

*Pest Management News  
News About integrated pest management for  
producers in Runnels-Tom Green Counties*

Richard Minzenmayer  
Extension Agent-IPM  
613 Hutchins Ave., Room 302  
Ballinger, Tx 76821  
Phone (325) 365-5212 Fax (365) 365-5212  
TPMA Website: <http://www.tpma.org>

June 13, 2014  
Vol. XXVII No. 06  
E-mail: [r-minzenmayer@tamu.edu](mailto:r-minzenmayer@tamu.edu)  
Website: <http://ipm.tamu.edu>  
Mobile (325) 365-1292  
Runnels County Website: <http://runnels-tx.tamu.edu>

GENERAL SITUATION

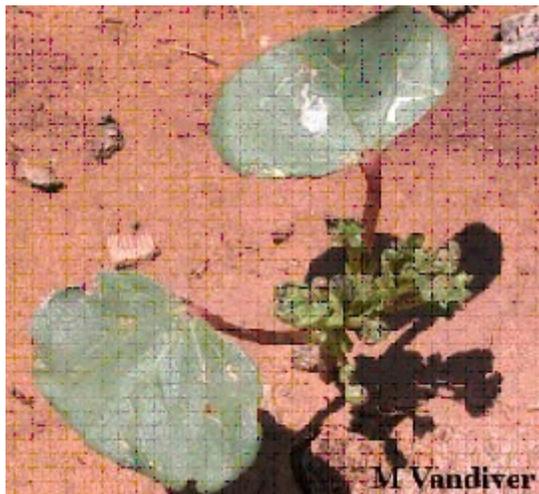
It has been a challenging two weeks to say the least. The rain is great, but it is time to get our cotton planted and up to a stand. Cotton ranges in growth from still in the bag to 6-7 true leaf stage. With the heavy rains and lots of wind, some cotton fields are struggling. Extended weather forecast shows sunshine which we need right now. Keep in mind, that seed treatments will generally not be as effective controlling thrips after heavy rainfall. Research has shown that neonicotinoid insecticides, such as imidacloprid and thiamethoxam can leach down quickly under heavy rainfall. So don't expect the seed treatments to last 21 days. With this in mind, scout your seedling cotton regularly for thrips and thrips damage.

Another problem is 2, 4D damage on seedling cotton. Folks, this is not the time of year to be spraying 2, 4D around cotton fields. If you are applying 2, 4D on your property and it drifts onto your neighbors or a mile down the road onto a cotton field... **YOU ARE RESPONSIBLE FOR THAT DAMAGE.** Yes, it can easily move a mile or more. When temperatures rise, phenoxy herbicides can volatilize and move off target. That's why it is not recommended to use this time of year. I can only imagine what it be like when the new herbicide traits come online. Okay I feel better now.

The rains have really flushed the weeds and many fields are greening up. I have attached some very good information dealing with weed control from Drs. Peter Dotray and Wayne Keeling, Texas A&M, Lubbock, Tx.

**THRIPS.....**Adult thrips are straw colored 1/16 inch long. The wings are fringed and held flat directly over the body when at rest. Immature thrips look similar to the adults but have no wings and are somewhat lighter in color. All thrips have rasping mouthparts including a single mandible that the thrips uses to scrape and jab host plant tissue. The thrips then consume the resulting "bleeding" of plant juices. Thrips often feed in the more sheltered and tender terminal or growing point of the cotton plant, requiring very close inspections to acquire an accurate population count. The ensuing damage causes scarring and malformation of the young leaves at a time when plants need healthy leaves for energy and a good start.





The economic threshold (ET) for thrips remains at one thrips per true leaf stage, but there are multiple factors to consider in conjunction with that threshold. The presence or absence of immature thrips should represent the primary additional consideration. The presence of immature thrips indicates that the thrips are reproducing in the field and will be there causing damage for some time. Some other factors include the recognition of light thrips damage, plant stage, plant health and predator populations.

Remember, scout regularly because the seed treatments may not hole this year. Suggested insecticides would include: Orthene®, Cygon and Bidrin®.

## WEED CONTROL

### EARLY POSTEMERGENCE

Herbicides applied early postemergence (EPOST) are essential when weeds are not controlled by preplant and preemergence herbicides. Herbicides applied EPOST are generally applied to both emerged crops and weeds; therefore, it is necessary to have some mechanism of selectivity between crops and weeds. Early season weed control is essential in order to avoid competition for water and nutrients between crops and weeds. Severe early season competition can cause crop stand, which may lead to yield loss. Early emerging weeds will have a much larger impact on yield than weeds that emerge later in the growing season.

