



Dicamba Issues EPA Perspective


Presentation to the Southern Legislative Conference

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July 2018





EPA Office of Pesticide Programs

- Licensing program – Office of Pesticide Programs (OPP) regulates pesticide products
 - Applicant develops a pesticide, generates data and submits an application to the EPA
 - EPA reviews submitted data to assess risk
 - EPA makes its decision based on all available information
- By design pesticides are intended to kill certain pests so OPP must balance between controlling pests and protecting human health and non-target organisms
- “Label is the law” principle – it is a violation of Federal law to use a pesticide not in accordance with the label
 - States are the primary enforcer

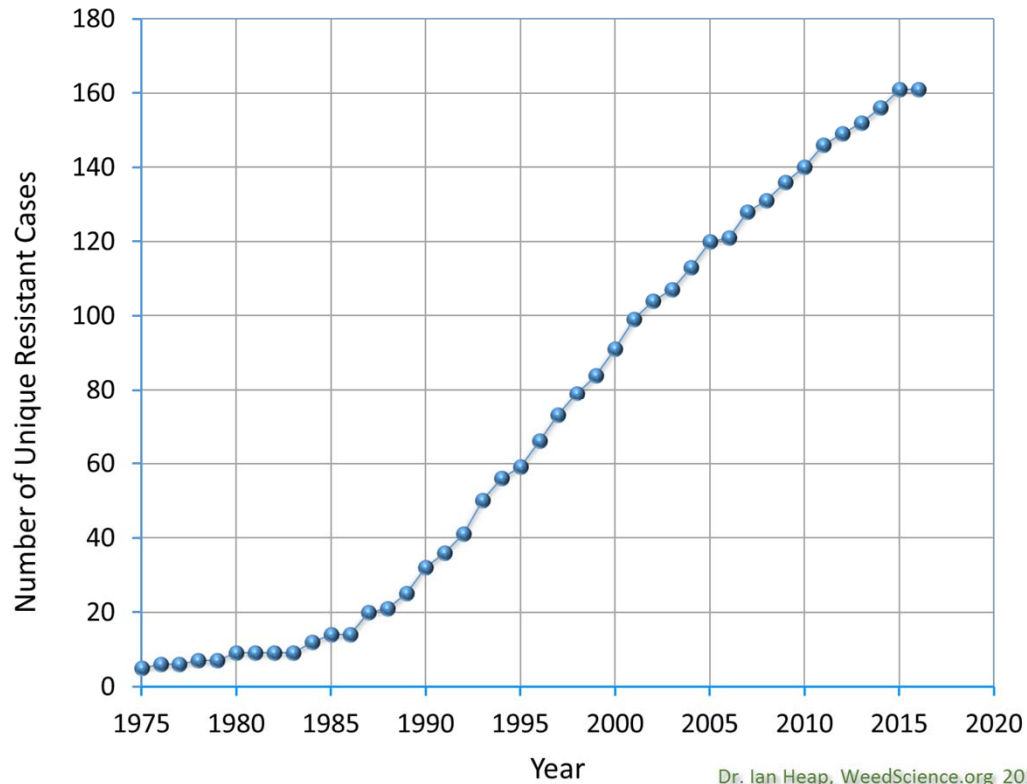


Background on Herbicide Resistance

- Weed resistance is an increasing problem
- Resistance results from a variety of biological, technological, and economic factors
- Impacts in the U.S.
 - ~70 million acres infested with resistant weeds (USDA)
 - Cost to U.S. farmers is estimated to be ~\$2 billion/year (Vince Davis, University of Wisconsin)
- No new herbicide Modes of Action have been registered in > 30 years.
- In 2017 OPP published two Pesticide Registration Notices (PRNs) on resistance management and is implementing them during registration and registration review.



