



Dicamba OTT Registration 2019-2020

XtendiMax, Engenia, FeXapan

Governmental Affairs & Commodities

Lyndsey Ramsey



AGENDA

- IFB Policy
- 2018 Review
 - IDOA
 - IDNR
- New Label Requirements
- Additional Considerations
- State level
- Next steps



2018 IFB POLICY ON PESTICIDES (HIGHLIGHTS)

Policy 31: Pesticide Application, Education, and Recordkeeping

Proper understanding and handling of crop protection products is important to every farmer.

We support:

1. The pesticide applicator certification as a means to assure society that farmers and other licensed applicators are trained and knowledgeable.
2. Encouraging pesticide applicators to be aware of liabilities for drift to all crop and non-crop land that is pesticide-sensitive.
3. Encouraging non-agricultural users of pesticides to become better educated on their safe use and potential environmental impacts.

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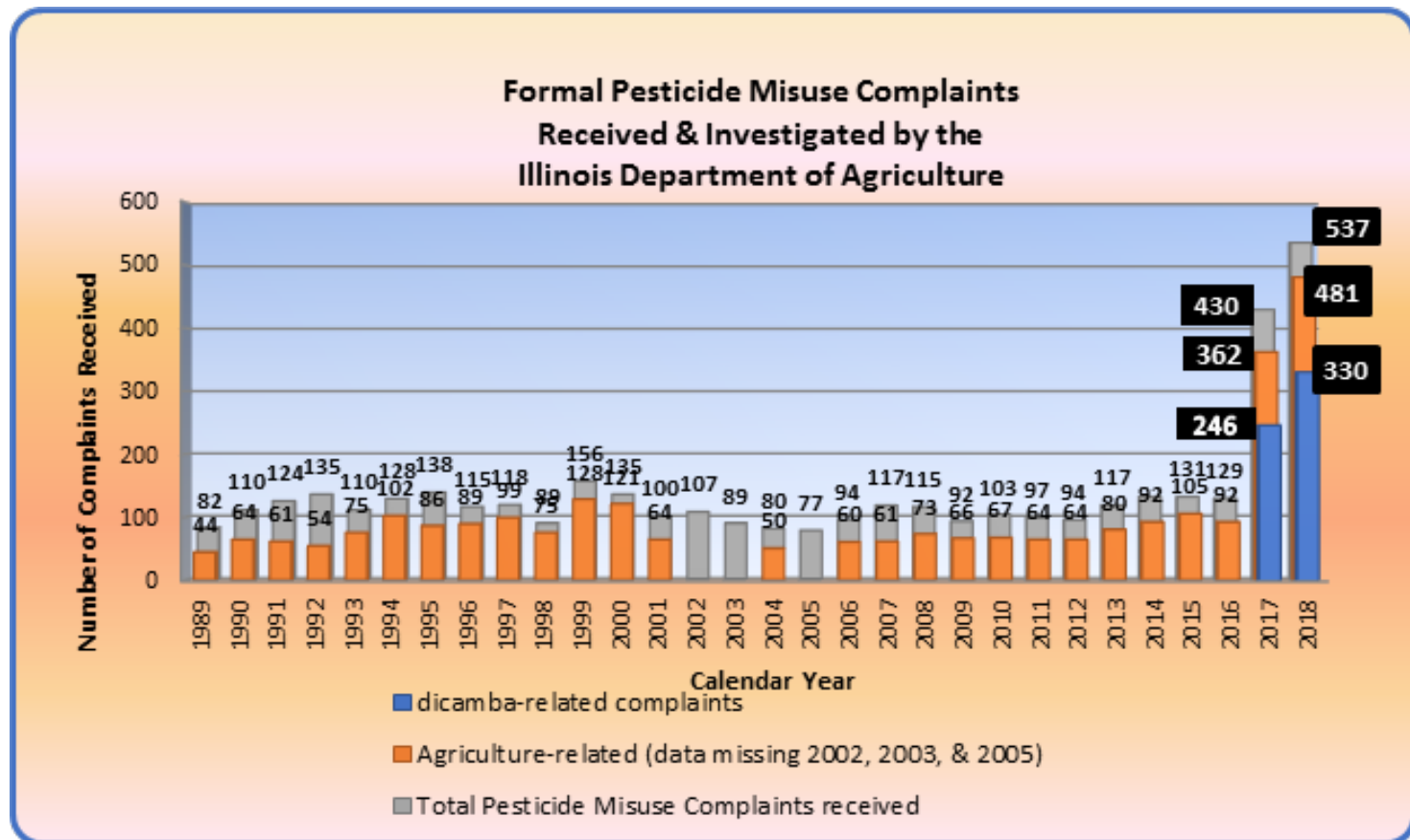
9. Making IDOA the lead state agency to implement and administer all pesticide recordkeeping.

