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FOCUS on South Plains Agriculture

Texas AgriLife Research and Extension Center at Lubbock
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Get Radio Updates

Ag Talk on KJTV, radio 950 AM, features Extension IPM personnel each Wednesday from 1:00 - 2:00 PM. This is a good way to keep current on the evolving pest situation and ask questions.

Cotton Insects

False Chinch Bug

As Dr. Porter mentioned in last week's edition, we are seeing very high numbers of false chinch bugs feeding on wild mustards throughout the High Plains. Thus far they appear to be staying put on the mustards, but that could quickly change as the mustards mature or dry down. False chinch bugs are occasionally troublesome in cotton, particularly in the eastern counties of the Texas South Plains. Dustin Patman, IPM Agent in Floyd and Crosby counties reports some movement into cotton in Crosby County and that the field margins of at least one field have been treated. Individual false chinch bugs do little damage, but large populations can injure or kill seedling cotton. On warm days, false chinch bugs are easily missed, since they prefer to hide under field debris and clods, so care must be taken to inspect these types of habitats when scouting.

False chinch bugs are about 1/8th inch long, narrow bodied and are brownish gray in color. The immature bugs have inconspicuous red markings on their bodies. Be careful not to confuse false chinch bug with the predacious bigeyed bug, which is wider and has a flatter head. Currently, Texas AgriLife Extension has no guidelines for managing false chinch bug in cotton. However, in the past Acephate has proven effective although the pest is not listed on the label. In California, pyrethroids are often

used for false chinch bug control in cotton. Usually applications can be relegated to the field margins where the false chinch bugs are migrating into the field.

False Chinch Bug Adult
(Photo courtesy of Whitney Cranshaw. Colorado State University. www.insectimages.org)

Bigeyed Bug Adult
(Photo courtesy of Bradley Higbee. Paramount Farming. www.insectimages.org)

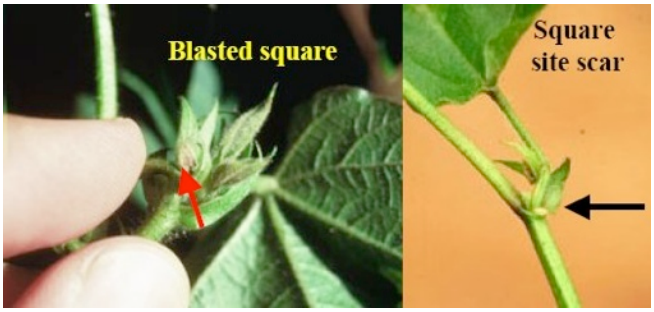
Grasshoppers

We are still getting reports of large populations of grasshoppers, and some field margins requiring treatment. Rick Minzenmayer, IPM Agent in Runnels and Tom Green counties, and Dr. Chris Sansone, Extension Entomologist in San Angelo, have had quite a bit of experience dealing with grasshopper problems in cotton. If treating only cotton, they recommend Bidrin at 4 oz/ac or Lorsban at 0.5-1.0 pt/ac. Both of these materials are short lived. Pyrethoids can be used and provide longer residual control, but carry more risk of flaring secondary pests. If treating both cotton and surrounding weeds or CRP, pyrethoids may be a good options. If just treating weedy areas or CRP, Sevin may be a good option. Dimilin may also be considered but it is only effective on immature grasshoppers. Additionally, regardless of what you treat with, control is almost always better when targeting young grasshoppers.

Cotton Fleahoppers

Much of our cotton is or is about to begin squaring, and thus it is time to watch for cotton fleahoppers. Everywhere I have been throughout the Southern and High Plains I have observed high populations of cotton fleahoppers in the weeds, and a few already in cotton. Winged cotton fleahoppers are about 1/8th inch in length and yellowish-green to almost whitish-green in color. The adults have flattened elongated bodies and may have small black hairs and spots on their upper surface. The nymphs are wingless and very small, 1/30th of an inch in length, and tend to be almost translucent to pale green in color with reddish eyes. Click here for a large photo of cotton fleahopper adult (on left) and nymph (on right).

Both adults and nymphs will feed on the tender plant growth including terminal tissues and small squares. They feed using piercing-sucking mouthparts. Fed on squares will be desiccated from sap removal and will darken and fall from the plant. Such squares are termed “blasted” squares. Under high pressure, fleahopper feeding on terminal growth may result abnormal growth patterns such as shortened internodes or loss of terminal dominance.



