4 KEY TAKEAWAYS

AI in Precision Agriculture: Legal Risks and Mitigation

Recently, Kilpatrick's Siegmar Pohl and Jordan Glassman presented a talk entitled **"AI in Precision Agriculture: Legal Risks and Mitigation"** at the **45th Annual Symposium** of the **American Agricultural Law Association** in Memphis, Tennessee. The firm's leadership and depth of expertise in AI-related law were showcased to practitioners negotiating the growing adoption of AI technologies in this important sector of the agricultural industry.

Key takeaways from the presentation, include:

1

Artificial Intelligence (AI) as used in precision agriculture typically involves predictive machine learning (ML), in contrast with generative AI such as ChatGPT. These technologies involve algorithms that are trained to recognize patterns and then make predictions that are useful for farmers. Example applications of AI in precision agriculture include predicting soil properties, weather prediction, estimating crop yields, disease and weed detection, livestock production and management or recommending harvesting techniques.

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The growing use of AI in precision agriculture raises a number of legal issues for both producers and consumers of these technologies. While there is a nascent body of case law around generative AI, the issues raised by AI in precision agriculture are largely untested and unregulated. The federal government and some states are beginning to explore regulating AI, although again the efforts are generally focused on generative AI. In the meantime, the National Institute of Standards and Technology (NIST) publishes a voluntary AI Risk Management Framework that is rights-preserving, non-sector-specific, and use-case agnostic that provides guidelines for managing AI risks and responsibly developing trustworthy AI systems that are generally applicable to producers and consumers of AI technologies in the precision agriculture space.

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Many farmers are reluctant to adopt advanced AI systems for the following reasons: **(1)** Farmers are concerned that the equipment provider, their competitors, or the government could own or control data from their farm; **(2)** Farm data may only be protected under most privacy laws if they can be linked to an individual. AI tools may be able to breach privacy walls that humans cannot. Agricultural data have been the frequent target of cyberattacks; **(3)** Predictions, recommendations or other AI output can be inaccurate because of **(a)** geographical, crop type or other bias in datasets that are used to train the models or **(b)** inaccurate algorithms, software errors, or so-called "hallucinations" in AI output.

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Most of these problems can be mitigated by taking the following measures: **(1)** Creating clear and easy-to-understand data contracts, codes of conduct or contract certifications from independent bodies that farmers trust. Kilpatrick has created suitable contracts. Another source is the model agreement from the non-profit industry group AG Data Transparent; **(2)** Data sharing and collaboration platforms complying with codes of conduct and security standards will incentivize more farmers to participate and share their data leading to a larger data pool, which alleviates bias and reduces potential for identification of individual farms. The Agriculture Innovation Act, if adopted, would authorize the establishment of a secure data center for collecting and sharing agricultural data, and the Farm Tech Act, if adopted, would allow the Secretary of Agriculture to certify AI software for use in agriculture; **(3)** AI system providers can be contractually obligated to filter personal information out of data input, models, and data output; **(4)** Data contracts need to clearly allocate the risks associated with the use of AI to the farmer, the system provider, or a third party; **(5)** Developers should temper expectations of AI systems to mitigate the risk of implied warranties and product liability claims; **(6)** Farmers should receive more education about the use and limitations of the AI systems; **(7)** Farmers can already receive some financial assistance under USDA programs with the adoption of AI tools. The 2024 Farm Bill (if adopted) would provide further support programs, such as the Precision Agriculture Loan Program or the PRECISE Act.

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