FOCUS on South Plains Agriculture

A newsletter from the Texas AgriLife Research and Extension Center at Lubbock

Volume 50 number 11 27 July 2011

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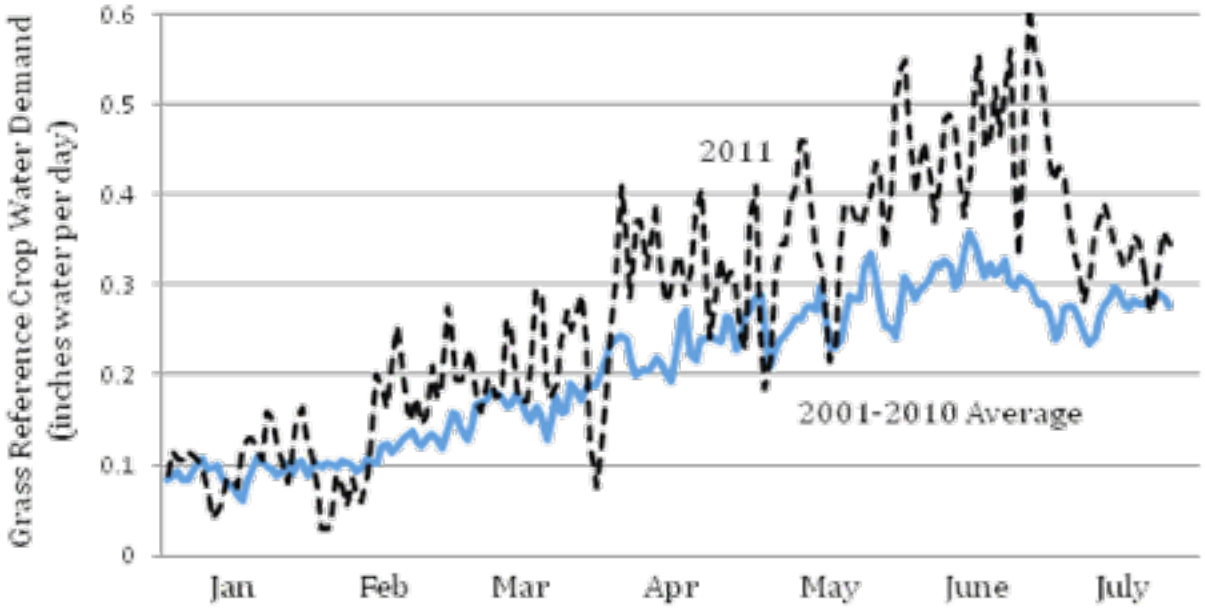
Crop Water Management

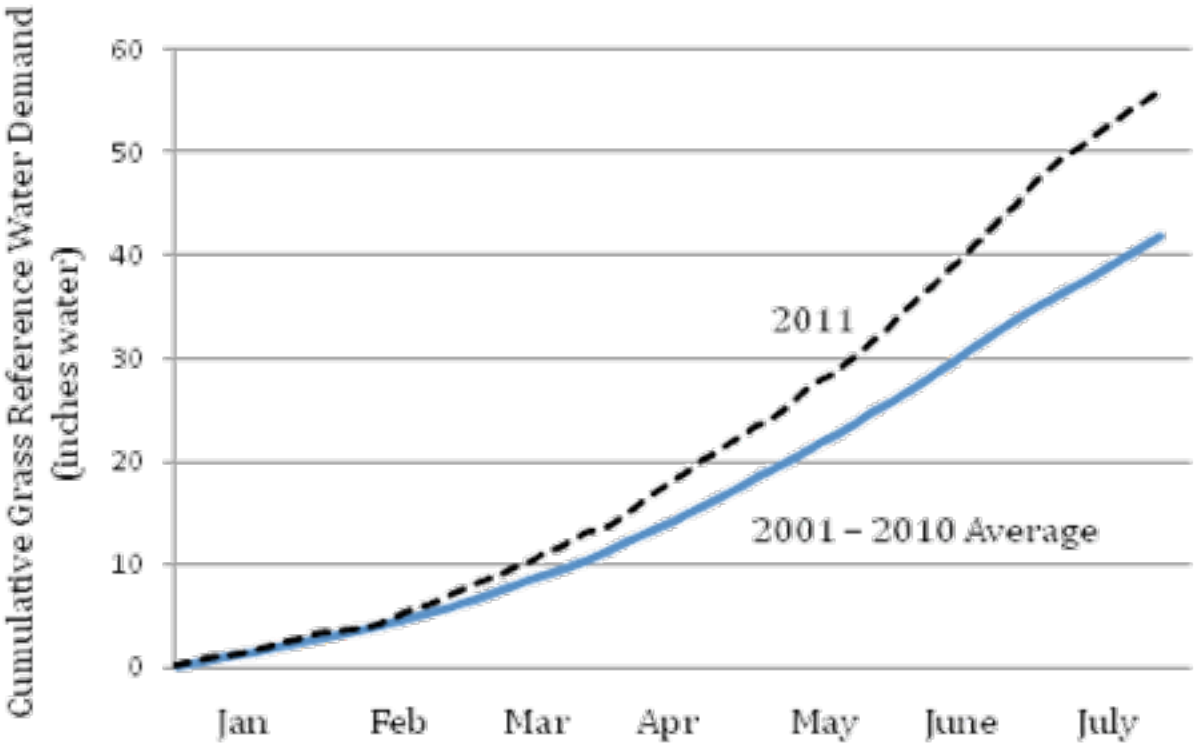
The Situation as of July 23rd

Atmospheric crop water demand, determined by crop evapotranspiration (ETc) estimates, continue to exceed "average" or "normal" values, and except for a few localized storms, precipitation is still lacking throughout most of the Texas High Plains region. The following figures, courtesy of the Texas AgriLife Research and Extension Irrigation programs at Lubbock and Amarillo, summarize the crop water demand situation.

