

# FOCUS on South Plains Agriculture

Texas AgriLife Research and Extension Center at Lubbock  
1102 E. FM 1294, Lubbock, Texas 79403

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## Cotton Insects

### Thrips

Things have really quieted down on the thrips front. Most cotton is beyond the stage where thrips can have much impact, and with the higher temperatures, the thrips numbers have declined dramatically and the late-planted cotton is growing rapidly. I would continue to watch cotton with fewer than 5 true leaves, but I would not be in a hurry to spray it unless you are getting about 2 thrips per true leaf.

### Early Season Insect Management in Late Planted Cotton

There is quite a bit of late cotton around the South Plains. Cool temperatures and thrips undoubtedly played a role in slowing development, but most of the late plantings stems from a lack of moisture, or replanting due to hail or high winds. Regardless, pests in late planted cotton should be managed differently than under normal conditions.

Producers can commit one of three common mistakes concerning insect management in late cotton: 1) manage insects as if it is a normal year, 2) decide not to spray no matter what happens, or 3) try to mature every fruiting form they can set until a killing frost. Any of these approaches can lead to problems. The correct approach is to base decisions on realistic projected yields and scouting reports.

For high input fields with good irrigation, a more aggressive approach to insect management is probably justified for late cotton, particularly north of Lubbock where late season heat units may be hard to come by in the fall. Lost squares, especially those lost post-first bloom, may be very difficult to re-

place. Early season management consists of doing the right things that maximize square set and later boll protection. This would involve aggressively controlling cotton fleahoppers and early Lygus bug infestations to insure **at least** 90 percent retention of 1st position squares during the first couple of weeks of squaring, and 80 percent thereafter until first bloom. This would take a very aggressive management approach for 3 plus bale per acre cotton, and would require a good understanding of insect induced versus environmental induced square loss. Acceptable fruit loss should be adjusted as realistic yield potential changes. If either fleahoppers or Lygus bugs are approaching threshold levels, don't wait for square set to fall below an acceptable level. Once this occurs it maybe difficult to recover yield from these squares since there is little time left to compensate for these losses unless we experience an open fall with some good late season heat units.

In lower input fields the management decision is even more of a crap shoot than usual. Dryland and low irrigation input fields will have a tougher time making up lost fruit unless the weather cooperates. For the pre bloom stage, under dry conditions, preventing insect induced fruit loss may very well not pay off, since much of that fruit will shed anyway. However, under wetter conditions, a more aggressive approach may be justified, and any effort to preserve these squares could pay depending on the environment. During the bloom period in dryland cotton, it will be important to prevent boll loss due to insects. It is difficult for dryland cotton to compensate for lost fruit during this period, and if we do not see an open fall, retaining these fruit will be critical. Insect control decisions become very difficult once yield potential drops below 200-250 pounds per acre.

Thus far this year I have not seen or heard of any large populations of fleahoppers, but we definitely need to be looking carefully for this pest; especially in a year like this (refer to last weeks edition of FOCUS for more information on cotton fleahopper). Lygus have been numerous in alfalfa and some safflower fields. However, I do not see these as an im-

minent threat. With the large populations of weeds spurred on by the last week's rains, the weed population should attract most of these Lygus away from cotton. In our area, Lygus typically do not like to colonize small cotton. However, you may see spikes of adult Lygus moving into and out of a field over a 7 to 10 day period with little egg laying occurring. These adults need to be monitored closely because they may remove a significant number of squares during that period.

