

Logan Ag News

February 2017

Dicamba Watch Outs

For those planting Roundup Ready 2 Xtend® dicamba-tolerant soybeans with the idea that weed control will be trouble-free, Dr. Kevin Bradley from the University of Missouri begs to differ. Dr. Bradley saw first-hand some of the problems which arose from off-label applications of dicamba in 2016. Logan Ag will host a presentation for Missouri and Illinois customers by Dr. Bradley at Fiddlestik Restaurant in Hannibal, MO on March 7. Dr. Bradley outlines some of his experiences from last year below.



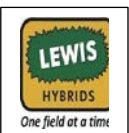
- *Drift from dicamba devastates fruits and vegetables including watermelons, peaches, and garden crops. In one noteworthy instance involving a peach orchard in southern MO, fruit and trees were damaged by off-label dicamba application to a field that was nearly two miles away.*
- *More than 45,000 acres of MO soybeans were reported with dicamba injury. Most of these acres were in the southern portion of the state, but there were also several cases in north central Missouri. Dr. Bradley estimates total damaged acres exceeded 100,000.*
- *All dicamba formulations have the ability to move off-target and damage sensitive crops including DMA salts (Banvel®) and DGA salts (Clarity®).*
- *Small amounts of dicamba are injurious – even as little as 1/20,000 of the labeled rate of product.*

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LOCATIONS

- * Griggsville, IL 217-833-2375; 1-800-LOGAN AG
- * Pittsburg, OH 937-692-5181 (JACK BAKER)
- * Paris, MO 660-327-1111 (DEAN OSBORN, MEGAN MORGAN)

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The Road To Top Soybean Yields In 2017

Current market prices and good yields in 2016 have many producers considering adding bean acreage this year. To achieve maximum yield potential and profit in 2017, we refer to “The Six Secrets of Soybean Success” by Dr. Fred Below of the University of Illinois. Dr. Below identifies **WEATHER, FERTILITY, GENETICS/VARIETY, FOLIAR PROTECTION, SEED TREATMENT, and ROW ARRANGEMENT** in that order as his secrets of soybean success. All except weather can be controlled to an extent by the producer, and some of the “secrets” help overcome stresses caused by weather-related issues. Below also lists drainage, weed control, and proper soil pH as crucial prerequisites for yield success.

1. **Weather.** 2016 weather patterns during crucial soybean development stages were very good, and helped produce excellent yields across much of the Midwest. Ideal spring conditions enabled early planting. Most agronomists today recommend early planting for yield success, and have no issue with mid-to-late April seeding. One of Dr. Below’s prerequisites – drainage – helps overcome early season soil conditions that sometimes delay planting date.
2. **Fertility.** Soybeans remove large quantities of P&K fertilizer, as well as nitrogen. Fortunately, soybeans obtain the majority of their nitrogen through a process known as fixation. It is commonly known that soybeans remove approximately 0.85 LB phosphorus (1.85 LB DAP) and 1.3 LB potassium (2.16 LB potash) per bushel. In some manner, adequate P&K fertilizer must be applied for yield success either through application to the previous corn crop or direct application to soybeans. Often, producers do not allocate sufficient P&K in their previous corn crop to cover soybeans, and the bean yield suffers. Another of Dr. Below’s prerequisites – soil pH – plays an important part in the fertility requirements of the soybean crop. Logan Ag recommends soil pH level of 6.5-6.8 for optimum availability of P&K. Less well-known is the soybean plant’s need for nitrogen. Soybeans remove approximately 3.5 LB nitrogen per bushel of production. Many contend the soybean plant is not capable of fixing adequate nitrogen to supply the

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- Bradley points out that excessive spray boom height above the crop is a leading cause of off-target movement. Currently labeled dicamba formulations for Xtend soybeans require boom height not more than 24" above the crop canopy.
- Watch wind speed during application. Application is optimal when wind speed is between 3-10 MPH. Bradley advises against any application when wind speed approaches 15 MPH.
- Bradley believes the ideal dicamba application time is mid-AM to mid-PM provided wind speed is appropriate.
- Know the crops, gardens, and ornamentals planted near the field of application to avoid difficulties and confrontations with neighbors. One such confrontation in MO resulted in murder in 2016.