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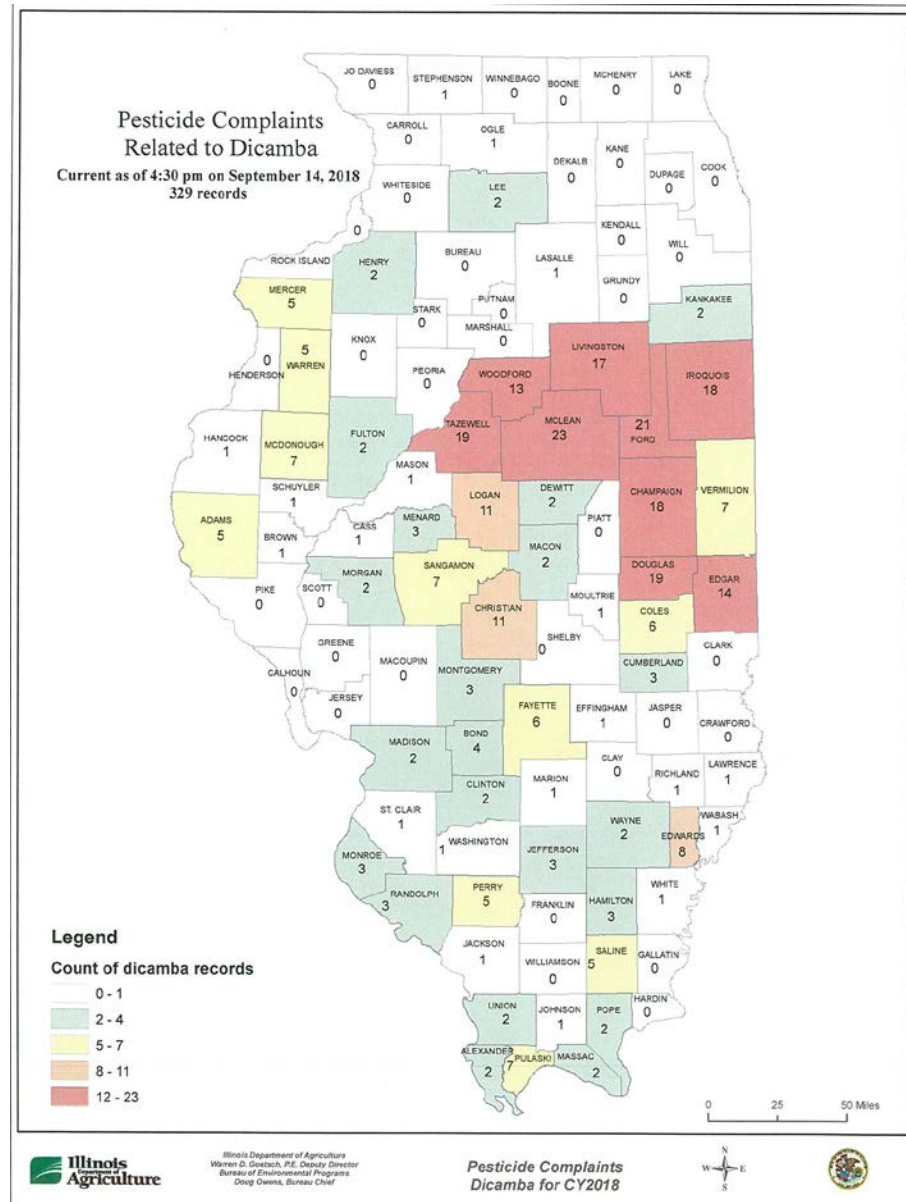
IDOA PESTICIDE MISUSE COMPLAINT PROCESS



IDOA – DICAMBA CASES

Dicamba related cases:

- 140 cases completed
- 85 warning letters
- 2 advisory letters
- 51 complaint withdrawn/ no misuse determined
- 2 notices of fine



