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## COTTON INSECTS

The cotton season is well underway with thrips pouring out of maturing wheat and other alternate hosts. Most thrips examined were of the western flower thrips variety. This means that the Gaucho seed treatment will not be very effective. Other treatments are also finding themselves under the gun including the Cruiser seed treatment (formally called Adage) and Temik.



Adult thrips are fogging out of wheat as it dries down making evaluation decisions as to whether your at-planting treatment is still effective. This outpouring of thrips has only been a factor for the last couple of weeks. While adult thrips must feed on the cotton plant to ingest the insecticide incorporated in the tissue, this feeding activity should result in little damage as compared to a resident infestation that is continuously feeding without the effects of insecticides.

Therefore, my decision as to whether to apply a foliar spray to an already treated field is based on the presence of immatures. If adult

thrips can stick around long enough to reproduce, then the insecticide is probably no longer effective.

Determining the nature of the thrips infestation will require scouting the field. Some folks will rely on a visual inspection of damage, looking for crinkled, puckered leaves. While this will tell you whether thrips are damaging the plant it will already be too late to prevent the yield loss associated with this visible leaf damage. You see, thrips are feeding on tiny squares not visible to the unaided eye when causing the visible damage to leaves. This is where the yield loss occurs, not from leaf feeding.

Scouting is best done in the morning when thrips are generally settled in the cotton or alternate host and not swarming in the air. It can be extremely frustrating to be examining a plant for thrips and have several adults alight on the plant as you count. The afternoon is a time of heightened flight activity and hence can be a poor choice for scouting fields for thrips.



Carefully approach the plant you will examine without casting your shadow on it. Keep your eyes wide open as to pull up the plant in preparation for counting thrips, making sure that no adult thrips leaving the plant escape your attention. Now scan the top surfaces of the leaves before flipping the plant over. Most thrips will be on the undersides of the leaves or in the folds of the developing terminal leaves. Don't let sand and bits of plant residue from a previous crop hide thrips from you. The 1/15<sup>th</sup> inch long adults will generally be straw colored with darker wings folded on their backs. They look like tiny cigars. The immatures will be much smaller and less mobile and of course

will lack wings. They often are more yellow in appearance.

By the time you are through visually examining a plant, it should be pretty mutilated, especially in the terminal area. Some folks with less than satisfactory visual acuity will rely on a "thrips counting box", a device that allows you to beat the plant in a small white box so that thrips are easier to see. The plant will still need to be torn apart to extract thrips tucked away in damaged leaves and folded leaves.

Some researchers have gone to a plant washing technique where whole plants are "bagged" in the field and taken to the lab so that thrips can be washed off plants with alcohol. These samples are then examined under a dissecting microscope. They use this technique because many individuals do a poor job of visually counting thrips in the field and many research projects need a more absolute thrips count. While I can't argue with their success, I do believe that individuals can be trained to be effective counters in the field. I think I can find almost as many thrips on a plant through visual counts as researchers can through the "washing" technique. After all, pest management decisions need to be made quickly with the minimum amount of time expenditure. Our treatment thresholds are rough estimates and visual counting "works" with this system.

I know everyone that needed protection from thrips damage based on field history did not use an insecticide at planting. Economics, poor moisture conditions and a general feeling of needing to cut back on expenditures lead to this approach last year and has continued into this season. I didn't agree with this decision last year and again disagree with it this year. Thrips protection is one of the best investments a cotton producer can make, at least for irrigated fields. Returns on investments have been averaging \$50 per bale of cotton produced for every \$10 invested. Taking a wait and see approach and using foliar insecticides when needed can be equally effective in controlling thrips only if scouting provided timely detection of problem fields and

applications are made quickly. This seldom occurs in the real world.

Unfortunately, all has not been perfect when it comes to preventative treatments such as Temik or the Cruiser seed treatment.

