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REPORT PERIOD: 1/1/2014-06/30/2015

Annual
PROGRESS REPORT + Summary
TO
NORTH CAROLINA PEANUT GROWERS ASSOCIATION, INC.

TITLE: New Answers for Insect Control in the Absence of New Products
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DEPARTMENT(S): Entomology¹ and Crop Science²

REPORT: Insect management trials were conducted in three locations within North Carolina and in collaboration in a non funded multi-state project collaborating with Clemson and Virginia Tech. There has been controversy and concern over the replacement product for the at plant insecticide Temik and the results from 2014 in collaboration with other states has given us excellent data to provide research based recommendations for moving forward with new early season insect control options. Evaluations of Cruiser seed treatment continue to provide data that indicate this is a very mediocre control approach. We have a great deal of concern about the performance and reliability of this product and will not give it a strong recommendation. Our ability to partner with two other institutions in a non-funded multi-state project allows us to feel confident in not recommending this product. The evaluations of Bayer's Admire continue to show promise in multi-state trials. We first evaluated this product many years ago, but Bayer lost interest in 2002. Interest has been renewed in this product with the loss of Temik. Our trials in 2014 and in previous years have demonstrated it is one of the most effective products for use at plant to control thrips. These results were also confirmed in the cooperative trials in SC and VA. Our studies also include the older traditional control options so we can measure if real progress is underway. We have also evaluated the use of a 3 week post plant application of Orthene and with current varieties and planting dates this approach is demonstrating sound economic value. Funds from the NCPGA have allowed us to be a partner in this cooperative study that received no other external funding, but was viewed by the scientists in all three states as being a high priority. In 2013 we implemented a total of 12 studies in 3 locations and we followed those with 13 more studies in 3 locations in 2014.

Our evaluations of caterpillar control in peanuts have been focused on the recent occurrence of increasing levels of insecticide resistance in corn earworms. Higher levels of resistance to pyrethroid insecticides can dramatically increase the cost of caterpillar management by requiring other more expensive products. A new addition to the concern over poor control of corn earworm in peanut fields was a dramatic increase in the occurrence of budworms in peanuts which are more difficult to control. We evaluated a number of products for budworm control in peanuts in 2013 and 2014 and found wide variation in control. Products such as Besiege and Belt provide good control in contrast to relatively expensive labeled products like Steward which gave average results. Our efforts to find optimal caterpillar control programs that are cost effective will continue. Rootworms trials, despite the abundant soil moisture in 2014, did not produce adequate populations for valid comparisons of data. This is the second year in a row with adequate soil moisture but an obvious absence of rootworm infestation. While this prevented field testing of management options, it provides additional data for the rootworm index and increases our confidence in limiting rootworm treatments.

IMPACT STATEMENT

The available funding allow our participation in a cooperative, multi-state study focusing on the most effective early season thrips management strategies. Multiple sites in NC, SC, and VA provided a critical, yet uniform evaluation of a variety of management strategies in different soil types, weather conditions, and site specific practices. The real value of these trials in 2014 was the consistency of the data collected that provide great efficiency in developing consistent thrips control practices for the region in a shorter period of time than would be required through individual stat testing. Growers throughout the region can move forward with great confidence with the knowledge that these recommendations are based on a strong and diverse data base. The 2015 insect control recommendations received a revision due to the value of the data collected from these trials.