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COTTON INSECTS

Cotton for the most part is moving out of the thrips vulnerability stage and into the fleahopper and *Lygus* vulnerability stage. Squaring fields near weed or cultivated sources of fleahoppers and *Lygus* (western tarnished plant bug) should be watched closely over the next few weeks. Late planted fields will be

vulnerable later in the season from weed sources as well as earlier infested cotton fields. Squaring fields should be plant mapped now to determine square set. Without this information it is a “crap shoot” to determine the need to treat insects that are square thieves.

Thrips problems should be winding down in most fields across the area. Earlier infestation pressure was severe in some of the northern counties and many fields benefited (or would have benefited)

from an at-planting insecticide with an additional foliar insecticide application. While some fields are still experiencing elevated numbers of adults, plant development in



most cases has pushed plants beyond the yield loss vulnerability stage. There may be some minor leaf crinkling from the more recent feeding damage but this should not be a problem. Most other areas in the High Plains now have very low thrips numbers as external sources of thrips have pretty much dried up. Our incessant winds have made foliar applications more difficult this year.

Some fields in the southwestern area of the High Plains are being sprayed for pink bollworms. These are either fields in high-risk areas that were planted to conventional varieties or refuge acreage associated with resistance management provisions of the Bollgard program. While some traps have continued to catch high numbers, the general trend has been for lower numbers the last couple of weeks. I’m hoping that this means overwintering pinkie emergence is winding

down. Because management decisions are being based on trap catches of moths and some individuals may be misidentifying some of the moths caught, I am providing a file on [Pink Bollworm Moth Identification](#).

Weekly numbers of pink bollworm moths caught in each of 8 traps in Gaines Co., 2004.

Trap	4/22	4/29	5/7	5/14	5/20	5/27	6/2-3	6/8	6/14-15
1	0	0	2	3	10	135	89	3	4
2	0	3	1	36	20	93	138	8	55
3	0	0	0	12	18	30	11	5	13
4	0	0	0	16	8	71	43	0	3
5	0	1	2	3	4	68	21	5	27
6	0	1	18	106	26	125	135	6	13
7	0	2	1	12	12	103	95	4	12
8	0	0	1	10	21	*	52	1	23
Total	0	7	25	198	117	629	584	31	150
No./ trap	0	1	3	25	15	89	73	4	19

*Lost to wind.

To avoid season long problems with pinkie infestations producers and consultants may need to identify those fields needing treatment and initiate a preventative spray program. This very aggressive approach will not necessarily prevent late season problems when pink bollworm moths move considerable distances from earlier infested fields to those that were either properly managed or had escaped earlier infestations.

Early control programs (preventative) consist of using trap data to identify fields that need treatment. **Fields with traps catching pinkies in the realm of 5 per trap per night certainly need to be addressed.**

Control tactics can involve pheromone releases for mating disruption, pyrethroids alone for



control, or a combination of the two. Windy weather like we have been experiencing probably detracts significantly from the confusion tactic. I would go with the pyrethroid and apply two applications, evaluating the need

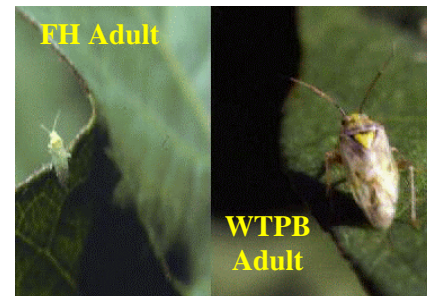
for the 2nd application using trap data. Once matchhead to pinhead sized squares are present, applications should cease until blooms appear. Once small bolls are present, trap information can be misleading. Relying on boll cracking data is recommended. Rosetted blooms in fields where traps continue to catch pinkies will give a hint of problems to come. For more pink

bollworm information see [Pink Bollworm Management Tips I](#) and [II](#) in the Crop Production Guide Series of FOCUS and [Pink Bollworm Management In Texas](#).

