



Row Crop Newsletter

A Newsletter for Miller County Row Crop Producers

**November –
December 2017**

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If you have any questions, please feel free to contact me at 870-779-3609, email jcaraway@uaex.edu or visit Room 215 in the Miller County Courthouse, 400 Laurel, Texarkana, Arkansas.

Sincerely,

Jennifer Caraway
County Extension Agent-
Agriculture

Pesticide Applicator Training for Miller County

Applying pesticides requires appropriate education and training to assure safe and effective use. Any agricultural producer or land owner who applies restricted use pesticides to their own property or supervises employees who apply the chemicals needs to possess a license.

Whether you are in need of a Pesticide Applicator license for the first time or have an existing one that will expire soon, please make plans to attend one of these trainings or visit <http://bit.ly/JUlwS> for other training opportunities around the state.

December 4th, 2017 - 5:30 PM - 3rd Floor Conference Room of the Miller County Courthouse, 400 Laurel, Texarkana, AR

February 1st, 2018 - 2:00 PM - Four States Fairgrounds Ag Expo

NOTE DATE AND/OR LOCATION CHANGES. Pre-registration is not required but is appreciated.

There is a \$10 training fee (payable to the Miller County Extension Service) **AND** a \$10 per year for 5 years (or \$45 if you choose to pay for the full 5 years) license fee, payable to the Arkansas State Plant Board (check or money order only).

Online Certification Course Available

Arkansas crop producers planning to use Eugenia and Enlist Duo for this growing season must fulfill certain requirements to use the products in Xtend or Enlist cropping systems, said Tom Barber, extension weed scientist for the University of Arkansas System Division of Agriculture.

Eugenia & Enlist Duo are restricted-use pesticides in Arkansas. For growers to purchase, they must have a current Pesticide Applicator license.

When getting ready to use Engenia on Xtend crops or Enlist Duo on Enlist crops in the field, the person operating the sprayer must take a specific online training. It is available here - <http://bit.ly/AR-Engenia-Enlist>. You may not apply these herbicides until you have completed this online training module.

This online training is hosted and developed by Extension Application Technologist, Jason Davis and Extension Pesticide Assessment Specialist, Ples Spradley, as a result of the requirements passed by the Arkansas State Plant Board (see article on Page 2 - Herbicide Dicamba Update). Once training is completed, a reference card "Arkansas Application requirements for Engenia Herbicide" may be downloaded at <https://www.uaex.edu/publications/pdf/MP535.pdf>.

Herbicide Dicamba Update

Dicamba has been in use since the 1960's. In 2012, it was the fifth most used herbicide worldwide. The chemical, marketed under names including Clarity and Banvel, kills broadleaf weeds.

Dicamba will likely go down as the biggest agricultural issue in 2017.

Things changed in the last few years when several agricultural businesses sought to alleviate concerns with weeds that had become resistant to the common herbicide glyphosate (active ingredient in Roundup). Companies developed genetically modified seeds for soybeans and cotton that possessed a dicamba tolerance. Thus, rather than applying glyphosate over the top of growing crops, farmers who planted these new seed varieties would be able to apply dicamba to growing crops that are tolerant to the chemical. This would allow farmers to combat the weeds that were resistant to glyphosate. In addition to these genetically modified seeds, the companies developed corresponding herbicides.

In 2015, Monsanto began selling its Xtendflex cotton seeds. In 2016, their Xtendflex soybean seeds were on the market. However, despite selling these seeds for the 2015 & 2016 crop years, the corresponding herbicide, XtendiMax, was not approved by the EPA for sale until November 2016. Other companies also developed herbicides to be used with the tolerant seeds. Dow received EPA approval for its Engenia product in December 2016 and DuPont's FeXapan being approved in February 2017. At the time of approval, these herbicide products were approved for 2 year periods and were classified as general use pesticides - meaning that no pesticide applicator license or certification was required to purchase or apply.

In addition to receiving EPA approval and labeling under the Federal Insecticide, Fungicide, & Rodenticide Act (FIFRA), the products had to be approved for use in individual states as well. States can issue an approval or not, and can impose various additional requirements in addition to those included on the federally approved label. For example, in Arkansas, pesticide use is governed by the Plant Board. To date, the XtendiMax product has never been approved for over-the-top crop use in Arkansas. The BASF Engenia herbicide was approved in 2017, but in June, over-the-top dicamba use was banned by the Plant Board.