Monitoring for cotton fleahoppers should begin as soon as squaring begins, and should continue until first bloom. Sometimes cotton fleahopper infestations do not result in fruit loss. Additionally, not all fruit loss is due to insect feeding but may be due to climatic factors. Thus for cotton flerahoppers it is important to determine square loss or square set before making a treatment decision. Although some cotton varieties will begin squaring at the 5th node, most of today's varieties tend to begin squaring around nodes 7-8. While all square positions can be monitored, for monitoring fleahopper damage we'll concentrate on the 1st position squares. Start at the cotyledons, or where the cotyledons used to be (that is node 0) and continue up the plant to each true leaf, or where one was, counting it as a node. Continue up the plant until you get to the lowest curled up mainstem leaf. This is the top node leaf and will be associated with pinhead sized squares, while those on lower nodes will have larger squares. Also look for scars where squares have been shed. Record the number of fruiting positions (squares + scars) and divide the number of squares by the number of fruiting positions, then multiply by 100 to determine percent square set Click here to view plant mapping slide.

To determine the level of the cotton fleahopper infestation, slowly and quietly approach the plant you intend to sample; avoid casting a shadow over the plant. Fleahoppers are very skittish and will take flight at the slightest disturbance. Count any adults that fly off as you approach the plant and then grasp the mainstem stalk of the plant near the soil surface. This will help prevent fleahoppers from running down the plant undetected. Inspect the plant paying particular attention to the terminal growth, counting adults and nymphs.

The decision to treat should be based on the presence of fleahoppers along with square set. If there are quite a few fleahoppers present and the square set is acceptable, you should probably plan on re-visiting the field in 3-4 days. Square sets can drop from > 90% to less than 60% in a little as a week. Click here to view the cotton fleahopper action threshold. Remember that the action threshold is a guideline and based on plant health, water availability, and other factors, what is considered as an acceptable square set can differ. Fully irrigated cotton can often make up for early square loss through compensation, and in fact may over compensate under some circumstances. However, depending on the length of time and heat units available before crop maturity, some compensated squares may not have the time to develop desired boll and lint maturity resulting in quality issues such as low micronaire. Dryland cotton will often have a hard time compensating for lost squares, but because in drier years many of these fruit will be naturally shed, aggressive management of fleahoppers may not be well founded.

Cotton fleahoppers are fairly easy to kill with insecticides, but selecting the right insecticide is a little more involved. Insecticides with notable fleahopper activity include: Orthene, Bidrin, Intruder, Centric, Trimax Pro, Carbine, Lorsban, Steward, Lannate, Vydate, Dimethoate and various pyrethroids. Bidrin has a supplemental label allowing its use in cotton from emergence to first bloom in Texas, Oklahoma and New Mexico, but you can't apply more than 3.2 oz/ac during this period. At this point in the cotton crop it is important to consider the preservation of beneficial insects and choosing a treatment that is less disruptive in causing outbreaks of secondary pests. Products I would consider least likely to flare secondary pests include Carbine, Bidrin, Steward and low rates of Orthene. Intruder, Centric and Trimax Pro won't flare aphids and are probably fine to use as well, but have been implicated in flaring mites. Pyrethroids are typically not recommended for fleahopper control because they tend to be very disruptive and may flare aphids, and bollworms in non-Bt cotton.

Webworms

Manda Cattaneo, IPM Agent in Gaines County, reports garden webworms feeding in cotton. Garden webworms are frequent pests of soybeans in many parts of the country but rarely found in large number in cotton. The population Manda reported was fairly large, but not

sufficient to warrant an insecticide application. Click here to view the garden webworm picture Manda took. Garden webworms are green with black spots and have a light brown head capsule. As their name implies, they produce webbing and will often web themselves into a shelter and come out to feed. They will also sometimes fold the leaf over themselves for protection. Because this is such a rare pest in cotton we have no action thresholds or treatment recommendations. Their protective behaviors may make control with insecticides more difficult; contact insecticides may not work as well as translaminar (move into the leaf tissue) insecticides. Thus if you need to treat these webworms, you may want to consider using something like Tracer, Demin, Belt or Coragen. However, I have no experience with the level of efficacy you'll get with these, so use at your own risk. Cotton can withstand a great deal of defoliation without impacting yield. I would avoid treating cotton until you are approaching 50% defoliation. If the cotton is squaring and they are taking squares, or if they are knocking the terminals out, then you will want to be more aggressive. DLK