Lastly, we are setup for aphids. Late cotton tends to have more aphid problems; especially in skippy stands caused by hail, poor emergence, etc. Because fruiting is so delayed, there may not be a sufficient boll load to draw down nitrogen levels in leaves at the time aphids become serious pests. This usually occurs beginning in August. Thus far, I have observed just a few aphids around the region, but this can change quickly. Where early season aphids are detected, be careful not to induce an aphid outbreak by using harsh insecticides for other pests such as fleahoppers or Lygus. Pyrethroids are notorious for causing aphid outbreak. Where aphids are a concern, for fleahoppers consider using Centric, Trimax Pro, Intruder or Bidrin. Low rates of Orthene or Acephate may be used, although there is some risk of flaring aphids. If treating for Lygus, consider using Carbine when aphids are present. DLK

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

#### **Upper Coastal Bend (reported by Clyde Crumley, IPM Agent, Matagorda, Wharton, and Jackson counties)**

The hot, dry weather pattern that has settled in over this part of the southeastern Texas is continuing with record high temperatures being noted daily. The recent widely scattered showers that we experienced were welcomed however, the key word here is "widely" and they were not enough to offset this years' ongoing drought area wide. The balance of cotton here is at or fast approaching cutout. We are continuing to monitoring for bollworms, fall armyworms, stink bugs, spider

mites, aphids, *Lygus* and *Creontiades*. Whereas, beneficial numbers in cotton are moderate to high with lady beetle adults, larvae, big eyed bugs, and minute pirate bugs being observed.

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

The current concern for cotton fields is worms and seed feeders. Bollworms may be found in some or the few remaining non-Bt fields. However, the heat and dry conditions are making survival of these worms difficult. Seed feeders such as stink bugs and *Creontiades* are being found in some fields.

**Southern Blacklands (reported by Marty Jungman, IPM Agent, Hill and McLennan counties)**

Cotton fleahoppers range from 12 - 40%. The majority of the cotton is past fleahopper damage. The exception is later planted cotton. With the extremely hot, dry weather the later cotton may set in spite of high fleahopper numbers. Spider mites are being seen in several fields in low to moderate levels. No fields have been treated for this pest.

**Northern Blacklands (reported by Glen Moore, IPM Agent, Ellis and Navarro counties)**

Dry conditions and the highest temperatures of the season, thus far prevailed over north central Texas during the past week. Aphid numbers remain light and fleahoppers have been low to moderate, ranging from 6 to 21 per 100 plant terminals.

**St. Lawrence Valley (reported by Warren Multer, IPM Agent, Glasscock, Reagan, and Upton Counties)**

Rainfall last weekend ranged from 0.8-2.2" across the area. Many farmers received from 1.5-2", which is bringing up any of the dryland cotton seed that has not germi-

nated previously and ruined. Warm temperatures and good moisture is allowing for excellent growth in most cotton. Many of the May planted fields are now squaring. This makes fleahoppers the most important pest at this time.

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## Cotton Agronomy

### Crop Update

The incredible 2009 "shrinking" and "growing" crop has been provided some badly needed precipitation in some struggling dryland areas. At the same time parts of Hale and Swisher counties which have been dealing with excessive rainfall also received more. The dryland crop situation is improved by rainfall on June 19/20. Some areas with poor dryland prospects, such as Lamb, Terry, parts of Yoakum, Hockley, Cochran, Bailey, Lynn, Lubbock, and Dawson received anywhere from less than an inch to perhaps up to 3 inches of rainfall. Localized conditions such as whether earlier low rainfall events resulted in seed sprouting and dying will have a lot of impact on whether the rain at this late date will save some of these fields. From the crop insurance perspective, for a county with a June 5 final planting date, June 12 would have been the end of late planting period, and June 20 would then be the end of the 8-day deferred appraisal period. Therefore the first day eligible for release by insurance adjusters would have been June 21. Following the same logic, the June 10 final planting date counties can begin releasing cotton June 26. Skippy stands may plague fields in many areas, due to the above described situation. In other areas where no earlier rainfall had been obtained, seed may still be viable and produce good stands. There is a real hodge-podge out there and based on gin manager reports, even they are struggling to determine how many acres may survive and be productive. Only time will tell, but with the situation we now have and reports of good rainfall in Martin and Howard counties, the depth of dryland loss may not be as much as

earlier anticipated. My best guess at this time is we will likely be in the 500,000 acre range for dryland losses, but this could go higher or lower based on the next couple of weeks. As adjusters begin to assess the situation on a field-by-field basis, the dryland crop picture should become clearer. One thing is certain - a large number of dryland acres will be late based on the calendar. Since those fields are at the mercy of Mother Nature, the crop prospects will be dictated by rainfall for the remainder of the season and whether or not we have a warm fall to mature the late crop.

