WEST PLAINS IPM UPDATE

News about Integrated Pest Management in Hockley, Cochran, and Lamb Counties from Kerry Siders

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CURRENT SITUATION

Cotton ranges from just germinated to 10 true leaf cotton. This wide range is reflective of the mess we have been in across a large area here on the West Plains. I cannot review all the scenarios which have played out over the last 5 to 6 weeks during planting. Just suffice to say that it has been a real struggle to get cotton up, and then to keep a stand. We missed some critical general rains to help with uniform emergence. I know there are still many uncertainties in this current planted crop. To hopefully aid in some of these decisions here is the link to the Hailout-Replant-Late Plant Guide: https://lubbock.tamu.edu/files/2018/06/Hailout-Replant-LatePlant-Guide-TX-S-Plains-Trostle-2018-TOC.pdf

Scouting this week has found very little insect issues. This is one benefit from the repressive heat. We are now concentrating our efforts on monitoring square development, retention and detection of any fleahoppers or plant bugs which might cause losses. Here is the guide for managing fleahoppers: https://agrilifecdn.tamu.edu/lubbock/files/2017/06/Cotton-fleahopper_ENTO073.pdf

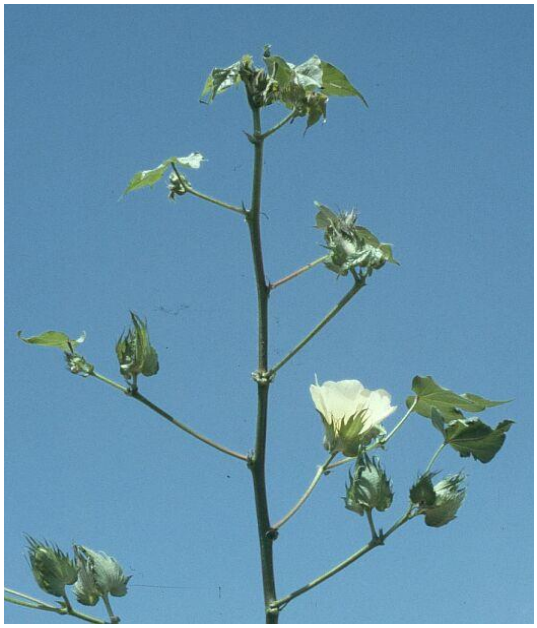
Weed control is all over the board. Unfortunately, this is a field by field prescription situation now in terms of what type of tillage you plan on using in-season, weeds present, the size of those weeds, and available equipment. I must say that although pigweed is resistant to glyphosate (Roundup), glyphosate is still very effective against many and most all other weed species. Also, while we do have some moisture and at times some humidity these herbicides generally work much better, especially Liberty.

See discussion on next page about using plant growth regulators in cotton.

Peanuts are generally doing well, with many fields well into bloom and a few beginning to pegging. Peanut producers need to do their best at maintaining a moist environment in-canopy to promote blooms to pollinate and subsequently form pegs/pods. In evaluating many fields for nodule formation, I have found it difficult to find many fields with more than an average of 5 nodules per plant. A plant requires 15 or more nodules per plant to fix sufficient nitrogen. Because of this low nodulation we must plan on compensating with additional fertilizer applications.

Grain sorghum is being replanted now in some areas. No sugarcane aphids have been found in Hockley, Cochran or Lamb counties yet.

Cotton Plant Growth Regulators



The use of plant growth regulators (PGRs) in cotton is sometimes like reinventing the wheel on an annual basis. However, it should not be that difficult or confusing if you understand what PGRs CAN and CANNOT do. I have heard PGRs referred to as:

- "Sunlight/heat units in a jug"
- "Stress in a can"
- "A jug of PGR is best used as a door stop"
- "PGRs help balance vegetative and reproductive growth"
- "PGRs helps tip the balance towards reproductive growth"
- "Using PGR's is like riding the brakes when the accelerator is stuck wide open on irrigation and fertility"
- "PGRs make everything better just like bacon!"

PGRs are Mepiquat-based (Pix Plus, Mepex, Mepichlor, Mepiquat Chloride, Mepex GinOut, Stance, and others). PGRs have been available for many years. Came of age in the late 80's. Dr. James Supak did much of the original work here. Companies are constantly enhancing formulations. The main active ingredient in nearly all these products is mepiquat chloride.