At the present time, two dicamba formulations are labeled for application to Xtend soybeans in 2017. Xtendimax™ with Vapor Grip™ Technology is Monsanto's low vapor product utilizing DGA salt of dicamba. Engenia™ from BASF is a more highly concentrated formulation of dicamba. Engenia received a federal tank mix label with glyphosate on 2/1/17. Label additions are possible prior to application, and other dicamba formulations are expected to be approved in the coming days.

Roundup Ready 2 Xtend and Xtendimax with Vapor Grip Technology are trademarks of Monsanto. Banvel, Clarity, and Engenia are trademarks of BASF.

New Crop Protection Chemicals For 2017

Several new crop protection chemicals have been added to the arsenal for weed, insect, and disease control in 2017 from major manufacturers. Following is a listing and brief description of several of the available products.

PRODUCT	SUPPLIER	TYPE	INGREDIENTS	CROP	COARSE SOIL RATE
Abundit Edge	DuPont	Herbicide	4.5 LB glyphosate	All R-Up Ready	22 oz.
Acuron	Syngenta	Herbicide	Dual + Callisto + Bicyclopyrone	Corn	2.25 qt.
DiFlexx Duo	Bayer	Herbicide	Dicamba + Laudis	Corn	24 oz.
Engenia	BASF	Herbicide	5 LB dicamba	Corn Beans	12.8 oz.
Manticor LFR	BASF	Insecticide + Fungicide	Capture + Headline	Corn	9.5 oz.
Resicore	Dow	Herbicide	Surpass + Callisto + Stinger	Corn	2.5 qt.

Temitry LFR	FMC	Insecticide + Fungicide	Capture + Headline	Corn	9.5 oz.
Valor EZ	Valent	Herbicide	Valor	Corn Beans	2 oz.
Xtendimax	Monsanto	Herbicide	2.9 LB dicamba	Corn Beans	22 oz.
Zidua Pro	BASF	Herbicide	Zidua + Pursuit + Sharpen	Beans	6 oz.

Logan Ag has supply of all these new compounds. Discuss your 2017 crop protection chemical program with your Logan crop specialist today!

Proposed Mergers May Increase Seed Prices

Results of a study commissioned by the Corn Producers Association of Texas and the Southwest Council of Agribusiness reveals pending mergers of Dow/DuPont and Bayer/Monsanto could increase seed prices. Joe Outlaw, a professor and Extension economist from Texas A&M University, presented highlights of the study to attendees at the 2017 Southern Southeastern Annual meeting recently. The proposed acquisition of Syngenta by ChemChina and its impact on seed prices was not included in the study.

Findings from the study entitled "Effects of Proposed Mergers and Acquisitions among Biotechnology Firms on Seed Prices" expect average seed corn price to increase by 2.3% if the proposed mergers come to fruition. Soybean seed prices would increase by 1.9%, while cottonseed price might increase as much as 18.2%. Monsanto and Bayer control approximately 70% of U.S. cottonseed sales. Senator Ted Cruz entered the study findings into the records of the Senate Judiciary Hearings regarding the mergers.

While the cottonseed price increase is substantial for growers in the southern regions of the U.S., expected increases in corn and soybean prices are somewhat minimal. One would hope the proposed mergers foster the development of new technology and/or improved genetics with greater yield potential to offset any expected price increase.

If mergers are approved, the Department of Justice can request divestiture of certain segments of the businesses to retain a competitive marketplace.

Logan Ag president Edward Logan suggests greater concern regarding the merger of fertilizer giants Agrium and PCS. This merger has the potential of significant increases in the price of commercial potash and phosphate fertilizers – increases that may dwarf a \$6-\$7 per bag increase in seed corn or \$1.50 per unit increase in soybean seed.

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Final Comments

Edward Logan, Logan Ag President
 Crop specialist/agronomist Heidi Martin at our Paris, MO location resigned her position to pursue another opportunity in the field of agriculture. We thank Heidi for her work with Logan Ag. Dean Osborn and Megan Morgan are working with Heidi's customers while we search for a qualified successor.

