# FOCUS on South Plains Agriculture

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### **Editor's Comments**

Hello, I am David Kerns and I will be the managing editor for all things cotton in FOCUS on South Plains Agriculture. I along with Pat Porter, who will be editing the non-cotton content of FOCUS, intend to carry on the FOCUS legacy left by Jim Leser, and maintain the tradition of quality you have come to expect. I am a native of the South Plains, born in Tulia and having lived in Silverton, Hart, Dalhart, Lubbock, Dumas and Plainview, where I attended high school. I received a BS degree in entomology from Texas A&M, a MS degree from Oklahoma State, and a Ph.D. from Auburn. I've spent time scouting cotton in Hale County and in the Brazos River Bottom, and rice along the Texas Coastal Bend. I worked in the agrochemical industry for several years in the Mississippi Delta, and spent 13 years with the University of Arizona serving on an agricultural experiment station in Yuma working primarily in citrus and vegetables. It is surely good to be back on the South Plains of Texas working in cotton. I look forward to meeting you and welcome all suggestions on how we can improve FOCUS and make it more valuable to you. DLK

#### Cotton Insects

Although it's a little early yet for immediate concern for cotton insect pests on the South and High Plains of Texas, insects are never far from our thoughts. Predicting insect pest problems is like predicting the weather; sure we can make predictions, but their accuracy is question-

able. Never-the-less, let's drag out the crystal ball and see what lies within.

## **Thrips**

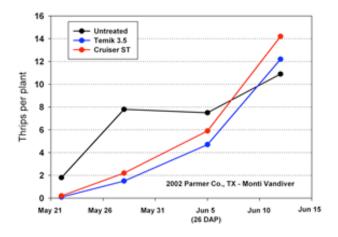
The large amount of precipitation we've experienced has been a blessing for getting off to a good agronomic start, but like most things this has a negative side as well. Besides the cool temperatures and difficulty getting the crop planted, the rain has produced a healthy weed crop in the ditches, corners and other riparian areas. A good many of the weeds consist of grasses in the brome family, primarily rescue grass. Like wheat, these grasses could harbor a large population of thrips, and although the rain will knock the thrips populations down, there is little doubt that they can quickly rebound and once these weedy areas begin to dry. This may result in a deluge of thrips looking for a meal and a home.



Western flower thrips adult

Areas north of Lubbock have traditionally had to battle heavier thrips pressure than the more southern areas, principally due to the higher acreage of wheat up north. But with the increase in weeds throughout the South Plains, high thrips populations may be more widespread than usual. It's a good idea to check nearby weedy areas to get an idea what the thrips populations are like in area to try to gauge what the potential is for thrips in the cotton. A sweepnet and/or a beat bucket work well for this.

The key to surviving a heavy influx of thrips is to take preventative measures. You can't stop adult movement from maturing wheat and nearby weeds, but you can prevent colonization in the cotton. Where thrips are expected to be a problem, an at planting application of Temik, or seed treatment with Crusier or Avicta Complete Pak (which contains Crusier), has proven to prevent early colonization of cotton by thrips.



(click here for a larger image)

As demonstrated in above graph, either Temik at 3.5 lbs/acre or a seed treatment of Cruiser will often provide as much as 21-28 days of protection post planting, but typically Cruiser will provide about 6 days less residual control than Temik. In the test depicted in the above graph, cotton treated with 3.5 lbs/ac of Temik at planting was protected from thrips for about 26 days, while the Cruiser seed treatment offered protection for about 20 days. Either treatment may have to be followed with foliar treatments if pressure persists. Alternative soil, seed, and foliar insecticides are available for thrips management in cotton, refer to Texas Cooperative Extension publication E-6A publication, "Managing Cotton Insects in the High Plains, Rolling Plains and Trans Pecos Areas of Texas, 2007" for more details. You can also watch our new video, "Recognizing thrips damage in seedling cotton" on our cotton video page.

