Corn production and drought: Notes from the SWAC Conference

In early January I had the pleasure of attending the Southwest Agriculture Conference (SWAC) at the University of Guelph in Ridgetown, Ontario (see www.southwestagconference.ca). This two-day conference is held every January and has grown to an attendance of over 1,200 attendees, mostly farmers. I was impressed by the meeting, especially the diversity of topics covered. If you are ever interested in going, the location is only an hour east of Detroit.

I went to sessions at the program that focused on corn, soy, and wheat. Dr. Tony Vyn of Purdue University's Department of Agronomy, and who is originally from Ontario, gave a talk on drought-resilient corn. Here were some of the key points I took away from this meeting:

1. Corn hybrid drought tolerance ratings vary from company to company. Farmers should ask questions about what factors a particular variety's drought rating addresses — differences in leaf structure, rooting growth, reproductive stage efficiency (kernel set), water use efficiency, or harvest stage efficiency. Also, yield boost from using drought-resilient varieties during a moderate to severe drought may only be modest. He also emphasized that drought resilience is not the same thing as drought resistance.

2. Much of Indiana's corn yield reductions in 2012 were exacerbated by the fact that the corn planting across the state was essentially completed in very narrow period of time. Not surprisingly, a large percentage of the state's corn crop pollinated in, again, a narrow window, which happened to fall during the peak of the early July heat wave. He suggested growers might consider staggered planting dates and including at least some different RM groups across their corn varieties to spread out pollination windows and reduce risks.

3. For nitrogen management during drought, Vyn suggested that research is showing the timing of nitrogen application may be more important than the total rate of nitrogen applied. Growers should strive to make sure the N they apply is available to the plant when uptake is increasing. Also, the form of nitrogen applied is less important than nitrogen placement, making sure, again, that the plant has access to the nutrients applied.

4. Yield benefits seen from rotating corn with soybeans (compared to continuous corn) in normal weather years become more dramatic in a drought year. This finding has been seen in on-going studies that span many decades.

5. Though nitrogen stabilizer products can be effective in reducing nitrogen losses, Vyn sees greater value in split applications of nitrogen compared to using an N stabilizer and applying all of the nitrogen pre-plant.

I hope to continue sharing crop research findings from winter meetings in upcoming articles. Keep your eye out for articles on soybean and wheat research in the coming weeks.

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