The U.S. Census Bureau projected the population of the United States at 324,310,011 on January 1, 2017, representing an increase of 0.7% from last year. World population was projected at 7,362,350,168, an annual increase of 1.1%. The world population increase represents more than 80 million people who will rely on the abundance of U.S. agriculture for food supplies.

We are honored that Dr. Kevin Bradley of the University of Missouri will present a grower education program on dicamba use in Xtend soybeans for Logan Ag customers in Missouri and Illinois. I heard Dr. Bradley's comments on the topic during the Illinois Fertilizer and Chemical Association meeting in Peoria recently, and suggested we engage him to discuss his thoughts on dicamba application. The meeting will be held at Fiddlestick Restaurant in Hannibal, MO (8945 Highway 36) on Tuesday March 7. Dr. Bradley's presentation begins at 11:00 AM followed by lunch and conversation. RSVP to your Logan Ag crop specialist in Paris or Griggsville, or by calling our office at 217-833-2375. We encourage your attendance at this informative meeting.

Logan Ag is now a Stine Seed dealer! Stine is one of the most respected brands in the seed industry, and we are pleased to add these products to our lineup. Your crop specialist will have information about the Stine seed products available from Logan Ag for 2017 including top-yielding Liberty soybeans and the all-new Balance GT soybean platform.



Nearly 70% of soil samples indicate sulfur deficiency. Sulfur levels declined consistently over the past decades due to the Clean Air Act, higher corn yields, and no sulfur application. Corn removes approximately 10 LB sulfur per 100 bushels production. I strongly encourage the addition of sulfur to your 2017 fertility program. We have dry and liquid formulations available.



The Iowa Supreme Court ruled the Des Moines Water Works cannot win damage payments from drainage districts in three northwest Iowa counties. This is a "win" for the districts, but still at issue is increased regulation of water flowing from drain tiles into streams and rivers. An unfavorable ruling for tile lines could have nationwide ramifications.

high-yielding crops. Nitrogen application research studies are ongoing with mixed results. Logan Ag recommends utilizing the nitrogen supply available in commercial phosphate fertilizer to satisfy known N requirements. Also recommended is inoculation of the soybean seed at planting to promote nodule formation on the plant roots.

3. **Genetics/Variety.** There is a difference in soybean varieties and subsequent yield. Select a bean with the maximum recommended maturity for your region (we suggest 3.6-4.1 in central IL and central MO). Review plot data for yield information, and consider the disease package of the variety including SDS rating. See Logan Ag for top-performing varieties.
4. **Foliar Protection.** Yield is a function of the total number of pods per acre x the number of seeds per pod x the weight of the seed. Foliar protection (insects and disease) improves overall plant health. A soybean plant typically has 20 nodes with multiple pods able to form at each node. The idea behind foliar protection is maintain the integrity (insect and disease free) of the leaf closest to each node up and down the plant as this leaf is responsible for supplying most the energy for the pods at that node. A healthy plant not only has the ability to product more pods, but also can better fill each pod and improve seed weight. The result is better yield. Some fungicide manufacturers now stand behind their product when applied at the optimum time (R3). Logan Agri-Yield Premium Foliar is an excellent addition to the foliar protection package as it supplies important micronutrients to enable the soybean plant to develop flowers and healthy leaves.
5. **Seed Treatment.** Seed treatment including fungicide and insecticide promotes better early season plant growth and health. Results often include faster and more even emergence, a more expansive root system, more rapid growth of the plant, and consistently higher yields. Inoculation should be part of every seed treatment program as most trials suggest 1.5 to 2.0 bushel yield increase over the check. As more acres of soybeans replace corn in rotations, there will be acres of beans following beans. In these fields, Soybean Cyst Nematodes may flourish. The addition of a nematicide in the seed treatment helps control nematodes and allows normal root growth and nutrient/water uptake. Fields where SDS has been a problem previously should have ILeVO applied on the seed for protection.
6. **Row Arrangement.** Dr. Below recommends narrow row beans (15" or 20" rows) over 30" rows. Several issues come into play with narrow rows including improved weed control, soil moisture retention, and soil temperature reduction – all accomplished through faster row canopy. Narrow rows provide better seed spacing, and are preferable to drilled beans.

Any one of the 6 steps outlined above increases yield. Combine them, and gear up for a super harvest in 2017!