## Lygus and Cotton Fleahopper

Other pests may also benefit from the increased moisture and subsequent abundance of weedy hosts, namely cotton fleahopper and Lygus. Clyde Crumley, IPM Agent in Gaines County, reported catching 6 to 12 Lygus per 100 sweeps in weedy patches composed primarily of hairy vetch the weeks of May 10 and 17, and 6 per 100 sweeps from weedy patches composed of primarily of primrose. Although this number of Lygus is high, it is fairly normal during wet springs. The biggest concern for Lygus and cotton feahoppers will arise if the weeds sustaining these pests experience rapid desiccation, thus forcing the pests to disperse into nearby cotton. On the other hand, if the weedy areas stay relatively flush with healthy wild hosts, these areas may actually act as a sink for the pests, drawing them away from cotton.



Lygus hesperus adult

For *Lygus* species in general there is some concern that this pest may become a more predominant fixture on the South and High Plains of Texas. As more dairies move into the region, along with them come the forage crops. It is a well known fact that *Lygus* can develop large populations in alfalfa, and when cut, the efflux of *Lygus* out of alfalfa and into nearby cotton can be

costly.

#### **Pink Bollworm**

Pink bollworms were a late season problem in some fields in Gaines, Terry and Yoakum counties in 2006, and moths are beginning to emerge from overwintering sites in soil and cotton harvest residue. This emergence is essentially a "suicide" emergence since very little cotton has emerged and thus no suitable host is available. Scott Russell, IPM Agent in Terry and Yoakum counties, and Clyde Crumley, IPM Agent in Gaines County, are actively monitoring pink bollworm emergence, and report that thus far emergence is light.



Pink bollworm larva

In Gaines County, most traps were catching less than 2 moths per trap per week for the weeks of May 3 and 10, although one trap contained 6 moths the week of May 10. For the week of May 17, trap catches were still low, with no traps catching more than 3 moths per trap per week. Growers in the areas where pink bollworms have been a problem in 2006 were diligent about destroying harvest residues and deep plowing to bury overwintering populations. Growers are also proactively battling pink bollworms by

planting more acreage containing varieties expressing Bt genes. The colder winter, compounded by the wetter than normal conditions, may help in the reduction of the overwintering pink bollworm population.

#### **Boll Weevil Eradication**

While the boll weevil has been declared as functionally eradicated or suppressed in the western half of Texas, the eradication program is still busy in some other portions of the state. Although it is too early to make a determination regarding the status of boll weevil in the eastern half of the state, the early numbers look promising.

	Weevils per trap per week Week ending, April 22			Acres treated
Eradication Zone	2007	2006	2005	YTD
Lower Rio Grande Valley	0.36	0.18	2.92	32,434
South Texas/Winter Garden	10.04	21.87	25.06	381.4
Upper Coastal Bend	0.007	0.015	0.33	415.5

### DLK

### **Bt-Cotton Refuges**

Bt cotton varieties are becoming increasingly popular with growers on the South and High Plains of Texas, not only for their insect pest protection properties but also for the agronomic qualities of the varieties themselves. Regardless of the reason for planting varieties containing Bollgard, Bollgard II, or Widestrike Bt traits, it is important that the refuge requirement be followed. There are three options a grower can use to adhere to the refuge requirements outlined in Monsanto's and Dow's resistance management guides for cotton.

These options include 1) A 5% embedded refuge, where 5% of the cotton must be non-Bt. This non-Bt cotton maybe planted adjacent to the Bt-cotton field, or embedded within. This 5% block of non-Bt cotton may be treated independ-

ently pre-squaring with insecticides targeting lepidopteran pests, or post-squaring as long as the Bt cotton is also treated with the same insecticide within a 24 hour period. 2) A 5% non-sprayed refuge, where 5% of the cotton is non-Bt and must be planted no further than ½ mile from the Bt cotton. The 5% refuge cannot be treated post-squaring with insecticides labeled for lepidopteran pests. 3) A 20% refuge where 20% of the cotton must be planted to a non-Bt variety and must be planted no further than 1 mile from the Bt-cotton source. This 20% refuge may be treated with insecticides as the grower sees fit.

