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Crop Production Guide Series

Pink Bollworm Management Tips II

Mapping Potential Problem Fields

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Pink bollworm infestations intensified and expanded across the southwestern High Plains area last year, especially late in the season. This was a continuation of a trend that probably started a few years ago, primarily in response to our drier weather pattern the last several years. "Pinkies" can be even harder to control than boll weevils although much of their ecology and management is similar. Since control can be challenging for most folks, many threatened producers will opt for planting Bollgard cotton varieties, which provide near 100% control. In addition, Bollgard varieties provide reasonably good control of bollworms but only fair control of armyworms. But how do you know whether your field or farm would benefit from this additional expense for Bollgard technology as a pinkie management tool?

First and foremost is to determine what is your risk from a pink bollworm attack? The best means of determining this risk would have been to determine through field inspection whether your field had a larval infestation any time during the last growing season. A useful time to check would have been just prior to the application of your harvest aid. Failing to have done that the next best approach would be to look at the late season distribution of pinkie moth trap catches (**See map on page 3**). Dr. Charles Allen, with the Texas Boll Weevil Eradication Foundation developed this trap-catch map.

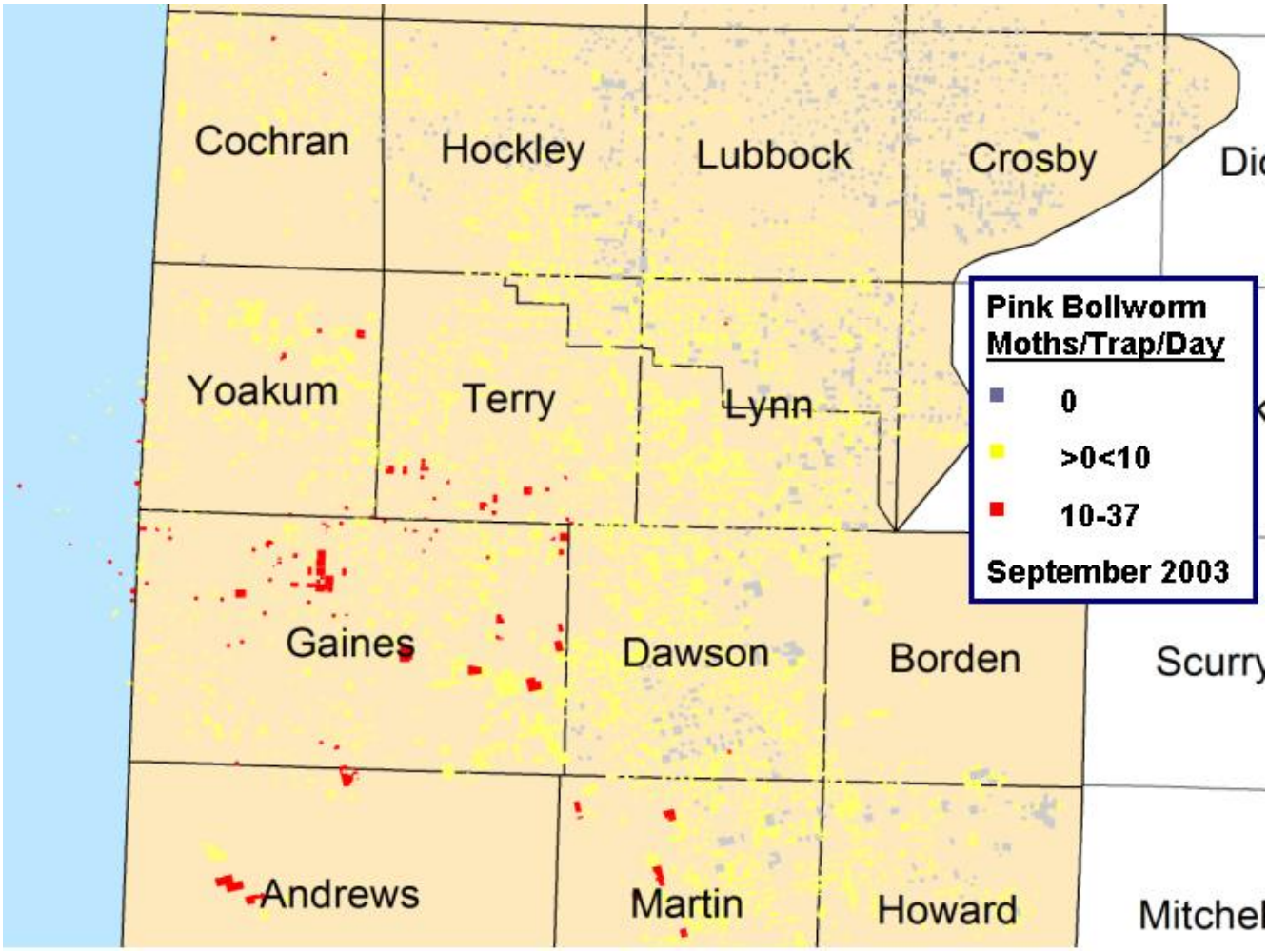
This map looks different than one you may have seen previously. It is based on the same trapping data but expresses moth trap catches as an average per day for the month of September. The earlier map expressed trap catches as a total for the 5-week period in September. A single trap was placed on one field for every section in the trapped area and run for 5 weeks during September. The fields depicted on the map represent only a very small portion of the total fields and may be irrigated or non-irrigated fields. Our trap management trigger is approximately 5 moths per trap per day. It should be obvious that no field averaged that number during the 5-week trapping period (although there may have been days when trap catches exceeded 50/day). The maximum number caught in 35 days of trapping was 1,311 moths (37/trap/day). In fact, of the 86 fields on the map that caught 10 or more on average per day, only 2 caught over 25, 11 caught from 14-24 and 73 caught 10-13 moths per trap per day.

