

AI Its Usefulness in Agriculture... and What to Watch Out For

Artificial intelligence (AI) interfaces (sometimes called generative AI or language learning models) like ChatGPT are all over the news lately. You may have heard about these platforms' extensive abilities to generate information, respond to questions or provide image descriptions. This got us wondering about whether generative AI has a role in agriculture and what this technology could mean for agronomy advisers and other experts in the seed industry.

When digital marketing expert Anthony Jones presented at the IPSA (Independent Professional Seed Association) conference earlier this year, he told attendees that AI is "changing the landscape" of information generation and offered some ideas on how to use language learning models in ag.

- Find and answer questions – type a phrase into a search engine to see what questions people are asking about a specific topic, such as the economic impact of drought conditions and what potential answers might be.
- Set news alerts (such as Google Alerts) to let you know when a particular agronomy topic—like summer derechos—is being talked about, so you can get ahead of emerging issues and encourage customers to take any necessary actions.

Many industry articles claim generative AI could be used to analyze agronomic data for predictive modeling. However, the information that a platform like ChatGPT will be able to provide depends on the quality of the data inputs. If that data is inaccurate, any "guidance" provided may be ineffective. Still, its algorithms could be trained to accumulate data to identify weather patterns and make predictions, allowing farmers to make informed decisions about planting dates, treatments and more.

Language learning models could also be used to help a farmer quickly get up to speed on an issue, such as how to repair a piece of machinery or how to calculate yield losses.

AI could also be trained to recognize visual symptoms of pests and diseases in crops to help farmers identify new issues they're seeing in their fields. But AI cannot recognize cause and effect relationships, so its use in determining how to treat these issues may be limited. And only a grower truly knows what

the conditions are in their fields, so AI isn't a replacement for a farmer's experience and wisdom.

Agronomy advisers may still wonder if AI could replace the need for their expertise. ChatGPT has already passed online accreditation exams, and could potentially pass the Certified Crop Adviser program, as well. And some ag-based generative AI already exists. Farmers Business Network has launched a beta version of its own AI-based agronomic adviser, Norm, which is available to members. It's built on ChatGPT with added information to address agricultural and agronomic questions. But ag analyst Shane Thomas cautions that generative AI has many limitations, including inaccurate results and a lack of source information for its responses. It can also require many attempts or specific configurations of inquiries to get the type of response you seek.

AI can be a powerful tool for gathering information, but farmers should continue to rely on their own expertise. There's no replacement for a farmer's deep knowledge of their land and crops when it comes to making decisions that affect their acres.

Artificial intelligence is always evolving, and language learning models in particular will be a technology to watch. Government oversight may increase as these technologies are tested. We'll be keeping an eye on AI and bring you information on the potential ramifications it could have on the ag industry.



Discover new ways to use open AI to generate marketing content for your business in the November *Groundwork*.



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