In the past, growers could use the Community Refuge Plan, which was essentially the same as the 20% refuge option, but a grower could use a neighboring grower's non-Bt field to meet his non-Bt requirements. However, this plan has been dropped for Bollgard and Bollgard II varieties, but is still in effect for WideStrike varieties.

Where Bollgard or Bollgard II varieties are being planted, growers are now required to meet their own refuge requirements without being able to utilize their neighbor's non-Bt plantings. These requirements pertain to all cotton growing counties with the exception of Dallam, Sherman, Hansford, Ochiltree, Lipscomb, Hartley, Moore, Hutchinson, Roberts and Carson counties, which are currently prohibited from planting any Bt cotton varieties.

For more information regarding Bt cotton insect resistance management, please refer to the following resistance management product use guides, <u>Bollgard 2007 IRM Guide</u> and <u>Widestrike Product Use Guide</u>. DLK

#### **Cotton Pests Around the State**

Rio Grande Valley (reported by Manda Cattaneo, IPM Agent, Cameron, Hidalgo, and Willacy counties) The Rio Grande Valley saw some cool temperatures early in April that slowed cotton development and led to scattered problems with thrips. The area also experienced some wind damage that may have slowed cotton growth somewhat. However, things have heated up substantially the last few weeks and the cotton is developing very well. Aphids have been a problem in a number of fields, particularly in the southeastern portion of the boll weevil eradication zone. Spider mites have been popping up all across the valley, and fleahoppers have been increasing across the valley the last few weeks and square retention has been low. As of May 14, some cotton fields have begun to bloom while others are just starting to square. There is concern of pests building up in older cotton and migrating to the younger fields. Bollworms/ tobacco budworms are beginning to show up in some fields, although treatments have not yet been warranted.

## Middle Coastal Bend (reported by Stephen Biles, IPM Agent, Calhoun, Refugio, and Victoria counties)

As of May 8, the cotton was in the 1-6 leaf stage. Thrips populations have been high in fields where treated seed was not used. Some fields are being treated for fleahoppers, and populations seem to be earlier than normal. Aphids are generally light, but some fields are being treated. Bidrin appears to be the product of choice for aphids.

# Central Blacklands (reported by Marty Jungman, IPM Agent, Hill and McLennan counties)

Cotton ranges in development all the way from not yet planted to 5 true leaves. Thrips have increased in numbers and damage over the last several days in some fields. Thrips numbers are expected to continue to increase over the next week. Some producers are beginning to treat for thrips. Cotton aphids have been very light to light, and cotton fleahoppers have been ranging from 6 per 100 plants. Spider mites have been observed in one

field in very light numbers.

# Southern Blacklands (reported by Dale Mott, IPM Agent, Milam and Williamson counties)

The early-planted cotton is expected to reach the 5<sup>th</sup> true leaf stage within the next week. Overall, insect pressure has been light. Light populations of thrips and aphids have been noted, but nothing requiring treatment thus far, most likely due to the widespread use of soil applied insecticides or insecticide seed treatments. Cutworms have caused some stand loss in some fields. In general, it appears that the heaviest cutworm activity has been in the refuge (non-Bt) cotton. DLK

# **Cotton Agronomy**

## Recap of 2006 Crop and Overview of 2007 Season Thus Far

In spite of a difficult production year in 2006, the High Plains produced the third largest crop ever, set at about 4.1 million bales by the National Agricultural Statistics Service (NASS). We failed about 1.2 million acres, mostly dryland, in 2006 and had very little in-season or lateseason hail damage. Although substantial September rainfall was obtained across most of the region in 2006, we still produced a crop with generally good to excellent color grades (about 53%), leaf grades (average just over 3, with about 75% 2 or 3) and bark contamination (about 25%). Fiber length (staple) set a record at over just over 36 thirty-seconds of an inch, and over 42 % of the bales classes were an outstanding 37 staple or longer. We also set a record for strength, at about 29.4 g/tex.