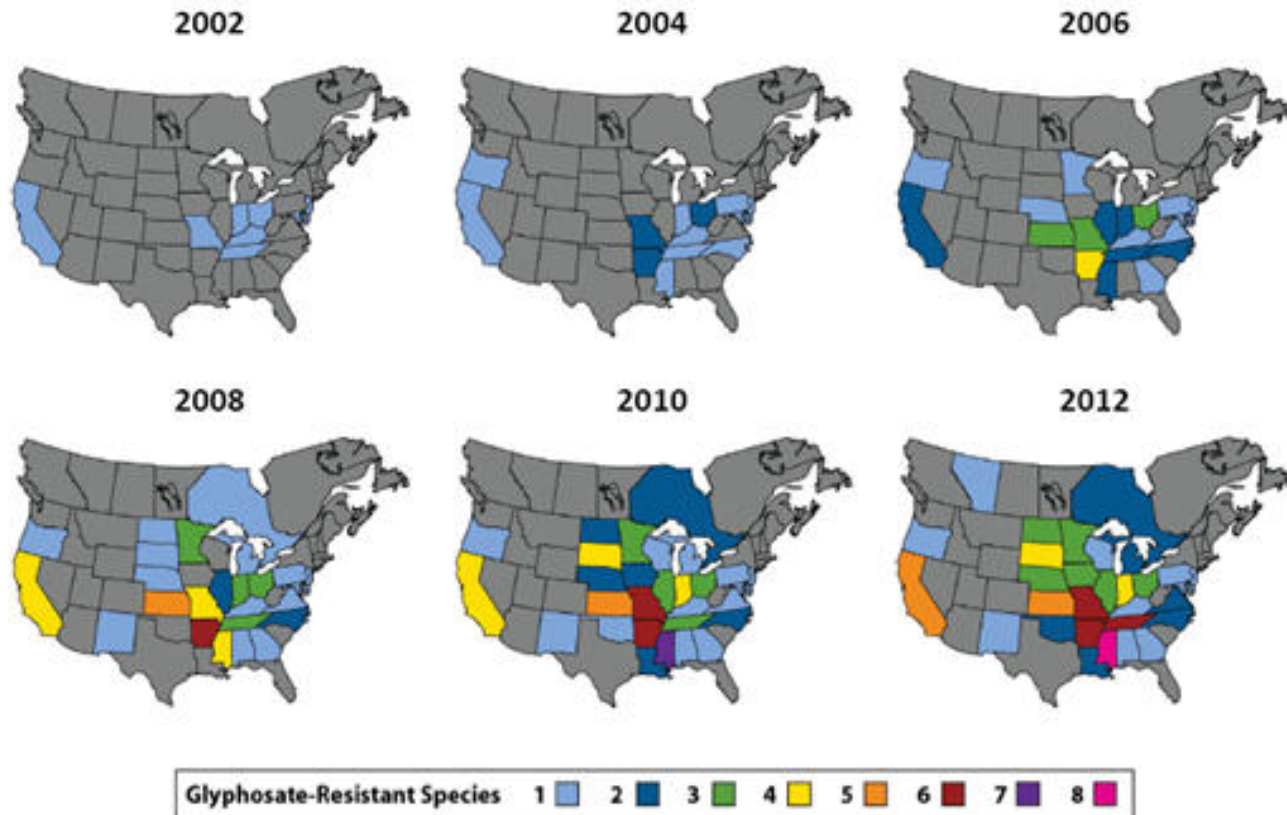
Increase in unique resistant weed cases for the U.S.



Each resistant weed by individual herbicide is counted as one case.



Glyphosate Resistance over Time



Confirmed glyphosate-resistant weed populations in North America, 2002-2012 (Heap 2012).



Dicamba Over-the-Top Uses

- New Uses for dicamba-tolerant soybean and dicamba-tolerant cotton were registered in late 2016
- Three products were approved for use with 2 year expirations
 - Xtendimax with VaporGrip Technology (EPA reg no. 524-617)
 - Engenia Herbicide (EPA reg. no. 7969-345)
 - DuPont FeXapan Herbicide Plus VaporGrip Technology (EPA reg. no. 352-913)
- 2016 labels contained several restrictions designed to avoid off-target movement



Additional Terms of Registration for Dicamba

- Maintain website listing approved tank mixes
- Herbicide Resistance Management Plan
 - Field detection and remediation
 - Education
 - Evaluation
 - Best Management Practices from WSSA
 - Reporting of “likely resistance”



Summary of 2017 Dicamba Incidents

- May/June 2017 EPA started receiving reports of significant crop damage following applications of dicamba
- Early reports were reported in Bootheel of Missouri
- As the season progressed, reports of soybean damage spread across southern states and northern MO, into the Midwest and Dakotas