What can PGRs do and not do?

- 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.
- It does not increase growth rate but essentially reduces plant size by reducing cellular expansion.
- It may, under good growing conditions, increase fruit retention, control growth and promote earliness.

Mepiquat chloride (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 including herbicide damage (for example 2,4-D, dicamba, etc.) due to drift or from tank contamination; or fertility stress. Original MC, like Pix, basically simulated a stress on the plant, which in turn can result in the natural response of reproductive growth. Back then the stress from the MC combined with other natural stresses could result in fruit loss/shed, particularly at rates above 8oz. More recently Boron/borate helps soften this MC stress.

Results from replicated testing indicates that a 5 to 20% reduction in plant height (compared to the control) can be obtained 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. It is generally possible to reduce about one

node from the growth of the main stem, 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. Research trials have shown that statistically significant increases in yields are not generally obtained, but excellent growth control is consistently provided. Many times, we don't see a lot of differences in performance of these products with respect to growth control.

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 may need to consider PGR application.

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). FYI, most MC products have a maximum of 48 oz/ac per season (22 oz on Stance).It is best to manage high growth potential early if conditions favor excessive growth for an extended period of time. Here is the dilemma: It is unknown at that early period of time as to how weather will affect the crop in July and into August. If 100+ degree temperatures with southwest winds at 30 mph and 10% relative humidity are encountered, 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 low fruit retention, then MC rate should begin early and be increased, especially under high water, fertility, and good growth conditions.

My Recommendations for Cotton PGRs:

- On varieties which are known to have vigorous growth patterns start at pinhead square with 4-8 oz of MC (Pentia something which has boron). Watch compatibility.
- 7-10 days later another 4-8 oz of MC.
- Have a total of **16 oz** of MC **prior to 1st bloom** by applying low multiple applications.
- Then as plant responds to irrigation, rain, fertility, H.U., apply MC as needed.
- Under normal conditions I usually recommend a 16 oz MC (Pentia) application at peak bloom (5 NAWF) on vigorous varieties.

Farm Bill Decision Training Cochran County:

Tuesday June 26th 9 a.m., Extension Service Cochran, 200 W. Taylor, Morton, TX

Persons planning on attending can request the need for special accommodations relating to hearing impaired or any other special need by calling 806 266-5215.

Private Pesticide Applicators Training 2018 Cochran, Hockley and Lamb Counties

The Texas A&M AgriLife Extension Service will offer the required private Pesticide Applicators Training (PAT) in Morton, Levelland and Littlefield throughout 2018. This training is required by Texas Department of Agriculture before taking the exam for obtaining the license. A private pesticide applicator is a person who uses or supervises the use of a restricted-use or state limited-use pesticide or a regulated herbicide for the purpose of producing an agricultural commodity. This license is not for those receiving monetary compensation for a pesticide application.

To participate in a training individuals must call 806-894-3159 by 3pm the day prior (Wednesday) to the trainings in Levelland; or 806-266-5215 by 3pm the day prior to any trainings in Morton. The trainings will begin promptly at 1pm at the Extension Offices (see addresses below). There is a $60 fee for training materials. This is only the required training. Testing will be conducted at a separate time and location. Future PAT Trainings:

- July 24 Morton Extension Office 200 W. Taylor Avenue
- August 16 Levelland Extension Office 1212 Houston Street
- Sept 13 Levelland Extension Office 1212 Houston Street
- October 23 Morton Extension Office 200 W. Taylor Avenue
- Nov 29 Levelland Extension Office 1212 Houston Street

Texas A&M AgriLife Extension seeks to provide reasonable accommodations for all persons with disabilities for any educational meetings. Please contact us to advise us of the auxiliary aid or service that you will require a week in advance of training.

See You On The Radio

Wednesdays from 7:30 am to 7:45 am.

900 KFLP AM
All Ag, All Day!

West Plains IPM Update is a publication of the Texas A&M AgriLife Extension Service IPM Program in Hockley, Cochran, and Lamb Counties.

Editor: Kerry Siders, Extension Agent-IPM
Contact information: 1212 Houston St.,Suite 2 Levelland, TX 79336
(806) 894-3150 (office),
638-5635 (mobile), or 897-3104 (Fax)
ksiders@tamu.edu (E-mail),

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