On the downside, the 2006 crop had a substantial amount of low-micronaire (about 33% was 3.4 or lower). Our micronaire averaged about 3.8, the third lowest since 1992 and only

marginally higher than 2005. Variety selection, cool September nighttime temperatures, high yield (high boll retention), verticillium wilt issues, rainfall distribution pushing crop somewhat later, perhaps low density stands (pushing fruiting patterns out on branches and further up the stalk), early harvest aid applications, cloudy conditions (low solar radiation), perhaps excessively high residual nitrogen levels could all be contributing factors to the micronaire issue.

In 2007, various Texas Agricultural Experiment Station and Texas Cooperative Extension personnel hope to initiate some additional studies. Based on a two-year project (2004 and 2005) conducted in cooperation with USDA-ARS agricultural engineer Dr. Alan Brashears (now retired) and Dr. Eric Hequet at the International Textile Center at Texas Tech University, we have some good data to indicate that picker harvesting can improve micronaire when compared to stripper harvesting. A graduate student at College Station (Brock Falkner) also conducted a project in Yoakum County in 2006 which provided more information concerning picker versus stripper harvesting. Additional projects are planned for 2007. Dr. Craig Bednarz (who holds a joint appointment with Texas Tech University and the Texas Agricultural Experiment Station) is continuing his work investigating stand densities, irrigation level, and a few varieties at both Halfway Helms Farm and the AGCARES facility at Lamesa.

The 2007 crop season is upon us and we are "out of the gate" once again. We have been blessed with outstanding late winter and spring rainfall across the region (graph). We have excellent subsoil moisture across the entire area. The most serious issue we have facing the region now is the fact that we are still considerably behind on cotton planting based on the calendar. Air temperatures have not been what we have been accustomed to for the last several years. In fact, I think this is one of the most challenging starts to a cropping season in my 11 years at Lubbock.

In spite of a slight warming trend that was slightly above normal during the first few days of

May, there have been seriously low temperatures since then. Daytime highs have been considerably lower than our long-term average. Nighttime lows have been reasonably close to normal for Lubbock (graph). This, coupled with significant rainfall for the last two weeks or so, has resulted in delayed plantings for many producers, especially north of Lubbock. Night time low temperatures have been in the mid 40s in the higher elevations (such as Muleshoe and Dimmitt). This is setting us up for some real challenges in the northern areas. Many northern county producers, for justifiable reasons, do not desire to plant cotton much later than May 15-20, and some have even earlier personal deadlines. Next week I will try to provide a more detailed update on planting progress across the region. Soil temperatures have been hanging in there for now, but the 7-day forecast is indicating that air temperatures will likely not be climbing back to normal any time soon. This may result in chilling injury (see below) to some fields and perhaps initiate a serious amount of seedling disease. The Texas Tech University Mesonet system provides a clickable map of soil temperature data,



We are now only two weeks away from the <u>Final Planting Dates for Insurance Purposes</u> for the northern counties in the Southern High Plains region, and many producers in this area are getting nervous due to air temperatures and continued chances of rainfall. With the cool spring, and poor planting conditions, the amount of cotton that will be planted north of Lubbock is still unknown. If further rainfall is obtained and with higher grain prices this year, some producers may opt to plant sorghum or early maturing corn hybrids if these conditions persist. Producers in the central and southern counties have until June 5-10 (depending upon county) before the Final Planting Date for Insurance Purposes is reached, and the good news is that we currently have outstanding soil moisture levels in most dryland fields in those counties.

