



INSECTS AND WEEDS IN FOCUS

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GENERAL CONDITIONS

Rainfall ranging from 1 to 3 inches over a week ago came in time to help the sorghum and cotton crops. Even with that, many of the cotton fields in the Corpus Christi area were at 6 nodes above white flower and have not improved that position since the rain. Expect much of the cotton to move to cut-out (defined as 5 nodes above first position white flower) by the end of this week. Another noticeable indication of cut-out is the presence of larger squares in the tops of plants. The good news is that plants do have a heavy fruit load but may not have enough leaf surface or soil moisture to hold all the fruit currently on plants. Cloudy conditions last week hampered plant growth. Another rain event would sure help the situation.

Sorghum in the Lower Coastal Bend looks surprisingly good but sure not a bumper crop. We attribute the good sorghum heads to a generally good soil profile moisture level to begin the season. Even corn looks fair in some areas, but we are not expecting anything other than a fair corn crop.

RDP

LOW NUMBER INSECTS IN SORGHUM

Headworm (corn earworm and fall armyworm) and **rice stink bug** have been very low in sorghum fields this season. In the case of the corn earworm, this has been surprising since we are capturing more adult moths of the species in pheromone traps than at any time in the last decade. For example, moths per trap per night have averaged 141 over the past 10-day period. It would be a good idea to inspect sorghum fields for these insects until the grain is mature. Remember, if only corn earworm larvae are found,

pyrethroid insecticides provide control, but if fall armyworm larvae are present in enough numbers we would suggest a switch to methomyl (Lannate).

Yellow sugarcane aphid and greenbug continue to be reported from some fields in the region. Generally, the yellow sugarcane aphid has declined whereas greenbug numbers have tended to increase.

It appears to me that it will be difficult for greenbug infestations to develop to very high numbers in most fields as predator and parasite activity has been observed. Larger sorghum plants tolerate more greenbugs. Yield reductions during boot, flowering and grain development stages depend on their numbers, length of time they have infested the plants, and general plant health (more damage on drought stressed plants). Many greenbugs on booting and older plants can reduce yields and weaken plants that may lodge later. The best way to determine control needs once greenbug numbers reach noticeable numbers is to wait 48 hours to see if the population has begun to decline and whether increased number of "mummies" or parasitized aphids are present. Rapid decline of greenbug's activity follows once 20% are observed to be parasitized.

Greenbug infestations after flowering and before the hard-dough stage should be controlled before they kill more than two normal-sized leaves on 20% of the plants. Greenbug colonies usually begin on the underside of lower leaves and move up the plant. When estimating leaf damage, if more than 75% of its surface is red, yellow or brown consider the leaf dead. The consequences of insecticide treatment could mean more headworms and even rebound of greenbug numbers from removal of a high percentage of the natural enemies of these pests. Finally, ground application of insecticide should be done using hollow-cone nozzles to get better coverage of lower leaves. These nozzles are designed to work efficiently at 40-pounds pressure or higher. It is a good idea to use a pressure near the 40 pound mark. Dimethoate has generally been the insecticide of choice for greenbug; the label should be consulted for certain restrictions.

Another insect that has caused damage to sorghum has been **chinch bug**; especially on older sorghum plants that went undetected in parts of fields near wild host plants. It is difficult to obtain control of these infestations on larger sorghum. Drop nozzles, with spray directed to

the bottom of plants and large spray volume are required. Even then only moderate control should be expected.

Prepare now for diligent scouting for sorghum midge if your sorghum will be blooming 3 to 4 weeks after older surrounding sorghum has bloomed. The female sorghum midge will move from “old” sorghum fields where little damage occurs to the late blooming fields where damage can approach 100%. Daily scouting is required during the bloom period since new midge could move into fields every day. They only live one day. Sometimes people scout every day for a while, and then get busy and do not scout; this could end up costing a large amount of yield. One way to help save control cost is to determine how far the midges can be found out in the field. Often they only move into fields a short distance. If that distance can be determined, then treatment of twice that distance has often proved economical. After 72 hours determine if additional treatments are needed. Remember, if no rain occurs treatments more often than every 72 hours will not be required no matter how many midge are observed as their numbers will be reduced by residual insecticide as time goes by in the field. This practice has been proven to be correct in many tests over the years. Under heavy sorghum midge pressure late planted sorghum yields have approached 3000 lb/acre where 2 or 3 treatments were applied versus only 300 lb/acre without treatment. Pyrethroid insecticides have been the material of choice for control.

The following map shows estimated latest sorghum flowering dates most likely to escape significant damage by sorghum midge. It should be noted that historically Corpus Christi heavy midge numbers have not been found in sorghum until the first week in June with progressively higher numbers through the first few weeks of the month.