Cotton fleahopper and *Lygus* numbers are increasing in cotton fields but are still mainly holding back in other host plants. Only those fields that are squaring are vulnerable to these two pests. There have

been a few fields treated for one or both of these pests but these were usually associated with cut alfalfa or other such hosts.

These pests can become a serious problem where fleahoppers (FH) or *Lygus* (western tarnished plant bug-WTPB) are



herded into cotton following the destruction of their other host. We believe that in many cases, these bugs would prefer to stay in their original host plants but are forced into nearby cotton fields through cutting or mowing practices; or when weed hosts mature and become dessicated.

Proper management of these two insects requires plant mapping to determine square retention.

Remember at least these two things: 1) not all varieties square or shed squares the same and 2) not all square shed is insect

induced! Refer to [COTMAN](#) for further help on plant mapping. Square sets can change dramatically over a week's time. This should warn you that scouting frequency needs to be increased when bugs begin moving in. Know

that some varieties square high, others may square low but shed these later on and some will shed squares at the “drop of a hat”. Please refer to a the new [Cotton Fleahopper Management Tips](#) publication, a part of the growing Crop Production Guide series of FOCUS for further fleahopper management assistance.

Boll weevils continue to emerge in areas where eradication problems still exist. Most High Plains zones have zero to very few weevils caught thus far. Only the Permian Basin zone is suffering from infestations that moved out of the St. Lawrence area in late 2002. Survival was much higher this past winter and numbers caught thus far reflect this.



Average number of boll weevils caught per 100,000 trap inspections through June 6.

High Plains Zone	2004	2003
Permian Basin	1,280	90
Western High Plains	0	10
Southern High Plains	1	3
Northern High Plains	0	10
Northwest Plains	0	0

Most acreage is not yet hostable for boll weevil establishment and reproduction but this will change rapidly as more, earlier planted fields begin to square. A very low percentage of the acreage in the Permian Basin zone (7,200 acres) and the Southern High Plains zone (353 acres) has been treated thus far. Mapping and setting out traps should be complete by now for the Panhandle zone. Don’t expect much if any weevil activity to be found in this zone’s first program year. **JFL**

COTTON AGRONOMY

[Good growing conditions](#) have been encountered over the last week. We are still

in an above average temperature situation. Hot, dry conditions and high winds have also plagued the region (30 mph) over the last week or so. This has made herbicide applications difficult for many producers. A broadcast hooded sprayer is really a great piece of equipment to use for glyphosate applications under these conditions.

Of course, we still need a good regional rainfall over most acreage in the big cotton patch. Some rainfall has been obtained in the dryland region south of Lubbock, but there is still substantial acreage that remains unemerged due to dry conditions. At least parts of Yoakum, Terry, Gaines, Dawson, Lynn, and Martin



counties still have dry pockets. Some hail, which destroyed cotton stands, was noted in Dawson County last weekend. Some of this acreage has already been replanted. Wednesday night, a significant storm tracked across the northwest region of the South Plains and produced around an inch or so of rainfall along with some hail. As of this writing it is unclear if acreage losses were encountered.

Stand assessment after recent weather events. Due to rainfall/hail events that occurred over the last week, there may be some producers who need information relative to assessing stand damage. We had a good write-up on this in the [June 13 Focus](#) issue last year.

Additional information on stand assessment and replant decisions is available:

[Making Replant Decisions](#)
[Effects of Standloss on Yields](#)

Nitrogen fertilization for fields making good progress should be considered. Guidelines are provided in the following file [Nitrogen Fertilization Considerations for Cotton](#).

Roundup WeatherMax applications past the 4-leaf stage on Roundup Ready cotton.

