



INSECTS AND WEEDS IN FOCUS

VOL 36 ISSUE 5

ENTO/SCS

May 9, 2011

Inside this issue:

- Agricultural Tour Schedule
- Crop Condition in General
- Review of Current Cotton Insect Activity
- Sorghum Insect Activity Surprisingly Low
- Pecans
- Texas Pest Management Association Website
- Utility of Plant Growth Regulation in Cotton
- Phytogen Tailgate
- 2011 COTMAN™ Software
- When is Cotton Most Sensitive to Water Stress?
- Accumulated DD60s for Cotton
- Actual to Historical DD60s Ratio
- Rainfall
- Sign Up for the Newsletter by E-Mail
- Interesting Insects

AGRICULTURAL TOUR SCHEDULE

Dates for county tours in the region are provided in the table below along with telephone numbers to check on tour details. Most tours will involve row crops, but a few will include range and pasture sites. RDP

COUNTY	DATE
Kleberg 361-595-8566	June 1-AM
Live Oak 361-449-1703	June 2-PM
Jackson 361-782-3312	June 6-PM
Jim Wells 361-668-5705	June 7-PM
Refugio 361-526-2825	June 8-AM & PM
San Patricio 361-364-6234	June 9-PM
Nueces 361-767-5223	June 10-AM
DeWitt 361-275-0816	June 14-PM
Victoria 361-575-4581	June 16-PM
Calhoun 361-552-9747	June 21-PM
Fayette 979-968-5831	June 22-AM
Colorado 979-732-2082	June 22-PM
Fort Bend 281-342-3034	June 23-AM

CROP CONDITION IN GENERAL

Corn is suffering and yield has been reduced by the dry conditions. Sorghum is producing heads with number of seeds per head already determined. A good rain would help fill out seed and improve yield to some extent. Cotton still has a chance to make a good crop with a rain, but it is my understanding that rain possibility in the near term is slim. RDP

REVIEW OF CURRENT COTTON INSECT ACTIVITY

Cotton aphids are being reduced as plants grow; in some cases insecticide was applied for the aphid infestation. Fields that were not treated are looking better. In general, plants are looking somewhat better as they enter the rapid growth stage. It appears that the cotton aphid builds up on 4 to 8 true leaf cotton, and then they decline due to predator and parasite attack. Therefore, cotton fields in a region vary greatly as to aphid numbers and the number of natural enemies which attack them. Many times the aphid infestation has been in isolated spots in fields.

Of greater concern would be aphid buildup in cotton during the first few weeks of bloom especially if they persist at numbers above 50 per leaf for more than 7-10 days. In cases where aphids approach or exceed 100 per leaf for more than 10 days in tests we have conducted a negative impact on yield was observed. In that case there were few predators, parasites, or fungal infestation to curb the aphid infestation. One of the key causes of aphid infestation during the bloom and boll fill stage of development has been the use of pyrethroid insecticides which are known to "flare" aphids. We have demonstrated this fact in our field studies over the years.

Squaring cotton should be monitored for the **cotton fleahopper** through the first week of bloom. At present most fields have had very few fleahoppers, but there are some fields where numbers increased to the point that insecticide was applied. We are attempting to conduct several fleahopper field studies but their numbers have been low. In our case it may be a result of very few alternate hosts (horsemint) in the area to supply fleahoppers to the cotton. Only a few clumps of the alternate weed host have been observed in our area

which may have contributed to the low fleahopper infestation in cotton. In 2010 horsemint was growing over large expanses in the region which contributed to early and heavy fleahopper infestations in cotton. It appears now, at least in many areas, that fleahoppers may not build up until near first bloom.

Leafminers continue to be observed, but they are being parasitized. New leaf growth in most areas has not been affected by leafminers; the infestation may be over. Even if it is not over I have no idea how to react to leafminer infestation.

The leafminer we are seeing is a *Liriomyza* sp. and is a common and damaging pest of vegetable crops. The adult insect is a small black and yellow fly about the size of a gnat. The adult insect lays her eggs in the leaf tissue where larvae mine and develop, leaving behind an opaque serpentine line.