Cotton Pests Around the State

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

Hot, dry weather pattern has settled in over this part of the southeastern Texas with most of the crops faring well under this current weather pattern. Blooming cotton can be found across the entire area with the majority of cotton having 6-8 NAWF. Aphid populations in the area have either been treated or have crashed in the past several weeks to around 0-10 per leaf in most fields. Lygus numbers are low in most program fields with numbers falling well below 1 per 10 row feet in fields with the highest levels. We are continuing to find small numbers of Creontiades in Jackson and Matagorda Counties however as of yet no treatable populations have been found or reported. Bollworm egg lays are variable across the area with program fields ranging from 0-8%. However, damaged squares were between 0-12% and worms were detected from 0- 4%, all of which were less than 2 days old. Treatable levels of stink bugs have been found feeding on squares and bolls in the Vanderbilt and El Toro area of Jackson County.

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

In cotton, bollworm egg lay was observed over the past week. Small worms are being found in non-Bt cotton fields, however in some of the fields we are inspecting, and there seems to be a lot of predation. We find squares in plant terminals fed upon by worms but cannot find the worm. Stinkbugs are being found in soybeans but are expected to show up in cotton soon. We are also watching closely for Creontiades in cotton.

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

Rainfalls from last week will range from 0-15 inches. The heavier rains were primarily from Hillsboro south. North of Hillsboro and the western part of the county remains dry with some exceptions. Cotton growth stage ranges from cotyledon leaves to just past first bloom. The majority of the cotton ranges from 1/3 grown square to just past first bloom. In areas that received substantial rainfall, cotton is growing rapidly and growth regulators are being used. Cotton fleanhoppers continue to be seen in moderate to high numbers in area fields. Fleahoppers range from 4-140 per 100 terminals. Percent square sets ranges from 25-80 percent. Percent square set in the majority of the cotton ranges from 50-70 percent. Bollworm eggs range from 0-10 per 100 plants. Lygus bugs range from 0-4 per 100 plants. Spider mites are only a problem in areas that received limited amount of rainfall.

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

Hot and dry conditions prevailed across north central Texas during the past week. Cotton growth varies from late planted fields which have exerted the first true leaf to those in the bloom to small boll stage. Fleahopper pressure has been heavy and relentless. Producers with squaring cotton should inspect fields closely for fleahoppers and blasting of small squares. Fleahopper numbers have ranged from 10 to 57 adults and nymphs per 100 plant terminals in fields inspected this the past week. Spider mites have been observed in border rows of an increasing number of fields during the past week.

Southern Rolling Plains (reported by Richard Minzenmayer, IPM Agent, Runnels and Tom Green counties)

Hot, sticky and windy pretty much sums it up. Cotton planting is nearing completion and ranges in growth stage from still in the bag to matchhead square stage. Thrips have been a significant problem this year. Seed treatments did a good job for the first 14-18 days after emergence but quickly gave up after 18 days. Much of the cotton which was not treated got hammered. Many cotton fields planted around May 12-20th have reached reproductive stage. Fleahoppers will be an issue in many cotton fields this year. There were lots of weed hosts early and these hosts are drying down so monitor cotton closely and regularly for fleahoppers. Fleahopper numbers ranged from 0 to 92 fleahoppers per 100 terminals this week. Grasshoppers continue to be a problem along field margins in some areas. Scouts are picking up small hot spots of cotton aphids this week in a number of fields.

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

Hot & dry conditions have returned. Cotton ranges from cotyledon to pinhead square stage. Moisture conditions are generally still sufficient, but some dryland fields will need moisture soon. Thrips activity has slowed some and cotton is growing more rapidly. Thrips vary from 0-3 per plant. Fleahoppers are the next pest of most concern. Deer, rabbits, grasshoppers, and flea beetles have caused varying degrees of damage this past week. Flea beetles are causing skeletonization of the older leaves on the plants. One field was treated with acephate. Both the flying and jumbo grasshoppers can be found in several spots across the area. Damage has been minimal, but migration from drying pastures could cause more damage.