Sometimes these treatments don't last long enough to cover the entire period when thrips are attacking plants and cotton is still vulnerable to yield losses (up to about the 5 true leaf stage). The Cruiser treatment is too new for me to have a good handle on what to expect from this insecticide but I do have considerable experience with Temik. Over the last few years I have become concerned with the performance of Temik based on more frequent instances of less than expected residual control. I expect to get control out to 4 weeks from planting. But recently this has too often been reduced to 3 weeks. Thus Temik performance has become more variable in spite of higher use rate recommendations. I now recommend a minimum of 3 pounds of Temik per acre rather than the previous 2-2.5 pounds recommended. Could it be that recent years have brought conditions that are more consistently unfavorable to Temik performance? Much of our cotton is now planted under fairly dry conditions. This might make Temik uptake by the plant more difficult. On the other hand, the practice of "watering up" cotton under dry planting conditions could be leaching the insecticide down out of the early root zone.

What ever the problem is, both Temik and the Cruiser seed treatment are still the best defenses we have against thrips in this imperfect world. If enough thrips are present on your cotton prior to reaching the safer 5 true leaf stage, you will need to treat with a foliar insecticide. The treatment levels are based on the number of leaves present---1 thrips per true leaf. Use 1 thrips per plant as a trigger from emergence through the cotyledon or seed leaf stage and to the first true leaf. Remember you must have immatures present to justify a foliar over spray of a Temik or seed treatment protected field. Not so of course for previously unprotected fields. Under heavy adult pressure, no foliar will provide consistent protection past 5-7 days. Products I like to use include Bidrin, one of the many dimethoate

formulations, Orthene or Address. Banded ground applications can be pretty cheap but must be applied quickly for best results. If weather or acreage limitations slow the spraying process down, please use aerial applications. Don't wait!

Not much else is going on in cotton at this time. [Cotton aphids](#) can be found on most plants but their numbers are typically low at this time of year. Their presence at this time does not foretell of any problems later on. Some [beet armyworms](#) have been detected in seedling cotton but only in low numbers and with minimal survival. Trap catches of beet armyworm moths by the Texas Boll Weevil Eradication Foundation have not been exceptionally high so far this year but our dry conditions could put us at risk from this pest later on in the season. I am still optimistic that a beet armyworm problem is not in the cards this year.

**We also have had some problems with grasshoppers** in the southwestern area of the High Plains. These problems have been isolated but nevertheless a serious problem for that field and that producer. Often these problems have been associated with fields with a terminated wheat program. We probably should have controlled the hoppers before terminating the wheat. Insecticides that can be effective for grasshopper control include several of the synthetic pyrethroids, Lorsban and malathion. Dimilin can be a very good choice when immatures are the target. It is an insect growth regulator with no effect on adults. It can be used on rangeland as well as cotton but not on pastures.

Some of the earlier planted fields will be approaching squaring the end of this week, cool weather permitting. This signals the need for watching out for both **cotton fleahoppers and Lygus bugs**. These are little square thieves that can sneak into a field and remove valuable squares before you know it. I can't predict what their numbers will be like but I do know that Dr. Megha Parajulee (my Lubbock research counterpart) has been finding lots of Lygus in his survey of several weed hosts. I will discuss more fully the plant bug situation,

research findings relevant to this issue and management suggestions in next week's newsletter.

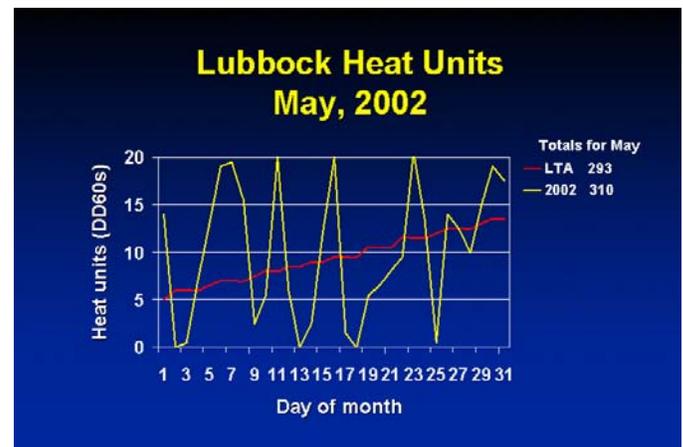
Leaving this week's cotton insect column on an upbeat note---**boll weevil numbers should be way down this year** thanks to an exceptional eradication program in all five zones last year and a fairly decent winter. We did not find a single live weevil adult in our overwintering site survey conducted this year, even in those areas where only a fall diapause program had been conducted. This was the first time for this to occur since the survey was started back in 1995. I suspect that our eradication efforts are at least one year ahead of schedule, maybe more. It may be difficult to find a boll weevil in any fields this year. We will pick up enough in traps to trigger needed eradication treatments though. But reduced weevil numbers will mean reduced secondary pest risk and more importantly, a probable reduction in overall program costs. **JFL**

