ARIZONA PINK BOLLWORM ERADICATION 2015 PROGRAM UPDATE

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Abstract

In 2015, Arizona transitioned into year two of the four-year Confirmation of Eradication phase of the Pink Bollworm eradication program. The concept of Confirmation of Eradication is outlined in the Pink Bollworm minimum standards document as adopted by the National Cotton Council's Pink Bollworm Action Committee. The recommendation to enter this new phase of program is based on results from 2013 when no native moth captures or signs of larval reproduction surfaced across the entire International Pink Bollworm Eradication Program area.

Introduction

The following updates the progress of the 2015 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 acreage for 2015 totaled 106,149, conventional cotton comprised 20,331 (19.15%) of the total acreage. Yuma County (Area III) conducted year eight of eradication activities. La Paz and Mohave counties (Area II) completed year nine eradication activities. Central and eastern Arizona (Area I) completed a tenth year of eradication activities (Figure 1). In the three zones, 1,391 traps were checked weekly.

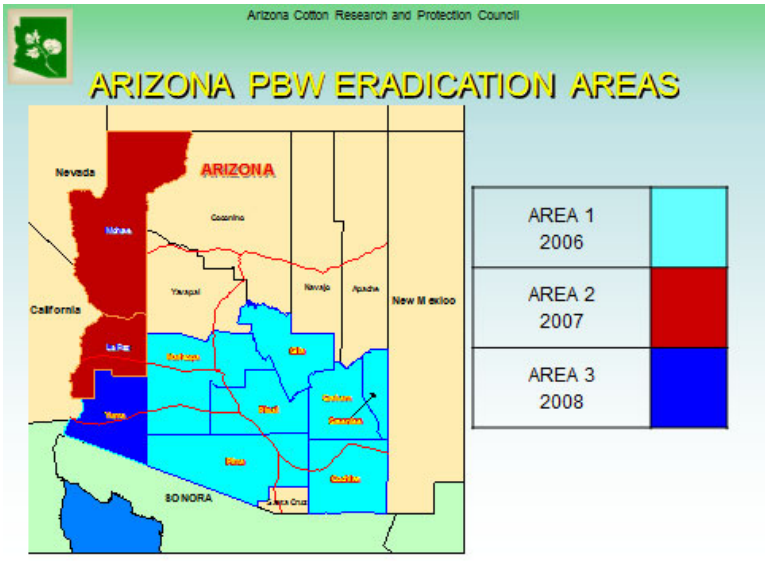

Figure 1. Arizona program areas.

In 2015 no pheromone or insecticide treatments we made for control of Pink Bollworm, limited sterile releases were conducted around the Pink Bollworm rearing facility on a precautionary basis.

In the three areas, no native moths were captured in 2015 (figure 2), and no immature Pink Bollworm life forms were detected in targeted boll sampling or boll incubation mirroring results in the previous 5 years (figure3).

