



# INSECTS AND WEEDS IN FOCUS

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- ◆ **Coastal Bend Entomology Research Results**
- ◆ **Tribute to Cotton Incorporated**
- ◆ **Corn Leaf Aphid: Key to Greenbug Control in Sorghum**
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## GULF COAST GRAIN HANDLERS CONFERENCE

The grain conference is set for Thursday, January 21, 2010 at the El Campo Civic Center, 2350 North Mechanic Street, El Campo, TX. (Details are on page 3.) The annual event is conducted especially for individuals who take care of grain in storage. Primary objectives of the program are to provide managers and employees with information for maintaining the quality of grain in storage, to share information on the latest tools and techniques used by the grain industry, to provide safety information, and to outline changes in various chemical labels and requirements. The focus is on employees who deal with grain storage on a daily basis. Five continuing education unit credits (CEU) for license holders through the Texas Department of Agriculture are available.

RDP

## COASTAL BEND ENTOMOLOGY RESEARCH RESULT

The "2009 Results of Insect Control Evaluations on Corn, Sorghum, Cotton & Pastures in Texas Coastal Bend Counties" is available from several sources. A hard copy can be sent to you by calling this office or it can be viewed at the <http://agfacts.tamu.edu/~rparker>.

The amount of work completed in the 2009 growing season was greatly reduced due the severe drought. Most of the studies were conducted on the Upper Coast. This year's tribute (inside front cover) was devoted to Cotton Incorporated and is repeated in the next section of this newsletter.

RDP

## TRIBUTE TO COTTON INCORPORATED

Cotton Incorporated was organized in 1970 in response to eroding markets for cotton from synthetic fibers. It became the cotton producer's company for research, development and promotion. Cotton Incorporated's contributions through their supported activities include development of the Seal of Cotton, funding of research that led to the cotton module builder (Gary Underbrink, Kleberg County, was involved as an engineer in the development work), the fabric of our lives campaign, improvements in the acid seed delinting process (George Slater, former Corpus Christi AgriLife Research Center Director, oversaw this work), improvements in gin technique and operation, increase in demand for cotton (from 15 to 35 pounds/person over a 30 year period), development through research funding of high volume instrument classing, development of the engineered fiber selection system for the textile industry, and many others.

The agricultural research arm of Cotton Incorporated focuses on practical matters of crop yield and fiber quality; insect, disease, and weed control; and processing. It has benefited cotton growers by increasing demand and lowering costs in demonstrable ways. State Support Program Committees made up of producer representatives from the cotton states determine where best to allocate a portion of the research funds. Current representatives from our region include Danny May, Keith Bram, Marvin Beyer, Jr., and Jim Massey, IV.

In the discipline of entomology significant funding has been devoted to almost every phase of insect management technique and practice. Areas of supported work include insect resistance monitoring to chemicals and technology, boll weevil eradication research support, treatment threshold development, effects of production practices on insect population dynamics, development of the Cotton Management Expert System Software (COTMAN), and study devoted to specific cotton insect pests and beneficials.

A highlight of my career has been to attend the Cotton Incorporated report given each year at the Production Conference of the Beltwide Cotton Conferences. Additionally, personnel from Cotton Incorporated have always responded when we needed their participation on programs in our region. The information they provided was a factor which led to improvement in yield and fiber

quality of the region's cotton. Cotton Incorporated is hereby thanked for their promotion of cotton and the many innovations in which they have had a part.

RDP

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## CORN LEAF APHID: KEY TO GREENBUG CONTROL IN SORGHUM

The research reported in this article comes from another part of Texas, but I believe it is relevant to this area. The information was taken from Michels, G. J. and J. H. Matis. 2008. Corn leaf aphid, *Rhopalosiphum maidis* (Hemiptera: Aphididae), is a key to greenbug, *Schizaphis graminum* (Hemiptera: Aphididae), biological control in grain sorghum, *Sorghum bicolor*. Eur. J. Entomol. 105:513-520.

Corn leaf aphids rarely cause economic loss (See also pages 21-23 in our annual research report) and can be considered helpful by attracting lady beetles to sorghum. We and others have shown that using insecticides to control corn leaf aphid did not increase sorghum yield. Additionally, applying insecticide for corn leaf aphid disrupts or eliminates predators and parasitoids which attack greenbug in sorghum or migrate and aid in biological control of aphids in other crops such as cotton.

The study by Michels and Matis confirmed that the corn leaf aphid is a key species that provides a critical early-season food source for native lady beetles. Their data indicated that successful biological control of the greenbug by lady beetles is normally dependent on early-season colonization of the sorghum field by the corn leaf aphid. When corn leaf aphid numbers exceeded 100/plant before sorghum boot stage, greenbugs never exceeded 125/plant. In all cases (during a 12-year period) where greenbugs were found in densities that would cause economic damage to sorghum, corn leaf aphids did not reach a density of 100 or more per plant until after sorghum reached the boot stage.

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## CHECK STORED GRAIN FOR INSECTS

Reports are being received of insect pests in grain storage bins to include rice weevil, red flour beetle, rusty grain beetle and various caterpillar/moth species. The higher counts are being found in grain where no insecticide protectant was applied during bin filling although some insects are being found in treated grain. In the treated grain insect numbers are generally not high enough to warrant fumigation, and if cold weather prevails much of this grain can be cooled to a temperature below 60°F where insect activity will be greatly reduced. Cooling to 50°F or below would be even better.