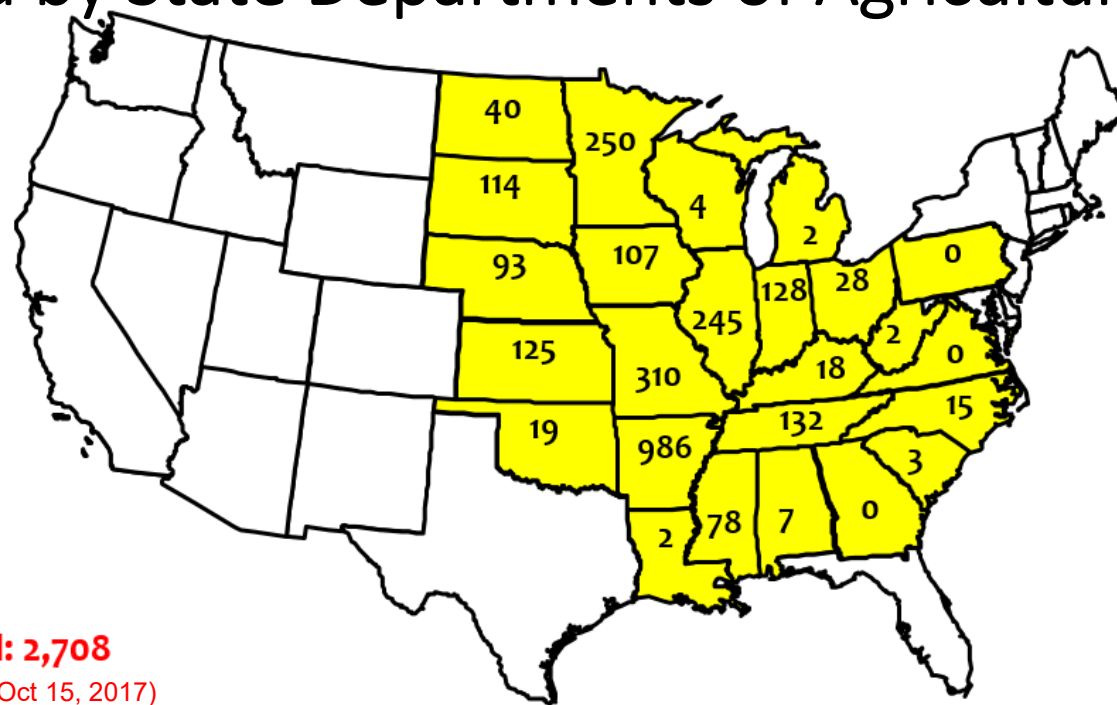


Incident Summary Continued...

- October 15, 2017: 2,708 official dicamba-related crop injury investigations (collected by Univ. of Missouri Ag. Extension as reported by state departments of agriculture)
- More than 3.6 million acres of soybeans impacted
- Other impacted crops: tomatoes, watermelon, cantaloupe, vineyards, pumpkins, vegetables, tobacco, residential gardens, trees and shrubs
- Not all reports of crop damage were reported to State Departments of Agriculture