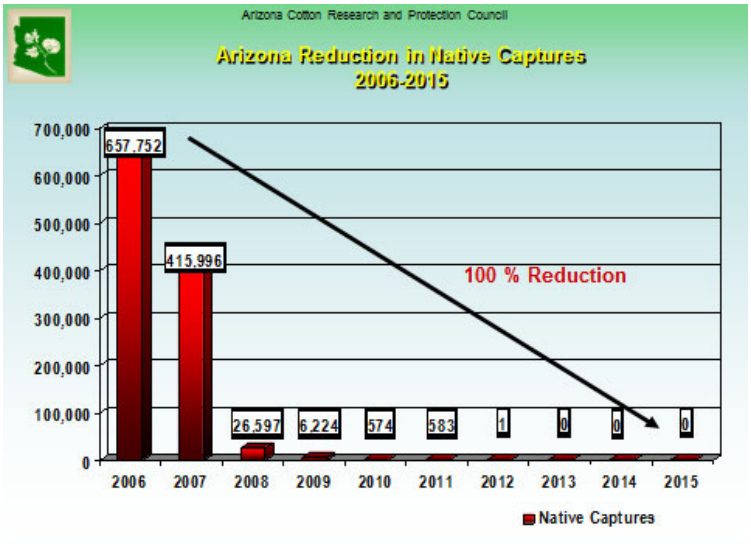

Figure 2. Area 1 native moth captures

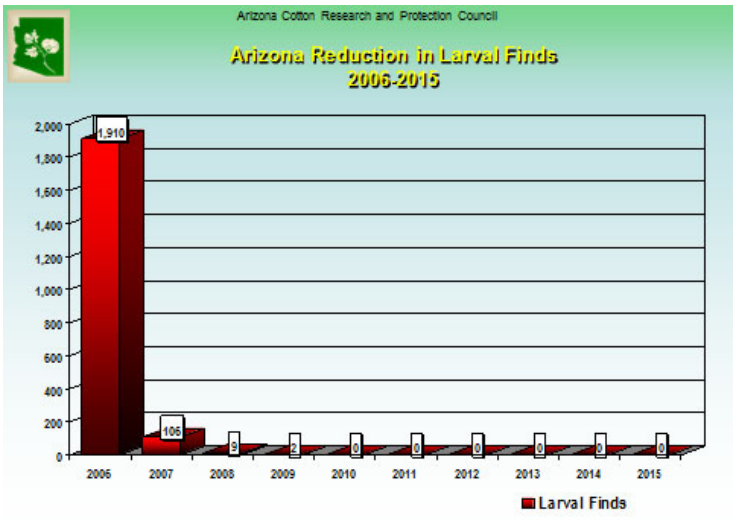

Figure 3. Statewide boll analysis results

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

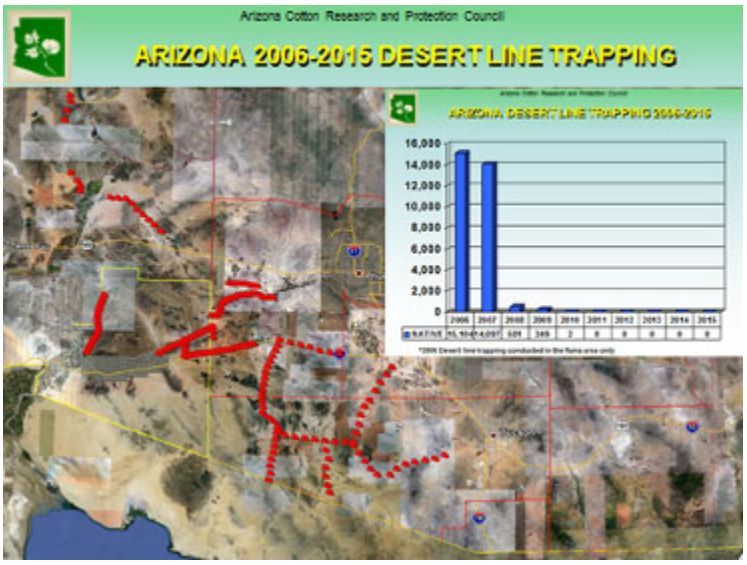

Figure 4. Arizona desert line trapping.

Conclusions

Although it is still too early to declare total victory in the fight against Pink Bollworm, Arizona is enjoying some of the lowest pesticide usage in cotton in over 35 years. This benefit to Arizona's cotton industry would not be possible without Bt cotton, advanced chemical formulations and Pink Bollworm eradication.

Trapping, maximum Bt cotton use, sterile moth technology and good cultural control continue to be vital in supporting Pink Bollworm eradication and preventing other pests and diseases from filling the void where Pink Bollworm used to operate.

As we continue forward in the confirmation of eradication phase of the program maintaining resources and support, including sterile moth technology, to respond to any reintroductions of Pink Bollworm has become more challenging. As previously noted this capability is vital to maintaining 24C special local need registrations for the 100% use of Bt technologies in conjunction with Pink Bollworm eradication.

There are many challenges to the cotton industry in Arizona and the greater southwest. However, to allow insurgent populations of Pink Bollworm to re-establish through migration or direct introduction would be an unwelcome outcome following execution of one of the most successful integrated pest management projects in history.

Moving forward it is crucial to remember that, in the past, Pink Bollworm was the most costly pest of cotton in the southwest U.S. and, with the global movement of cottonseed and equipment, it could be again. Therefore, in the future part of the challenge will be maintaining the support and resources to ensure this outcome does not become reality.