

## Preparing for the Auxin Technologies Meeting

San Juan, Puerto Rico: 2/11/16

Boyd Carey

### **NOTES REPRESENT MY PARAPHRASED STATEMENTS AND OPINIONS EXPRESSED BY THE PARTICIPANTS (see participants at end of document)**

#### Summary Common Themes

##### RESISTANCE CONCERNS:

- Economics and convenience will drive growers to use dicamba alone (not part of a tank-mix), multiple times in the same growing season and without residuals.
- Growers will not change this behavior until forced to by resistance on their own farm

##### OFFSITE MOVEMENT CONCERNS:

- Grower and retailer practices and equipment are not currently adequate to apply auxins correctly
- This will not change despite company training and education efforts

##### CONCERNS WITH APPLICATIONS IN XTEND SOY AND COTTON IN 2016

- Generic DMA formulations will be used
- Education and training on how to do it correctly cannot be done without a label

##### Notable suggestions made during the session:

- Education for on-target application would be facilitated by uniform requirements across products
- Multiple applications of dicamba or 2,4-D per growing season should not be allowed
- Unified training efforts across companies and extension would be more effective (referencing success of the "Take Action" program)

A press release from WSSA expressing support for best practices was already planned independent of this special meeting on auxins

#### Stated Meeting Objectives

1. Preserve the Auxin technologies – resistance related
2. Protect agriculture's reputation – on target application related

#### Presentations

- Kevin Bradley – U of Missouri – WSSA President:
  - Currently conducting survey of Commercial Pesticide Applicators in Missouri (growers and retailers) about application practices
  - **35% of Commercial Pesticide Applicators think that Xtend Soybeans will tolerate both 2,4-D and dicamba**
  - **2,4-D resistant waterhemp is identified in Missouri**
- Richard Joost – United Soybean Board (presented by Bob Nichols in Richard Joost's absence)
  - USB is emphasizing use of "Take Action" initiative which was led by Bill Johnson (Purdue) and funded by companies including Monsanto
  - USB funded glyphosate resistant pigweed research and will fund two new projects in 2016 (could not document the projects)
- Bob Nichols – Cotton Incorporated
  - 3 of top 5 concerns in cotton production are weed control related
  - **Glufosinate resistance is probably in eastern North Carolina**

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BADER FARMS ET AL v. MONSANTO ET AL.

**EXHIBIT  
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- **PPO resistance in north Delta**
- Potential sources of damage related to auxins:
  1. Tank Contamination – application related – grower/retailer
  2. **Drift – application related – grower/retailer (Bob most concerned with this)**
  3. Volatilization – formulation related – manufacturer
- No direct relationship between injury symptoms and yield loss
- Who gets scrutinized for off-site movement? Pesticides, GMOs, Farmers, Cotton, Soybean
- Environment image of cotton is critical – there is a significant impact of consumer attitude on Ag
- **Suggests it would be easier and more effective if the application direction/guidelines/requirements were the same between ENLIST DUO and XTEND**
- Advocates use of logo proposed by Neil Rhodes previously:
  - “Herbicide Stewardship: Protecting Crops, Environment, Technology”
- **Larry Walton – Dow**
  - Cotton
    - Trait is approved for cotton
    - Will launch in 2016
    - No US EPA registration for chemistry - ENLIST DUO cannot be applied
  - Corn and Soy
    - Have US EPA registration for chemistry
    - Will continue to Steward in 2016
    - Seed increases only? (not clear on this)
  - ENLIST E3 Soybean = glyphosate, 2,4-D, glufosinate)
  - ENLIST AHEAD = management resource to promote responsible use:
    - Management recommendations
    - Education and Training: ENLIST 360° Education Series
    - Technology Advancements
      - Colex-D Technology
      - ENLIST AHEAD Apps
      - Improved Nozzles
  - Presented diagrams outlining flow of field investigations for off-site movement and for potential weed resistance (HRM) as a condition of registration – will have 855- phone number
- **Steve Bowe – BASF**
  - Presented/shared very little information – primarily reviewed formulation and anticipated label
  - **Emphasized that they cannot (not allowed) to train growers until they have a label**
  - **BASF will have an equipment program to facilitate nozzle adoption**
  - **“On Target Application Academy” = planned training program**
- **J.D. Green - U of Kentucky**
  - emphasized that we need the final label directions in order to educate effectively
  - **Suggests we would be more effective with education if everything were the same across auxin products**
- **Concern that ENLIST DUO label does not specify what to do with the rinsate after tank cleaning**

### DISCUSSION NOTES

- **Bryan Young (PURDUE)**
  - **wants recommendations for tank clean-out to specifically call for the use of detergents**

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- does not believe growers will change herbicide program practices (ie using Roundup alone in the past and potentially dicamba alone in the future) as a result of our training efforts and will do the practice until they have to (when the problem is on their farm)
- Dan Westberg (BASF)
  - Stated his biggest concern with on-target application is boom height
  - Believes that dicamba applications can be effectively made if done properly as evidenced by decades of successful use in midwest corn, but we are not in position to do the necessary education and training without a label in place
  - **Stated that off-label use of dicamba in cotton was widespread in cotton last year and that it will be rampant in 2016. It will be driven even more by the PPO resistance issue in soybeans**
- Mike Owen (Iowa State)
  - doesn't believe we will impact grower practice with our training and education efforts.
  - Insists that our marketing messages are selling the expectation to growers that auxins will "fix" waterhemp and palmer pigweed problems.
  - **Is very concerned that growers will use multiple applications of dicamba alone**
- J.D. Green (U of Kentucky) emphasized that we need the final label directions in order to educate
  - **Suggests that we would be more effective with education if everything were the same across auxin technologies**
- Peter Sikkema (U of Guelph, Canada)
  - **Does not believe label should allow multiple applications of dicamba in a single growing season**
- Darin Dodds (Mississippi State Univ)
  - Mid-west and South different with respect to portion of acres treated by growers vs. custom application. South = 20% custom application, Midwest = 65%.
  - In cotton applicators need to treat insects and weeds at the same time. They make multiple applications of insecticides (4-7 for plant bugs) and will tank-mix insecticides. Nozzles suited for insecticides are that same nozzles suited for auxin herbicides.
  - Midwest (65% custom app) – operators given spray ticket with X number acres to complete and they will spray in any conditions in order to complete the assigned acres
  - South (20% custom app) – grower or custom applicators may not be competent to level required to apply correctly
- David Shaw (Mississippi State Univ)
  - We do not have the same threshold of tolerance for application mistakes as 10 years ago
  - Economics and convenience will drive use of dicamba alone
- **Concern that ENLIST DUO label does not specify what to do with the rinsate after tank cleaning**
- BAYER is supplying Greenleaf dual fan nozzles to growers/applicators for Liberty applications
- EPA is in process of developing some type of certification process or requirement for applicators??

### Participants

- Bob Nichols – Cotton Inc.
- Kevin Bradley – U of Missouri, WSSA President
- Lee Van Wychen – WSSA Liaison to EPA
- Larry Walton – Dow
- Steven Bowe – BASF
- Dan Westberg – BASF
- Peter Dotray – Texas A&M
- J.D. Green – Univ of Kentucky

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- Darin Dodds – Mississippi State Univ
- Mark Bernards – Western Illinois Univ
- Nilda Burgos? – Univ of Arkansas
- Michael Owen – Iowa State Univ.
- David Shaw – Mississippi State Univ
- Bryan Young – Purdue Univ
- Peter Sikkema – Univ of Guelph, Canada
- Phil Westra – Colorado State Univ
- Dallas Peterson? – Kansas State Univ.
- Scott Parrish

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