Unfortunately, the rollout of these new crop systems was not as smooth as the companies had hoped. Complaints of drift damage to neighboring fields began pouring in. Even before the new dicamba formulations were approved for use, drift complaints were prominent across the South. Given that there was no dicamba formulation available for over-the-top application approved by the EPA during the 2016 growing season, it is likely that farmers who purchased the dicamba-tolerant seeds applied older, potentially more volatile versions of dicamba and applied them off-label to their crops.

These issues did not end when the new herbicides were available for use. From January to September 2017, there were more than 963 alleged misuse complaints involving dicamba in Arkansas. At one point mid-growing season, drift complaints were so severe that Arkansas banned the further use of dicamba during the growing season.

What is causing these drift issues remains to be seen. Certainly, a major difference between the new dicamba formulations versus the use of prior dicamba versions like Banvel or Clarity, is that new products can be applied over top of growing crops, not just at the pre-emergence stage.

There are a number of possibilities that could be contributing to the drift damage from dicamba, and likely it may be a combination of any or all of them causing the problems:

- Failure to follow label requirement for the new formulations.
- Use of incorrect spray nozzles.
- Improper boom height or operation speed.

Producers planning to use Eugenia & Enlist Duo must have a current pesticide applicator license.

Continued

- Use of inappropriate tank mix partners, including acidifying agents.
- Volatilization of new dicamba formulations despite following label instructions.
- Improper tank clean-out methods.
- Using older dicamba formulations (off-label) with new seed varieties.



*Photo by Chris Bennett,
Farm Journal*

A recent BASF study shows that there were about 1.8 million acres of dicamba-tolerant seeds sold in Arkansas. There was only one dicamba-containing herbicide approved for over-the-top use in Arkansas, the BASF Engenia product. BASF reports that they sold only enough Engenia to be used on about 52% of the 1.8 million dicamba-tolerant acres. This shows, they claim, that there was wide-spread use of older formulations that were not approved for over-the-top application in AR. Some attorneys in cases against BASF claim that the mid-season dicamba ban in Arkansas may have decreased sales and argue that some producers defensively planted the seeds, but sprayed no dicamba of their own. Determining whether damage was caused by the new herbicide products or by off-label application of old products is extremely difficult.

In light of these issues, the Environmental Protection Agency released some amendments to the FIFRA-approved labels for XtendiMax, Engenia, and FeXapan in 2018. The three manufacturers-Monsanto, BASF, and DowDupont, agreed to the additional requirements for their products.

- These 3 products are now deemed “restricted use” under federal law, meaning that only certified applicators will be allowed to purchase and apply the products.
- Dicamba-specific training will be required for anyone seeking to purchase and apply these products.
- Increased recordkeeping requirements, including keeping “receipts of purchase” for 2 years. Download your recordkeeping form here - www.ams.usda.gov/rules-regulations/pesticide-records.
- Applications may only be made between sunrise and sunset.
- The application may only occur when wind speeds are between 3-10 miles per hour. (Previously, the federal label allowed application up to 15 mph.)
- New tank cleanout language is included on the label to prevent cross-contamination.
- New language regarding sensitive crops and sensitive crop registries is included.
- Annual certification training for all applying new dicamba formulations.

Pecan Update from Texas

Deliveries by growers to delivery points of Improved varieties were very light. Demand was good for good quality pecans. Harvesting is expected to increase seasonally. Much buying interest has been expressed for the export trade to China.

Demand was fairly good for the retail and gift pack trade. Due to continued light volumes, buyers are making purchases from other production areas or are waiting for additional availability of pecans. Prices paid to growers (from noon Nov. 7, 2017 through noon Nov. 14, 2017) at buyers’ delivery points or F.O.B. the orchard including direct sales to end users, center per pound in-shell of generally good quality in lots of 20,000 pounds or less unless otherwise stated.

- Cheyenne (deliveries very light), 50-54% meat yield 225-275 mostly 230-260 occasional higher and lower.
- Choctaw (deliveries very light), 50-54% meat yield 225-275 mostly 230-260 occasional higher and lower.
- Pawnee (deliveries very light), 50-54% meat yield 225-275 mostly 230-260 occasional higher and lower.
- Natives/Seedlings (deliveries light) yard tree lots 70-100 mostly 75-90 occasional lower; machine harvested 90-140 mostly 100-125.

What Happened to the Wheat Last Year?

