



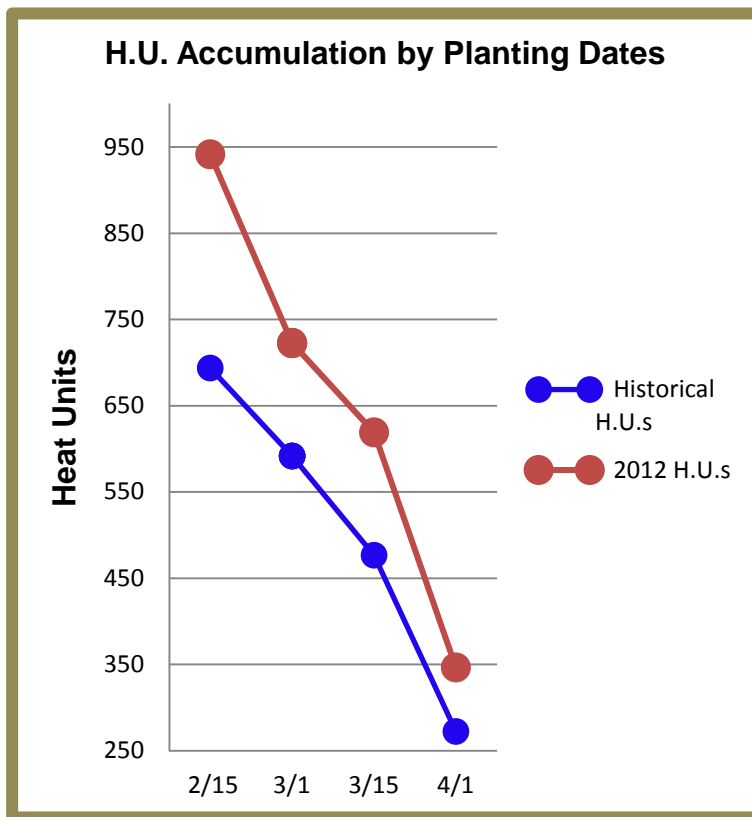
Pest Cast

The Row Crops IPM Newsletter for the LRGV, a cooperative project of Texas AgriLife Extension Service and the Cotton & Grain Producers of the lower Rio Grande.

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Editor

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General Situation: Compared to last year at this time, the Valley is in very good shape with good soil moisture and lower winds. The rain this week helped in most cases. Rain amounts ranged from near 0 (not helpful) to over 5 inches in an isolated area. Overall, precipitation averaged about 2 inches (very beneficial). Moisture will not last forever and the winds are likely to blow hard sometime later this month or next. But for now, the appearance of the cotton, grain sorghum and corn crops has everyone is thinking very positive about this season.

Cotton: Almost 130,000 acres were planted based on the Boll Weevil Eradication Foundation reports from last week. More acres likely will be reported in the next week or so. But, if the current trend holds, the Valley will have about 70,000 less acres than in 2011. The crop that is in the ground now, is in good shape with good height and good color. If winds begin to blow too hard, plants in some of the fields will likely get ragged up, but so far, there has been a mild start to the spring here in the

Lower Rio Grande Valley.

Cotton fleahoppers were reported in increasing numbers this week. Counts of fleahoppers ranged from 0 to 18/per 100 plants. With many fields beginning to square, now is the time to make certain that fleahopper infestations are either below threshold or scheduled for treatment before they can cause any economic harm.

Only a hand full of aphids have been reported by consultants and ag chemical fieldmen this week. Still, the season is early and vigilance is important for all pests. Some adults of leaf miners were noted in scattered fields recently. However, compared to last year, leaf miners should be of minor consideration in cotton since this year's crop is rapidly outgrowing the minimal leaf damage that is being found - primarily on cotyledons, not older true leaves. Another unusual pest was reported from several fields this week. Lace bugs, a pest that attacks leaves of cotton and many other plants, were reported from fields scattered from near Harlingen to Raymondville. Lace bugs are about the same size as adult fleahoppers, but do not fly off the leaf like fleas. Instead, lace bugs tend to be found on the underside of leaves and are often group up from 2 to 10 or more on an individual leaf. Damage from the bugs, white speck on leaves, can be seen from the top side of the leaf. When the leaf is turned over, the bugs may be observed and/or black specks, droppings or frass, may be

observed where the lace bugs were feeding. If lace bugs are present and the damage is similar to that of heavy aphid or spidermite infestations, treatment may be warranted.

Also in cotton, there had been numerous reports and observations of “yellowing” cotton leaves across the entire Valley, but notably in the dryland areas of Willacy County. This week field observations showed less yellowing than in the past several weeks. Dr. Gaylon Morgan and Dr. Toni Provin, Extension Cotton Specialist and Director of Soil, Water, and Forage Testing Laboratory for Texas AgriLife Extension Service, College Station, wrote the following article dealing with the yellowing leaf symptoms in the Lower Rio Grande Valley. They indicate the problems and make recommendations for possible correction of the problem in the article. The article is at the end of this Pest Cast issue. I thank Drs. Morgan and Provin for their work on this information.