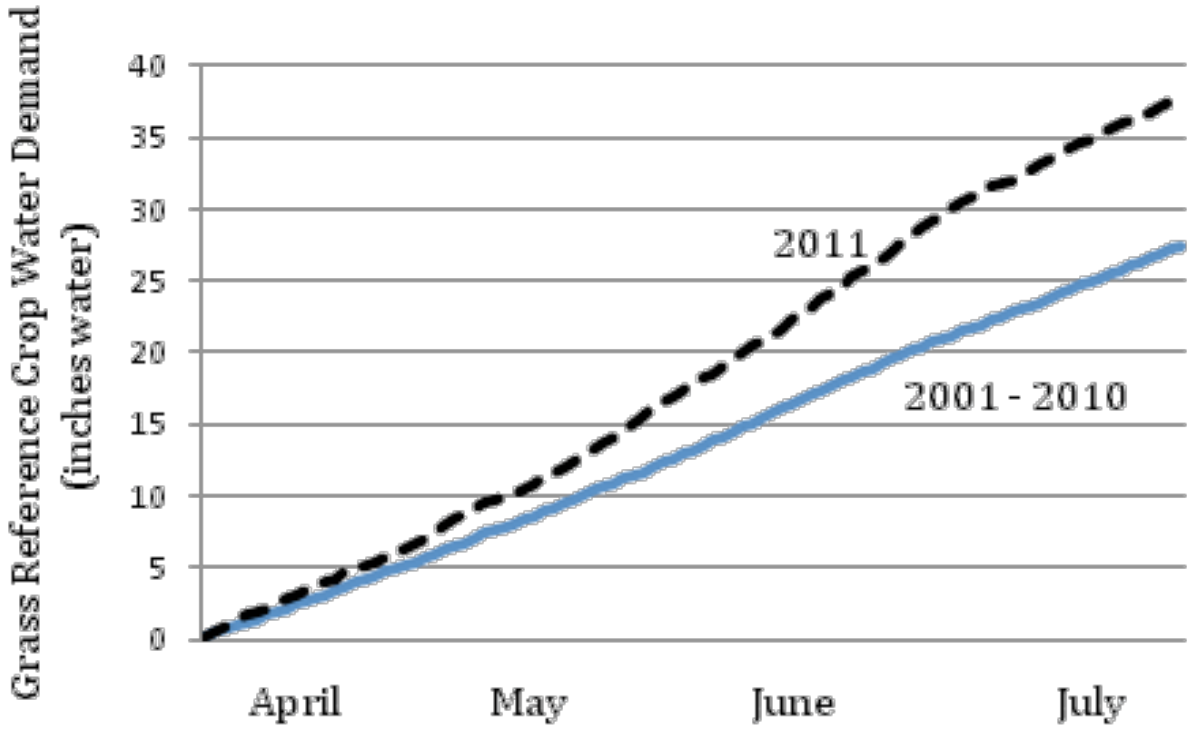
Calculated grass reference water demand (reference evapotranspiration) and cotton crop water demand (ETc) for 2011 (to date) are compared to 2001-2010 average values in the following graphs. These provide a fairly good quantitative indication of the severity of crop demand obvious now in the field: the hot, dry conditions this year are truly exceptional.



Average grass reference crop evapotranspiration (ETos) in 2011 compared to the 2001-2010 average daily ETos values for the period January 1 to July 22 at Lubbock, Texas.



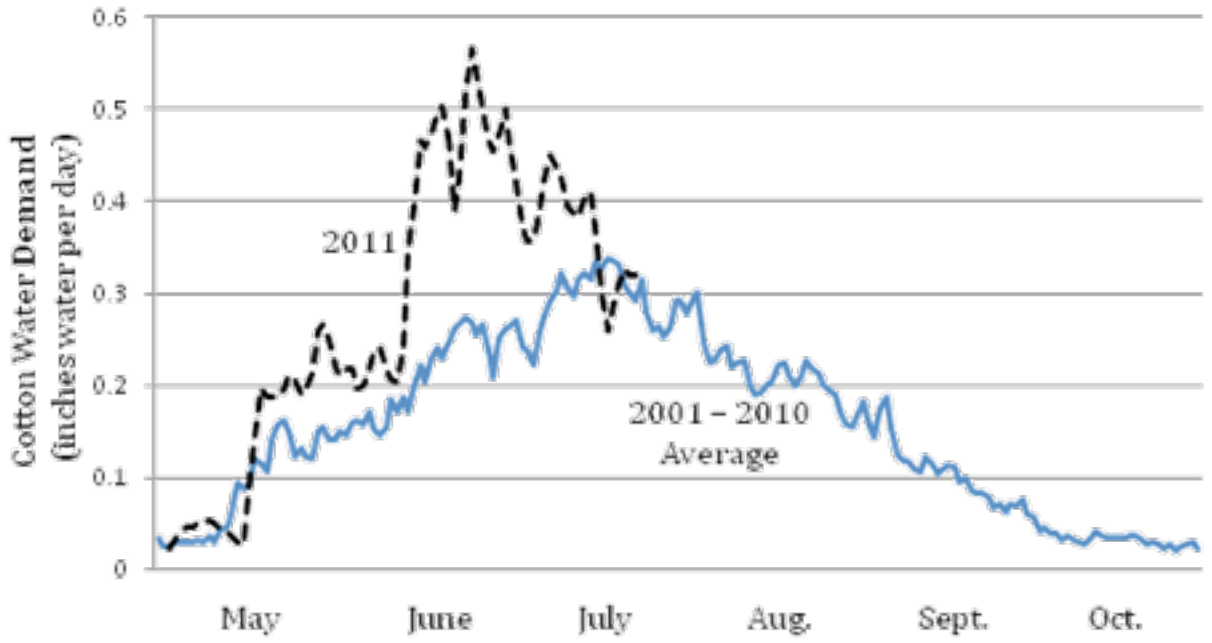
Cumulative grass reference crop evapotranspiration (ETos) in 2011 and 2001-2010 average daily values for the period January 1 to July 22 at Lubbock, Texas.