## **Electronic Version of Cotton Physiology Today Newsletter**

The excellent "Cotton Physiology Today" newsletter was published by the National Cotton Council (NCC) from 1989 to 2001. Dr. Bill Robertson (formerly the Extension Cotton Specialist with the University of Arkansas) has been hired by the NCC as Manger, Cotton Agronomy, Soils and Physiology. Bill has been an outstanding colleague among the Extension cotton specialist group and we will miss him in that capacity, however, he is doing a great job in his new position. One of his new tasks is to reinvigorate the Cotton Physiology Today Newsletter. We worked with him on the first issue and it is now available. The following are Bill's comments relative to the first emailing of the newsletter:

"The National Cotton Council strives to ensure that all U.S. cotton industry segments compete effectively and profitably. The Cotton Physiology Education Program was initiated in 1989 to assist growers in understanding the plant and utilizing that knowledge for improved production practices. Cotton Physiology Today, a newsletter of the Cotton Physiology Education Program of the National Cotton Council, published from 1989 to 2001 was and still is a valuable educational tool. Attached is our newest electronic issue of the newsletter. Considerable changes have occurred in our industry since the last newsletter was published. However, these changes have not dimin-

ished the need for this information. If you find this newsletter beneficial and wish to receive additional newsletters, please click on subscribe at the end of the newsletter to be added to our distribution list. Please distribute this email to anyone who might benefit from the newsletter. Questions, comments, and suggestions for future topics may be forwarded by e-mail to CPTNewsletter@cotton.org "

The first of the new electronic version of "Cotton Physiology Today" can be obtained on the Lubbock Center website. This issue includes discussions of the following topics: planting and replanting decisions, photographs of chilling injury, and cotton stand establishment.

#### **Cotton Root Disorder Guide**

With the stressful start to the 2007 crop, the Cotton Root Disorder Guide might be a useful tool. This guide was published by Cotton Incorporated a few years ago. It was generated by several workers across the Cotton Belt and was funded by the Texas and Arkansas State Support Committees. Cotton root disorders detailed in the publication include: herbicide injury from amino acid synthesis inhibitors, photosynthetic inhibitors, and seedling growth inhibitors; pathogens including fungi and nematodes; fertilizer injury; chilling injury; and soil compaction. The guide is available on the Web at:

http://pestdata.ncsu.edu/cottonpickin/disorders/RKB

# Plant Pathology

### **Seedling Diseases**

Things appear to be off to a good start with all of the precipitation we have been receiving across the region. However, increased rainfall may result in lower soil temperatures, which are conducive for the development of seedling disease. In Texas, several soilborne pathogens are

known to cause seedling disease. Under cool, wet conditions, fungi such as *Rhizoctonia solani*, *Rhizopus* spp., *Pythium* spp., and *Fusarium* spp. often cause seed rot and pre-emergence damping-off. These fungi attack young, succulent tissues such as hypocotyls. Brown to black colored lesions rapidly develop and girdle infected tissues, often killing seedlings.



Stand loss from Fusarium

Under favorable soil conditions, these same organisms may also infect established plants, resulting in a post-emergence damping-off. Fortunately, most seed purchased today comes standard with a protectant seed treatment. Such treatments are very effective at managing seedling disease; however, some losses may be experienced under extreme disease pressure. In addition to chemical seed treatments, delaying planting (until soil temperatures are above 55°F), maintaining a proper seeding depth (~1.5-2.0 inches), and improving drainage or planting on raised beds may also help reduce the potential for seedling diseases. If you have any questions regarding seedling diseases of peanut or cotton please contact Jason Woodward at the Lubbock Center, 806-746-6101. JW

# **Grain Sorghum Agronomy**

In March, Texas Cooperative Extension hosted nine mini workshops for grain sorghum in the South Plains. Resources such as my main presentation, Extension agronomist Brent Bean's sorghum herbicide guide, a seeding rate calculator, etc. are available through either your county Extension office, the Texas A&M Center at Lubbock, or you can view/download them from <a href="http://lubbock.tamu.edu/sorghum/">http://lubbock.tamu.edu/sorghum/</a>

# **The Four Big Sorghum Questions Being Asked Now**

There were four recurring producer questions in the grain sorghum workshops. Each is outlined further in the master grain sorghum presentation by Calvin Trostle available through the above website.