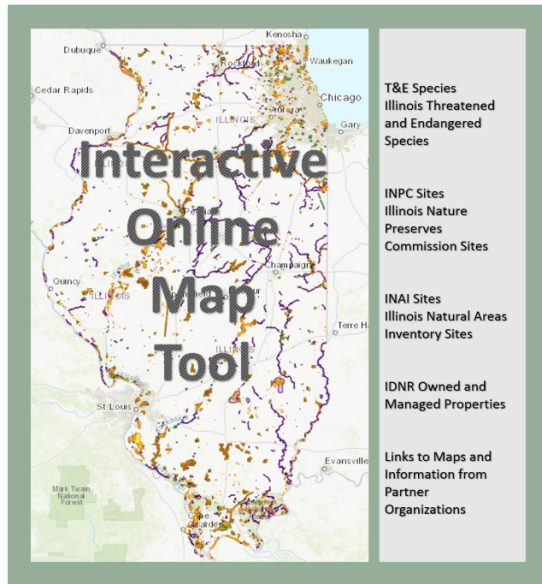


IDNR: HERBICIDE DAMAGE & TREES



Illinois DNR » Conservation

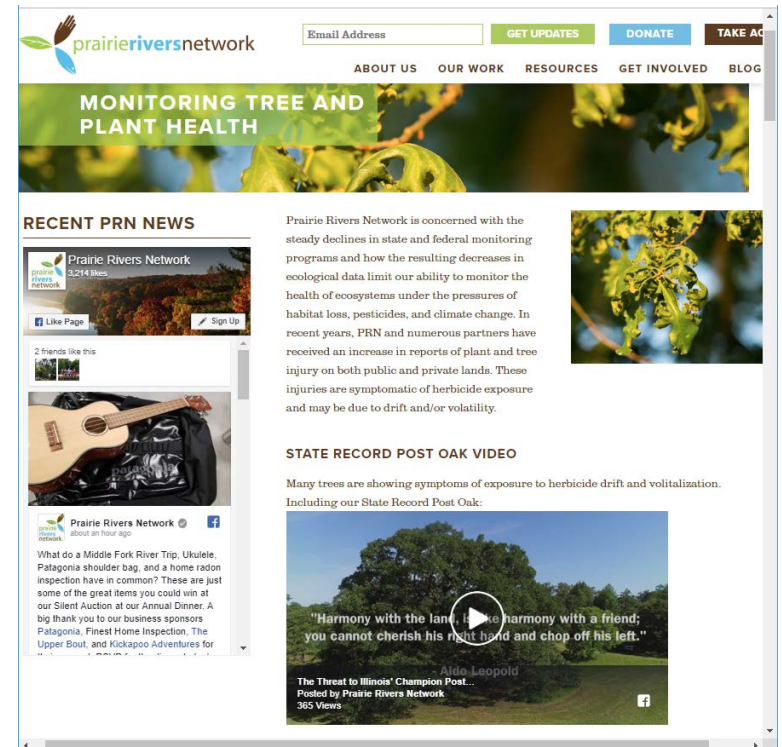
Natural Resources Awareness Tool for Applicators



Toward the end of the growing season in 2017, IDNR began receiving injury reports on plants, especially oak trees, that could potentially be attributed to drift and volatilization from agricultural herbicide application on surrounding lands.

IDNR is responsible for preserving and protecting the state's natural resources for present and future generations. By bringing awareness to the importance of these resources in Illinois, IDNR strives to strengthen the partnership between all stewards and stakeholders within the natural resources and agricultural communities.

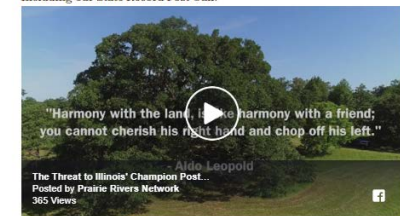
Due to the number of reports and apparent widespread effects to natural areas, IDNR developed this online mapping tool identifying the location of the state's natural areas, threatened and endangered species, and other sensitive areas to assist landowners, producers, and applicators with pre-application planning of herbicides and pesticides, to help prevent and manage off-target drift.



Prairie Rivers Network is concerned with the steady declines in state and federal monitoring programs and how the resulting decreases in ecological data limit our ability to monitor the health of ecosystems under the pressures of habitat loss, pesticides, and climate change. In recent years, PRN and numerous partners have received an increase in reports of plant and tree injury on both public and private lands. These injuries are symptomatic of herbicide exposure and may be due to drift and/or volatility.

STATE RECORD POST OAK VIDEO

Many trees are showing symptoms of exposure to herbicide drift and volatilization. Including our State Record Post Oak:





USEPA DECISION

- **Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)**
 - Licensing statute: pesticides must be **registered** to be legally sold/distributed
 - Administered by USEPA, various pesticide offices
 - Science: biological & economic analysis, environmental fate & effects, health effects
 - Data review:
 - Risk assessment: harm to humans, wildlife, fish & plants, risk to water
 - Peer review, Risk management, regulatory decision
 - Stakeholder input
- **Federal Food Drug Cosmetic Act (FFDCA)** - Tolerances for food consumption
- **Food Quality Protection Act (FQPA)** - “reasonable certainty of no harm” for pesticides used for food or feed
- **Pesticide Registration Improvement Act (PRIA)** - fee-for-service, timelines
- **Endangered Species Act (ESA)** - EPA must assess if registration “may effect” TES
- **Registration Oversight** - 15-year review + special reviews



THE LABEL IS THE LAW

Pesticide product labels provide critical information about how to safely and legally handle and use pesticide products. Unlike most other types of product labels, pesticide labels are legally enforceable, and all of them carry the statement: “It is a violation of Federal law to use this product in a manner inconsistent with its labeling.” In other words, the label is the law.