Cotton Agronomy

Crop Update

The High Plains has generally experienced above normal high and low temperatures for the first half of June. Heat unit accumulation at Lubbock totals 318 DD60s from June 1-15 vs. 236 for the long-term average Click here to view June Temperatures. For the same period of time, believe it or not, we are not far behind 2008 year. However, we were much drier in that year than now. We still need rainfall in some areas, but there has been relief in many places due to the thunderstorms that keep popping up. Cotton was damaged in several counties over the last week. Several counties including Floyd, Lamb, Lynn, Dawson, Gaines and others perhaps others encountered some severe weather. The good news is that some of these areas also received some excellent rainfall along with the storms. Although any acreage lost is grief for our producers on the receiving end, as a region we are still relatively intact and have excellent crop prospects for 2010. The hot weather has resulted in significant growth of the crop. Some mid-May planted cotton is squaring, and hopefully we will have blooms around July 4! Many producers are beginning to crank up irrigation to top off soil profiles before crop water use soon goes exponential. High temperatures forecast in the 90s for the next week coupled with cotton reaching the squaring stage indicates that crop water requirements will quickly reduce soil moisture

to critical levels in fields which have not had much recent rain. 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 increase 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 observed from 5 to 20% 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 cutout. **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 senescence 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/fruiting 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, especially when the stalks are still alive (or "green"). However, if weather constraints at harvest time delay harvesting after freezing weather, the large brittle plants can still result in picker harvesting difficulties.**

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 matchhead 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 in 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.

Irrigation Issues

Key cotton growth and development information indicates that a mainstem node should develop on the plant every 3 days and with excellent conditions (good plant health, water) perhaps every 2.7 days. With some environmentally damaged cotton with ragged up leaves and mainstems out there that might not necessarily be happening. However, plants that have only experienced high winds may not be too far off that mark.

If using a LEPA system with furrow dikes and dragging socks with a system delivering about 3 gpm/acre: A good strategy would be to use a 2.5 day interval with 0.40 to 0.45" per application or apply as much water per application without causing unacceptable runoff. The system could be sent around once and if no runoff occurs, then one could go around once or twice per week. If satisfied that the profile is deficient now, then the producer may keep the pivot running on a 2.5 day interval. The plants are not using a high percentage of the water at this time, and some irrigation will likely be lost to the environment, but some is hopefully stored in the profile for later use by the crop.

If using a spray system: Make sure to use nozzle applicators that generate large droplet sizes. This should reduce evaporation losses during application. Apply as high a quantity as possible without generating unacceptable runoff. Apply at least 1 inch per application in order to get even a "minimum" amount of water into the soil. This amount can be applied using a system with slightly less than 3 gpm per acre. Temperatures of 100 degrees, high winds, and low relative humidity can result in ET values of up to 0.5 inch/day.

Producers are encouraged to use the Texas High Plains ET (evapotranspiration) Network data available on the AgriLife Research and Extension Center at Lubbock homepage (http://txhighplainset.tamu.edu/statemap.jsp) to determine how much irrigation water to apply. One can click on the nearest weather sta-

tion, then click on the Daily Fax link to observe reference ET values (ET_o), growing degree days, and daily, 3-day, 7-day, and seasonal estimated water used values (in inches per day or the summation for seasonal crop use). Crops include short and long season corn and sorghum hybrids, peanut, cotton, and soybean. Estimated crop phenological (growth stage) data for May 1, May 15, June 1 and June 15 planting dates are provided. Data are present for both the North and South Plains regions. This can be especially useful in determining the start of the initial seasonal irrigation and when to restart irrigation following significant in season rainfall.

Nitrogen Fertility

A one-bale per acre cotton crop will remove about 45 lb of actual N per acre, but due to inefficiencies in uptake and in the soil, about 50 lb N/acre are actually required. Our recommendations are to apply 50 lb N per bale of yield goal. It is important to not over fertilize with N if reduced yield potential is anticipated. This is due to the fact that it makes late cotton more difficult to manage on the back side of the season and may complicate harvest aid performance. Some late-season insect problems, such as aphids, can be aggravated by high N status plants, and incidence of Verticillium wilt may be increased. There is good evidence that excessive N in general can also result in delayed maturity with corresponding decreases in maturity of the fiber (micronaire). I seriously doubt that any high yielding drip irrigated field really needs more than about 150 lbs N/acre for yields up to four bales/acre. Assess the yield potential of your specific fields and make N fertilization adjustments accordingly. Much of the dryland is in good to excellent condition. Apply sidedress fertilizers as early as practical (but before bloom), and take care to minimize root pruning during application. It takes about 10 lb of N to produce 100 lb of lint. If the yield potential is reduced by one-fourth to one-half of a bale per acre due to late planting or lagging development, then also reduce the actual N rate by 15 to 25 lb per acre. **A good rule of thumb is to apply 30 to 50 pounds of actual nitrogen to dryland fields that are emerged and have good soil moisture. Benefits from low rates of foliar fertilizers are questionable.**