Cumulative grass reference crop evapotranspiration (ETos) in 2011 and 2001-2010 average daily values for the growing season period ***April 15 to July 22*** *at Lubbock, Texas.*

The ten year average grass reference crop water demand (ETos) from January 1 to July 22 is 41.9 inches; the 2011 ETos to date is 56.2 inches, representing a 34% increase over the average or normal demand value. The ten year average grass reference crop water demand (ETos) from April 15 to July 22 is 27.4 inches; the 2011 ETos for the same period is 37.8 inches, representing a 38% increase over the average for the previous 10 years.

Crop-specific water demand is related to the atmospheric water demand (estimated by reference crop ETos) and the crop's growth stage (translated into a crop coefficient function). Cotton crop water demand estimates (for the May 1 planting date) at Lubbock for 2011 are compared to the 2001 – 2010 averages below. The long-term average cotton crop water demand for May 1 – July 22 is approximately 15.2 inches; 2011 cotton water demand for May 1 – July 22 is estimated at 23 inches. This represents a 52% increase over the 10 year average crop water demand.



Ten year (2001 - 2010) average and 2011 seasonal daily cotton crop water demand estimates for cotton planted May 1 at Lubbock, Texas.

These exceptionally high water demand estimates for the current season are driven by extraordinarily high air temperatures. Low humidity, higher than normal wind speeds and high solar irradiance (lack of cloud cover) also contribute to the high atmospheric demand.

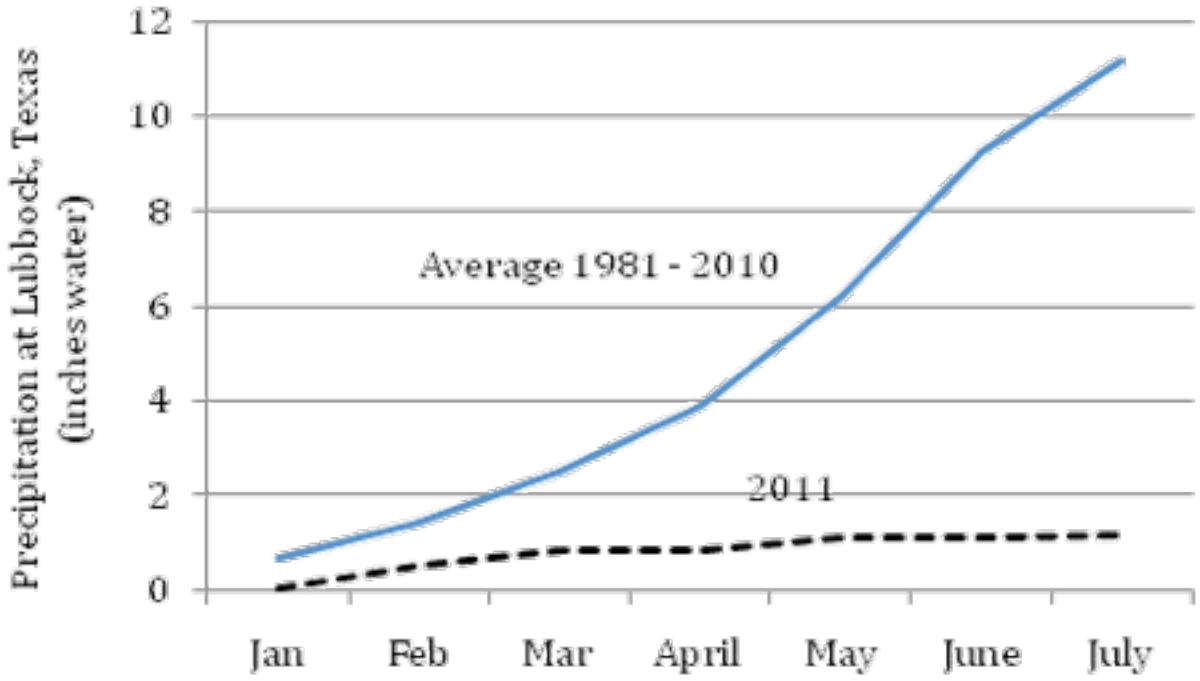
SOME ADDITIONAL CONSIDERATIONS

Atmospheric crop water demand estimates represent a maximum expected water use by a healthy crop under ideal conditions (including unlimited access to water). Limited available water (from stored soil moisture, rainfall and irrigation), limited root systems, drought stress and other factors reduce the amount of water actually used by the crop.

If irrigation capacity is less than crop water demand, soil moisture reserves will be used to meet crop water demand. As soil moisture is depleted, it becomes increasingly more difficult for the plant to extract water from the soil (due increasing soil moisture suction, or "potential"). An extensive root system provides greater access to stored soil moisture reserves. Root systems limited by shallow soils, caliche layers, or limited soil moisture have limited access to soil moisture and nutrients and are more vulnerable to drought stress.