## COTTON AGRONOMY

**Overview of season thus far.** The 2002 crop season is here. Surely the cotton production situation has to be better with the new farm bill. Producers have been much more optimistic this year due to the new legislation and significant early rainfall across the region. Rainfall during the months of March (2.1 inches at Lubbock) and April (1.3 inches at Lubbock) really helped. However, May rainfall was very limited during the first three weeks across most of the area, but unfortunately, high winds were notable. Lubbock completed the month of May with only 0.37 inches of rainfall. According to the National Weather Service, May 2002 was the 6th driest month on record at Lubbock International Airport since records began in 1911. This posed a significant problem for stand establishment for many irrigated fields, as producers had to turn on the pivots after planting to insure a stand. Some marginally moist fields had difficulty producing uniform stands. Dryland fields across the region suffered, but producers in some areas were able to get cotton stands.

Most counties were able to get the irrigated crop planted in a reasonably timely manner. By the end of May, with insurance deadlines closing in, upwards of a million dryland acres were severely lacking for planting moisture. For counties with June 5 and 10 insurance deadlines, it is estimated that at least 500 thousand acres of dryland cotton in Gaines, Dawson, Martin, Howard, and parts of Lynn are lacking planting moisture. Look at the [final cotton planting dates](#) for insurance purposes for the High Plains and surrounding region.

The cotton planted in early May moved along at a snail's pace due to poor heat unit distribution. Although we completed the month

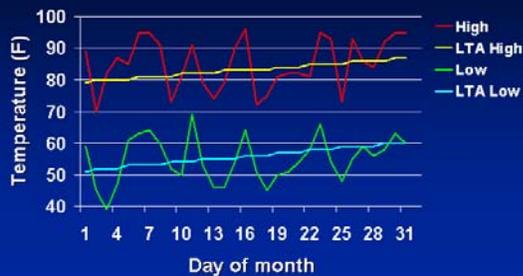


of May with near "normal" heat units, the distribution was very poor. The long term average for May is about 295, and the 2002 total was 310. The poor distribution problem was noted when the 7 days of zeros were averaged with the 6 days with greater than 15. In mid-May, we were still encountering some days with low temperatures in the 40s in the central portions of the region and mid-30s in some of the northern areas.

Cotton fields planted during the good warm-up period of May 5-11 were subjected to the extremely cool temperatures. The good news was that fields were not moisture saturated, thus seedling disease was not rampant in many areas.

Only localized rainfall and hail events have occurred across the region over the last couple of weeks. Some stands were lost in Swisher,

## Lubbock Air Temperatures May, 2002



Floyd, Crosby, and Gaines counties around Memorial Day weekend. However, a major meteorological event was encountered on the night of June 4. High winds, localized flooding, and large hail destroyed cotton fields in eastern Hockley, northern Lubbock, southeastern Hale, northeastern Crosby, and southwestern Floyd counties. It has been estimated that about 250 thousand acres were affected by these storms, but the number of acres destroyed is unknown at this time. Producers will still be assessing stand damage over the next few days as the fields dry. The good news was that some reasonable rainfall did occur to help the moisture situation in these and surrounding counties.

**Roundup Ready Variety replant/crop destruct programs (Monsanto and Syngenta).** Cotton producers are again supported by various programs from Monsanto (Roundup Rewards) and Syngenta (Touchdown Assurance Plan). Of course the respective program is based on which herbicide has been used on Roundup Ready cotton varieties for burndown or in-crop applications (Roundup UltraMax or Touchdown IQ).

Monsanto's Replant Relief program includes Crop Loss/Destruct Refund, which is implemented when a producer loses the crop within 60 days after planting or by July 15 and does not replant. Eligible varieties with Roundup Ready will receive 100% of technology fees plus \$9.00/bag. Those with Bollgard will receive 100% of technology fees plus \$13/bag. Bollgard/Roundup Ready stacked varieties will receive 100% of

technology fees plus \$15/bag. For fields destroyed by July 15 or within 60 days after planting and then replanted to an eligible cotton variety, the Crop Loss/Replant Refund is as follows. If the same brand is replanted, 100% of technology fees + 85% of the retail seed price/bag is provided. If a different brand is replanted, 100% of the technology fee is provided. Most cotton varieties with Monsanto transgenic traits planted in the High Plains region are eligible for this program. Contact your Monsanto representative or seed provider for a complete list.