A knifing rig fitted with coulters would be a good way to accomplish N fertilization. Apply the fertilizer to the side of the bed for low elevation spray (LESA) fields and place coulters to the side of the bed into the "wet furrows" for low energy precision application (LEPA) systems. For alternate-furrow subsurface drip irrigated fields, place the coulters to the side of the bed in the furrow with the drip tape, being extremely careful not to damage the tape. Since most drip tape has been placed 10-14 inches or so deep, placement of N fertilizer 4-5 inches deep should suffice.

Many producers may be tempted to cut fertilizer use by a certain percent or to use a gallon per acre of this or gallon per acre of that to replace a sound fertilizer program. **The cotton plant has a physiological need for nutrients. These nutrients have to come from somewhere if good to excellent yields are to be expected.** If one does the math concerning what some of the "gallon per acre" products can supply, then it is fairly easy to determine that these products will not meet the needs of the crop. And they could be very expensive when comparing the "program price" with how many pounds of N the same money could buy using conventional fertilizers. If good to excellent yields are obtained after cutting back on a recommended fertilizer management program, then the producer is actually "writing checks on the checking account" in the soil. If no deposits are made over time, then a shortage of fertility will occur and yields will be adversely affected. Soil sampling and testing was discussed during the winter Extension meetings, and I hope that our producers who are cutting back on fertilizer use have solid justification to do so (a soil test report that indicates that there is considerable fertility in the "checking account").

The amount of organic residue of the previous crop is also important and will potentially adversely affect nitrogen availability. If the previous crop was grain sorghum or if cotton was planted into terminated small grains

cover then producers should consider increasing nitrogen fertilizer rates by around 20-30 pounds per acre in order to have adequate nitrogen for the cotton crop due to microbial immobilization of crop residue.

Fertigation of UAN (32-0-0) is a practical application method in the High Plains, especially in center pivot and subsurface drip irrigated fields. This results in lower application cost. One should consider whether a LEPA system with drop hoses is used vs. a spray system. If a pivot rigged with spray nozzles has marginal water quality and extremely hot, dry conditions are encountered, then some salt burn may be encountered on foliage. **To obtain maximum utilization of applied N, the total amount of N should probably be injected between first square and peak bloom.** This type of N management fertigation scenario has been used and validated for the last several years at the Lamesa AG-CARES facility and Halfway Helms Farm using alternate furrow LEPA irrigation. Figure 1, nitrogen uptake, is presented here, which shows a typical N uptake curve for cotton and corresponding crop development stages. Suggestions for applications of approximate percentages of total N are also shown.

Several N related publications are available

1) A Department of Soil and Crop Sciences cotton publication entitled Managing Nitrogen Fertilization in Cotton.

2) A Department of Soil and Crop Sciences publication entitled Nitrogen Management in Cotton.

3) A 2005 High Plains Crop Production Guide Series publication concerning nitrogen fertilizer management in cotton.

RKB

Non-cotton Insects

Cornucopia of pestilence

Brant Baugh, Lubbock County IPM Agent, summed it up perfectly yesterday when he said, "There is a cornucopia of pestilence just waiting to happen." That is why I am lumping the non-cotton crops together. **Fall armyworm** larvae are still doing damage to corn and sorghum in some places and not others. I put out pheromone traps for fall armyworm, southwestern corn borer and European corn borer this week and will have some counts next week. Ed Bynum, Extension Entomologist in Amarillo, just reported very high numbers of fall armyworm moths in his traps. Weekly trap captures for the two traps were 989 and 310 moths. **False chinch bugs** have reached treatable levels on the margins of some fields. Usually a margin treatment will take care of the problem. **Spider mites** are increasing in area corn.