In plants stressed by lack of soil moisture and/or high temperatures, physiological responses may include loss of turgor pressure and closure of the plants' stomata (leaf pores), effectively reducing the plants' water loss to the atmosphere through transpiration. Reduced transpiration can be indicated by increase in plant canopy temperature, since transpiration is essentially an "evaporative cooling" process. Plant turgor pressure and canopy temperature measurements provide quantitative indicators of plant water stress. The "bottom line" is that drought stressed plants transpire less (use less water) than healthy plants. Crops differ in their responses to this stress (drought stress tolerance). While relatively drought tolerant crops such as cotton can tolerate mild stress with good results (acceptable yield and quality), moderate to severe drought stress will affect yield and/or quality of most, if not all crops. Obviously drought sensitive crops (such as corn) will be more negatively impacted.

In the Texas High Plains, we generally expect to receive some in-season rainfall, and we manage irrigation as supplemental to that rainfall (to help meet the shortfall). The figure below summarizes long-term average cumulative rainfall and 2011 rainfall to date for Lubbock. Obviously the rainfall received to date in 2011 falls far short of average.



Average January to July rainfall (1981 – 2010) and 2011 rainfall to date. (Source: National Oceanic and Atmospheric Administration National Weather Service)

Crop water demand estimates for selected crops in the South Plains for the week of July 18-24, 2011 are summarized below.

Crop	Stage	Crop Water Demand, inches per day
Corn	Black layer	0.26
	Dough	0.41
Cotton	1st Bloom	0.39
	1st Open	0.28
Sorghum	Soft Dough	0.31
	Flag	0.28
Soybeans	V-6	0.27
Peanuts	Full Pod	0.34

Irrigation system capacities (gallons per minute per acre) are presented in equivalent inches water per day and inches water per week in the following table.

Irrigation capacity equivalents expressed in inches per day and inches per week		
GPM/Acre	**Inches per Day**	**Inches per Week**
1	0.053	.037
2	0.11	0.74
3	0.16	1.11
4	0.21	1.48
5	0.27	1.86
6	0.32	2.23
7	0.37	2.59
8	0.42	2.97
9	0.48	3.34
10	0.53	3.71

For reference (for readers from outside the South Plains), many highly efficient low pressure center pivot and subsurface drip irrigation systems in the region are designed to deliver 3-5 gpm/ acre, with some operating on less. Obviously the extremely high atmospheric crop water demands of the current season have exceeded the capacities of many wells and irrigation systems in the region. The crop will only use water that is readily available and then it will go into drought stress. DP

Cotton Insects

NEW PEST ALERT: THRIPS

A new thrips has been observed feeding on and causing extensive damage to cotton in Gaines County. This thrips has been tentatively identified as Kurtomathrips morrilli. This species was originally described in Arizona and has been collected in California, Arizona, New Mexico, Nevada, Texas, Florida, Hawaii, Jamaica and India. It can feed and damage a number of crops including cotton, eggplants, beans and chrysanthemums. Reports of it damaging cotton are quite old, dating back to the 1920-50's, and little information pertaining to these infestations exists.

This species is very small, about the size of a mite, and are very difficult to see with the naked eye. They tend to be found on both upper and lower leaf surfaces although initial infestations appear to begin on the underside of the leaf. They seem to prefer to rest and initially feed along the leaf veins, but will spread their damage throughout the leaf surface.

The wingless adults are tan in color while the winged ones are more amber. The immatures are creamy white. The adults are mostly wingless although winged were originally reported in Hawaii in 1965. We found several with wings in Gaines Co.

Most adult Kurtamatothrips *are wingless*

Damage can easily be mistaken for mite damage, but tends to be more silvery in appearance and without webbing. There does not appear to be a preference for terminal growth or blooms as we see with most other thrips species infesting cotton.

Kurtomathrips *damage (photo courtesy of Manda Anderson)*

Although we have observed severe damage from these thrips in one field, we have not seen other infestations. However, I suspect that there are other infestations out there and we need to be watching for these. The field where this infestation was observed was highly stressed cotton (drought stress and nematode) which may have set the plants up for infestation by these thrips. Whether or not they will heavily infest less stressed plants is not certain, but we are watching this infestation to see if it moves to a less stressed area of the field.

I would treat these thrips similar to spider mites as far as determining when to treat. If damage is readily evident and thrips are present, an insecticide application may be warranted. Control of these thrips is not certain and there are no insecticide efficacy data for this thrips species. We initiated a test to determine what products may offer control, but we have no data yet.

Spider Mites, Beet Armyworms and Aphids

Spider mites continue to be found throughout most of the region, but severe outbreaks seem to be diminishing. Spider mite destroyer beetles and six spotted thrips now appear to be maintaining control of most populations. As we move further into fruiting and boll filling it is more important to prevent extensive damage by mites. Data from last year's work suggests that you should treat fruiting cotton when glance and go spot checking reveals that 50% of the spot checks show noticeable reddening, not necessarily extensive, that a miticide application is warranted.

Beet armyworms have been showing up in area non-Bt cotton but not at levels that would justify an insecticide application in most cases. Beet armyworms are usually heavily preyed upon by a number of beneficial parasitoids, so large numbers of small worms will usually be reduced to a few large worms within a week. Also, because the insecticides we currently have are so much more effective on beet armyworm than in the past, we can allow these worms to gain a little size and still be able to control them. Since the small worms do little fruit feeding in most cases, do not panic if you have a pretty large infestation of small worms. Once they get some size and appear to be beginning to move to the fruit, then is the time to take action. Hopefully the beneficial insects will take care of them for you.