The overall irrigated situation is improving. The month of June has provided much better growing conditions, especially for the last 2 weeks. For the June 1-25 time period, Lubbock heat units are about 16% above normal, [Click here to view June temperatures](#). We are now seeing a healthy green cast across many fields. Irrigated cotton in parts of Hale and Swisher counties is in poor condition due to excessive rainfall and hail. Some of the more advanced cotton is squaring and well on the way for blooming in early July, however some of the more "ragged up" cotton will be hoping for blooms around July 15.

Some producers are beginning to crank up irrigation on dry fields. High temperatures in the 90s and slight thunderstorm chances in the forecast coupled with cotton reaching the squaring stage indicates that crop water requirements will quickly reduce soil moisture to critical levels. I suggest that producers watch their fields and not get behind on irrigation.

## Plant Growth Regulators

Questions concerning mepiquat-based (Pix, Pix Plus, Mepex, Mepichlor, Mepiquat Chloride, Mepex GinOut, Stance, and others) plant growth regulators (PGRs) are being asked. Mepiquat chloride (MC) reduces production of gibberellic acid in plant cells that in turn reduces cell expansion, ultimately resulting in shorter internode length. MC will not help the plants compensate for earlier weather or disease damage by increasing growth rate. It may under good growing conditions in-

crease fruit retention, control growth and promote earliness. MC should not be applied if crop is under any stresses including moisture; weather; severe spider mite, insect, or nematode damage; disease stress; herbicide injury; or fertility stress. Results from our replicated testing indicates that we got from 5 to 15% reduction in plant height (compared to the control) from 16 oz of 4.2% a.i. MC material applied in up to 4 sequential 4-oz/acre applications starting at match head square (MHS) and ending at early bloom. We have been able to "shave" about 1 node from the growth of the main stem at some locations, which can result in about 3-5 days earlier cut-out. **Low rate multiple applications beginning at MHS have generally provided more growth control than later higher rate applications made at first bloom or later.** Our results have shown that we usually do not get statistically significant increases in yields, but do get excellent growth control. Many times we don't see a lot of differences in performance of these products when comes to growth control.

Mepiquat chloride (MC) based products have been around for many years. Several plant growth regulators (PGRs) based on the same active ingredient are now available. Pentia is a formulation of mepiquat pentaborate - a different molecular structure than MC. Nufarm's Mepex Gin Out product contains the same amount of MC active ingredient as others, but contains an additional PGR. Refer to the product labels or contact local representatives to ensure you understand the correct use of these products.

**Mepex, Mepichlor, Mepiquat Chloride** and other generics: 4.2% active ingredient (a.i.)/gallon or 0.35 lb/gallon a.i.

**Pentia:** Mepiquat pentaborate molecule (different from MC): 9.6% a.i./gallon or 0.82 lb/gallon a.i.

**Mepex Gin Out:** 4.2% a.i./gallon or 0.35 lb/gallon a.i. with 0.0025% Kinetin (a cytokinin). Cytokinins are plant hormones that promote cell division and growth and delay the senes-

cence of leaves. This product has use guidelines similar to other MC materials.

**Stance:** Bayer CropScience's Stance product is a mepiquat chloride based PGR. It is a 4 to 1 ratio of mepiquat chloride and cyclanilide (0.736 lbs/gallon mepiquat chloride plus 0.184 lbs/gallon cyclanilide). Cyclanilide is an auxin synthesis and transport inhibitor. Auxins are generally referred to as compounds which have the capacity to induce cell elongation. The inhibition of auxins could reduce cell elongation and inhibit growth. **Producers should be aware that the mepiquat chloride concentration in Stance is about twice as high as most of the other materials we have become accustomed to applying. THEREFORE THERE IS A CORRESPONDING REDUCED RATE.** If you have specific questions concerning this product, visit with your local Bayer CropScience representative.