A key function of the pesticide product label is to manage the potential risks from pesticides. In support of that function:

- state and federal agencies enforce pesticide label requirements;
- educational programs certify pesticide users; and
- pesticide users read and follow the label directions.

“The most valuable time spent in pest control is the time you take to read the pesticide label.”

“Labels change! Don’t assume you know how to use a product because you’ve used it before... Read the label at all stages of the application process.”



DICAMBA 2018

RESTRICTED USE PESTICIDE

For Retail Sale To and Use Only by Certified Applicators or persons under their direct supervision, and only for those uses covered by Certified Applicators certification.

Registration process, 2017 - 2018 labels

Renewed October 12, 2017 (Engenia, XtendiMax) and October 16, 2017 (FeXapan)

Expire November 9, 2018 (XtendiMax, FeXapan) and December 20, 2018 (Engenia)

2018 additional (federal) requirements:

- Restricted Use Product (must abide by new label)
 - Must be certified applicator (private or commercial), or operator
 - Have passed required test(s), received a license
- Dicamba-specific training
 - 11,000 Illinoisans trained during winter 2017-8

Additional state-level requirements in : AR, MO, MN...

FIFRA Section 24(c) Special Local Need

FOR DISTRIBUTION AND USE ONLY IN THE STATE OF NORTH
DAKOTA





DICAMBA 2019 – 2020

- Renewed registration for OTT dicamba on soybeans, cotton
- October 31st, 2018 – December 20, 2020
- Additional requirements / restrictions from USEPA
- Label language for specific products

Clickable Links:

Engenia®

Herbicide



“EPA understands that dicamba is a valuable pest control tool for America’s farmers. By extending the registration for another two years with important new label updates that place additional restrictions on the product, we are providing certainty to all stakeholders for the upcoming growing season.”

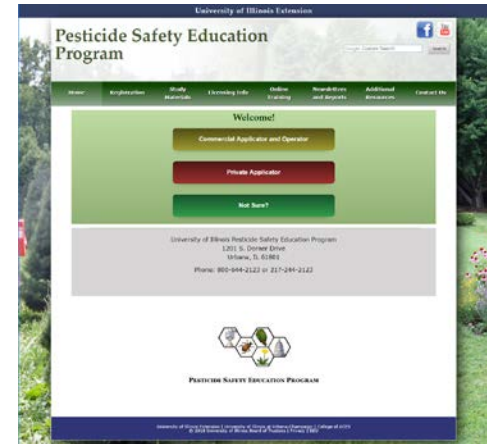
--Acting Administrator of USEPA, Andrew Wheeler

“It is important that the EPA has decided to renew the registration of over-the-top use of this important weed control technology on dicamba-resistant cotton and soybeans, because it presents farmers with options. This represents the conclusion of a very thorough scientific review, in conjunction with stakeholders, involving site visits and careful consideration of facts. Producers who use this weed control method should review the label, understand why changes have been made, and ensure that all requirements of the label are met when the 2019 use season begins.”

-- Secretary of USDA, Sonny Perdue

CERTIFICATION REQUIREMENTS

“Only certified applicators may apply dicamba over the top (those working under the supervision of a certified applicator may no longer make applications)”



Illinois Pesticide Act (415 ILCS 60/)

“Certified applicator” is any individual who is certified to purchase, use, or supervise the use of pesticides which are classified for restricted use.

- “Private applicator” is a certified applicator who purchases, uses, or supervises the use of any pesticide classified for restricted use, for the purpose of producing an agricultural commodity on property owned, rented, or otherwise controlled by him or his employer.
- “Licensed Commercial Applicator” is a certified applicator who owns or manages a business that is engaged in applying pesticides, or uses or supervises the use of pesticides, whether classified for general or restricted use, for hire, on property of others.
- “Commercial not-for-hire applicator”
- “Licensed Operator” means a person employed to apply pesticides to the lands of others under the direction of a “licensed commercial applicator” or a “licensed commercial not-for-hire applicator”.