Insecticides that show good efficacy toward beet armyworms include: Belt, Coragen/Prevathon, Demin, Diamond, Intrepid, Tracer/Blackhawk and Steward.

Beet Armyworm and Yellow-striped Armyworm Action Thresholds

Cotton Stage				
Pre-bloom	Treat to prevent excessive defoliation and/or terminal loss; maintain a minimum of 2 plants/ft-row (dryland) or 4 plants/ft-row (irrigated) cotton with 20-25% undamaged terminals			
Post bloom	**≥10% infested plants and**			
	Feeding Site	**< 0.25 inch larvae**		**≥ 0.25 inch larvae**
Bloom to 5 NAWF	Primary leaf feeding	20,000 larvae per acre	Or	14-25 larvae per 100 plants
	Obvious fruit feeding	7,000-12,500 larvae per acre	Or	12 larvae per 100 plants
After 5 NAWF	Any	20,000 larvae per acre		

A few aphids are showing up despite the heat. I have yet to see any treatable populations, but keep an eye out for them. On stressed, fruiting cotton, I would be more aggressive with this pest and not let them exceed a threshold of 25 aphids per leaf. The normal threshold is 50 per leaf. DLK

Corn and Sorghum Insects

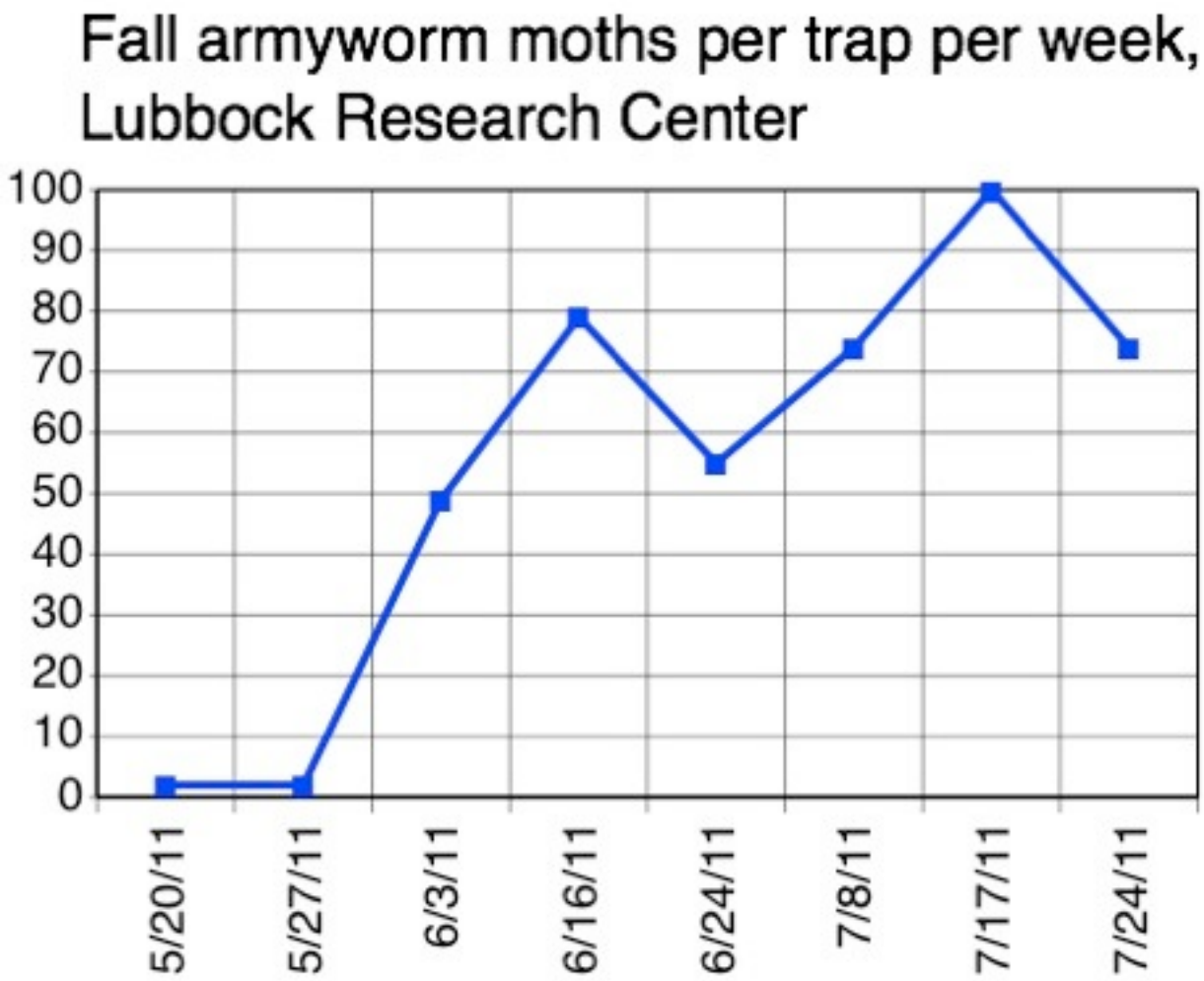
Spider Mites

Mite levels are all over the board and all corn fields should be scouted. The good news is that predators, especially six-spotted thrips, are building up as well. Greg Cronholm in Hale County is also reporting that he is finding some mites in sorghum, although they are not yet at treatable levels.