RDP

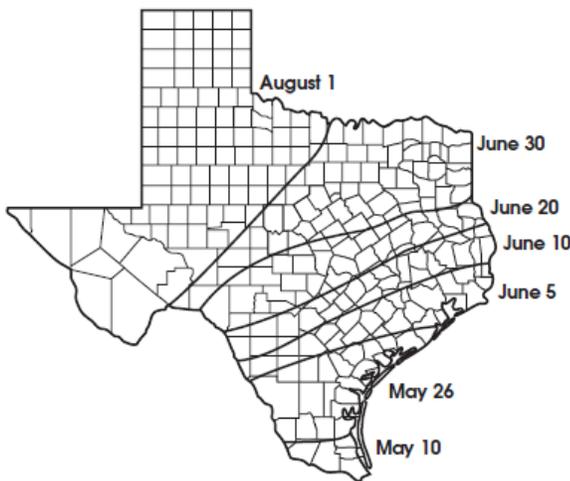


Figure 3. Estimated latest sorghum flowering dates most likely to escape significant damage by sorghum midge.

BOLL WEEVIL NUMBERS LOWER THAN EVER BEFORE

Tremendous progress was made in eliminating boll weevils from the South Texas/Winter Garden Zone in 2010, which has been reflected in trap captures to date this season. Through May 22, a total of 59 boll weevils had been captured in pheromone traps in the entire Zone with 51 of these boll weevils from the Uvalde District. Captures for the various regions are shown in Table 1.

Table 1. Total number of boll weevils captured in pheromone traps by the various district office locations through May 22, 2011 (20 weeks of trapping).

Location	Uvalde	Robstown	Sinton	Kingsville	Victoria
# weevils	51	3	1	1	3

One thing that could result in loss of ground would be cotton fields that are not found and trapped and subsequently develop an infestation. Lack of detection of two fields in Jim Wells County last season resulted in just such a situation. **Please look for boll weevil traps around all cotton fields and report any on which traps are not seen. It is time to finish the active phase of eradication and move to either suppressed, functionally eradicated, or eradicated as the numbers allow.**

RDP

GET YOUR CUSTOM HARVESTERS TO CLEAN EQUIPMENT IF THEY COME FROM THE LOWER RIO GRANDE VALLEY

Too much progress has been made to let boll weevils back on your farm by hitchhiking on cotton strippers/pickers, module trucks, module builders, tractors, or pickups from infested fields. Contact your custom harvesters, remind your neighbors, and put out the word how important it is not to bring the insect back into the region. Green plants with bolls or squares hooked on underside of the equipment and raw cotton in or on equipment are of special concern.

RDP

BOLL WEEVIL FOUNDATION FARMER STEERING COMMITTEE

The Texas Boll Weevil Eradication Foundation, South Texas/ Winter Garden Zone Farmer Steering Committee will meet Thursday, June 2, 2011 at 1:30 p.m. at the Texas AgriLife Research and Extension Center, 10345 Highway 44, Corpus Christi. The location is between Clarkwood and Violet. A review of program progress and other issues will be covered. Any problems or concerns will be addressed. The meeting is open to anyone who would like to attend.

RDP

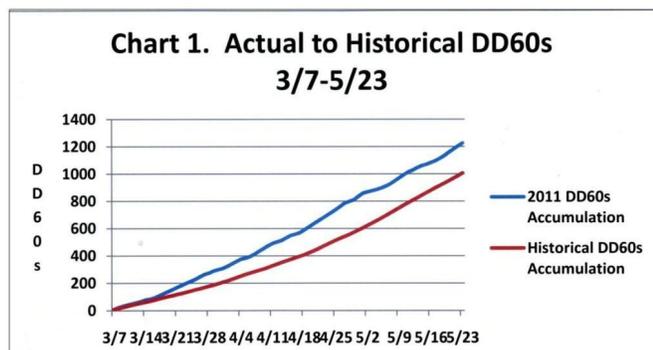
BEETLES FEEDING ON FLOWER PARTS IN COTTON AND ON EARS OF CORN

Five calls were received in a 24-hour period about scarab beetles feeding on flowers (mostly aged a few days) in cotton and on corn ears. In the case of corn, high numbers were found on a single ear. The beetles (at least two species) are in the genus Euphoria. They are known for feeding on flowers of many wild hosts but seldom have been observed on cultivated crops in any kind of numbers. It may be that their wild hosts are not abundant due to dry conditions; therefore, the beetles have migrated to cultivated crops. I suspect they would also feed on sunflower. Populations will probably occur in spots of fields or along field margins. It is not certain if their numbers will warrant control. Growers should scout fields to determine infestation levels. RDP



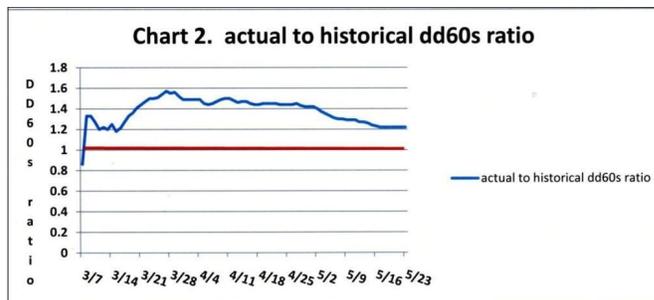
ACCUMULATED DD60s FOR COTTON

During the period of 3/7 to 5/23 1,226 DD60s were accumulated compared to the historical DD60 accumulation of 1,006 (Chart 1). Information obtained from the Nueces County crop weather station #1 at <http://cwp.tamu.edu> DDF



