

Rethinking Manure Management with 360Rain: Expanding Application Windows and Improving Nutrient Use Efficiency

SEPTEMBER 26, 2025

2:30 PM ET, 1:30 PM CT,
12:30 PM MT, 11:30 AM PT

This webinar will explore how the 360Rain autonomous irrigation system is being used as a new tool for manure management. By enabling in-season manure application, 360Rain opens opportunities to better match nitrogen availability with crop uptake, reduce manure storage time (and associated methane emissions), and even provide supplemental irrigation. We'll discuss **lessons learned from early adopters, the challenges of implementing a new system, and the potential to shift manure management toward more efficient and sustainable practices.**

Managing manure nutrients effectively is always a balancing act between storage capacity, weather, and crop nutrient needs. New technology like 360Rain, originally designed for irrigation, offers a new window for manure application: in-season delivery of nutrients and water right when the crop needs them. This webinar will highlight **how 360Rain is being adapted for manure application, the management and engineering considerations** for successful adoption, and what farmers are learning from early implementation.

An application for continuing education credit for Certified Crop Advisors (CCAs) and members of the American Registry of Professional Animal Scientists (ARPAS) will be submitted.

Additional Information

- High Clearance Robotic Irrigation Impacts on Soybeans and Corn Yield and Nutrient Application

<https://lpec.org/high-clearance-robotic-irrigation-impacts-on-soybeans-and-corn-yield-and-nutrient-application/>

Andrew Klopfenstein is a 2-time graduate of The Ohio State University with a Master and Bachelor Degree in Agricultural Engineering. Andrew has been at Ohio State since 2008 and currently serves as a senior research engineer in ag engineering. He is originally from a family farm in northwest Ohio that grows corn and soybeans and custom harvests forage crops. He currently conducts research in the areas of compaction, nutrient application, **yield sensing and harvest logistics, autonomous vehicles, robotic irrigation**, and precision ag technologies.

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Andrew Klopfenstein
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Daniel Andersen, or "Dr. Manure," is an Associate Professor at Iowa State University who works with farmers on nutrient management, water quality, and finding ways to turn manure into a resource instead of a challenge. He grew up on a small dairy farm in Wisconsin where manure was hauled daily, often pitching it forward and back in the spreader to keep it from leaking out. That experience, along with his B.S. from the University of Wisconsin-Platteville and Ph.D. from Iowa State, sparked his passion for the science of agriculture and the logistics of manure. **He believes manure has real value, but it takes good decisions and better systems to make that happen.**

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Dan Andersen
Iowa State University

Tibor Horvath is a native of Hungary where he received his Master's in agricultural engineering in 1985 at Georgikon University. In 1991 Tibor moved to the US working for the private sector and in 2000 got hired by USDA - NRCS and since worked in seven different states. Currently working for the East National Technology Support Center as an agronomist on the National Manure and Nutrient Management Team. He is also a Certified Crop Adviser. He will **serve as the moderator for this webinar.**

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Tibor Horvath
USDA-NRCS

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