Fall Armyworm, Corn Earworm and Beet Armyworm

I have had reports of as many as 12 headworms per sorghum panicle on early blooming sorghum north of Lubbock. Whorl stage sorghum is seeing increasing numbers of caterpillars, at least in my fields at the Lubbock Center. In both whorl stage and headed sorghum the pest complex consists of fall armyworm, beet armyworm and, to a lesser extent, corn earworm. Corn, on the other hand, has plenty of fall armyworms and corn earworms. Within the same corn field I am finding approximately one fall armyworm per plant when the plants are under significant drought stress, and fewer fall armyworms on corn that is under less drought stress. Corn earworm larvae are present in more than one half of the ears I have examined, and many ears have both fall armyworms and corn earworms. Once these insects become adults they will fly to late corn, sorghum and cotton to lay eggs. First generation Bt corn (non-pyramid plants that have only a single toxin) are relatively ineffective on both species and will contribute moths to the next flight. Based on the age structure of the fall armyworm larvae I am finding, it appears that the trap captures will start to increase toward the end of next week and continue to increase from there. It looks like we are heading toward a challenging sorghum headworm year. Fall armyworm trap captures are presented on the next page.

On the plus side, southwestern corn borer trap counts at Halfway are relatively low and I have not seen many larvae in the field. Bt corn is basically immune to southwestern corn borer but non-Bt fields and refuges should be scouted. RPP



Non-cotton Agronomy

Huskie Herbicide Approved in Grain Sorghum

On July 11, Huskie Herbicide was approved for over-the-top weed control (including pigweed) in grain sorghum. The new supplemental label includes grain sorghum, forage sorghum, and perennial grasses. The active ingredients are bromoxynil (Buctril) and pyrasulfatole. Mid-season weed control, including Palmer amaranth and kochia is of immediate interest for this new label for over-the-top application to grain sorghum at 3-leaf stage to 12" tall. These weeds and others listed on the label will be controlled with Huskie plus atrazine when applied up to the 4-inch stage of weed growth. Other major weeds for control include devil's claw, henbit, kochia, three species of morningglory, marestail, whereas partial control is noted on bindweed and puncturevine.

Recent Texas AgriLife work with Huskie in grain sorghum at Lubbock (Pete Dotray) and Amarillo (Rex Brandon/Brent Bean) has demonstrated very positive results. Key results at 7 & 42 days after treatment (DAT) from the Amarillo study include:

- 91+% control at 7 & 42 DAT of 3-4" Palmer amaranth when Huskie is applied alone at labeled rates (13 & 16 oz./A).
- 95+% control when tank mixed with 0.5 lb. atrazine per acre at the 13 oz. Huskie/acre rate.
- Adding 4 oz./A of Clarity (dicamba) improved control in one of two years over Huskie alone for Palmer amaranth control.
- To demonstrate how effective Huskie is at controlling Palmer amaranth, additional research tests included labeled Huskie rates on weeds up to 18" tall (of course the sorghum was well past 12" tall, the label limit on plant height), and control typically exceeded 80% and was further improved by including 0.5 lb. atrazine per acre.
- When grain sorghum tolerance was examined, only minor leaf burn (<20%) was observed 3 DAT to 4−leaf sorghum whereas when applied to 8−leaf sorghum (comparable to 12" tall on the label), even less leaf burn was observed. Fourteen DAT very little leaf burn was apparent following any of the applications. Yields were not affected. But when dicamba was included some injury was observed, and yields were slightly reduced when applied at sorghum boot stage
- Huskie should be applied with ammonium sulfate.

Huskie appears to be a much better option than 2,4-D (if even allowed in your county due to area cotton) and dicamba, which both can cause development problems in grain sorghum if not applied properly. Remember, the smaller the weed (as well as actively growing) the better control that can be expected.

What about rotation to cotton in 2012? Currently the full Huskie label is 'field assay' for cotton the next year. Otherwise, crop rotations are as follows:

- 1 month: wheat, triticale, rye, oats
- 4 months: alfalfa, grain sorghum, soybean
- 9 months: corn, sunflower, safflower

Bayer anticipates addressing the rotation restriction to cotton in more detail on the label in the future, but there does not appear to be a major concern about cotton in 2012, but of course if you have doubts, then the field assay noted in the full label can potentially provide you added information. Industry comments note, however, that drift from Huskie on to cotton is expected to cause injury to cotton though apparently not nearly like 2,4-D may cause. Huskie in fact is labeled for control of volunteer cotton.

Sorghum varieties may differ in tolerance to herbicides. If a variety or hybrid has not been tested, treat only a small area until the herbicide tolerance has been confirmed. Sensitivity of sweet sorghum (sorgo), sudangrass, sorghum/sudan, and dual-purpose sorghum varieties to Huskie is not known thus the label states that Huskie use on these sorghums is not recommended.

South Plains dealers and distributors report that the product should cost the farmer $8-9/acre at the 13 oz. rate. As for availability, dealers and distributors note Huskie is in the system, but may not be at your immediate location. Call your supplier as soon as possible if you may be interested in trying Huskie. See the Huskie supplemental label for more information. Additional

points include minimum 10 gallons of water per acre, use of ammonium sulfate, and recommended nozzle tips (minimize drift, produce medium droplet size).

Finally, a few dryland situations exist due to the recent rains in the northwest South Plains where grain sorghum and pigweed are growing. Atrazine use on coarse soils and applied after June 20 usually states no cotton the next year. If any dryland received atrazine with Huskie, but then potentially has risks to cotton in 2012 if only minimal rainfall is received, then it might be better to apply Huskie alone.

