Addressing the pressing problem of herbicide resistance

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Managing Weed Resistance: It’s a mindset issue

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An old broken-down weed scientist

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Some things I believe

• Herbicide-resistant weeds: a game-changer for agriculture
• Particular concern about resistance to multiple classes of chemistry
• We have become complacent in our approach to weed management
• We must become better managers
Some things I believe

• Don’t blame the technology
  – Technology *per se* not good or bad
  – Value judgments can be made on uses
  – Weed *control* today is chemically-based
  – Weed *management* involves many practices
    • Prevention, Avoidance, Monitoring, Suppression (PAMS)
    • Integration of PAMS components essential
We need to keep the goose alive
Some things I believe

• We must quit pointing fingers at each other
  – We are all culpable
    • Government, universities, consultants, supply chain, growers, and if I left anyone out – you too!
  – All have a role to play in solutions
IT IS HARD WALKIN' ON THIS STUFF.

YEP, SON, WE HAVE MET THE ENEMY AND HE IS US.
Some things I believe

• Assume all fields have resistance
  – Resistance genes are present
  – May not have manifested in a weed yet
  – May not have been selected for yet
  – But it will happen without proper management
  – You can take that to the bank!
Some things I believe

- Proper management requires keen observation
  - Keen observers see what others miss
  - Post-treatment observations critical
  - A continuous process with record-keeping
  - A behavior change is involved
  - Some short-term costs, but long-term gains
Some things I believe

• Resistance is an area-wide concern
  – Resistance spreads very quickly
  – Neighboring fields impact yours
  – Need a coordinated approach
    • Everyone on the same page
    • Clear and uniform message
Some things I believe

• The days of solving resistance with the next herbicide mechanism of action are over
  – No new mechanism of action in 20 years
  – Nothing different in the pipeline
  – Must integrate tactics to preserve what we have
  – Will be more management intensive system
Some things I believe

• Resistance management solutions include:
  – Research on better approaches
  – Outreach to educate decision makers
  – Incentives to growers and other landowners
    • Gov’t programs (conservation programs, crop ins.)
    • Industry (alternatives)

• Solutions do not include
  – Prescriptive regulation (for now)
  – Refuges
Some things I believe

• We need a little luck
  – Luck is when preparation meets opportunity
  – The opportunity is clearly before us
  – Now we need to be prepared
And now – let’s hear from you

The mike is open