In general, EPOST herbicides are most effective when applied to small, actively growing weeds. Control will generally be reduced when herbicides are applied to stressed weeds that exceed the size recommendation on the label. Weeds could be suffering from stress if exposed to extended periods of hot and dry or cool and wet climatic conditions. The period of time needed from application to rainfall or irrigation varies for each herbicide. In general, a six-hour rain free period is sufficient for most herbicides, although some formulations have decreased this time to approximately one hour. Many postemergence (POST) herbicides require a spray additive to ensure maximum herbicide performance. In west Texas, a crop oil concentrate is recommended over non-ionic surfactants for many herbicides, while for other herbicides, the choice is not as critical as long as a good quality spray additive is used. Some herbicide labels suggest the addition of liquid nitrogen fertilizers or dry spray grade ammonium sulfate for improving herbicide performance. Mixing order and compatibility are an issue for many herbicides; therefore, always carefully read and follow label instructions for maximum herbicide performance.

There are two types of herbicides applied POST: systemic (mobile) and contact (non-mobile). Systemic POST herbicides are absorbed by leaves and translocate to sites within the plant where the herbicide is needed to control the weed. Contact herbicides kill only the plant tissue that comes in direct contact with the herbicide. Thorough coverage on leaf and stem surfaces is more critical for contact herbicides compared to systemic herbicides. Thorough coverage can be accomplished by applying herbicides to smaller weeds, increasing the carrier volume and/or spray pressure, proper boom height, and accurately applying the herbicide to weeds growing beneath the crop canopy (through various nozzle arrangements and spray equipment).

The length of soil activity (residual activity) of POST herbicides varies from no soil activity to activity season-long or even into the next growing season. It is important to know the rotational crop restrictions when choosing a POST herbicide since some of these herbicides may influence rotational crop selection. It is also important to know if a herbicide has limited or no residual activity so additional weed control practices are planned for season-long control.

The use of some POST herbicides is dependent on the variety selection. Below are herbicide options in Roundup Ready Flex, GlyTol, LibertyLink, GlyTol plus Liberty Link, and conventional cotton varieties.

**ROUNDUP READY FLEX COTTON.** Roundup PowerMAX™ (and several other glyphosate formulations) may be applied in-crop in Roundup Ready Flex cotton from GROUND CRACK to 60% OPEN BOLL. The maximum in-crop single application rate per acre is 44 oz by ground or by air and the maximum cumulative application rate during this time is 4 quarts per acre. Sequential in-crop applications may be made after allowing a minimum of 7 days. Glyphosate provides excellent control of many annual broadleaf and grassy weeds and controls or suppresses several perennial weeds including silverleaf nightshade (whiteweed) and woollyleaf bursage (lakeweed). Applications should start when weeds are fairly small (1 to 3 inches tall) to avoid weed competition. Larger weeds may be controlled, but weed competition early season could reduce cotton yield. Do not add additional surfactant or additives containing surfactant to this product for any postemergence (in-crop) or preharvest application. Not all glyphosate formulations contain a non-ionic surfactant, so depending on the formulation used, additional adjuvants may be needed. A few generic formulations have been reported to cause leaf burn in the past, so use an approved glyphosate formulation that you trust. Spray grade ammonium sulfate may also be used as a spray additive and is generally recommended with glyphosate applications in west Texas. Ammonium sulfate helps condition the hard water typically found in west Texas. If ammonium sulfate is used, make sure it is added to the tank prior to the addition of glyphosate. Potential tank mix partners with glyphosate OTT include **Staple (or Pyrimax), Dual Magnum (metolachlor and other generics), or Warrant**. Other tank mixes include **Prowl H2O, Assure II, Envoke, Fusilade, Parrlay, Poast Plus, and Select Max**. Consult the glyphosate label for rates and for the complete list of potential tank mixes for use with glyphosate in Roundup Ready Flex cotton. **GLYTOL COTTON.** This glyphosate-resistant trait gives cotton season-long plant tolerance to glyphosate using a different gene and promoter than the Roundup Ready Flex technology. Any brand of glyphosate herbicide registered for use on cotton may be used over-the-top of GlyTol cotton unless expressly prohibited on the herbicide label. Previous research using the follow herbicides has shown excellent crop safety: Glyfos X-Tra®, Glyfos X-Tra Flex®, Touchdown Total®, Buccaneer®, Roundup PowerMAX®, Makaze®, Credit Extra®. Glyphosate rates and application timings in GlyTol cotton is similar to strategies used in Roundup Ready Flex cotton.