Consistent yield increases have not been observed from any of the MC materials we have investigated. A good boll load will normally help control plant growth. Fields with poor early-season fruit retention, excellent soil moisture, and high nitrogen fertility status may be candidates for poor vegetative/fruitlet balance and should be watched carefully. Growers who have planted varieties with vigorous growth potential and have fields with excellent growing conditions need to be concerned. For brush roll header stripper harvest, 28-32 inch tall plants optimize stripper-harvesting efficiency. If possible, target a maximum plant size of about 32 inches for picker varieties under high input irrigation (drip or high capacity pivots). If plants get larger than 36 inches, harvest efficiency and productivity drop significantly. With the greater number of spindle picker harvesters working in the region, plant size for high yielding cotton is not as much of a harvesting consideration. Pickers can handle higher yielding, taller plants with much greater ease than stripper harvesters.

Determination of application rates is generally more "art" than "science" for these products. Applications should begin when

50% of the plants have one or more match-head squares (see specific product label for more information). It is best to get a handle on excessive growth potential early if conditions favor excessive growth for an extended period of time. Herein lies the High Plains dilemma: It is unknown at that time as to how weather will affect the crop for the remainder of July and on into early August. Will we get 100+ degree temperatures, southwest winds at 30 mph at 10% relative humidity? If so, those conditions will limit plant growth in many fields with low irrigation capacity. Watch high growth potential varieties and fruit retention. If a high growth potential variety has been planted and has encountered low fruit retention, then MC rate should be increased, especially under high water, fertility, and good growth conditions. One should target applications to fields with high growth potential. Some newer varieties may need aggressive management under high irrigation capacity and or if heavy rainfall conditions are encountered. The situation that has arisen due to the release and availability of new genetics is challenging. Visit with your seed company representative to determine which new varieties should be watched closely for MC needs under field-specific conditions. Use MC to limit plant size. Sequential applications can be adjusted to meet subsequent crop conditions and growth potential.

### Management of Late Cotton

Dr. David Kerns and I have updated the Management of Late Cotton in the High Plains, [Click here to download this publication](#). We have many fields that are significantly behind because of lagging development due to environmental damage, late emergence, etc. This guide covers several areas including: Assessing Crop Potential (including comments on stands, and yield and quality potential), and Managing for Earliness (including comments on reducing the potential negative impacts of cultural practices; nitrogen application adjustments; irrigation; mepiquat use; and insect control issues). RKB

## Cotton Diseases

Fusarium wilt is caused by the soil-borne fungus, *Fusarium oxysporum* f. sp. *vasinfectum*. This disease is becoming increasingly important throughout cotton production regions of the South Plains, particularly to the South and West of Lubbock (i.e. Lynn, Dawson, Terry, Yoakum, and Gaines counties). Typical symptoms of Fusarium wilt include chlorosis (or yellowing) on the margin of leaves.



Inspection of the vascular system will reveal in discoloration of infected plants. If plants are infected early in the season, and adverse conditions are experienced, seedling mortality can occur.



This may potentially be confused with seedling disease. One characteristic that can be used to differentiate Fusarium wilt is the presence of galls on the root indicative of root-knot nematode (*Meloidogyne incognita*). In general, Fusarium is considered a weak pathogen; however damage to plants caused by the nematode facilitates entry into roots, thus, Fusarium wilt severity can be minimized via proper nematode management. I have isolated *Fusarium* spp. from plants collected from fields where an at-plant nematicide, such as Temik was used. In most of these cases, infections took place following some type of injury to the crop. Lack of rainfall or poor moisture conditions may also negatively impact the ability of nematicides to go into solution and be taken up by plants. Collar rot symptoms associate with *Fusarium* spp. have been observed in areas with low nematode populations. In these cases, populations of *Fusarium* are high;

