April 11 and 12, respectively), the early NC test also showed high thrips levels, while the late planted NC test avoided most of this major thrips flight, which was reflected in lower levels of immature thrips in the untreated check.

By the 10+ week maturity assessment of NAWF in VA, the late planted test had "caught up with" the early planted test, plant heights for the late planted test likewise were almost the same height at 5 weeks as the early planted test at 6 weeks.

In both VA (the high input treatments Temik 15G @ 5.0 lb; Temik 3.5 lb. + Aeris and Temik 3.5 lb. + Orthene) and in NC (all treatments), the later planting date showed higher yields than the early planting dates. In the tests which seemed to avoid high thrips levels (the early April 27 test in VA and the late May 20 test in VA), few differences were noted between treatments. Additionally, in the late planted NC test, the impact of thrips damage on yield was minimized, with few yield differences noted between any of the treatments and the untreated check.

Conclusions

- Because 2009 was the initial year of a planned 3-year assessment of the relationship between planting dates and thrips management options, any conclusions must be tentative and drawn cautiously.
- Immature thrips levels with both early (late April) and late (late May) planting dates were lower than in mid planting dates (early to mid May) in both NC and in VA.
- The VA tests indicated the maturity of the late planted test had already matched that of the early planted test at 10+ weeks after planting.
- In both the VA and NC tests, yields trended higher in the later planted tests.

- In the late planted test in NC, because of both rapid growth and to low thrips levels, none of the at-planting treatments out-yielded the untreated check statistically.
- Additional applied research is planned to further determine if a system of planting date-based at-planting insecticide choices can be developed for the Virginia / North Carolina area.