Grain Sorghum: There have been no reports of any pest problems in sorghum to date. There have been many reports of iron chlorosis across the Valley this season. The reason for the widespread iron chlorosis on sorghum is not completely known. Dr. Dan Fromme, Extension Agronomist from Corpus Christi indicated that due to the rapid growing conditions (namely warm, though not extreme temperatures), sorghum plants have not been able to obtain iron from the soil. Dr. Fromme further indicated that those growers who have made from one to three foliar iron sprays seemed to have remedied the problem.

Corn: Field corn has been free from pests based on reports received to date. There have been reports of sprayable levels of worms in seed corn. However, seed corn has a much, much lower damage threshold than regular field corn. No one should jump to the conclusion that field corn has any treatable pest problems at the current time. Field scouting is still in order to determine pest levels.

Zinc Deficiencies in Cotton in the Rio Grande Valley

Gaylon Morgan and Tony Provin

Texas AgriLife Extension Service

April 20, 2012

Some unique symptoms have been appearing primarily in dryland cotton fields in Willacy County, but other dryland and irrigated fields throughout the RGV. The plants were exhibiting stunting and interveinal chlorosis (leaf veins are green and between the veins are yellow). The initial thought was herbicide carryover, such as atrazine or similar herbicide, due to the extremely dry year in 2011. However, herbicide application history does not consistently match up with the symptoms. It does not appear associated with any soil pathogen or nematodes, because roots appear to be healthy. The only legitimate answer at this point is a nutrient deficiency that is being expressed by the plants, specifically Zinc deficiency. Cotton samples were collected by Dr. Robert Lemons, Dow Agrosiences, and those samples were submitted to the Texas AgriLife Extension Service Soil, Forage, and Plant Testing laboratory to help identify the any nutrient deficiencies. Of the cotton plants submitted, the stunted and chlorotic plants showed substantial deficiencies in Zinc, while the healthy plants exhibited slight deficiencies in Zinc. All the other nutrient levels were within an acceptable range for healthy cotton plants. Also numerous soil samples analysis (macro and micronutrient) from soil samples collected in Willacy County last year indicated several fields at or below the critical level for cotton production.

Why are the symptoms being observed this season?: Good question!!!! Cotton is typically considered moderately tolerant to low Zinc levels. However, several factors may be contributing to the causing the symptoms to occur this season. Below are a few key factors that influence Zinc availability to the cotton plants.

- pH: The pH has the biggest impact on Zinc availability. On high pH soils, Zinc is the nutrient most likely to be deficient after nitrogen and phosphorous. As pH rises above plant available Zinc decreases

substantially. Some literature states a 100 fold decrease in Zinc concentration for each unit increase in pH. However, soil pH does not change considerably from the previous season or even over multiple few seasons and cannot be the sole cause of the problem in the RGV this year.

- Soil moisture: Zinc and most other nutrients move from the soil particles and decomposing organic matter into soil solution (water between the soil particles). Then, the plant roots absorb the nutrients as water is taken up by the roots. In non-irrigated fields, the dry soil conditions through most of 2011 and the first couple of months of 2012, would have slowed organic matter decomposition and may have reduced the plant available Zinc in the early portion of the season. The reduced plant available Zinc may not be sufficient for the rapidly growing cotton plants thus far this season.
- Zinc in the soil: Considering the soil types in the RGV, it is possible that the Zinc levels increase as the depth increases. Depending on the cropping history, it is possible the top soil is deficient in Zinc, but as the plant rooting depth increases the roots are able to uptake sufficient levels of Zinc.
- High heat unit accumulation: A very warm spring and adequate soil moisture has led to some very quick growing cotton plants in the RGV. The quick growing plants coupled with the limited plant available Zinc in the soil may have led to the symptoms currently being observed.

Recommendations:

Short-term recommendations - Very little information is available on yield benefits of foliar Zinc applications on cotton. However, if the Zinc deficiency symptoms (interveinal chlorosis) continue to be observed, foliar Zinc can be applied to the cotton plants to help meet the Zinc requirements by the plants. Multiple applications will be required and applied at 2-3 week intervals. The foliar application of Zinc is a short-term fix, but may meet the Zinc needs for this current growing season.

Next season recommendations - Collect soil samples from the cotton fields this fall and have the soil tested for both macronutrients (N,P, and K) and micronutrients (Iron, Zinc, Manganese, Copper and Boron) to determine if sufficient levels of nutrients are present in the soil. Previous soil samples from Willacy County indicate low Zinc levels. If insufficient levels exist in your fields, the follow the soil test recommended rate by applying sufficient levels of Zinc to the soil prior to planting or at planting. The soil application is the most economical and practical fix the Zinc problem long-term.

LRGV

BOLL WEEVIL TRAPPING INFORMATION

YTD	2012	2011	2010	2009	2008	2007	2006	2005
	.02194	1.00376	.00597	.24503	.20438	.19289	.89775	0

Week Ending	2012	2011	2010	2009	2008	2007	2006	2005
4/1/12	.03353	.00476	.00672	.19847	.08503	.64118	.48544	0
4/8/12	.01617	.00360	.00592	.11633	.30512	.40392	.37552	0
4/15/12	.01572	.00114	.00312	.23686	.17102	.36414	.88875	6.47392

Traps inspected for current week: 27,537

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