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Unaddressed data privacy concerns threaten agricultural innovation

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University of Minnesota (UMN) researchers test a drone equipped with sensing equipment that will be used to collect data to monitor crop health and growth. Photo courtesy of the UMN photo archive.

Farms are a cornucopia of data used to shape agriculture practices, which in turn help to increase crop productivity and minimize the impact on our natural resources. While the importance of these data cannot be overstated, concerns related to data ownership and privacy threaten to limit the potential gains to be had from the “big data” revolution.

In a recent *Agronomy Journal* article, a team of researchers from the University of Minnesota describe a tiered-risk, standards-based approach to addressing data privacy concerns in a research context. Borrowing best practices from the healthcare sector, the team demonstrates how a framework that includes well-defined standards and three tiers of risk tolerance can be used to address both technical and cultural issues faced by researchers and developers.

As the data revolution in the food and agricultural sciences gathers pace, concerns over data ownership and privacy—and their implications for innovation in the food and agricultural sectors—are bound to multiply. This article considers data management guidelines linked to common technical standards in light of differences in consequential risks posed by breaches in data security. These considerations will help scientists and researchers develop trust among stakeholders and advance the innovation promised by the big data revolution in agriculture.

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Wilgenbusch, J.C., Pardey, P.G., Hospodarsky, N., & Lynch, B.J. (2022). Addressing new data privacy realities affecting agricultural R&D: A tiered-risk, standards-based approach. *Agronomy Journal*. <https://doi.org/10.1002/agj2.20968>

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