Even some of the later planted Roundup Ready cotton is nearing the end of the over the top window for Roundup applications. We have been getting questions concerning Roundup applications on cotton, which cotton is past the 4-leaf over-the-top (OT) window. If late applications are made, then significant yield losses CAN be encountered. High winds have been a challenge this year, and the technological bottleneck has posed some serious weed control challenges. If an OT application of 22 oz/acre is made past the 4-leaf stage, one would still be “on label,” but into what is considered a “salvage-type” application. Based on various experiences, it is possible that fruit retention on 3 nodes will be affected when making over-the-top applications of Roundup past the 4-leaf cutoff. One can expect fruit on the next 3 nodes (which would currently be in the terminal) to be most affected, with poor pollination, and perhaps boll shed from these sites.



Some questions pertaining to the potential of over-the-top applications past the 4-leaf cutoff affecting square retention have also been asked. Most problems reported from across the Cotton Belt relative to late Roundup applications generally have been poor pollination causing so-called parrot beaked bolls and possibly subsequent boll shed, NOT SMALL SQUARE LOSS. Of course one has to factor in weed population effects on yield, the harvestability of the field due to large weeds, etc. into an “economic analysis” of each field-specific situation.

The Monsanto label for Roundup WeatherMax for use in Roundup Ready cotton states: “Salvage treatments will result in significant boll loss, delayed maturity and/or yield loss. No more than one salvage treatment should be

used per growing season.” Field research conducted in the High and Rolling Plains indicated that anywhere from 0 to 50% yield reduction might be encountered with salvage type applications past the 4-leaf stage. A trial kept “weed free”, which included several Roundup Ready varieties was conducted at the Lubbock Center over a three-year period (1999, 2000, and 2001). In these tests, Roundup applications were made at various crop stages, and a non-sprayed check was included as a reference point. The take-home message from

that study 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. The critical issue is the crop’s ultimate

environment and the ability to compensate for the losses of the fruiting sites by retention of bolls up the plant and out on the fruiting branches. For the past several years, the fall has been fairly kind and has allowed later set bolls to fully mature, perhaps masking any potential yield losses due to crop compensation. I guess the disclaimer: “Your results may vary” may be in order here.

With cotton development rapidly progressing, it is important to also consider the requirements for a successful post-directed or hooded Roundup WeatherMax application program. The Roundup label states that herbicide applications may be made using precision post-directed or hooded sprayers through layby. The spray should be directed to the bottom of the plants, with minimal contact of the spray with the leaves. Nozzles should be placed in a low position with a horizontal spray pattern directed under the cotton leaves to contact weeds in the row, and low spray pressure – less than 30 psi, should be used. **RB**

COTTON DISEASES

Fusarium wilt has begun to show itself in fields south of Lubbock. Fields with nematode infestations and with wilt-susceptible varieties



will have the most problems. Scouts need to start looking for problem fields and correctly identify the cause. The symptoms for Fusarium wilt at this time are: wilting of the

plants and defoliation from the bottom of the plant moving up. The vascular system has some discoloration. These plants will either completely defoliate, or show some yellowing of the leaves and die in several weeks. The severity of disease is entirely related to susceptibility of the variety. If you have not noticed wilt in previous years, or only slight problems, but you experience severe problems this year, then it is related to the variety planted. Root-knot nematode can make wilt more severe, however, variety is still the most important factor.



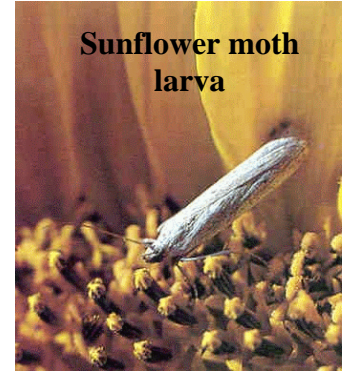
There is no control for this disease, other than planting more tolerant varieties and using some sort of nematode control at planting (like Temik 15G). Therefore, if you observe symptoms over a great deal of a field early on (like over the next few weeks), you may want to stop spending money on that field. The plants will probably go ahead and die, leading to little or no yield. If wilt shows up later in the season, losses will not be as severe. More information will be available next week in FOCUS. TW

SUNFLOWER INSECTS

Timing of sprays for sunflower moth control. The damage inflicted by uncontrolled

sunflower moth (incorrectly 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 a 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”](#). In addition, a critical [2002 supplement](#) to B-1488 regarding sunflower head moth control recommendations as well as an alert on the soybean stem borer in sunflower should accompany B-1488. If you like video, Dr. Pat Porter, Lubbock-based Extension entomologist, and I collaborated in 2002 to create [two short videos](#) explaining the timing of sunflower moth spraying based on stage of bloom.