The Syngenta Crop Loss Protection Refund program covers eligible Roundup Ready varieties and Bollgard/Roundup Ready stacked varieties. Touchdown herbicide must have been used on the crop for burndown or in-crop applications. The refund includes 100% of technology fees for Roundup Ready and Bollgard/Roundup Ready stacked varieties. Eligible varieties with Roundup Ready will receive 100% of technology fees plus \$9.00/bag. Bollgard/Roundup Ready stacked varieties will receive 100% of technology fees plus \$15/bag. The loss must occur within 60 days of planting. The Replant Protection program covers 100% of the technology fees for Roundup Ready and Bollgard/Roundup Ready stacked varieties. Syngenta will provide an additional 85% of the respective transgenic seed cost. The crop must be replanted to the same or another qualifying technology crop, and the loss must occur within 60 days of planting. Most cotton varieties with Monsanto Roundup Ready or Bollgard/Roundup Ready traits planted in the High Plains region are eligible for this program. No coverage for Bollgard/Roundup Ready stacked varieties produced under ultra-narrow row (UNR) production is provided, but Roundup Ready varieties produced in UNR are covered. Contact your Syngenta representative for a complete list.

Considerable "fine print" exists on sales materials covering these programs. Please refer to the respective documents and contact your local Monsanto or Syngenta representatives for clarification.

**Syngenta's Touchdown IQ use on Roundup Ready cotton.** There has been some confusion concerning the use of Touchdown herbicide on Roundup Ready cotton. Perhaps the following comments will help. Glyphosate (Roundup UltraMax) is an isopropylamine salt of N-phosphonomethyl glycine. The Touchdown IQ (3 lb glyphosate acid per gallon) material **WHICH HAS BEEN LABELED** for Roundup Ready cotton is a diammonium salt of N-(phosphonomethyl) glycine.

See the Touchdown label available at [www.greenbook.net](http://www.greenbook.net) , enter Touchdown and see page 6, or go to: [www.cdms.net/ldat/ld4BG002.pdf](http://www.cdms.net/ldat/ld4BG002.pdf) , page 7.

Both herbicides contain the same active ingredient, only the salt formulation and surfactants are different. The differences in the efficacy of these materials for weed control are generally very minimal according to various weed scientists. For very good comments concerning this from Dr. Bob Hartzler (Iowa State University) go to:

[www.weeds.iastate.edu/mgmt/2001/glyphosateformulations.htm](http://www.weeds.iastate.edu/mgmt/2001/glyphosateformulations.htm)

**Syngenta's Touchdown 5 WAS NEVER LABELED** for Roundup Ready cotton and has a different salt (trimethylsulfonium salt or TMS) of the N-(phosphonomethyl) glycine acid. This formulation is different from BOTH Roundup UltraMax AND Touchdown IQ. This herbicide HAS shown some phytotoxicity problems in Roundup Ready cotton. **The TMS salt formulation used in Touchdown 5 HAS been identified as the problem with this formulation.**

Of course when you do not use an approved Monsanto brand Roundup formulation for burndown or in-crop applications, the Roundup Rewards Value Package is voided. However, Syngenta has established the Touchdown Assurance Plan for eligible Roundup Ready cotton varieties.

**Roundup label issues.** Producers need to make sure that they have a copy of the supplemental label for Roundup UltraMAX herbicide in their possession. Read and follow