Grain Sorghum Heading is Delayed

Numerous grain sorghum fields that would normally be heading and even flowering are delayed in development. This is a natural defense of grain sorghum under stress. If you have a hybrid with the 'stay green' trait, then this may be even more pronounced. Recently examples include:

- Lubbock Co., July19: medium maturity planted May 20th, 13 mature leaves, no boot stage. Heads inside the stalk were pushing up, but I estimated another 10-12 days before heading, and then 4-5 days to initial bloom, which would be about 74-77 days, whereas we typically see mediums reach half bloom at 64-68 days after planting.
- Lynn Co., July 22: medium-long maturity planted May 12th, 14 mature leaves, no boot stage. Heads were ~1" long down in the stalk. Estimated heading in 10-12 days, with 4-5 days to initial bloom, or flowering at 85-88 days after planting, when about 69-74 days is typical for a medium-long.
- Hockley Co., July 22: medium-long maturity, planted April 25, at 10% bloom and 33% heading. Half bloom expected in 5-7 days due to uneven emergence, or at about 93 days (up to 20 days delayed).

You may need to cut stalks to locate the growing point and the small head above it. Figures 1a, 1b, and 1c note different heads inside the stalk that were 1/4", 5/8", and 1.5" long. Finding the heads gives assurance that growth and development is progressing albeit slowly.

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Figure 1a. Small head, 1/4" removed from grain sorghum stalk, sorghum planted ~May 15th

Figure 1b. Immature head 5/8" long located in stalk about 12" above the soil. Expected heading still 12-14 days away under stress conditions

Figure 1c. Head approximately 1.5" long down in the stalk, with expected emergence in 7-10 days

Grain Sorghum and Diverting Irrigation

As we faced questions starting about four weeks ago relating to abandoning corn irrigation, so the questions have started with grain sorghum. More often than corn, grain sorghum appears to be paired with cotton on center pivots.

Calculations for corn suggested that if little to no soil moisture was available, we returned to normal rainfall pattern (which we haven't) then 75% ET on corn required a minimum of 5.0 gallons per minute per acre. A similar calculation for grain sorghum is about 4.0 gallons per minute per acre to maintain 75% ET Sorghum ET is normally slightly lower, and with modest plant populations sorghum can withstand more stress. The advantage grain sorghum has relative to corn is that no sorghum growth stage is nearly as sensitive to heat and moisture stress the way tasseling and silking corn is.

In hindsight, the mistake that many corn farmers made is the decision to possibly concentrate irrigation water on fewer acres was made too late. For grain sorghum, the decision to continue irrigation will encompass the following parameters:

- What is your irrigation capacity? If you have only grain sorghum under irrigation, then even limited irrigation can sustain the crop. However, for medium-long hybrids, limited irrigation is not recommended in this hot environment. With your crop insurance in consideration, you may benefit in reducing irrigation acreage. Picture what a field of puny heads will look like, and think about how you can avoid that by ensuring adequate water on some of your acreage.
- Hybrid maturity and stay green trait can extend the time during which you hope to finally get a rain. Stay green can be a real plus—breeders selected for it, but if it never does rain,

then it actually can work against you as the crop doesn't go ahead and attempt to fill grain.

- Plant population—if you have a modest plant population of less than 45,000 per acre where you were full irrigation, or less than about 36,000 plants per acre, where you were limited irrigation, then the crop can bear more heat and drought stress than high population fields. This may factor in decisions on whether to terminate irrigation.

Shared irrigation with grain sorghum and cotton

In this case, if you are below the 4 gpm/A noted above for grain sorghum as well as cotton, then it makes sense to evaluate your current stands. Should you divert water? Is there any scenario where grain sorghum is the favored crop vs. cotton?

- If you have the irrigation capacity, from an agronomic point of view, you can keep both crops going. I have visited only a few fields where I would say the sorghum crop was in danger of producing little to no grain yield under the current shared irrigation scheme.
- Do you have a cotton price locked in at $1.20-1.30/lb. or higher? If you are not contracted or in a pool, then prices are considerably less, whereas grain sorghum is $10.50-10.75/bushel.
- What is the nodes above white flower (NAWF)? Many cotton fields are coming into bloom at 6 or even 5 NAWF. If this is the case in any of your fields then the cotton is severely stressed. The advantage to grain sorghum then in this case is hopefully you have a modest plant population so you can push water to the cotton to try to sustain 5 NAWF, but then at some point later planted sorghum can make use of the water better than the cotton (possibly starting mid-August?). In this case it may not be a good idea to let the entire sorghum crop go as cotton can't make use of all of the extra water from sorghum.
- If sorghum is demonstrating stress as in Fig. 2, then sustaining cotton is an option you must consider, anything to attempt to keep the crop going. This will come down to your irrigation capacity and whether you can actually relieve stress on your cotton. Our cotton staff suggests that you need to focus water as much as possible to the cotton to stave off blooming out the top, but if that is occurring, then water might have a better home elsewhere, particularly if you have a later planted sorghum crop.

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Figure 2. Hockley Co. grain sorghum field under drip irrigation. Neighboring cotton is about 8 NAWF and shows good potential if sustained with irrigation. Sorghum may be suitable for hay though replacement cost of nutrients removed should be calculated (this field is a candidate for high nitrates with 115 lbs. N/acre applied). Sorghum fields such as this that are not sharing water with another crop should be sustained as there is still moderate yield potential though a reduction in acreage should be considered if irrigation is less than ~4 gpm/A.