Last year, Miller County had more wheat planted than any other county, at approximately 28,829 acres. This past year, I scouted several wheat fields and talked to many producers who were disappointed in what they thought should have been a decent wheat crop. So what happened? While scouting with specialists from the University of Arkansas System Division of Agriculture, we noticed a surprising amount of scab across Miller County, and even into Bowie County. With all the wet weather this past year, I guess we can see why. I talked to Dr. Jason Kelley, our Wheat and Feed Grains Agronomist, and this is what he had to say: -----



Fusarium head scab symptoms on a single spikelet (left), half of head (middle) and entire head

“Wheat yields are always variable year-to-year for various reasons - variety, weather and disease are probably some of them. Scab was an issue and was likely part of the reason yields were low; however, scab is brought on by wet weather, which alone may have also been a large factor in low yields.”

“There are two main fungicides that are used to control scab - Caramba and Prosaro. Both are more expensive than the normal fungicides many growers are probably using; therefore, price alone sometimes is a deterrent to using these fungicides. With a plane cost to apply, these cost ~\$20/acre. So it always seems like only the best wheat sometimes gets sprayed. Scab is caused by wet weather around flowering. Once an individual glume is infected, it can spread up and down the entire head and result in the “white” heads that may not have any grain (or shriveled grain) that are often noticed before the wheat starts to dry down. Wheat following corn

is supposed to be more problematic for scab as the fungus is the same one that causes moldy ears on corn (fusarium). But when conditions are right for scab, it probably doesn’t matter which crop you follow. Some varieties are more susceptible than others to scab, but variety trial data is sometimes not a good indicator of variety susceptibility. The AGS 2055 variety, which I think some were growing down our way last year, is likely more susceptible than most. Some years scab may be found in early maturing varieties and not late maturing varieties just because of the different weather conditions at flowering, even though the varieties may be equally susceptible.”

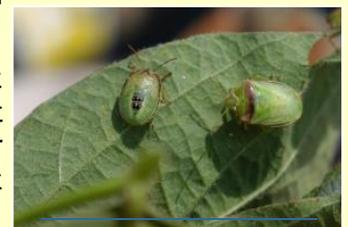
“The decision on whether to apply a scab fungicide depends on weather to me. If rain is forecast at flowering, it might be worth it if the wheat yield potential is good. Caramba and Prosaro have a narrow application window that is difficult to hit sometimes - about 10% flower - so you have about a 2-3 day window when they would be most effective. Coverage can be an issue as well. From what I’ve seen, these fungicides are about 50% effective on controlling scab when properly applied. They are effective on the other foliar diseases of concern such as leaf rust and stripe rust. These fungicides would/should improve test weight and yield when applied timely.” -----

We will be scouting again once the wheat is up and going. Let us know if you want us to look at your wheat or if you want to be informed through texts as to what we’re seeing in the field. This is a form of a heads-up to help you manage your crop, whether it be wheat, soybeans, corn, rice, or cotton. You can call or text 903-701-6084 or email jcaraway@uaex.edu with your name and crop.



Fusarium head blight (FHB)-infected wheat heads will generally be white and often have a pink or salmon-colored fungus growing on the glumes in the fields when scouting.

Get the latest updates on what we’re finding in the fields when scouting.



Red Banded Stink Bug Nymph & Adult Scab on Wheat



Soybeans with Dicamba-Resistant Trait



Soybeans showing the cupped leaves which are a symptom of dicamba injury

Initial dicamba symptomology in fields have varied from limited symptoms with barely cupped uppermost leaves, to more severe symptoms with growing points/terminals turning yellow, stunting and blooms shedding. The pattern of symptoms across damaged fields was often consistent with physical drift; and in addition, injury from dicamba-impregnated dust and sprayer contamination from lack of proper cleanout were suspected in some cases. Many fields that sustained a single hit earlier in the year with suspected light rates of off-target dicamba were able to recover and resume growth. However, many others continued to show symptoms and remain stunted with reduced terminal growth.

Researchers with the University of Arkansas System Division of Agriculture have conducted considerable field research involving control of resistant pigweed and herbicides containing dicamba; however, an opportunity for these researchers to test the new formulation developed by Monsanto, using VaporGrip® technology, in volatility or large field studies was denied by the company prior to 2017. Researchers in Arkansas and many states were able to test Engenia® herbicide in small experimental plots, for volatility and efficacy, in addition to somewhat larger field plot testing for drift and volatility for two consecutive years prior to launch.

Research has shown that yield reduction in non-traited soybean from dicamba injury depends on four factors:

- Growth stage of the plants
- Rate of dicamba exposure
- Number of times the plants come in contact with dicamba
- Environmental conditions following exposure

Based on data, soybean seed production fields exposed to dicamba during later reproductive development would likely have dicamba-like symptoms on emerging seedlings after planting as well as reduced seed quality, vigor and germination.