Where glyphosate-resistant (GR) weeds are suspected, apply Roundup PowerMAX (or other glyphosate) to control other emerged weeds, in a tank-mix with metolachlor or other herbicides with soil residual activity for preemergence control glyphosate-resistant Palmer amaranth. Emerged but small GR Palmer amaranth may be controlled using Staple herbicide (not ALS resistant Palmer amaranth) and may be controlled using directed sprays by tank-mixing Roundup PowerMAX (or other glyphosate) with diuron (Direx) or flumioxazin (Valor). These tank-mixes will also provide soil residual control after application.

**LIBERTYLINK COTTON.** **Liberty 280 SL Herbicide** may be applied at 29 fl oz/A three times per season. Sequential applications should be made at least 10 days apart. If more than 29 fl oz/A is used in a single application (Liberty 280 SL may be used up to 43 fl oz/A in a single application), the season total may not exceed 72 fl oz/A. Liberty 280 SL must be applied with ammonium sulfate (AMS). Use a quality spray grade AMS. To maximize weed control, do not cultivate from 5 days before or 7 days after an application. Application timings may be made preplant to 70 days before harvest. For best results, apply to emerged, young and actively growing weeds. High humidity, warm temperatures, and bright sunlight will help maximize herbicide performance. Carrier volumes should be a minimum of 15 gallons per acre. Liberty 280 SL controls many broadleaf weeds, including annual morningglory and common ccklebur. Common tank mix partners include

Dual Magnum or Staple. Consult the Liberty label for additional information on rates and additional tank mix partners.

**GLYTOL PLUS LIBERTYLINK** This cotton has full tolerance to both Roundup (glyphosate) and Liberty (glufosinate). This technology will help control difficult-to-control weeds and assist in resistant management. Previous research suggests that antagonism on Palmer amaranth (carelessweed) control may occur if Roundup and Liberty are applied in tank mixture; therefore, tank mixing these two products IS NOT recommended. A sequential application of Liberty early postemergence followed by Roundup mid-postemergence has been shown to be effective on several weed species including Palmer amaranth and ivyleaf morningglory.

**CONVENTIONAL COTTON. Staple** may be applied POST on conventional and herbicide-tolerant varieties. It is one of the few herbicides that may be applied over-the-top (OTT) for broadleaf weed control in non-transgenic cotton. Staple has good activity on Palmer amaranth and annual morningglories, but **WEED SIZE** (2 inches or less) is important for effective weed control. Annual and perennial grasses may be controlled with the POST-Grass herbicides which include: **Assure II, Fusilade, Fusion, Poast Plus, and Select**. Control of bermudagrass will require sequential applications of these products. Tank-mixes of the POST-Grass herbicides and Staple should be avoided since antagonism can occur. **Envoke** is a selective postemergence herbicide that has activity on several emerged weeds. Apply once the cotton has reached a minimum of 5 true leaves. Use a high quality nonionic surfactant with Envoke at 0.10 to 0.15 oz/A. The spectrum of weed control with Envoke is similar to that of Staple.

Always carefully read and follow herbicide label instructions!

## GRAIN SORGHUM AND CORN

Grain sorghum and corn fields look great right now with no insect problems to date. Dr. Apurba Barman and Dr. Pat Porter report very high fall armyworm trap captures the past several days at the Lubbock Center. Similar numbers were seen in 2011 when an outbreak damaged much of the sorghum on the plains.

Dr. Pat Porter says, assuming these moths arrived on a storm front on Saturday and laid eggs, the first egg masses would have started hatching on Tuesday or Wednesday. That is exactly what we are seeing in Lubbock; large numbers of egg masses in corn, some of which have hatched and some of which are freshly laid. Egg laying is continuing and we now have many small larvae feeding on whorl stage corn and sorghum.

Whorl stage corn and sorghum can withstand at least 30 percent leaf damage before treatment is justified. However, high numbers of caterpillars can kill the growing point and this will lead to stunted plants. Crops at risk include corn, sorghum, pasture and some vegetables. All of our *Bt* corn should be able to protect itself from a whorl stage infestation.

Pyrethroid insecticides are not very effective on fall armyworm. Insecticide efficacy studies we conducted in the last few years indicate that Belt, Beseige and Prevathon can be effective if spray coverage is good.

Check your sorghum fields closely for larvae feeding in the whorl.