the label, as it has much critical information. Remember that the Roundup UltraMAX has a higher acid equivalent (a.e.) per gallon than the old Roundup Ultra. Best control is generally obtained from Roundup UltraMAX when most weeds are 1 to 3" in height. Up to two 26 oz/acre of Roundup UltraMAX OT applications can be made to Roundup Ready varieties. At least 10 days between applications and two additional mainstem nodes of growth are required. No single application may exceed 26 oz/acre. Once past the four-leaf stage, two post directed or shielded sprayer applications can also be made, at a maximum 26 oz/acre per application. Ten days and two additional mainstem nodes of growth are also required between these applications. Post directed equipment should be adjusted to direct the spray to the bottom of the plants and spray contact onto leaves should be minimized. Salvage treatments of Roundup UltraMax may be applied OT after the 5<sup>th</sup> leaf reaches 1 inch in diameter at 26 oz/acre when weed competition may threaten to cause crop loss. These treatments can result significant boll loss, delayed maturity and/or yield loss. No more than one salvage treatment should be made during the growing season. Follow up applications of up to 51 oz/acre can be made OT again once 20 percent boll crack has occurred to control late season or perennial weeds. The maximum amount of Roundup UltraMAX that can be used OT and through layby is 3.2 quarts/acre, while the seasonal maximum for all applications is 6.5 quarts/acre.

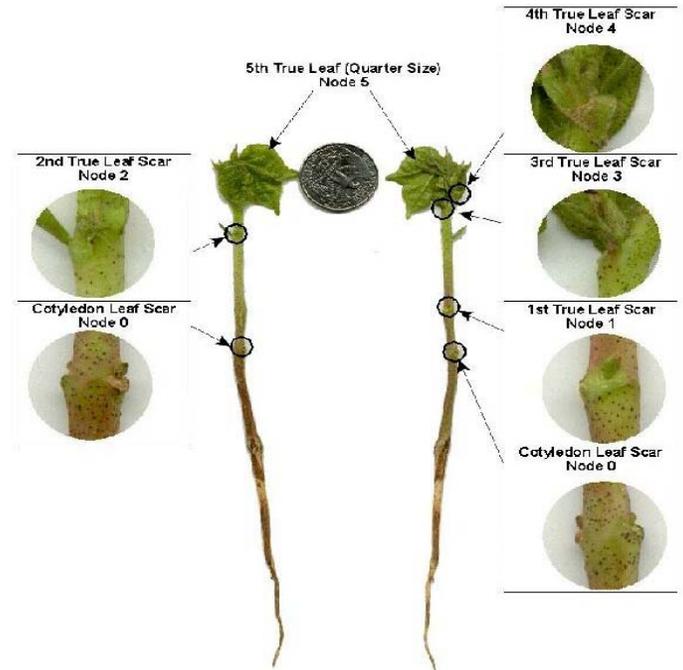
Ammonium sulfate is generally necessary when preparing Roundup UltraMAX spray mixtures in West Texas due to "hard" water. The general recommendation for Roundup UltraMax spray mixtures is to add 17 lb of spray grade ammonium sulfate/100 gallons of spray.

**Watch for Roundup Ready over-the-top window closure.** Some earlier planted Roundup Ready fields are nearing the end of the over the top window for Roundup applications. Cotton that was planted around May 1 that has had no environmental damage is nearing the cutoff stage. The considerable

thrips and wind/sand damage has “ragged up the plants” and has resulted in severe stress, stacked nodes and has made staging the seedling plants more difficult. Where leaves have been lost or badly damaged, it is imperative that mainstem nodes be counted in order to properly stage the cotton.



If late applications are made, then significant yield losses can be encountered. Field research conducted at the Lubbock Center during the last three years indicated that when Roundup was applied over-the-top (OT) after the window closure, lint yields were decreased in 2 of 3 years from 5 to 19%. Plant condition, as affected by environmental factors, appeared to influence potential yield loss.



**Roundup/Staple tank mixes.** Research conducted by TAES weed scientists Dr. Wayne Keeling and Dr. Pete Dotray indicates that the addition of a half-rate (0.6 oz/acre) of Staple herbicide to the first OT application of Roundup UltraMAX may enhance control of several weed species and also provides some residual control. The DuPont Staple label should be consulted for specifics. Improved control of some morning glory species and palmer amaranth is stated. Rainfall or sprinkler irrigation (0.5 to 1") after application is required for residual control.

**Touchdown IQ/Dual Magnum tank mixes.** Dual Magnum has been labeled for OT applications in cotton and a supplemental label has been obtained for Touchdown IQ/Dual Magnum tank mixes for use on Roundup Ready cotton. The Dual Magnum should be tank mixed with Touchdown IQ for residual control of grasses and yellow nutsedge at 1 to 1.33 pt/acre. According to Syngenta personnel, the cotton should be at least in the 3-4 leaf stage. Also, it is suggested that ammonium sulfate NOT be included in the spray mix as phytotoxicity may occur with the Dual formulation. Potential for reduced weed control from the Touchdown could exist in extremely hard water areas due to the exclusion of ammonium sulfate. Best results are obtained when the Dual is incorporated 24 hours after application using 0.5 to 1 inch of

irrigation water. For specific questions concerning this application contact your Syngenta representative.