WINDOW OF APPLICATION

“Prohibit over-the-top application of dicamba on soybeans 45 days after planting and cotton 60 days after planting”

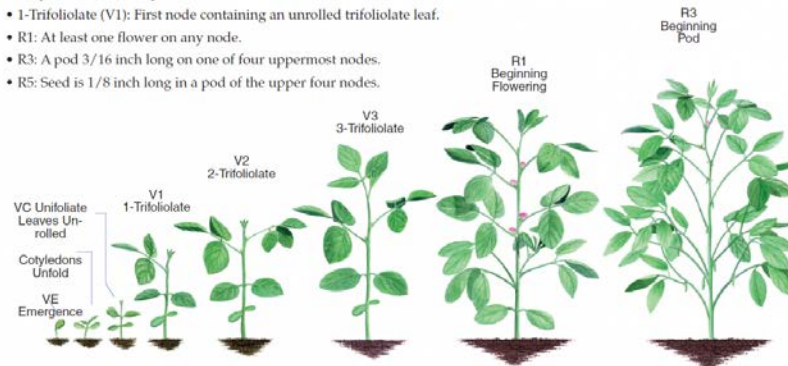
2018:

- Preplant surface, Preemergence, Postemergence - up to and including bloom (R1 growth stage)

2019:

- Preplant surface, Preemergence, Postemergence - *45 days after planting* or R1, *whichever comes first*

- Emergence (VE): Hypocotyl pulls cotyledons through soil surface, cotyledons provide nutrients and energy.
- Cotyledons (VC): Cotyledon leaves with unifoliate leaves unrolled.
- 1-Trifoliolate (V1): First node containing an unrolled trifoliolate leaf.
- R1: At least one flower on any node.
- R3: A pod 3/16 inch long on one of four uppermost nodes.
- R5: Seed is 1/8 inch long in a pod of the upper four nodes.



NUMBER OF APPLICATIONS

“For cotton, limit the number of over-the-top applications from 4 to 2 (soybeans remain at 2 OTT applications)”



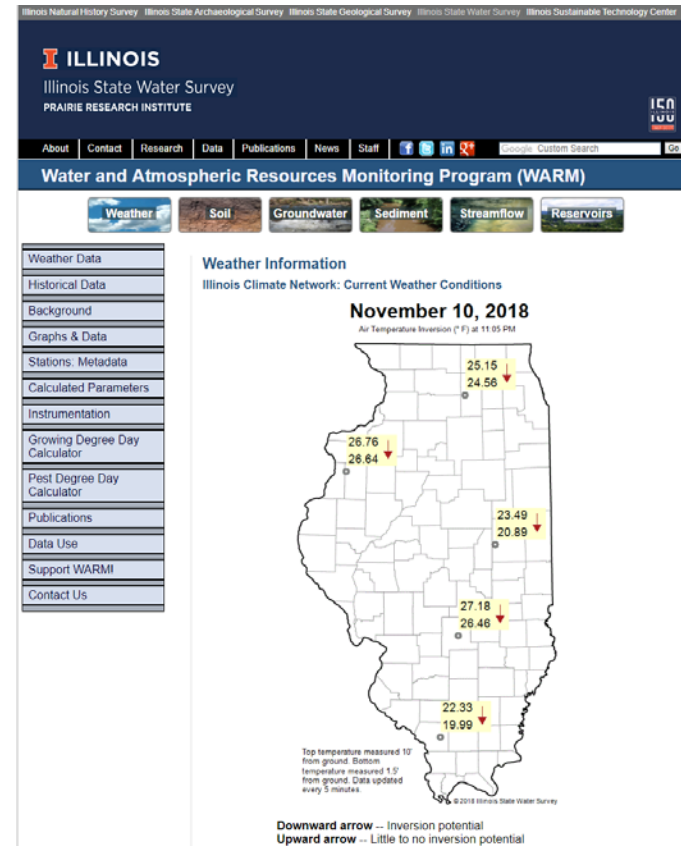
- “Up to two postemergence applications... may be made from soybean emergence through 45 days after planting or R1, whichever comes first.”
- “DO NOT make more than two applications preplant or preemergence per year.”
- “Avoid making more than two applications of ... Group 4 herbicides within a single growing season unless mixed with another mechanism of action with an overlapping spectrum for the difficult-to-control weeds.”



APPLICATION TIMING

“Applications will be allowed only from 1 hour after sunrise to 2 hours before sunset”

- DO NOT make applications at night. Applications are only permitted beginning one hour after sunrise, and ending two hours before sunset.
- Inversions begin to form as the sun sets and often continue into the morning before the surface warming. Their presence can be indicated by ground fog, smoke not rising, dust hanging over a road, or presence of dew or frost. Inversion conditions typically dissipate with increased winds (above 3MPH) or when surface air begins to warm (3°F from morning low).



<https://www.isws.illinois.edu/warm/weather/>

Click on “inversion map”





ENDANGERED SPECIES

- “In counties where endangered species may exist, the downwind buffer will remain at 110 feet and there will be a new 57-foot buffer around the other sides of the field (the 110-foot downwind buffer applies to all applications, not just in counties where endangered species may exist)”
- Registered in 34 states, but subject to area-specific restrictions as required by <http://www.epa.gov/espp/> that must be consulted prior to an application.
 - In combination with a 110-foot infield wind directional spray drift buffer, a 57-foot omnidirectional infield buffer is required to protect federally listed threatened and endangered species.