Scouting for sunflower moth is best done early in the morning or after sunset as the

temperature 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.

Industry partners suggest—and I concur—that sunflower growers make their initial sunflower moth spraying decision 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 then see the center of the head (demonstrated in the above videos). This means making the sunflower spraying decision 1-3 days earlier when you start to see the backside of the yellow ray petals on the head scattered across the field. Industry also tends to use a threshold of less than 2 moths per 5 plants (especially for confectionary sunflower)—even recommend spraying if only a few moths are observed in the field. Though this may be extremely aggressive, 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. Some of our field observations have indicated just how fast sunflower fields can bloom going from 6% on day 1, 19% on day 2, 43% on day 3, 67% on day 4.

Labeled products for sunflower moth control include Warrior T (pyrethroid), but numerous growers find benefit in mixing the pyrethroid with methyl parathion for a quick knockdown in the first spray. CT

SUMMER FORAGES

Summer annual forages such as sorghum/sudans, which have good regrowth potential after grazing or baling, will still be planted on numerous acres in the South Plains in 2004. In 2002, FSA changed the planting date from June 30 to July 15 for full coverage NAP insurance (thus limited coverage is available into early August).

For a summary on current forage types including sorghum/sudans, forage sorghums, and millets (good for caliche soils due to Fe

acquisition; no prussic acid problems) contact your local Extension office or the Lubbock Center for [“Annual Summer Forages for West Texas”](#).

This document was updated in June 2004 (not yet posted on the Web; call Calvin Trostle).

It includes a brief introduction to the brown mid-rib forages (generally lower lignin content, higher livestock palatability, and higher invitro digestibility) and photoperiod-sensitive forages (heads out in October regardless of planting date). Also, dryland and irrigated forage seeding rate guidelines have been compiled in [“Suggested Forage Seeding Rate Targets for West Texas”](#).

Establishing summer annual forages in dry conditions. Consider using a planter rather than a drill. In 2003, due to minimal soil moisture conditions, Extension test plots at AGCARES at Lamesa were established in late June using a planter rather than a drill. We did not believe we had enough control over seed placement with our older drill hence establishment was more important to us than potential forage yield. We achieved excellent results using a planter on 40-inch rows. We were able to move soil to get to moisture that we could not have done with a drill. In spite of only 4.5” of rain on the crop from late June through mid-October, we averaged 2.7 dry tons of forage per acre. We used a seeding rate of ~10 lbs./A rather than the 15 lbs./A we would have used with a drill, which saved us about \$2/A on seed costs.

A take-home lesson from our 2003 AGCARES experience is that establishment was important, and if you have an older drill without limited ability to adequately place seed, using a planter may be a good idea, especially if you are on 30-inch row spacing. The way 2004 is shaping up for many producers we may face increasing forages demands since it is too dry in many areas to drill sorghum/sudan. In addition, grazing

cattle will walk between the rows if the forage spacing is at least 20-24” hence they don’t tromp the stubble and regrowth potential is improved. **CT**

**REPLANT/LATE PLANT
NON-COTTON DECISIONS**

Though we are not eager to deal with decisions involving replanting after failed cotton, [Extension’s guide](#) for replanting and late planting is now updated. Producers can review the basics on crop production information for crops other than cotton, last recommended planting dates, pricing, contracting, etc. for sorghum, sunflower, soybean, guar, soybeans, vegetable and pea crops, sesame and summer annual forages. The document was placed with County Extension offices on June 17th (or call Calvin Trostle at the Lubbock Center) for a copy. **CT**

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