Boll weevil captures in pheromone traps operated by the Boll Weevil Foundation have been very low throughout the zone including the area operated out of the Uvalde office. It is time to finish up the active phase of eradication in the South Texas/Winter Garden Zone as this is the beginning of the 14th full season of the program for this region. The years mentioned did not include the two “diapause” years of 1996 and 1997. Farmers and others can assist in completing the job by making sure that all cotton fields have pheromone traps deployed and are being monitored. Please call someone immediately to report fields that do not have pheromone traps. RDP

SORGHUM INSECT ACTIVITY SURPRISINGLY LOW

Except for **corn leaf aphid** in whorl stage sorghum few damaging pests are being observed in enough numbers to be of major concern. However, both **yellow sugarcane**

aphid and **greenbug** numbers have tended to increase over the last two week period. Under our conditions the greenbug may be the most likely aphid to cause damage for the remainder of the season. Few **rice stink bug** or **headworms** (corn earworm and fall armyworm) have been observed, but that situation could change at anytime as sorghum enters the milk stage. It would be a good idea to scout sorghum fields on a weekly basis to determine this insect activity. RDP

PECANS

Pecan nut casebearer treatments have been made for the first generation where enough eggs were found to justify treatment. Very low casebearer numbers were observed in some locations prompting growers not to treat for the insect. RDP

TEXAS PEST MANAGEMENT ASSOCIATION WEBSITE

Texas IPM Program newsletters from across the state can be viewed at the Association website at <http://www.tpma.org>. It includes newsletters from the Lower Rio Grande Valley, the Mid-Coastal bend and the Upper Gulf Coast. Generally these other newsletters are being published more often than the one we write out of this office. RDP

UTILITY OF PLANT GROWTH REGULATION IN COTTON

In 2007-8, Extension Cotton Specialists from across the Cotton Belt in partnership with Cotton Incorporated initiated a Beltwide project to determine the benefits of PGR treatments on cotton and the relative utility of using several different widely marketed cotton PGRs. Trials were conducted in 22 locations across 11 states during the two year study. The objective was to determine the effect of several commercial PGR treatments on cotton growth, development, yield, and fiber quality. Results and conclusions from the two year study can be found at:

<http://www.cottoninc.com/Agronomy/Cotton-Plant-Growth-Regulation/Cotton-Plant-Growth-Regulation.pdf>

DDF

PHYTOGEN TAILGATE

On Thursday, July 21st the Texas AgriLife Extension Service and Phytogen cottonseed will be hosting a meeting and field day at the Texas AgriLife Research and Extension Center located at Corpus Christi. The program will begin at 8:30 a.m. and conclude at 1:15 p.m. Activities will include viewing current and future Phytogen cottonseed varieties, update on the Enlist™ Weed Control System which is new herbicide-tolerant trait technology from Dow AgroSciences, and a

presentation on Transform™ WG which is a new insecticide for controlling aphids, whiteflies, and cotton fleahoppers. DDF

2011 COTMAN™ SOFTWARE

The 2011 COTMAN™ software is now available for download at <http://cotman.org>. The COTMAN™ software will no longer be distributed via a CD through the mail and will only be distributed thru a download link on the website. If you are a current user, a COTMAN login account has been created for you. All you have to do is go the cotman.org website and click the button at the top of the webpage for “User Login”. Your username is in the format of “firstname.lastname”, for example “Joe.Jones”. The password is “password”. After logging in, you will be required to update your profile, change your password, and submit the annual COTMAN usage questionnaire before being able to download the software. If you are not a current user, go the cotman.org website and click on request software and complete the online request form. DDF

WHEN IS COTTON MOST SENSITIVE TO WATER STRESS?

We often talk about what stage does cotton use the most water? The answer is during the bloom period. However, when is cotton most sensitive to water stress? A study conducted by Dr. Dan Krieg, a Texas Tech University cotton physiologist (retired) points out the most sensitive time is from square initiation to first flower (**Table 1**). In dry years we see first hand out in the cotton field how sensitive cotton is to water stress from first square to first flower by utilizing the nodes above white flower (NAWF) concept at first flower.

Table 1. Supply water to cotton at specific stages of development affects its subsequent yield as well as the components of that yield. The higher the number in the table, the more closely correlated the factors are (Krieg).

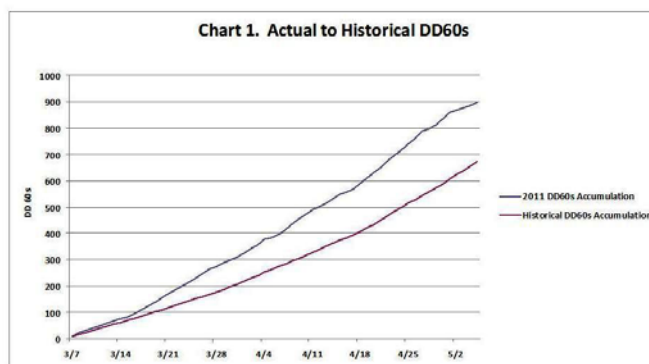
	Lint yield ^{m-2}	Boll ^{m-2}	Boll/ plant ⁻¹	Lint/ boll ⁻¹	Lint/ plant ⁻¹
Total water supply	0.34	0.35	0.37	0.12	0.36
WS P-SI	-0.32	-0.18	-0.08	-0.24	-0.22
WS SI-FF	0.73	0.58	0.54	0.65	0.68
WS FF-PB	0.32	0.55	0.23	0.04	0.13
WS PB-Maturity	-0.43	-0.45	-0.23	-0.56	-0.27