ACTUAL TO HISTORICAL DD60s RATIO

For the period of 3/7 to 5/23 the actual to historical DD60s ratio is 1.22 or cumulative heat units is 22% higher than normal (Chart 2). Information obtained from <http://cwp.tamu.edu> DDF



CONTROL OF VOLUNTEER COTTON

Control of volunteer cotton in failed cotton acres will be needed to prevent plants from providing hostable squares for boll weevil reproduction. In 2010, four studies were conducted across the state on controlling 1-2 true leaf and 5-6 true leaf stage volunteer cotton in corn. Evaluation or efficacy of herbicides included in these trials was based on percent control and on percent of surviving plants that produced a hostable square. Results are available under the soil and crop sciences section at <http://coatabend.tamu.edu>. DDF

2011 COTTON ACRES

The table below compares 2011 and 2010 cotton acres for regions along the Texas Gulf Coast. As of this week, an increase of 358,897 acres was planted in 2011 compared to 2010. DDF

2011 versus 2010 cotton acres for the Lower Rio Grande Valley, South Texas/Winter Garden and Upper Coast Regions.

Region	2011 Acres*	2010 Acres
Lower Rio Grande Valley	196,170	92,000
South Texas/Winter Garden	554,837	367,000
Upper Coast	191,890	125,000
Total	942,897	584,000

*Source: TBWEP (May 15th report)

NITRATE POISONING IN DROUGHT DAMAGED CORN, GRAIN SORGHUM AND SORGHUM SUDANGRASSES

Often in years like 2011, drought stressed corn and sorghum plants may have high level of nitrates and may not be safe for livestock consumption.

Research at the Texas Veterinary Medical Diagnostic Laboratory (TVDM) at Texas A&M University has found that it is safe to feed forage containing 1 percent nitrate (on a dry-matter basis) to healthy ruminants. Forage with a higher percentage (>1%) of nitrate could be fed if it is ground and mixed with nitrate-free forage to reduce overall nitrate levels to less than 1 percent (dry-matter basis). However, this grinding and mixing method should not be used for forages containing more than 2.5 percent nitrate. Do not use the baled forage for livestock feed or bedding.

Forage containing 0.5 to 1 percent nitrate should not be fed to weakened cattle unless your veterinarian has approved it. The 1 percent nitrate level set by the TVDM is significantly higher than levels suggested by other southern universities. This level assumes that cattle are healthy, well conditioned, and being fed a high-energy diet.

Sampling for nitrates - Type of grazing system will influence what part of the plant to sample. If **limit-grazing** corn, grain sorghum, sorghum-sudangrass, sample only the plant leaves. When **rotational grazing or single-field grazing** systems are used, a more conservative sampling approach is warranted because livestock will consume not just the leaves and upper plant parts but also the stems (which contain more nitrate). Samples should be taken from the lower one-third of corn, grain sorghum and sorghum-sudangrass stalks.

To sample corn, grain sorghum, and sorghum-sudangrass **standing forage**, create a composite sample from plant parts taken from at least 10 to 15 areas with the same fertility and moisture conditions. Do not mix plants from "good" and "bad" parts of the field. Create different composite samples for these areas. Ship samples to the laboratory in clean paper sacks. Do not use plastic bags

because the high moisture content will cause the samples to mold, which interferes with the nitrate analysis.

To sample corn, grain sorghum and sorghum-sudangrass **in bales**, the bale must be split open and the lower stems of individual plants must be collected. If the bale is going to be ground before it is going to be fed, then representative core samples can be taken with a bale probe.

Samples can be submitted to the Texas AgriLife Extension Service Soil, Water, and Forage Testing Laboratory. Submittal forms are available online at <http://soiltesting.tamu.edu> DDF

INTERESTING INSECTS

Exclusive male parental care is rare among insects. Over 90% of about 100 known insect species with

GIANT WATER BUGS
(Belostomatidae)



Figure 10.12. *Belostoma* adult ♂

exclusive parental care are giant water bugs. In certain giant water bugs, females lay eggs on the backs of males, and only males brood the eggs until hatch. Up to 100 eggs or

more are glued in sticky pads (see drawing) to the males. Specific brooding behavior in these males contributes to successful hatching of eggs. For example, males maintain an intermittent flow of fresh water over the eggs by stroking them with the hind legs. Interestingly, if the egg pad becomes loose or detached, the male may cannibalize the eggs. These dislodged eggs have little if any chance of hatching even if the males did not use them for food. RDP

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