So what is my recommendation? If I were not comfortable with my management ability for pink bollworm control, I would select a Bollgard variety for most irrigated fields in Gaines, south-southwestern Terry, Andrews and western Martin counties. The map does not provide enough information for the other areas shown. My recommendation does not mean that all fields in these areas will be exposed to sufficient pink bollworm pressure to warrant the use of Bollgard technology; it just means there is an increased risk compared to other areas. Look at my earlier **Pink Bollworm Management Tips I** to determine if you could follow the insecticide approach to pink bollworm management using traps and cutting bolls for your decisions.

Bollgard varieties can be a good investment in their own right even in the absence of pink bollworm problems. Depending upon your planting rate, seed costs could range from as little as $7.50 per acre to a high of $20.00 per acre. Most planting rates would be in the $9.00 to $12.00 range. My recommendation is to first pick varieties based on their agronomic performance and then decide whether you need the Bollgard trait. Many of the stacked Roundup Ready-Bollgard varieties are top performers even in the absence of insect pests. Also realize that you will get some benefit on both bollworm and armyworm control if these pests infest your fields.

What is the risk posed by these late season moth catches shown on the map? Pink bollworm moths can travel considerable distances (over 170 miles documented) in search of the last green bolls of the season. But unlike the boll weevil, it is the mature larva, not adult pinkie that overwinters in the soil or cotton trash. From mid September to the plant-killing freeze in 2003 there were probably less than 300 heat units accumulated. Pinkies need about 350 heat units to develop a mature larva from an egg that is capable of making it through the winter. If you had fields that cutout early because of moisture limitations or other factors, these fields would have a reduced pinkie risk. As long as you don't plant too early, overwintering pinkies will either fly out of your field to the nearest squaring field or will emerge and die prior to the appearance of hostable fruit. This suicidal emergence would be enhanced by late winter and spring rains. Just make sure that you don't plant so late that your field is vulnerable to pinkie attack when their numbers are at their highest in the fall.

Finally, there is nothing wrong with choosing to plant varieties that include Bollgard technology. There can be many benefits, both hidden and obvious. Just don't panic and let someone convince you to plant Bollgard varieties because of a perceived threat of damaging pink bollworm infestations. For most producers in the High Plains area, pink bollworms by themselves will be a minor inconvenience at best.



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