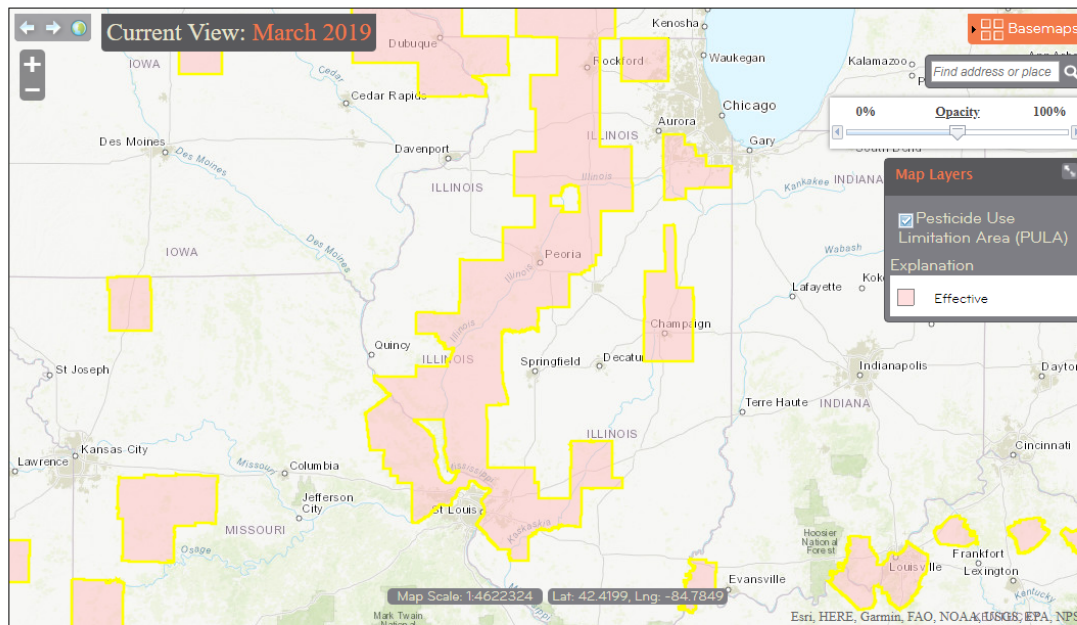


Endangered Species

Bulletins Live! Two -- View the Bulletins

For assistance in using Bulletins Live! Two, [view the tutorial](#). Also see [background, notes and a quick start guide for BLT](#).

(tentative) Bureau, Cass, Champaign, Clinton, Fayette, Ford, Fulton, Greene, Jersey, Jo Daviess, LaSalle, Lee, Madison, Marshall, Mason, McHenry, Morgan, Ogle, Peoria, Pike, Schuyler, Scott, St. Clair, Tazewell, Will, Winnebago, Woodford



INSTRUCTIONS				
RESULTS				
AI/Product	Use	App Method	Formulation	Code
ENGENIA HERBICIDE [7969-345]	Cotton	Ground spray	Liquid	D1
ENGENIA HERBICIDE [7969-345]	Soybean	Ground spray	Liquid	D1

Codes and Limitations Table	
Code	Limitation
D1	In combination with the 110 foot in-field wind-directional spray drift buffer, a 57 foot omnidirectional in-field buffer is required to protect federally listed threatened and endangered species. Non-sensitive areas, defined below, may be included as part of the buffer. Non-sensitive areas: The following areas may be included in the buffer distance calculation when directly adjacent to the treated field edges: 1. Roads, paved or gravel surfaces, mowed and/or managed areas adjacent to field such as rights of way. 2. Planted agricultural fields containing: corn, dicamba tolerant cotton, dicamba tolerant soybean, sorghum, proso millet, small grains and sugarcane. If the applicator intends to include such crops as dicamba tolerant cotton and/or dicamba tolerant soybeans in the buffer distance calculation, the applicator must confirm the crops are in fact dicamba tolerant. 3. Agricultural fields that have been prepared for planting. 4. Areas covered by the footprint of a building, silo, or other man made structure with walls and or roof.

Printable Bulletin

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TRAINING REQUIREMENTS

“Clarify training period for 2019 and beyond,
ensuring consistency across all three products”



Prior to applying this product in the 2019 growing season and each growing season thereafter, all applicator(s) applying this product must complete dicamba or auxin-specific training. If training is available and required by the state where the applicator intends to apply this product, the applicator must complete that training. If the state where the application is intended does not require auxin or dicamba specific training, then the applicator must complete dicamba or auxin-specific training provided by one of the following sources: a) a registrant of a dicamba product approved for in-crop use with dicamba-tolerant crops, or b) a state or state-authorized provider.