WS – water supply P – planting SI – square initiation FF – first flower PB – peak bloom

The concept of NAWF is an excellent indicator of yield potential at first flower. If a cotton plant has 8-10 NAWF at first flower, it already has established 15-18 floral buds per plant and has tremendous yield potential. On the other hand, if the plant starts to flower with only 5-6 NAWF, it has suffered major water stress resulting in only first position fruiting sites. Yield will be severely limited, no matter what the subsequent conditions may occur. Not only is boll number decreased, boll size (lint/boll) will be impacted. Lint per boll is highly correlated with seed per boll. DDF

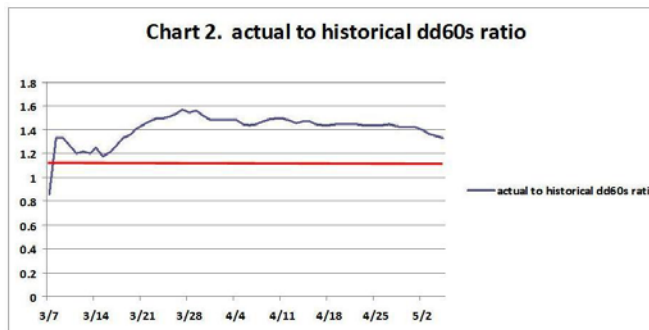
ACCUMULATED DD60s FOR COTTON

During the period of (3/7-4/5) 895 DD60s were accumulated compared to the historical DD60 accumulation of 674 (**Chart 1**). Information obtained from <http://cwp.tamu.edu> DDF



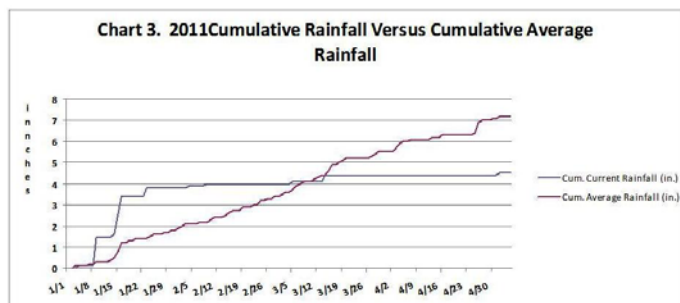
ACTUAL TO HISTORICAL DD60s RATIO

Obviously it has been a warm spring in 2011, for the period of 3/7 to 4/5 the actual to historical DD60s ratio is 1.45 or cumulative heat units is 45% higher than normal (**Chart 2**). Information obtained from <http://cwp.tamu.edu>. DDF



RAINFALL

Rainfall at the Texas AgriLife Research and Extension Center for 2011 has totaled 4.5 inches compared to the average of 7.2 inches for this time period (1/1-4/5), (Chart 3).
DDF



SIGN UP FOR THE NEWSLETTER BY E-MAIL

Consider receiving this newsletter by e-mail as it will save postage, be available quicker, and you will be able to

click on other sites referenced from time-to-time. Let us know by e-mail or telephone call if you desire to switch from paper to electronic newsletter.
RPD

INTERESTING INSECTS

Caterpillars inspire new movements in soft robots.
April 26, 2011. <http://tinyurl.com/44ss7vk>.
Researchers have been examining the diverse behaviors of caterpillars to find solutions for the new generation of search and rescue soft robots. Despite their extreme flexibility and adaptability, current soft-bodied robots are often limited by their slow speed, leading the researchers to turn to terrestrial soft-bodied animals for inspiration. Some caterpillars have the extraordinary ability to rapidly curl themselves into a wheel and propel themselves away from predators. This highly dynamic process, called ballistic rolling, is one of the fastest wheeling behaviors in nature. See <http://www.youtube.com/watch?v=wZe9qWi-LUo> to see the robot and caterpillar in action.
RPD

For more information contact:

Roy D. Parker
Extension Entomologist
rd-parker@tamu.edu

Dan D. Fromme
Extension Agronomist
d-fromme@tamu.edu

10345 Hwy 44
Corpus Christi, TX 78406
(361) 265-9203
Fax (361) 265-9434

We're on the Web!

Newsletter available at <http://agfacts.tamu.edu/~rparker/>

Pest Management information available
at <http://txaac.org/>



Educational programs conducted by Texas AgriLife Extension serve people of all ages regardless of socioeconomic level, race, color, sex, religion, handicap or national origin. The information given herein is for educational purposes only. References to commercial products or trade names is made with the understanding that no discrimination is intended and no endorsement by Texas AgriLife Extension is implied.

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