Sunflower

There are a few fields of sunflower that reached bloom this week. It is very important to begin **sunflower head moth** applications at bloom. Nearly 80 percent of sunflower moth egg laying occurs within 4 - 7 days after a bud begins to open (yellow ray petals become visible). Insecticide applications should begin when 15 to 25 percent of the plants in a field are blooming and sunflower moths are found in the field. **Carrot beetle adults**, which look very much like regular June beetles, are causing some very significant damage to sunflowers in Crosby County and areas nearby. The adults (pictured here at BugGuide) chew the roots below the soil surface, and this year's infestations are quite extraordinary in places. There is only one generation of carrot beetles per year. The beetles doing the root damage to this point are actually the overwintering generation. Their progeny will emerge as adults beginning around the first of July, and these will begin chewing on sunflower roots. The scientific literature shows that carrot beetle adult numbers

from this year's generation will hold steady through August and begin a gradual decline in September. The newly revised version of Managing Insect Pests of Texas Sunflower is available on our website. RPP

Sunflower head moth

Non-cotton Crop Agronomy

Hailout/Replant/Late Plant Guide Update Will be Completed Shortly

The 10th annual edition of Texas AgriLife Extension Service' "Alternative Crop Options after Failed Cotton & Late-Season Crop Planting for the Texas South Plains" is being updated for 2010. Compiled by Extension agronomist Calvin Trostle, the guide is a 'first things' approach to what you need for assessing hail damage and stands in current crops, and what your replant options are. Tips for planting dates, seeding rates, herbicides already applied, and contractor contact information are noted throughout the document.

The document will be available from county Extension offices on Monday, June 21, on the web at http://lubbock.tamu.edu/cotton/pdf/cropreplantoptions10.pdf, or by calling the Texas AgriLife Research & Extension Center at Lubbock. If you need quicker information last year's edition is still posted under the 'What's New' section of the Lubbock Center main page at http://lubbock.tamu.edu

Late-season guidelines are provided for the following crop in the South Plains region: Grain sorghum, Sunflower, Sesame, Black-eyed peas and other pea & bean crops, Guar, Soybeans, Peanuts, Corn & corn silage, Summer annual forages including sorghum/sudan, hybrid pearl millet, and forage sorghum

Wheat Protein Concerns & Labs for Protein Testing

Many elevators are not purchasing wheat due to low prices and purported concerns over low protein in wheat. Wheat grain often exceeds 12% protein, which sometimes might command a premium. Protein is expected to be above 11%, however, and several buyers have focused on this potential reason to discount wheat greatly even though the wheat isn't routinely being tested or kept separate at the elevator if wheat is below 11% or over 12% protein.

Protein levels can be reduced when higher yields are achieved. This situation can be compounded by minimal N applications let alone no nitrogen fertilizer at all. If you are interested in obtaining a protein analysis of your wheat grain, the labs below can conduct the test. Wet chemistry often tends to be more accurate, but may cost more. Near infrared analysis, or NIR, is quicker, but unless the lab runs a lot of samples (to develop a better calibration curve; many labs do) might not be as accurate.

Amarillo Grain Exchange, Amarillo, 806.372.8511, http://age-inc.com/default.asp Protein analysis only is $6.00 using NIR. Need

500 grams of seed. If you want the sample graded then they will need about 1,500 grams.

Servi-Tech, Amarillo, 800.557.7509. http://www.servitechlabs.com Will run wet chemistry analysis for $10.55 a sample. Also will need about 500 grams of seed.

A&L-Plains Labs, Lubbock, 806.763.4278, http://www.al-labs-plains.com Uses wet chemistry for $15, one day turn around.

Texas A&M University Soil, Plant, & Forage Lab, 979.845.4816, http://soiltesting.tamu.edu/ Protein analysis is $5 for wet chemistry. CT

Insecticide Update

Correction: Sevin NOT cancelled

I wrote in the May 28th issue that Bayer CropScience was cancelling several formulations of Sevin. This was incorrect; they are canceling some Sec. 24(c) registrations because these uses have been folded into the new regular label uses. I would like to thank Mike Schwarz of Bayer CropScience for clarifying this for me. It is very good news that Sevin is still with us. RPP

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Texas High Plains ET Network

Irrigation at Lubbock

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County IPM Newsletters

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