If you desire to know the species involved bring or send a sample to my office for identification. The species present and number per unit volume of grain will help determine appropriate action. Take samples by unit volume such as quart sized samples.

RDP

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## INTERESTING INSECTS

Did you know that the largest insect egg belongs to the Malaysian jungle nymph. The insect is one of the walking sticks. Eggs measure about 1.3 centimeters which is larger than a peanut kernel. Some insects such as cockroaches lay egg cases that are larger, but they contain many individual eggs.

The jungle nymph walking stick feeds on leaves of guava, raspberry, blackberry, strawberry, currants, oak, beech, and other plants. In Malaysia they are often kept by people who feed them guava leaves and their droppings are used to make tea. I suspect this tea to be unique as the insect surely changes the chemical composition which should make a great tea.

RDP

For more information contact:

Roy D. Parker  
Extension Entomologist  
[rd-parker@tamu.edu](mailto:rd-parker@tamu.edu)



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

Dan D. Fromme  
Extension Agronomist  
[d-fromme@tamu.edu](mailto:d-fromme@tamu.edu)

View our newsletter earlier on the internet at <http://agfacts.tamu.edu/~rparker>. Also pest management information is available at [www.txaac.org](http://www.txaac.org).  
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The Texas A&M University System, U.S. Department of Agriculture, and the Commissioners Courts of Texas Cooperating

# 2010 TEXAS GULF COAST GRAIN HANDLERS CONFERENCE

Thursday, January 21, 2010  
 El Campo Civic Center  
 2350 North Mechanic Street  
 El Campo, Texas

- 8:00 - 8:25     **Registration: Coffee & refreshments**
- 8:25 - 8:30     **Conference Objectives and Instructions -**  
Brent Batchelor
- 8:30 - 9:30     **Grain & Rice Inspection and Grading -** Joe Hearn
- 9:30 - 10:30    **Laws and Regulations for Stored Grain -** Randy Rivera
- 10:30 - 10:45   **Break**
- 10:45 - 11:45   **Rodent Control in Grain Storage Facilities -** Jerry Meers
- 11:45 - 12:30   **Lunch**
- 12:30 - 2:30    **Hands on Demonstrations- Factors That Impact Pest**  
1:10 - 2:40    *Management (30 minutes each)*
- Session 1       **Aeration Management -** Steve Gasaway
- Session 2       **Bin Maintenance -** Richard Sommerlatte
- Session 3       **Selection and Use of Personal Protective Equipment -**  
Leonard Kobeski
- Session 4       **Sealing On-Farm Storage Bins for Fumigation -**  
Tommy Meave
- 2:30 - 3:00     **Announcements, Wrap Up/CEU Forms/Evaluation -**  
Peter McGuill

## Program Speakers

**Randy Rivera**- Texas Department of Agriculture, Coordinator for Training & Certification Pesticide Division, P O Box 12847, Austin, TX 78711, 512-463-7717, [randy.rivera@TexasAgriculture.gov](mailto:randy.rivera@TexasAgriculture.gov)

**Joe Hearn** - Federal Grain Inspection Service, 1025 E. Main, Suite 104, League City, TX 77573, 281-338-2787, [joe.l.hearns@usda.gov](mailto:joe.l.hearns@usda.gov)

**Leonard Kobeski**, Murphy Industrial Products, 600 North Shepherd #303, Houston, Texas 77007, 713-868-1032, [lkobeski@murphyindustrialproducts.com](mailto:lkobeski@murphyindustrialproducts.com)

**Richard Sommerlatte** - Applied Industrial Technologies, 1507 East Main, Eagle Lake, TX, 979-234-2585, [rsommerlatte@applied.com](mailto:rsommerlatte@applied.com)

**Jerry Meers** - Great Plains Chemical Company, 8603 Ave P, Lubbock, TX 79423, [jerry@greatplainschemicals.com](mailto:jerry@greatplainschemicals.com)

**Steve Gasaway** - Gasaway Inc., P O Box 149, Bay City, Texas 77414, 979-245-6375, [steve@gasawayinc.com](mailto:steve@gasawayinc.com)

**Tommy Meave**-Houston Division Manager, Degesch America, P O box 451036, Houston, TX 77245, 713-433-4777, [tmeave@degeschamerica.com](mailto:tmeave@degeschamerica.com)

**Brent Batchelor** - County Extension Agent, Matagorda County, Texas AgriLife Extension, 4<sup>th</sup> Floor, 2200 7<sup>th</sup> St., Bay City, Texas 77414, 979-245-4100, [b-batchelor@tamu.edu](mailto:b-batchelor@tamu.edu)

**Peter McGuill** - County Extension Agent, Wharton County, Texas AgriLife Extension, 210 S Rusk St., Wharton, TX 77488, 979-532-3310, Fax 979-532-8863, [pjmcguill@ag.tamu.edu](mailto:pjmcguill@ag.tamu.edu)

## Texas Gulf Coast Grain Handlers Conference Planning Committee

Al Mahalitic  
 Ronnie Wittig  
 Harold Ross  
 Mike Hiller  
 Rodney Tegeler  
 Louis Schorlemmer

Brent Batchelor  
 Bob Wilkins  
 Jimmy Roppolo  
 Peter Stelzel  
 Joe Kelley  
 Jeff Nunely

Peter McGuill  
 Roy Parker  
 Doug Young  
 Dick Ottis  
 Bobby Little

Note: This course offers 5 CEU's to private, non-commercial and commercial applicators