2017 Dicamba-Related Injury Investigations Reported by State Departments of Agriculture



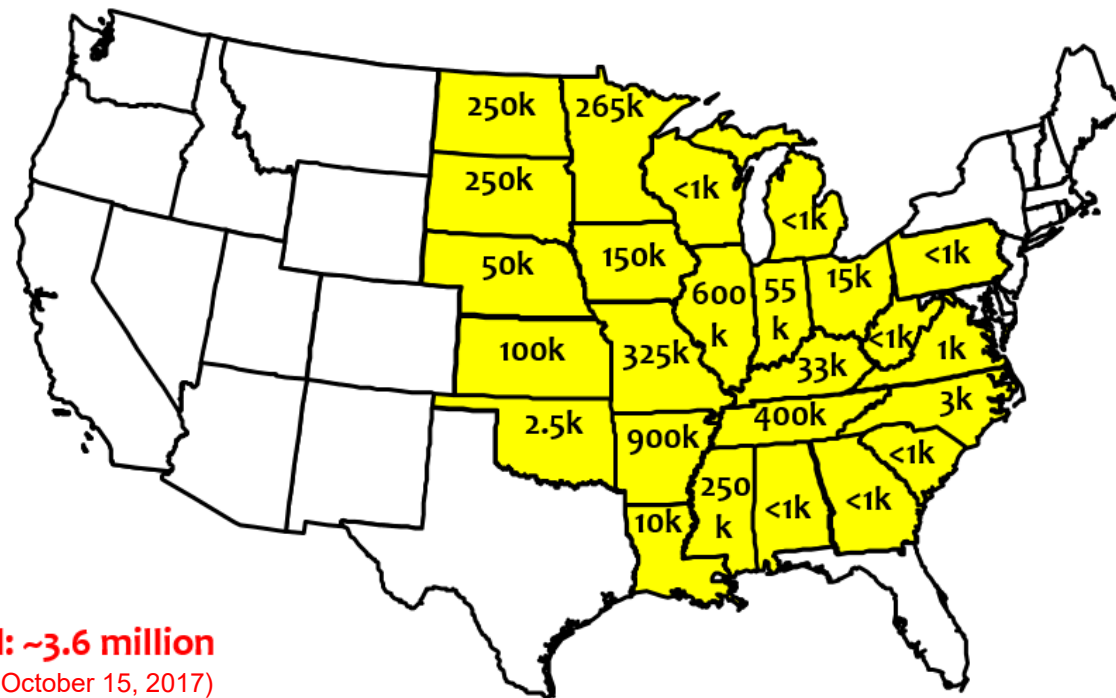
***Total: 2,708**
(*as of Oct 15, 2017)

Source: Univ. of Missouri, IPM, Dr. Kevin Bradley
https://ipm.missouri.edu/IPC/M/2017/10/final_report_dicamba_injured_soybean/

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2017 Estimated Dicamba-Injured Soybean Acreage



***Total: ~3.6 million**
(*as of October 15, 2017)

Source: Univ. of Missouri, IPM, Dr. Kevin Bradley
https://ipm.missouri.edu/IPC/M/2017/10/final_report_dicamba_injured_soybean/

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Summary of Investigations

- Physical Drift
- Tank Contamination
- Temperature Inversions
- Volatility
- Misuse



Summary of Investigations Cont'd...

- EPA engaged State Lead Agencies and University Weed Scientists soliciting information to cooperatively develop solutions to address the dicamba incidents reported in the field
- Cooperative efforts among University Academic, Industry and Growers were used to inform EPA's regulatory decision making



EPA Objectives for 2018 Label Changes

- Further minimize the potential for off-target movement by addressing application practices
- Reduce ambiguity across registered products
- Retain the utility of the technology recognizing the clear benefit and importance for managing weed resistance
- Federal label intended for all 34 states where dicamba is registered on dicamba-tolerant soybean and cotton



Summary of 2018 Label Changes

- All three products are Restricted Use Pesticide products
 - For retail sale to and use only by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's certification
- Dicamba-specific training is required for all applicators
- Each label limits applications to when maximum wind speeds are below 10 mph (from 15 mph) to reduce potential spray drift;
- Applications may only occur between Sunrise and Sunset
- Tank clean-out language to prevent cross-contamination
- Susceptible/sensitive crop identification and record keeping with sensitive crop registries to increase awareness of risk to especially sensitive crops near application site
- RUP designation requires applicators to maintain specific records regarding the use of these products



What are the additional training requirements for Dicamba products?

- In order to ensure better label compliance and stewardship when used over-the-top to these crops, all applicators must have taken a required dicamba-specific training.
- The dicamba trainings are different from, and do not take the place of, certified applicator training, which is required as part of the state applicator certification requirements.
- Some states permit the dicamba training to be included as part of the continuing education unit (CEU) requirements as part of the annual recertification for certified applicators.



Implementation of New Labels

- All registrants agreed to get the revised labels into the hands of farmers in time for the 2018 use season
- EPA, cooperatively with SLAs, will monitor the success of these changes to help inform regulatory decisions for the use of dicamba on tolerant soybean and cotton beyond 2018



All eyes are on the 2018 growing season...

- Registrations for over-the-top uses on dicamba-tolerant uses were all registered with a two-year expiration
- EPA and State Lead Agency (SLA) cooperation to monitor the current situation (planned regular and frequent communication)
- Obtain relevant data/information in a timely manner to inform decision making



Questions/Discussion?