**Roundup/Insecticide tank mixes.** Some questions have been asked concerning the use of Roundup/insecticide tank mixes. Generally Orthene, dimethoate, and Bidrin have been the tank-mix partners mentioned for thrips control. No problems with cotton phytotoxicity or product efficacy have been noted.

**Buctril 4EC on BXN transgenic cotton.** Buctril 4EC is a herbicide that offers good control of many broadleaf weeds, as long as size is not an issue. Targeting small weeds is critical. With the BXN weed control system, one needs to remember to stage the weeds and not the crop. When the 3/4 pint/acre rate is used, most weeds should be 1-3 inch tall. If the rate is increased to 1 pint/acre, then weed size can be 1-4 inches tall. Consult the label for specific weeds and sizes. In general, morning glories should be not larger than 3-4 inches at application. Pigweeds should not exceed 1-2 inches in height. Sequential applications may be required for control of some weeds species. When high densities of weeds are encountered, make sure adequate coverage is obtained. For best results, broadcast applications using 15-20 gallons per acre total volume are recommended by local Aventis personnel. Use nozzles that provide good coverage such as flat fans. Including a refined crop oil at 0.5% to 1.5% of the total spray solution (2-6 quarts/100 gallons) should increase weed control.

When fields require a graminicide for grass control, the Buctril 4EC label states that if Buctril is applied first, then wait 7 days before applying Assure II, Fusilade 2000, Poast or Select. When the grass herbicide is applied first, wait a minimum of 3 days before applying Buctril 4EC. Due to herbicide antagonism problems, grass control may be reduced if Assure II, Fusilade 2000, Poast or Select are tank mixed with Buctril 4EC.

According to the DuPont Staple label, Staple can be tank mixed with Buctril 4EC for use on BXN cotton. The Staple rate should be 0.8

oz/acre plus 1 pint/acre of Buctril 4EC. Improved control of weeds various pigweed species can be obtained. Rainfall or sprinkler irrigation amounts of 0.5 to 1 inch is required to obtain residual control.

**Late planting considerations.** Dr. John Gannaway has evaluated conventional variety performance under late-planted (mid-June) conditions at the Texas Agricultural Experiment Stations at Halfway and Lubbock. In general, short-season varieties have lower fiber quality (shorter, weaker), but produce higher lint yields than longer season types produced under short-season conditions. In short-season environments varieties such as Paymaster 183, AFD Rocket, All-Tex Express and All-Tex Quickie are generally expected to produce higher yields than other longer season types. However, a 3-year mean summary from Halfway and Lubbock for the years 1997, 1998, and 1999 indicates that Paymaster 2200RR yielded similarly to Paymaster 183. Fall heat unit accumulation in those seasons was certainly above average in those years, and benefited the longer season variety. All-Tex Xpress RR is a new short-season Roundup Ready variety that has recently been released.

Seed availability of various varieties may be an issue, so growers should contact seed companies to determine other potential options. Closely monitoring fruit retention will be key to success of any late planted cotton crop in the High Plains. It is critical that outstanding square retention be the goal going into early bloom.

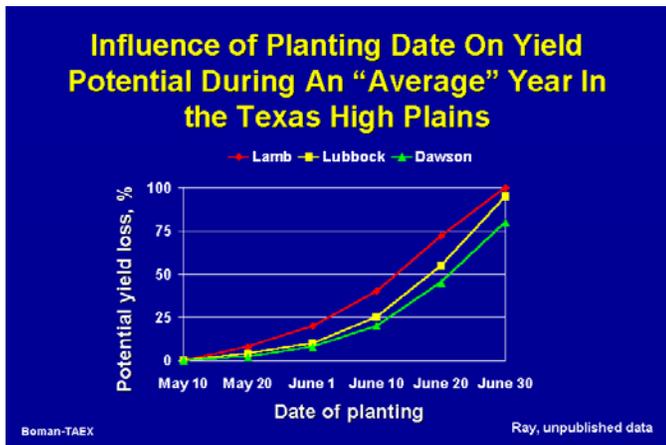
For more detailed information, visit the Lubbock Center Web site at <http://lubbock.tamu.edu/cotton/index.html> and retrieve the following documents:

