**Talking Points on Dicamba Prepared for National IPM Coordinating Committee**

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Survey responses compiled from Extension Specialist, Regional Centers and other responses by:

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* Dicamba gained popularity with farmers and became an important tool for weed management.
* However, its popularity faded as herbicide drift damaged millions of acres of crops across the Midwest.
* As a result, some environmental & consumer groups have called for EPA to deny re-registration of the herbicide (a decision that's expected soon).
* Damage from use of the herbicide also created challenges for cooperative extension and LGUs in the mid-west and mid-south portions of the country. Challenges included:
* Difficulty in securing new product formulations for field trials
* Questions about the quality of the science and information coming out of universities
* Threat of lawsuits & lawsuits filed
* For this reason, ECOP chair (Chuck Hibberd/NE) asked us to identify actions that Cooperative Extension directors and other land-grant university (LGU) administrators may want to consider individually or collectively to address issues resulting from dicamba use on soybeans. What is Extension’s role in dealing with Dicamba resistance?
* We asked Regional IPM Centers to solicit input from Extension weed scientists and other experts who have been involved with the dicamba issue. Many thanks to the center directors (Amanda Crump, Mike Hoffman, Sue Ratcliffe, Danesha Seth Carley, Joe LaForest) and the Extension weed scientists who took the time to respond.

Here’s what we learned . . .

* The answer to the primary question asked by Chuck Hibberd is that weed specialists and other LGU experts are doing a good job handling the issue at the state level and most indicated they are well supported by Extension administration in their states.

* However, the complex nature of the problem along with threats of litigation has severely limited Extension’s ability to act strategically.
* Some specialists reported that they have never seen a more polarizing issue affect agriculture:
* Interactions with BASF & Monsanto good at the regional level, but at the national level Monsanto has been combative, quick to dismiss any claims of volatility, and has tried to undermine the credibility of university weed scientists. One specialist remarked that “this behavior in no-one’s best interest and has resulted in a black eye on agriculture in the public’s mind”.
* The relationship with the pesticide industry has been strained by differences of opinions between university and industry on the volatility of the new formulations. There have also been threats of litigation and open records requests making work in this area difficult. Industry is on the defense and not willing to have open discussions about the problem.
* Contact with industry has been limited due to the aggressive nature of their response and their quick response to simplify the issue by first putting the blame on applicators and then on Extension educators for failure to adequately train applicators and growers.
* In the winter/spring of 2017, industry did a poor job of explaining the challenges of dicamba application and did not adequately explain the importance of buffers and the identity of sensitive species; the 2018 was much better.
* Issues are much broader than just dicamba and soybeans, and include:
* Herbicide resistance
* Pesticide drift and off-target impacts
* Herbicide-resistant GMO varieties
* How should cooperative extension engage in controversial topics?
* There appears to be a strong collaborative network of university weed scientists working with government agencies. A good relationship between Extension and the state department of agriculture is key.
* The Weed Science Society of America is helping to coordinate efforts of university weed scientists, companies and EPA.
* Extension is constantly interacting with growers and they want unbiased answers.
* There have been many requests to evaluate crops that may have been damaged by dicamba applications varies across states, but most requests are handled by area field agronomists, specialists or Extension educators. Some states have not taken an active role in investigating field damage due to limited staffing and liability concerns. In addition, temperature inversions make it possible for dicamba to move for miles so it is very hard to determine exactly where the dicamba injury actually evolved from.
* Training on dicamba varies greatly among states:
* Some decided to let industry or the state department of agriculture do the training
* Extension provides training in others. One state reported that Extension devoted two people for more than four months to this topic, at an estimated cost of $100,000.
* Pesticide Applicator Training programs in many states cover drift in a general manner but do not cover dicamba issues in depth.
* The predominant technical issues Extension/LGUs are being asked to address are related to drift:
* There is a growing consensus among land-grant scientists that air inversions were a primary cause of the problem reason in the mid-south issues in 2017; however the companies the primary causes were off-label use of dicamba, night-time applications, particle drift rather than volatilization, etc.
* Differentiating particle drift from vapor drift
* Volatilization
* Drift impact on other crops, including ornamental trees and shrubs
* Application technologies to reduce drift
* Management practices to reduce drift (e.g., reducing tractor speed to 5 mph around field borders)
* Human health effects of low dose exposure to dicamba
* How to read and interpret the label directions, including buffer requirements
* How to identify and notify the owner of the crops surrounding the field that will be treated with dicamba
* Prediction of dicamba’s atmospheric transport and fate

A bunch of knowledge gaps were identified, including:

* How to reduce the volatility of dicamba formulations
* When, how often, and how to predict temperature inversions at the field level
* How dicamba will volatilize or drift under varying environmental conditions and across a large scale
* Basic weed control recommendations when using dicamba: when to apply, how much, how big can the weeds be for effective control
* Technical questions regarding off-target movement: how far can it go, will there be a yield loss, what other crops/plants are susceptible, how is it getting there

FOLLOW-UP & FURTHER DISCUSSION NEEDED

* Is any follow-up action needed by:

ECOP or ESCOP?

Regional IPM Centers?

USDA? (ARS, NIFA, Office of Pest Management Policy)

Weed Science Society of America?

* Do any relevant multistate committees exist? Do we need to form a new one?
* Possible funding sources:

NIFA: Crop Protection and Pest Management Program; IR-4