however, the absence of the nematode does not trigger infection by the fungus. Symptoms appear as dark, superficial lesions at the soil surface. Again this could be mistaken for Rhizoctonia seedling disease. Attention should be paid to these fields, as Fusarium wilt could develop more rapidly as nematode populations increase. It is important to identify fields infested with *Fusarium oxysporum* f. sp. *vasinfectum* for future planting decisions. In addition to the use of at-plant, or seed-applied nematicides, several commercially available varieties perform very well in Fusarium wilt fields. Over the past few years, varieties such as Deltapine 174 F, Deltapine 164 B2RF, Deltapine 143 B2RF, Stoneville 4554 B2RF, and Stoneville 5458 B2RF have performed quite well. [A summary of Fusarium wilt variety trials can be accessed here](#). If you have any questions regarding Fusarium wilt or any other cotton disease issue please contact Jason Woodward @ 806-632-0762, or via e-mail [jewoodward@ag.tamu.edu](mailto:jewoodward@ag.tamu.edu). JW

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## Corn and Sorghum Insects

### Watching and waiting

I'm pleased to report a general lack of pestilence. Early mite problems have eased and we are now watching pest levels closely. The moth traps have been in operation for a week and a half (see the last page of this issue for the numbers), and captures of fall armyworm are disturbingly high in some traps, especially the one in south Lubbock. This trap exceeded 1,000 moths per week. We took advantage of last year's high fall armyworm numbers and put out several insecticide trials but, for the most part, we simply reminded ourselves that unless you have a pivot available to chemigate, insecticide won't do much good on whorl stage corn or sorghum. The insecticide simply does not penetrate into the whorl far enough to reach many of the worms. RPP

## Sorghum Agronomy

### Hybrid maturity and last recommended planting date

Two weeks ago I noted that we did not need to be at that time in a rush to get grain sorghum planted. Now the window is closing or has closed to plant longer season maturity hybrids through the central and northern South Plains. Producers frequently ask how late in the season they can plant the different maturity groups of grain sorghum. Below is a basic guideline for the Texas South Plains.

[These suggested dates](#) consider the length of sorghum maturity vs. historical averages for cool fall weather, which can be expected ahead of frost. Although these sorghum maturity classes may be planted later and be successful in many years, these guidelines should help producers understand when risk increases relative to achieving grain yield potential. The 2008 cool weather and Oct. 23 freeze hit many producers with reduced yields and low test weights mostly because many producers planted too late with a particular hybrid in their area. Calculations of heat unit accumulation for grain sorghum determined that, in spite of cool temperatures in August and again in September as well as the early freeze, that it is the planting date that mattered most. If you must consider a very late sorghum planting, choose among hybrids that have estimated 'days to maturity' of less than 90 days. Check among seed dealers for suggestions.

### Key Sorghum Growth Stage—Growing Point Differentiation

Just like in wheat, the growing point in grain sorghum transitions from producing leaves to developing the head. This process initiates about 30-35 days after emergence (leaf stage 7 to 8), and over about a 7- to 10-day period, the maximum number of potential spikelets on each head as well as the maximum number of potential seed per spikelet is determined. This is a hidden component of

grain sorghum growth and development that is highly important to the yield potential of your crop. We hope for a high number of spikelets and seed per spikelet to maintain a high yield potential. What happens later in the season (mainly water, whether rain or irrigation; also overall growing conditions) will determine how much of that yield potential you can make.



*Gradual development of grain sorghum growing point shortly after differentiation*

Growing point differentiation can be greatly influenced by a timely rain or irrigation and the application of much of the N to ensure that growth is not limited by drought stress or low fertility. Later N applications will not affect this maximum potential spikelet and seed number. To a dryland farmer who says, 'Without a lucky rain, there is nothing I can do to affect the number of spikelets and seeds per spikelet.' Not true. You can keep your seeding rate down so that more moisture is available per head during this critical time. This is another reason why Extension advocates modest seeding rates for grain sorghum as part of a comprehensive drought and risk management strategy for dryland sorghum production.