[\*\*Making Replant Decisions\*\*](#)

[\*\*Effects of Stand Loss and Skips on Cotton Yields\*\*](#)

**Yield potential for fields replanted to cotton.** Yield potential severely decreases once the insurance cutoff dates are encountered. Some

estimates of yield loss potential for delayed planting across High Plains region were generated several years ago. This information indicates that in Lamb County on June 10, we would normally anticipate about 65% of the yield potential that would be possible compared to a May 10 planting date. For Lubbock County, the value is about 75%, and for Dawson County, about 80%. **RB**



## REPLANT OPTIONS WITH OTHER CROPS

Calvin Trostle, Texas Cooperative Extension Agronomist, Lubbock, is updating options and guidelines for replanting to other crops after failed cotton. These will be posted on the Lubbock Center website by Tuesday, June 11th. Topics will include replanting cautions regarding herbicides, production tips and common mistakes in replanting to grain sorghum, sunflower, guar, soybean, summer annual forages, and vegetable crops like black-eyed pea. Also, phone numbers for contract information for many of these crops will be included.

## 2002 RESEARCH PROJECTS

**Cotton Root Disorder Guide** A new guide to cotton root disorders has recently been published by Cotton Incorporated. This publication 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/>  
**RB**

## NON-COTTON CROPS

Thankfully, pest problems have been few in the non-cotton crops. We had a severe army cutworm outbreak in April that led to the large miller moth flight this year. False chinch bugs are abundant in CRP and weeds and a few alfalfa fields have required treatment. It is important to scout alfalfa carefully after cutting because the insects that survived the cutting process will be concentrated on the remaining stubble. Grasshopper numbers are high in some areas. **RPP**

## REVISED CORN GUIDE

We have a new version of the corn guide, also called "Controlling Insect and Mite Pests of Texas Corn". This is the guide that presents scouting information, thresholds, and suggested pesticides. The new version has revised and updated pesticide tables and color photos of most pests. The Texas Corn Producers Board provided extra funding for the project that allowed us to include the photos. You can buy a paper copy from Ag. Communications at College Station (<http://texaserc.tamu.edu/catalog/topics/Insects.html>) or [download the PDF version here](#) for free. **RPP**

Before we get into pest season, I thought it might be of interest to provide a brief update on where we are investing our research efforts this year. Texas Cooperative Extension personnel have started a large research project to try and determine the level of spider mite susceptibility to Capture (bifenthrin). This is being done in response to last year's mite control problems that were especially acute north of I-40. We are going to collect mites from our area, New Mexico, and north of I-40 and conduct lab tests to determine whether there is increased tolerance to Capture. We won't really know for sure until these tests are completed. I am certainly not implying that there is a "resistance" problem out there. This work was funded by TDA and the Texas Corn Producers Board and is coordinated by Robert Bowling, Extension IPM Agent in Moore County. Brad Lewis, NMSU entomologist and District 2 personnel will assist with mite collection.

With TDA funding, Greg Cronholm, Extension IPM Agent in Hale and Swisher counties, and I are going to try and find a trap for the sunflower stem girdler that caused so much damage to last year's crop in some places. Kansas State University tried to find a pheromone for the beetle but was unsuccessful. Greg and I are going to conduct a "Hail Mary" project by putting 14 different types of insect traps around each side of a few fields. We will see if one or more trap types attract the adult beetles at least well enough to tell us when fields are in jeopardy. This is high risk research and we are grateful to TDA for funding it.

Brad Lewis, Monti Vandiver, Extension IPM Agent in Parmer and Bailey counties, and I are conducting a very large project on green beans. We hope to determine why green bean growers are losing control of the corn earworm with pyrethroid insecticides. The work will involve season-long screening for resistance and complex work to determine whether modern, high-speed aircraft apply a droplet distribution sufficient to allow good earworm

control. There has been concern over spray coverage with aircraft that fly at 140 miles per hour. This project is also funded by TDA through a special EPA grant. One of Greta Schuster's students from West Texas A&M will be working on the project as well.