If soybean plants have sustained damage, a producer may be considering whether or not to replant. The soybean plant's ability to recover is related to the growth stage at which it was affected, how many times it received injuries, the severity of the injuries, and the growing conditions following exposure. Based on a pair of studies done by the Division of Agriculture, replanting very late could have a greater yield reduction than keeping a minimally herbicide-injured soybean field, so it is always wise to have an experienced county agent or consultant provide specific advice after inspecting the affected field.

If injured fields are kept, the most important point is not to add any more stress to plants that are already stressed. It's likely to be worse for soybean with later planting dates. It is recommended that producers continue to scout these fields for insect and disease pressure, and spray the appropriate pesticide when economic thresholds are met for these pests.

Producers should irrigate in a timely manner to avoid drought stress.

In deciding whether to replant, growers can make use of the SOYRISK decision-making tool, one of several decision tools available for download: <http://agribusiness.uark.edu/decision-support-software.php#soymap>.

For more information, contact our office to receive *Dicamba in Arkansas - Frequently Asked Questions* or download here: <https://www.uaex.edu/publications/pdf/FSA-2181.pdf>.

Also sensitive to dicamba are grapes, peanuts, tomatoes, watermelons, cantaloupes, peppers, certain trees & many other crop plants that may be grown near Xtend® fields, which are bred with a dicamba-resistant trait.

Preparing for Next Season's Soybean Crop

There is no substitute for good preparation. Fall is an excellent time to employ timely practices to ensure the best yields for next year's crop. Considerations include: tillage; soil sampling for fertility and parasitic nematodes; planned rotation; history of diseases and weeds found in various fields and herbicide tolerance systems chosen for each field, such as Roundup Ready 2 Xtend, Roundup Ready 2 Yield or LibertyLink.

1. **Tillage** - Fields that are bedding or leveled up, with stalks and leave turned under is ideal for a near perfect seed bed. Plant stubble harbor disease spores so tilling plant debris under is helpful to destroy spores from diseases such as stem canker, frogeye, and target spot.
2. **Soil Sampling** - Fall is the best time to sample for nematodes such as SCN, root knot or reniform. Crop losses in the south due to nematodes can be very serious unless steps are taken to reduce losses such as crop rotation and planting resistant varieties. Checking soils for presence and levels of nematodes will determine the risk for damage to next year's crops. Soils should also be regularly sampled for nutrient needs. Soybeans are big users of potash and require 1.2 lbs. of K²O for each bushel produced. If yields of 60 bushels per acre or more are to be sustained, soils cannot be marginal in potash content. Also, pay attention to pH and apply lime accordingly. A soil pH of 6.0 to 6.5 is optimum for availability of other essential soil elements.
3. **Rotation Considerations** - What was planted in the field the year before is very important in planning for next year's crop. If planting beans after beans, it is especially important to note the fields yield history; the diseases and weeds that were prevalent; the variety planted; the variety planted and its pest resistance strengths and weaknesses; and the weed control system that will best ensure a clean crop and deal with problem weeds in the field. These principles also apply to soybeans in rotations with corn, rice, cotton, or grain sorghum. Soybeans in rotation with other crops often yield 15 to 20% more, have fewer disease problems, allow rotation of different herbicides and allow the buildup of organic matter for improved soil properties.

This information was taken from an article by Dr. Grover Shannon, Agronomy, Genetics & Plant Breeding, Mississippi State University

Four States Agricultural Exposition



We met recently to finalize our upcoming Ag Expo, slated for Thursday, **February 1st**, 2018 at the Four States Fairgrounds. It was originally set for February 8th but due to scheduling conflicts, it has been moved to Feb. 1st.

These are the topics scheduled to date: Fire Ants Around the Farm; Management of Pests in Blackberries; Ips & Other Pests of Pine Plantations; Internal & External Parasite Control in Cattle; Managing for a Strong Forage Stand; Lawn Care

Using Fertilizers; Weed Control in Farm Ponds; Dicamba Issues; Gardening Basics and Pest Management; Impregnated Fertilizer; Cotton Updates; Estate Planning; Feral Hog Control-What is Legal?; and ending with the Arkansas Pesticide Applicator Training. CEU's will be available for Texas Pesticide Applicators.



We are looking for producers interested in participating in our soybean research verification plots in 2018. This will entail working & consulting weekly with University of Arkansas Extension Agents and Specialists to produce the best yield possible while utilizing best management practices. Call our office at 870-779-3609 for details.



The 2018 MP 44, MP 144, and MP 154 will be available after the first of the year in our office. Be sure to get yours. They are great resources for weed and brush, disease and insect control.