TANK CLEAN OUT

“Enhanced tank clean out instructions for the entire system”

- You must ensure that the spray system used to apply this product is clean before using this product. Failure to properly clean the entire spray system can result in inadvertent contamination of the spray system. Small quantities of dicamba may cause injury to non-dicamba tolerant soybeans and other sensitive crops.
- Inadvertent contamination can also occur in equipment used for bulk product handling and mixing prior to use in the spray system. Care should be taken to reduce contamination not only in the spray system but in any equipment used to transfer or deliver product.
- Consider using block and check valves to avoid backflow during transfer. Piping should be reviewed to ensure there not potential for product build-up. Dedicated nurse trucks and tender equipment should be used when possible.
- Clean equipment immediately after using this product, using a triple rinse procedure (11 steps)



pH + VOLATILITY

“Enhanced label to improve applicator awareness on the impact of low pH’s on the potential volatility of dicamba”

- DO NOT add adjuvants that will further decrease pH or acidify the spray solution.
- Spray mixtures with lower pH levels (less than pH 5) can increase the potential volatility of dicamba. To mitigate this, it is important to know the pH of your spray mixture and make appropriate adjustments. Talk with your local agricultural consultant, extension agent, or company representative for recommendations to prevent low pH spray mixtures.
- Litmus test
- Neutral buffer agents



ADDITIONAL CONSIDERATIONS

Sensitive Areas, Sensitive Crops, and Residential Awareness



“DO NOT apply when the wind is blowing in the direction of neighboring sensitive crops or residential areas. The appropriate distance must be determined by the applicator relative to where the application is being made, the environmental conditions, and potential risk to downwind sensitive crops and residential areas.”

- **Sensitive Areas:** bodies of water and nonresidential, uncultivated areas that may harbor sensitive plant species
- **Sensitive Crops and Residential Areas:** Food, forage, or other plantings grown for sale, use or consumption, including in residential areas. (Examples (not inclusive list): non-DT soybeans, flowers, fruit trees, grapes, ornamentals...
- **Nonsensitive Crops and Areas:**
 - Roads, paved or gravel surfaces, mowed or managed areas adjacent to field (ROWS)*, agricultural fields prepared for planting, areas covered by the footprint of a building
 - Agricultural fields containing asparagus, corn, DT cotton, DT soybeans, sorghum, proso millet, small grains and sugarcane (Must confirm crops are dicamba tolerant)

Applicator must always apply a 110 foot buffer when applying this product from the downwind outer edges of the field.



ADDITIONAL CONSIDERATIONS

- Communication and Planning Ahead
- Temperature inversions : “DO NOT apply when temperature inversions exist at the field level.”
- Wind Speed & Direction: Remains 3 to 10 MPH, shifting winds
- Rates : Specified limits per application, during post-emergence, per season
- Boom Height : “DO NOT exceed a boom height of 24 inches above target pest or crop canopy”
- Future rainfall : “DO NOT apply if expected rainfall amount may exceed soil field capacity and result in soil runoff in the next 24 hours.”





RECORDKEEPING

- Must keep records for 2 years.
- Records must be generated within 72 hours application.
- A record must be kept for every individual application.
- Record must be made available to IDOA, USDA, USEPA upon request.

1. Full name of certified applicator
2. Certification Number of certified applicator
3. Product name
4. EPA registration number
5. Total amount applied
6. Application month, day, and year
7. Crop planting date
8. Start and finish times
9. Location of the application
10. Crop or site receiving the application
11. Size of area treated
12. Training requirement
13. Application timing (pre emerge, # days post)
14. Receipts of purchase
15. Product label (product + any special local needs label that supplements)
16. Sensitive areas, sensitive crops, and residential awareness
 - sensitive crop registry (name and date checked)
 - on site survey of sensitive areas, crops, residential areas
16. Buffer requirement calculation
17. Spray system cleanout date and method
18. Tank mix products and registration numbers
19. Nozzle selection and pressure
20. Air temperature, at start and finish
21. Wind speed and direction, at start and finish

RESEARCH

- Illinois university trials
- Recommendations



July 15 Dicamba injury update. Different Year, some questions

PUBLISHED: JULY 15, 2015

As explained in previous articles from this season Dicamba injury mostly confined to Specialty Crops, Ornamentals and Trees for the Dicamba signal Crops and Plants becoming more evident June 15th Update, I have attempted to provide updates as to the extent of damage going throughout the United States, which in the form of off-target dicamba related cases that are currently under investigation by the state Departments of Agriculture, as well as estimates of dicamba-related crop damage from generally weed scientists. Herein, I provide the maps below as an update of the situation as of July 15th.