1) Seeding rate for grain sorghum. This has always been a topic of discussion. General seeding rates for many irrigated or dryland grain sorghum fields are too high. Extension's base seeding rate for dryland sorghum in the Texas South Plains when soil moisture is at its highest is about 30,000-35,000 seeds per acre. We rarely if ever recommend seeding rates over 80,000 seeds per acre, even with the highest levels of irrigation. And most importantly, seeding rates should be adjusted based on available soil moisture at planting as well as projected level of irrigation. Consult the resources listed above for further information on setting your target seeding rate. Reduced seeding rates for grain sorghum guard against added risk should we end up in droughty conditions. And when rainfall is favorable, a uniform grain sorghum stand can compensate nicely to capture most of the grain yield potential that a thicker stand might offer.

2) Early planting of grain sorghum. With all the soil moisture available, many dryland sorghum acres were considered for early planting, especially south of Lubbock. These fields will flower before July 4, the hottest time of the summer. This strategy is a good one provided that a)

soil moisture is high, and b) soil temperatures have risen into the range needed for good germination for sorghum (above 60 degrees F for 5 days at 2" depth, and no cold fronts coming). If either condition is not met, especially for soil moisture, then growers are usually advised to delay planting to late June.

3) Propazine (Milo Pro) is now labeled for grain sorghum. This news was a long time in coming. Thanks are expressed in particular to National Sorghum Producers, headquartered in Lubbock, for all their efforts. The Milo Pro label is somewhat vague on several issues, perhaps deliberately so, in order to ensure the label was approved for 2007 use. Compared to atrazine (~\$12/ gallon), Propazine (~\$34/gallon) is labeled for sandy loam soils, has no soil organic matter minimum (atrazine's is a minimum of 1%), and has a 12-month restriction back to cotton only at the maximum rate of 1.2 quarts per acre. Some producers have inquired about possibly mixing reduced rates of atrazine and propazine as a compromise on cost, weed control, and injury potential in rotation.

4) Split pivot irrigation of both cotton and grain sorghum. How can we choose target planting dates for cotton and sorghum (along with sorghum maturity) to reduce the amount of overlap where both crops require significant irrigation at the same time? These strategies were developed in the sorghum workshops for a) early planted sorghum (late April-May 1, peak irrigation requirement declining by the first week of July) usually of medium-early and medium maturity grain sorghum coupled with slightly delayed cotton, or b) normal cotton planting dates paired with late June-July 1 planted grain sorghum, where peak sorghum water demand occurs at or just before cotton cut-out. In both cases the overlap of significant water demand for both crops can be minimized to 3 weeks or less, which puts less pressure on water resources. CT

#### Wheat for Grain

For the most part the South Plains did not suffer from the cold temperatures the first weekend in April. A few fields that were heading along and off the Caprock south and southeast of Lubbock had grain losses of up to 40%, but this was rare. Fields north and northwest of Lubbock were at the second and third joint stage in most cases, and while there was some splitting of stems, it appears that yield losses for the most part will be minimal.

#### Leaf Rust in Wheat

Up until about three weeks ago I had not seen much leaf rust on but a few fields. Now there is a lot more visible, and in some cases it looks pretty bad. Cool and moist conditions favor rust infection and development. It is too late to consider applying fungicides even if your rust now appears pretty bad. Normally, fungicide applications for rust are not warranted unless yield potential is at least 40 bushels per acre. Also, effective applications are usually best made by the time the flag leaf is fully expanded to perhaps full heading. After that the benefit of a fungicide application declines.

