ARIZONA PINK BOLLWORM ERADICATION 2018 PROGRAM UPDATE

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Abstract

On October 19, 2018 U.S. Secretary of Agriculture Sonny Perdue, declared the Pink Bollworm eradicated from the cotton growing areas of the United States. This order removes Pink Bollworm quarantine zones in the US, allowing for more freedom of movement for cotton domestically and internationally. This action brings the active program to eradicate the Pink Bollworm to a close regulatorily. Pink Bollworm was the most costly and injurious pest in the history of the Arizona cotton industry.

Introduction

The following characterizes the current status of the Pink Bollworm eradication effort in Arizona. Background information including methods and materials can be found in previous Beltwide proceedings; information provided here will be generalized, condensed, and focused on current program results.

Results

Arizona cotton for 2018 totaled 171,252 acres, conventional cotton comprised 18,353 (10.7%) of the total acreage. Yuma County (Area III) conducted year eleven of eradication activities. La Paz and Mohave counties (Area II) completed year twelve of eradication activities. Central and eastern Arizona (Area I) completed year thirteen of eradication activities (Figure 1). In the three zones, 1,507 traps were checked bi-weekly.

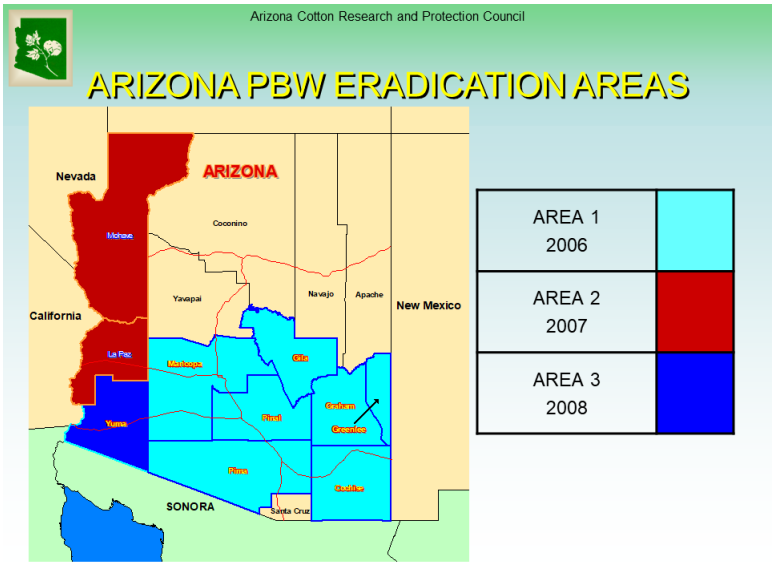

Figure 1. Arizona program areas.

In 2018, no pheromone or insecticide treatments we made for control of Pink Bollworm.

In the three areas, no native moths were captured in 2018 (figure 2), and no immature Pink Bollworm life forms were detected in targeted boll sampling or boll incubation, mirroring results in the previous eight years (figure 3).