Peanut Irrigation and Diverting Water

Producers in the southern counties of the South Plains have already made decisions to terminate irrigation water to cotton in order to sustain peanuts. USDA-RMA issued letters to this effect about 3 weeks ago. Recent evapotranspiration at Lamesa for the 30 days beginning June 21 demonstrated average daily water use in peanuts at 0.41" per day, which would require ~5.8 gpm/acre IF your irrigation system was efficient. Conventional wisdom suggests that this still may be inadequate though since no peanut fields are currently lapping, water use actually still might be at or below this level.

Reports from central and northern counties do not note the concerns with pegging in peanuts (it is occurring and appears adequate) where irrigation is good. Terry, Yoakum, Dawson, and Gaines Counties are experiencing widespread retarded pegging. Typically in these areas a peg needs to be in the ground by about August 15th to have a high probability of making a harvestable peanut.

Field observations from July 26 in Gaines Co. noted about 50 to 65 pegs that have penetrated the soil per foot of row (but less than 10% of those actually had pods on them). This

does not bode well for yield potential although what happens between now and mid-August will influence the outcome. Seven and 10-day forecasts, however, don't promise much break from the heat or for rain. Recalling former state peanut specialist Dr. Robert Lemon's writings about 1998, which was excessively hot in May and hot and dry into July, much of that year's peanut crop was saved by high pegging in the first two weeks of August. Overall yields ultimately were good, much better than expected. One runner field in Gaines Co., about 12" wide down the row, had many flowers, but essentially no pegs. Will this field make anything? If water is intensified, perhaps, but it is uncertain. Data from other U.S. peanut production regions suggest that only about 20% of flowers produce harvestable peanuts. Farmers should check pegging periodically. Nothing short of irrigate, irrigate, irrigate is going to produce a crop this year. The amount of pegging we can get in the next 2-3 weeks will go a long way toward determining how well our 2011 peanut crop does. As much as drag sock irrigation is water efficient, if you have concerns about pegging in your fields, you need to switch to nozzles.

Should farmers terminate irrigation on some peanuts? Agronomically, on some fields, probably yes. But crop insurance rules will dictate farmers' options, and at this point though no farmers have indicated they are concentrating water on reduced acreages of peanuts, it is feasible to believe this may be a good agronomic option. As for overall yield potential, the high price of peanuts makes an acre of production, even if only 2,000 lbs./A highly valuable.

Wheat Variety Recommendations for Grain

Dr. Brent Bean, Extension agronomist, Amarillo, compiles a running summary of wheat variety recommendations for the Texas High Plains on an ongoing basis. The current edition of the 2011 Panhandle/South Plains wheat report is now available. For any wheat seed, we recognize the potential advantages of certified seed. Texas Dept. of Ag. has checked the seed lot for weed seed, germ, etc. Any wheat seed, regardless of origin, should have a germ of at least 85% and a test weight of at least 58 lbs./bushel.

For 2011, Dr. Bean notes the following selections for wheat variety recommendations (in no particular order): Full Irrigation: TAM 111, Hatcher, Bill Brown (added in 2011), Endurance, Duster, TAM 304. Limited Irrigation: TAM 111, TAM 112, Hatcher, Bill Brown (added in 2011), Endurance, Duster. Dryland: TAM 111, TAM 112, Hatcher, Bill Brown (added in 2011), Endurance, Duster, Armour (added in 2011)

These varieties recommended by Brent Bean are those that have consistently performed well over at least a three-year period. Varieties are recommended after reviewing their performance at multiple locations over a minimum of three years. Emphasis is placed on the consistency of varieties yielding in the top 25%. For example, TAM 111 and TAM 112 have each been in the top 25% of 18 of 28 dryland variety trials in the High Plains over the last five years. Their consistent high yield across a range of conditions easily qualifies them as recommended varieties for dryland production. Other varieties that are recommended for dryland are Hatcher, Endurance, Duster, Bill Brown and Armour. Endurance is especially good as a dual-purpose wheat for grazing and grain production. Hatcher and Bill Brown are Colorado State varieties

with Russian wheat aphid tolerance. Armour is a Westbred variety making its debut on the recommendation list. Armour is an early maturing variety and can be short, although we did not have any trouble with harvest. The varieties recommended for full and limited irrigation are the same as those listed for dryland with just a couple of exceptions. TAM 112 is not recommended for full irrigation only because straw strength can become an issue under high water and nitrogen conditions. TAM 304 will work well under full irrigation because of its excellent straw strength and good disease resistance. Armour would likely be okay for limited irrigation but yields have only been slightly above average under full irrigation. TAM 113, the newest Texas AgriLife release (similar to TAM 111, but with improved baking qualities and both leaf rust and stripe rust resistance) does not make the recommendation list only because it will not be available until 2012.

For a description of 30+ wheat varieties tested in the Texas High Plains, consult the Wheat Variety Descriptions document. Additional wheat grain summaries are forthcoming. Extension is updating a five-year summary of grain yields for the southwest South Plains as well as newly revised Texas High Plains 3, 4, & 5 year summary for irrigated and dryland wheat in the Texas High Plains. These should be finalized by August 1. Watch for them on our Lubbock wheat page.

The most recent Weed Control Recommendations guide (2008) lists the many pre-plant and post-emerge herbicides for wheat along with key details. CT

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Useful Web Links

Texas High Plains ET Network, Water Management Website, TAMU, Irrigation at Lubbock, IPM How-To Videos, Lubbock Center Homepage, Texas Agricultural Experiment Station Home , Texas Cooperative Extension Home, Plains Cotton Growers

County IPM Newsletters

Castro/Lamb, Dawson/Lynn, Crosby/Floyd, Gaines, Hale/Swisher, Hockley/Cochran, Lubbock, Nolan/Scurry/Mitchell/Jones, Parmer/Bailey, Terry/Yoakum

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