Panhandle Pest Update

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The sugarcane aphid arrives on the southern High Plains

Blayne Reed, Patrick Porter and Ed Bynum

We have been watching for the possible arrival of the sugarcane aphid, *Melanaphis sacchari*, on the High Plains, and we must now report that it has been found. Clay Golden, an independent crop consultant serving the area, discovered a small pocket of the aphids on soft dough stage sorghum in an extreme northwestern portion of Floyd County on September 9, 2014. Upon his find Clay enlisted the aid of Blayne Reed, EA-IPM Hale & Swisher counties, who supported Clay's identification of the aphid. Dr. Pat Porter and Dr. Ed Bynum were then presented with aphid samples and confirm the identification.

Photo: Pat Porter

Given the proximity of this aphid population to neighboring counties; ½ mile from Briscoe, 2 miles from Swisher, and 7 ½ miles from Hale, combined with some possible smaller and un-confirmable sugarcane aphid hits in nearby sorghum in Swisher and Hale and that this aphid is often dispersed by prevailing winds, it is logical to assume that it is present over a wider area encompassing small portions of all four counties or in other counties across the High Plains. Many of the aphids in Clay's sample were at the developmental stage just prior to becoming winged adults, so we expect that further dispersal is happening now.

After Clay's discovery, we asked for some help and perspective from our downstate colleagues who have been dealing with this pest since last year. Here is a summary of information from Raul Villanueva, Robert Bowling, Stephen Biles and Mike Brewer.

1) It takes ten days to two weeks for isolated aphids to establish significant colonies on sorghum. So scouting should be concentrated on finding the first few infesting aphids in the field on lower leaves.

2) Stephen Biles, Extension Agent IPM in Victoria, has done some very recent work on an action threshold in sorghum in the reproductive stage. Stephen's work suggests that a good action threshold for treating is an average of 100

aphids per leaf. He suggests sampling 10 plants per location within a field (several locations) and picking the leaf below the flag leaf and an additional leaf from the middle of the plant. If there are an average of 100 aphids per leaf (2,000 total on all 20 leaves), then come back in two days and re-sample to see if the population is increasing. If the numbers are going up then consider treating. If the numbers are not going up then don't treat but continue to monitor. Observations of this aphid from downstate have shown that some populations can crash very quickly. We don't know how to predict which populations will crash and which will increase.

3) Transform (available under a Section 18 exemption) is the most effective insecticide. It can be used at a rate of 0.75 to 1.5 ounces per acre. Our downstate colleagues have had good results at the 0.75 ounce rate, but good coverage is essential at this rate. They strongly recommend 10 gallons of carrier volume per acre by ground and, if this can't be achieved with aerial application, they recommend a bare minimum of 5 gallons per acre and a minimum rate of Transform of 1.0 ounces per acre. (Which is to say the 0.75 oz rate of Transform may not work by air at 5 gallons per acre.) We do not know if a 1.0 oz rate can be put out at less than 5 gallons per acre. Our colleagues have also said that Dimethoate is not a good option because it is not a consistent performer.

This aphid is not going to be Atilla the Hun on the High Plains. Invasive species often do the most damage in their first year or two of invasion before natural enemies can respond to the new pest. For this year at least, the aphid is arriving late in the season and will not be infesting whorl stage plants which will be limiting the aphid in time to build into an economic problem. We also have products that have proven to control this aphid. This, combined with the implementation of good scouting techniques, give us confidence that this aphid can be effectively controlled if necessary. The Section 18 allows for two applications of Transform (1.5 oz maximum per application), with the total application for the season not exceeding 3.0 ounces. There is


Photo: Pat Porter

also a mandatory 14-day waiting period between the first and second application. So this gives us six weeks of good control, assuming 14 days of activity from each application. This should be sufficient to carry us through harvest.

It is not known whether the sugarcane aphid can overwinter on the southern High Plains; it is a subtropical species and overwintering survival is very much in doubt. We also do not know how fast the sugarcane aphid can reproduce given the predicted cooler temperatures in this week's weather forecast. We will have to watch for it next year when our sorghum is in the whorl stage, but for this year we can handle the problem if it arises.

The sugarcane aphid is fairly easy to recognize and distinguish from our other common aphids. Look for black-tipped antennae and legs. Dr. Ed Bynum recently posted an article on identifying the sugarcane aphid: http://amarillo.tamu.edu/files/2010/11/PPU-V6i6-5-23-2014.pdf . Our publication Sugarcane Aphid: A New Pest of Sorghum is available here: http://www.agrilifebookstore.org/product-p/ento-035.htm . We will of course keep you informed of new developments.

Photo: Pat Porter