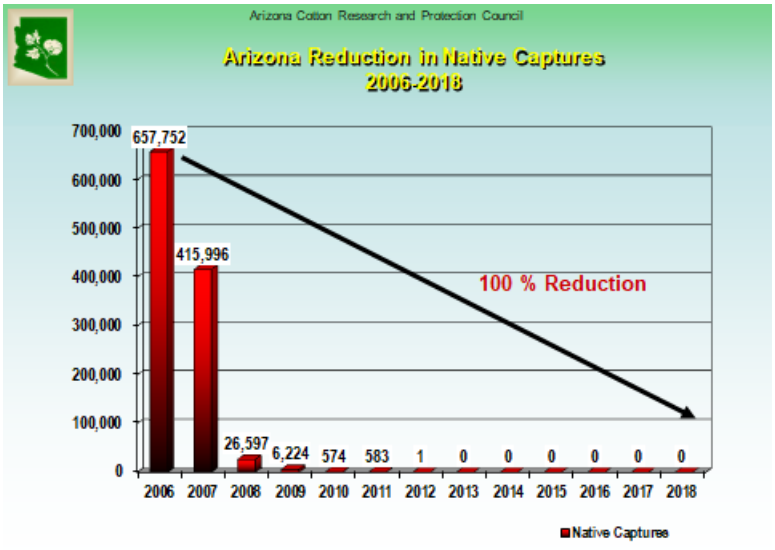

Figure 2. Statewide native moth captures

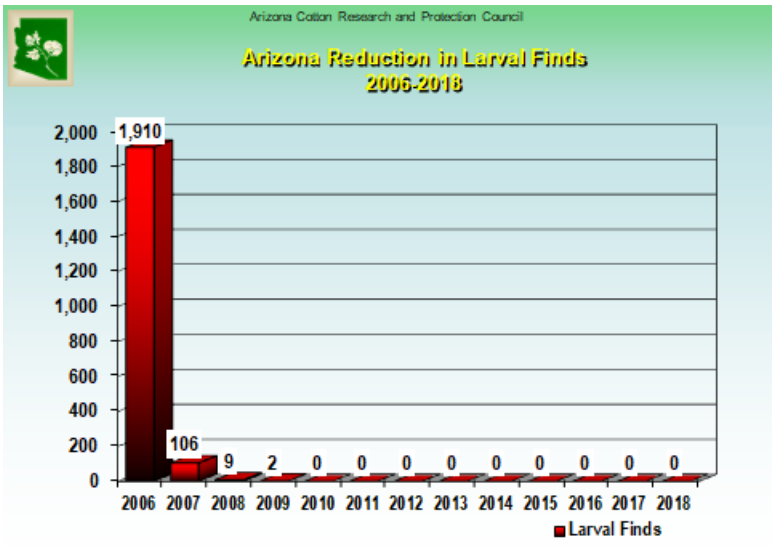

Figure 3. Statewide boll analysis results

For the eighth consecutive year desert line trapping produced no captures of native moths (figure 4).

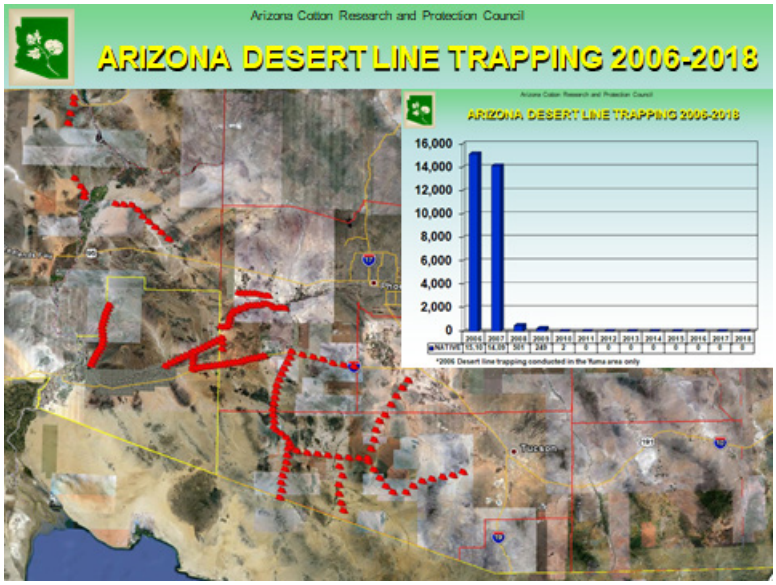

Figure 4. Arizona desert line trapping.

Conclusions

Pink Bollworm eradication in conjunction with Bt cotton and selective insecticide chemistries has resulted in the lowest pesticide usage in Arizona cotton in over 38 years. This is a wonderful time to reflect upon the triumphs, failures, losses and gains, all part of the saga to eliminate the Pink Bollworm as the key pest of cotton in Arizona.

Subsequent to the declaration of eradication, on November 27, 2018 the National Cotton Council convened the Pink Bollworm Action Committee to discuss the future of the Pink Bollworm colonies in Arizona. The action committee voted to support the ongoing Pink Bollworm research colonies at the University of Arizona and the Agricultural Research Service facility at MAC. Dispersal of Congressional funding for the colony maintained for the creation of sterile moths will stop at the end of 2019. Following a short discussion concerning minimum standards near the end of the meeting, the National Cotton Council disbanded the Action Committee.

Gone but not forgotten. Much of the discussion at the Action Committee meeting revolved around the risk of re-infestation. Populations around the world have developed resistance to Bt technology and insecticides. Many experts feel the most important question we now face is, when Pink Bollworm will show up again in the U.S., not, if it will. The future challenge is to protect the investment and sacrifices our growers made to completely eliminate the Pink Bollworm as a threat to commercial cotton production in the US.

As stated in previous reports: Trapping, maximum use of Bt cotton, sterile moth technology and good cultural control continue to be vital in protecting Pink Bollworm eradication and preventing other pests and diseases from filling the void where Pink Bollworm once caused crop losses.

As we move forward in the eradication phase of the program, maintaining resources and support including sterile moth technology for response to any reintroductions of Pink Bollworm, will be more challenging. As previously noted, sterile technology is vital to maintaining 24C special local need registrations for the 100% use of Bt cotton technologies in conjunction with the post eradication monitoring phase of Pink Bollworm Eradication.

It is truly overwhelming to actualize the goal shared by growers, program personnel, industry, USDA, and all of our cooperators. We are fortunate to stand on very broad shoulders. In the future, let us hope we have the courage and motivation to face other challenges to our industry, with as much dedication and determination, as those who pushed for and created the opportunity to realize this achievement. Pink Bollworm is once again, truly, an exotic pest in the United States.