Of course I shall present the results of these project in FOCUS next season. But why wait? With funding from TCE Administration, we at Lubbock are building a prototype tool that will automatically upload all Extension IPM reports to a website where they will be available on demand. Everyone will have instant access to all our research trials from 1999 to the present. These will be displayed by crop or pest and can be searched by county, pesticide, year, pests, etc. We are doing this because consultants and growers have told us that while we do very practical and useful research, it is just too hard to find when it is needed. No more. I will announce the website in FOCUS sometime in July.

Finally, I must announce that Stormy Sparks, our excellent Extension Entomologist at Weslaco is leaving for a new job with Georgia Extension. Stormy has been the state leader in vegetable entomology for many years and he will be missed. Stormy's family is in Georgia, and we are happy that he is moving home.

Next week I shall provide an update on transgenic corn for corn rootworm and present results of our corn rootworm control trials conducted last year. **RPP**

## IRRIGATION SCHEDULING

**South Plains Evapotranspiration Network Upgrade.** The South Plains Evapotranspiration (SPET) Network has been undergoing a much-needed equipment and programming overhaul in recent weeks. Upgrade of the SPET Network - replacing weather station sensors and re-working the sites and models to comply with standards more closely - was necessary to maintain and improve data quality in the network.

To make data more applicable to a broader audience, the data are now presented in multiple formats. The familiar "Achilleus" format includes a cumulative data collection, and accommodates users who have been using the data in research and modeling applications. A second format, adopted from the North Plains ET Network daily faxes, includes reference ET, soil temperatures, and estimated water use by crop and by planting date. This format incorporates crop growth stage models and crop coefficient curves into the calculations, thereby simplifying crop ET estimates for users who are primarily interested in irrigation scheduling.

The tremendous assistance from the North Plains ET Network (Thomas Marek and Don Dusek) and from the TAES Sorghum PROFIT information delivery team (Craig Carpenter, Mike Blanton, and Pat Porter) and the patience and input of our users during this transition are greatly appreciated.

We are still working on some additional data summary formats and other enhancements, but the data for Lubbock, Halfway, and Lamesa are accessible through links from the Lubbock Center Web Site at: <http://lubbock.tamu.edu/>. Or you can access the data directly at:

<http://lubbock.tamu.edu/irrigate/et/etMain.html>

Data from other High Plains stations are available on the North Plains ET Network (NPET). The NPET main page is accessible at:

<http://amarillo2.tamu.edu/nppet/station.htm>.  
DP

## COTTON SEEDLING DISEASE

Cotton emergence has been good this year, primarily because it has been dry for the month of May. However, with the cool temperatures, this has been a bad year for the black root rot fungus, *Thielaviopsis basicola*. In some fields, this fungus has combined with another fungus, *Rhizoctonia solani*, to rot the roots. In fields

where the roots are black, but the black area can be peeled off to expose firm white root tissue, the roots will probably grow out of the damage. In those cases where the root tissue has rotted completely through, then the plants may be able to partially compensate by lateral root production, but the tap root, may never recover. This means that the yield potential is severely compromised, especially if water is limited this year. **TW**

**WELCOME NEW EXTENSION  
VEGETABLE SPECIALIST**

On June 1, Dr. Russ Wallace joined the faculty at the Texas A&M Research and Extension Center in Lubbock replacing the retired Dr. Roland Roberts as the Extension Vegetable Specialist. Russ has a 75% Extension and 25% Research split in responsibilities. He developed his interest in vegetable crop production working for several ag chemical companies while doing his undergraduate studies at California State University, Fresno. His M.S. and Ph.D. degrees were obtained from Cornell University where he concentrated his efforts on vegetable weed control practices as well as sustainable crop production systems. Before joining Texas A&M, Russ was employed by Cornell as a Research Associate, followed by service as an Area Specialist with the Cornell Cooperative Extension system. Russ recently worked for BioWorks as a National Field Research Manager evaluating biological control and growth products for agriculture and ornamental crop production. Russ is excited about the opportunities to work with Texas A&M University faculty, county extension personnel and with area vegetable growers. He also looks forward to carrying on the good work initiated by Dr. Roberts. Please feel free to contact Russ at the Research & Extension Center for questions or just to introduce yourself.

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