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Crop Management Newsletter

News about Crop Management for producers in Dawson and Lynn Counties.

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Sugarcane Aphid Threshold Lowered for the Texas High Plains

Now that we have had a few weeks of experience with field-scale sugarcane aphid control in the southern High Plains, it appears that we need to move to a more conservative treatment threshold than the one currently in use. What we are finding in commercial fields and our insecticide trial is that our insecticides do not seem to be working quite as well as they do in more southern locations with higher humidity and less intense sunlight. Whether our environment affects the insects, plants and/or insecticides differently is unknown, and what we are seeing could be a combination of all three factors – or two or one or none, we just don't know. Insecticide coverage issues may also be in play. We could be experiencing insecticide interception by excessive honeydew such that some of the insecticide never gets to the leaf surface. We also do not know the importance of reduction in coverage and canopy penetration attributable to aerial application rather than ground application with higher volumes of water. Additionally, we also have reports of narrow row fields (less than 36 inches) having reduced insecticide efficacy, and this of course is a coverage issue.

The preceding paragraph is basically to say that we are not sure what is causing reduced control. We want to make it absolutely clear that there is no reason to think this is a resistance issue. However, with regard to application timing the prudent thing to do is to initiate insecticide applications sooner, before the aphids reach 50-125 aphids per leaf. For that reason we are recommending the action thresholds in use in Mississippi.

| Growth Stage | Threshold |
|--------------|--|
| Pre-Boot | 20% plants infested with localized area of heavy honeydew and established aphid colonies |
| Boot | 20% plants infested with localized area of heavy honeydew and established aphid colonies |
| Midge Timing | 30% plants infested with localized area of heavy honeydew and established aphid colonies |
| Soft Dough | 30% plants infested with localized area of heavy honeydew and established aphid colonies |
| Dough | 30% plants infested with localized area of heavy honeydew and established aphid colonies |
| Black Layer | Heavy Honeydew and established aphid colonies in head *only treat to prevent harvest problems **observe Preharvest intervals |

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The Texas A&M University System, U.S. Department of Agriculture and the County Commissioners Courts of Texas cooperating.

The threshold for soft dough stage sorghum is when 30% of the plants are infested and there are localized areas of heavy honeydew and established aphid colonies. This threshold would trigger significantly earlier insecticide applications than our Texas threshold of an average of 50–125 aphids per leaf. The full explanation of the Mississippi threshold can be found here:

<http://www.mississippi-crops.com/2015/02/24/management-guidelines-for-sugarcane-aphids-in-ms-grain-sorghum-2015/>.

Note that this document estimates a 21% yield loss if fields at soft dough stage are left untreated after reaching the threshold. Missing an application at the boot stage threshold of 20% of plants infested with localized heavy honeydew and established aphid colonies would cause a 67% reduction in yield.

Of course another prudent step would be to increase the insecticide rate if possible. Bayer CropScience has some good recommendations for tank additives on the High Plains. Insecticide applications made at relatively low to normal numbers of aphids can be tank mixed with MSO/silicone blends. For heavier infestations they are recommending that Crop Oil Concentrate or High Surfactant Crop Oil be added at the recommended rates. The thought here is to drive the insecticide deeper in to the canopy.

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