Dicamba: What we know & what we do not know

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Overview of presentation

• What we know
• What we do not know
• Next steps forward
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What we know about dicamba

- Can move off-target
- Soybeans are hyper-sensitive
- Lower spray pH correlates to more vapor loss
- More apparent emissions at higher temperatures
- New formulations have less vapors, but still some
- Variable stewardship in practice
- Population is watching us.
What we know about dicamba

• From Tennessee: (Larry Steckel)
• TDA completed 40% of official 2017 complaints (136 total)
• 41% could not find source of drift
• When source is known:
  • 27% was applicator error
  • 6 = unapproved tank mix, 6 = rate,
    3 = wrong nozzles
• Still many incidents not explained
What we do not know about dicamba

• How to get out of spray equipment
• Research papers on tank cleanout (very few)
• Reminder, Monsanto tank cleanout research?
  • Hydrogen peroxide using fenton’s reaction
  • Do not hear much about that
  • Not on the label
• Meaningful research on getting dicamba out of spray equipment
• Difficult to publish (active ingredients not listed)
What we do not know about dicamba

- How do dicamba vapors affect non target plants
- Most “drift” studies are sprayed at 10-15 GPA
- Not “drift” but simulated tank contamination
- Difficult research to do with vapors
  - How to generate dicamba vapors at known concentration?
  - Time of dosing?
- We assume 15 GPA behaves same as vapor...
What we do not know about dicamba

• Atmospheric loading
• Scale of vapor/aerosols loading probably affects plant response
• 4 acres? -40 -400 -4,000 - 40,000 - 400,000
• Cannot conduct this field trial under controlled conditions
• Fields with “no apparent plant response pattern”
  • Have no data to make claims it is due to vapor drift
Next Steps forward

• Researchers address various questions
Thanks from Tom Mueller

• Sincerely appreciate visiting with you today
Questions?