Oklahoma State University wheat scientists have prepared a basic question-and-answer guide to address common questions about whether to treat for rust in wheat, what stage of growth is best to apply, and what the potential yield losses might be based on stage of growth and percent of the flag leaf that is covered with rust. This document is on the web at <a href="http://www.wheat.okstate.edu/wm/newsletter/WPN311040407.pdf">http://www.wheat.okstate.edu/wm/newsletter/WPN311040407.pdf</a>

For example, a field at the milk stage of seed development and with 40% coverage of rust on the leaf is projected to have a yield loss of 8%. More severe situations can hit yield to a greater degree, but because the rust fungicides are more preventive in nature, one has to apply the fungicide in advance of infection to get optimum re-

sults. I don't think we could have projected this year that many of our fields appeared to have a significant rust potential at the time when the flag leaf was fully emerged. CT

## Honey Bee Problems

Many South Plains crops including pumpkins, melons, squash and apples are highly dependent on honey bees usually rented from commercial sources. However, there is trouble in the pollination industry, and many managed and natural bee colonies are suffering from "Colony Collapse Disorder" (CCD). Nationwide estimates are that half a million bee colonies have been lost. Migratory beekeepers have reported losing 50 – 90% of their colonies, and Texas is also affected. The root cause of this disorder is still not clear, but similar collapses have been reported as far back as 1896, although on a smaller scale.

One recent report from Europe suggested that radiation produced by mobile phones might interfere with the bees' navigation systems and prevent them from returning to the hive. This article made a lot of noise on the internet, but it does not seem to be getting any traction outside the lunatic fringe. Other people are saying that bees are acting as an indicator species similar to the canary in the mine, and are responding to an as yet unrecognized environmental perturbation. Still others have mentioned "bee rapture".

The University of California at San Francisco recently announced that DNA testing discovered two possible causal agents in California-collected bees: *Nosema ceranae* (a so-called microsporidian fungus) and *Iflavirus*, a virus. The scientists were careful to state, "We can't say that because the bees in Central Valley may have fallen to one or both of these pathogens that we have now proven that this is the cause throughout the United States." Colony Collapse Disorder remains a mystery, and we will pass along future developments. Texas A&M has an excellent honey bee website, and the CCD information was updated last week. Finally, you can listen to an excellent

and humorous summary of CCD by Dr. May Berenbaum who was <u>recently interviewed on National Public Radio</u>. RPP

### Does It Work?

You now have access to over 475 applied research reports generated by local Extension IPM agents, Agricultural Agents, and Specialists. We have been quietly building an online system that gives consultants, growers, and agricultural industry personnel instant access to our research reports. We are continually adding reports to the database, and they are peer reviewed before you see them. Try us out! Go to <a href="http://goldmine.tamu.edu">http://goldmine.tamu.edu</a> and click on the yellow "search" box. We have an impressive roster of reports. For example, there are 28 research reports from Hockley County alone. RPP

### **Pesticide News**

Onager receives Section 18 emergency exemption for control of spider mites on corn. Onager 1E (hexythiazox, Gowan Company) can be used to control Banks grass mites and twospotted spider mites in field corn from June 1 — August 31, 2007. Most High Plains counties are included in this exemption. Please read the official approval notice and Texas Section 18 Onager Label for complete details. I have tested Onager for several years now, and it is a solid performer. Like Comite II, it is a product that should be used before heavy mite populations are in the field.

### Mustang Max labeled for sunflower

FMC has announced that Mustang Max, a pyrethroid insecticide, is now labeled on sunflower for control of stem weevils, beetles, sunflower head moth, cutworms, grasshoppers and other pests. FMC also said that 4.0 oz/acre provided superior control of sunflower head moth. RPP

# FOCUS on South Plains Agriculture

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Insect photos: David Kerns Disease and planting photo: Randy Boman Linked videos: Pat Porter

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Applied Research Reports (Goldmine)

Texas High Plains ET Network

Irrigation at Lubbock

IPM How-To Videos

Lubbock Center Homepage

Texas Agricultural Experiment Station Home

Texas Cooperative Extension Home

Plains Cotton Growers

### County IPM Newsletters

Castro/Lamb

Dawson/Lynn

Crosby/Floyd

Gaines

Hale/Swisher

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Lubbock

Moore

Nolan/Scurry/Mitchell/Jones

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