Because there seems to be great confusion and/or controversy over the maps, I just need to explain once again what these maps contain. First, university weed scientists estimate to what extent they are seeing dicamba injury in their respective states. It is an estimate. My colleagues use extension agents and other trusted sources throughout their state to generate these estimates just like I do in my own state. Hopefully everyone on all sides of this issue can appreciate that much more happens than what actually gets turned into the state Departments of Agriculture that is the reason for the maps of estimates.

Estimates of Dicamba-injured Soybean Acreage in the U.S. as Reported by University Weed Scientists (as of July 15, 2015)



© 2015 The University of Illinois

The second map explores the number of actual dicamba-related injury investigations that are being conducted by the various state Departments of Agriculture. These are ongoing investigations and are not final. Given the significant stress that has been placed on these resources and the time involved with 2 to 3 years the number of investigations are on the

November 2017

Precautions for Dicamba Use in Xtend Soybeans

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Professor of Weed Science
Joe Kley
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Purdue University

Aaron Hager
Associate Professor of Weed Science
University of Illinois

Mark Loux
Professor of Weed Science
The Ohio State University

Dicamba use in soybean - general information

Ohio, Indiana, and Illinois are heavily infested with weeds resistant to glyphosate (group 9), PPO inhibitors (group 14), and ALS inhibitors (group 2). This has greatly reduced the number of effective postemergence herbicides for controlling these weeds in Roundup Ready 2 (RR2) soybeans. Adoption of Roundup Ready 2 Xtend (glyphosate and dicamba resistant - RR2 Xtend) soybeans and use of dicamba-based herbicides is one option for managing resistant weed populations. Keep in mind that selection for dicamba resistance occurs each time dicamba is applied, and over reliance on this technology will lead to the development of dicamba-resistant weed populations.

Concurrent with the development of dicamba-resistant soybean varieties, Monsanto and BASF developed new formulations of dicamba herbicides for use in RR2 Xtend soybeans that are supposed to be lower in volatility compared with previous dicamba products. These products are Xtendimax (Monsanto), FeXapan (same thing as Xtendimax, but sold by DuPont), and Engenia (BASF). The federal labels for these herbicides contain very detailed application instructions to reduce risk of off-target movement. However, in 2017, there were thousands of cases of off-target movement affecting millions of acres throughout the soybean growing region of the US. As a result, we provide information here to help reduce risk of off-target movement of dicamba applied to RR2 Xtend varieties. The information provided here is not necessarily inclusive, or meant to replace a thorough knowledge of herbicide labels and other information provided by manufacturers.

In early October 2017, the EPA approved revised labels for Xtendimax, FeXapan, and Engenia. All three products are now restricted use pesticides, meaning an applicators license must be held in order to purchase and apply these products. The labels now also require applicators to attend an annual dicamba or group 4 herbicide-specific training prior to using the products. In addition to becoming restricted use pesticides, these revised labels have more restrictions outlining how the products should be applied. The language regarding buffers and applications near sensitive crops has also been rewritten for clarification on what constitutes sensitive areas and crops, and how the products should be applied.

Find the latest weed management information and tools from Purdue:

<https://ag.purdue.edu/weedscience>

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STATE LEVEL

The Illinois Department of Agriculture administers the Illinois Pesticide Act.

- Enforce the registration, purchase, use, storage, and disposal of pesticides
- Control the purchase and use of pesticides pertaining to the production, protection, care, storage, or transportation of agricultural commodities
- Control the use of pesticides applied by agricultural equipment

IL Department of Public Health

- Control structural pes pesticides and enforce provisions related to vector control, control of pestiferous and disease carrying insects, rodents and other animals, and control of birds and other mammals that may pose a threat to the health of the public

IL Environmental Protection Agency

- To protect and preserve the quality of air, water, and guard against unreasonable contamination of land resources.



STATE LEVEL

Illinois Department of Natural Resources

- State Parks Act
- State Forest Act
- Illinois Endangered Species Protection Act (Endangered Species Protection Board)
- Illinois Natural Areas Preservation Act (Nature Preserves Commission, Natural Areas Inventory)
- Illinois Natural Areas Stewardship Act (Nature Preserves Commission)



For reference, Illinois has 995,000 acres of sensitive resources.

As of May 2015, Illinois had 245 endangered and 72 threatened PLANT species on the State of Illinois Endangered Species List.

(1 endangered, 8 threatened federally)



WRAPPING UP

Pre-season work

- Dicamba-specific training
- Read the labels
- Equipment (nozzles, etc.)

Pre-application work

- Communication with neighbors
- Checking websites for sensitive areas
- Checking weather related information

Application work

- Compliance
- Stewardship
- Recording required data

Post-application work

- Tank clean out
- Recordkeeping





NEXT STEPS

- Requirements on training, certification needs
- Input from IL Department of Agriculture
- Future webinars on regulatory environment (federal and state)



Questions?

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