### **Fertility Requirements for Grain Sorghum**

Grain sorghum, like any other crop in the South Plains, has a couple of rules of thumb for key nutrient requirements. Much grain sorghum in recent years, especially when prices were low and sorghum is treated as a step-child, has received little fertility. This,

along with too high seeding rates (see the [May 22, 2009](#) edition of FOCUS) often holds back sorghum production when conditions are otherwise favorable for even modest grain yield potential.

The following are two general rules of thumb for grain sorghum fertility:

- 2 lbs. of nitrogen (N) per 100 lbs. of production
- 0.375 lbs. of P<sub>2</sub>O<sub>5</sub> per 100 lbs. of production.

For dryland production, N is the focus and P is usually disregarded. Phosphorus becomes more important once yield potential passes 4,000 lbs./A.

So for a 5,000 lbs. per acre grain sorghum crop, the N requirement is about 100 lbs. of actual N, or units of N, per acre. This is a rule of thumb. Soil test information allows you to refine that number more precisely. That target of 100 lbs. N/acre can be reduced by the level of soil N. If residual N fertility is good then up to 20 lbs. of N per acre may be available from the soil and the subsequent N fertilizer requirement reduced to about 80 lbs. of N per acre.

For the same 5,000 lbs. per acre, P requirement would be about 18 lbs. of P<sub>2</sub>O<sub>5</sub> equivalent.

### **Timing of Fertilizer Application**

Phosphorus is best applied preplant with incorporation in a fertilizer blend or perhaps by the traditional starter fertilizer method of placing starter fertilizer 2" to the side and 2" below the seed. P fertilizer placed on the surface without incorporation is of little benefit in the year it is applied.

Nitrogen is a mobile soil nutrient. For dryland grain sorghum production, collectively as a group of farmers across the South Plains, we would probably all be better off applying N preplant. Otherwise we find reasons to apply no N at all, and yield potential may suffer. With preplant applications the least expensive form of N can be used and incorporation is



more thorough.

But producers may prefer to wait until they are sure their crop is established before they spend the money on N fertilizer. In this case, for one-time applications of N (knife rig, rolling coulters, etc.), be sure to minimize nipping off roots. More importantly, perhaps, is to ensure N is applied within about 30-35 days of planting. This places the N in soil in advance of growing point differentiation, an important component of yield potential. Peak N uptake begins to occur as the sorghum plant progresses past the 10 leaf stage through about the end of boot stage.

If N can be applied through the pivot it is still recommended that much if not most of the N be applied by growing point differentiation. Some later N is acceptable, but it should still be applied by no later than boot stage, or about 60 days after germination. CT

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## Sunflower Insects

### Sunflower (Head) Moth Control—Avoid Critical Mistakes

The damage inflicted by uncontrolled sunflower moth (commonly referred to by many as ‘head moth’) is a nuisance if not the downfall of some sunflower production, particularly among new growers. Understanding this issue is critical to sunflower production success. Although the biology of sunflower moth is quite different than weevils, there is reason I often refer to this insect as “the boll weevil of sunflower.” Left uncontrolled the larvae of this insect can wreak havoc on a sunflower crop, much of the damage coming not just from the burrowing larvae but the subsequent opportunistic infection of fungal *Rhizopus* head rot.

For information on sunflower insect control check with your local Extension IPM agent and consult Texas Extension bulletin B-1488, “Managing Insects Pests of Texas Sunflower,” which can be downloaded from <http://agriflifebookstore.org/> This document has been updated with improved

recommendations, color pictures, etc. It is at the printer, and if you would like an advance copy contact Dr. Ed Bynum, Extension Entomologist, Amarillo, 806.677.5600, [ebynum@ag.tamu.edu](mailto:ebynum@ag.tamu.edu)

If you like video, Dr. Pat Porter, Extension Entomologist, and I have collaborated to create [two short videos](#) explaining the timing of sunflower head moth spraying based on stage of bloom available.

Scouting sunflower moth is best done early in the morning or after sunset as the heat cools off. You might get best results using a flashlight to find the adults on the head. During the day the moths tend to hide under leaves and may not fly much so they are harder to find. If you find a few on the heads during the heat of the day then you can assume that pressure is high.



*Sunflower head moth feeding on pollen during which it will also lay eggs on the head*



*Hatched sunflower head moth larva which will burrow into head to feed on seed leading to Rhizopus head rot fungal damage*

Industry partners suggest—and Pat and I concur—that sunflower growers make their initial sunflower moth spraying decision targeting the initial spray at bloom of a few percent, certainly by 10% bloom, so as to increase chances of control. Bloom constitutes when the ray petals have opened up and you can see the center of the head (demonstrated in the videos). This means making the sunflower spraying decision 1-3 days earlier when you start to see the back side of the yellow ray petals on the head scattered across the field. Industry also tends to use a threshold less than 2 moths per 5 plants (especially for confectionary)—even recommend spraying if only a few moths are observed in the field, to go ahead and spray. Though this may be extremely liberal, producer failures—many of them—drive this practice. These practices are not without merit, especially for seed production and confectionary sunflower fields. If a grower ends up with head moth larvae infestation, typically it means that the farmer sprayed too late.

Do not be fooled by how quickly sunflower can bloom. The table below shows recent field date of bloom development in the South Plains. CT

Table 1. Progression of sunflower bloom for typical oilseed and confectionary hybrids, Texas South Plains, 2007 & 2008. Sunflower bloom can quickly surpass suggested bloom targets for sunflower moth spray timing.

| Location | Hybrid         | Planting Date | Percent Plants in Bloom @ |      |      |      |
|----------|----------------|---------------|---------------------------|------|------|------|
|          |                |               | Date of Record            |      |      |      |
|          |                |               | 8/13                      | 8/15 | 8/17 | 8/19 |
| Lubbock  | Triumph 845HO  | 6/26/07       | 0                         | 5    | 68   | 100  |
|          | Red River 2215 | 6/26/07       | 1                         | 9    | 84   | 100  |
|          |                |               | 7/11                      | 7/13 | 7/15 | 7/17 |
| Lubbock  | Triumph 845HO  | 5/17/08       | 1                         | 23   | 96   | 100  |
|          | Red River 2215 | 5/17/08       | 0                         | 10   | 74   | 99   |
|          |                |               | 8/22                      | 8/25 | 8/27 | 8/29 |
| Halfway  | Triumph 845HO  | 7/3/08        | 0                         | 51   | 89   | 100  |
|          | Red River 2215 | 7/3/08        | 3                         | 54   | 79   | 95   |

Data from Texas AgriLife Research crop testing hybrid trials, courtesy Calvin Trostle, Texas AgriLife Extension Service agronomist, Lubbock.

## Insect Trap Captures Through June 23rd

- [Cotton bollworm \(corn earworm\)](#)
- [Beet armyworm](#)

Moth trap captures for June 17 - 23rd. This was the first week of trapping for these species.

| Location              | FAW  | SWCB | WBC |
|-----------------------|------|------|-----|
| South Lubbock         | 1074 | 0    | 0   |
| TAMU Station          | 445  | 0    | 0   |
| NE Shallowater        | 253  | 0    | 0   |
| West of Cotton Center | 44   | 7    | 0   |
| Halfway               | 79   | 0    | 0   |

FAW = fall armyworm, SWCB = southwestern corn borer, WBC = western bean cutworm. RPP

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## Editors

David Kerns and Patrick Porter, Co-editors

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## Contributing Authors

Randy Boman, Extension Agronomist  
David Kerns, Extension Entomologist  
Patrick Porter, Extension Entomologist  
Calvin Trostle, Extension Agronomist  
Jason Woodward, Extension Plant Pathologist

## Useful Web Links

[Applied Research Reports \(Goldmine\)](#)  
[Texas High Plains ET Network](#)  
[Irrigation at Lubbock](#)  
[Pest Management How-To Videos](#)  
[Lubbock Center Homepage](#)  
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