

# A Systems-Approach to Understanding the Nutrient Cycle Across the Pork Ecosystem

NOVEMBER 14, 2025

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

This webinar explores how an integrated, systems-based understanding of the nutrient cycle can drive more sustainable pork production. By examining both feed utilization within the animal and nutrient management beyond the barn, the discussion connects nutritional strategies and manure treatment technologies as key components of the pork ecosystem. **Presenters will highlight advances in precision feeding, enzyme use, and feed processing that improve nutrient efficiency and reduce environmental impacts, as well as research optimizing zinc inclusion to balance performance and sustainability.** Complementing these insights, the session will review how manure treatment technologies—such as acidification, aeration, solid-liquid separation, and anaerobic digestion—affect nutrient flows, emissions, and recovery potential. Together, these perspectives provide a holistic view of nutrient use from feed to field, offering practical and scientific guidance for reducing waste and improving the sustainability of pork production systems.

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

- Will be available on LPELC webinar archive at a later date.

## How do I participate?

If it is your first time joining us for the LPELC webinar series, follow the steps at: [lpelc.org/how-do-i-participate-in-a-webinar/](http://lpelc.org/how-do-i-participate-in-a-webinar/)

If you are a returning viewer, go to [lpelc.org/live](http://lpelc.org/live) to download presentations and connect live.



## Livestock and Poultry Environmental Learning Community

The LPELC is a project dedicated to the vision that individuals involved in public policy issues, animal production, and delivery of technical services for confined animals systems should have on-demand access to the nation's best science-based resources. See our website at: [lpelc.org](http://lpelc.org)

**Dr. Lauru Greiner**, Director of the Iowa Pork Industry Center, is leading a multi-state collaboration on a National Pork Board funded consortium **focused on the life cycle assessment of nutrients in swine**. She is currently an associate professor at Iowa State University and is focused on swine nutrition. Dr Greiner received her BS, MS and PhD in Animal Science at Iowa State University. She may be contacted at 515-294-6728 or [greinerl@iastate.edu](mailto:greinerl@iastate.edu)



**Laura Greiner**  
Iowa Pork Industry Center



**Katelyn Gaffield**  
Kansas State University

**Dr. Katelyn Gaffield** completed her bachelor's degree in Animal Science at the University of Illinois. Katelyn completed her master's degree with a focus on meat science at the University of Illinois in 2021. She joined the Kansas State University Applied Swine Nutrition Team in August of 2021 for her PhD. **Her research focused on in-feed acidifiers in nursery and finishing diets.** Katelyn recently started her position as an Assistant Research Professor in Swine Nutrition and has a 100% research appointment. Her position primarily involves conducting applied swine nutrition research focused on improving profitability, efficiency, and sustainability for pork producers. Contact her at [gaffield@ksu.edu](mailto:gaffield@ksu.edu).



**Erin Cortus**  
University of Minnesota

**Dr. Erin Cortus** joined the Department of Bioproducts and Biosystems Engineering at the University of Minnesota in August 2017. Her position as Associate Professor and Extension Engineer is to provide engineering expertise in the area of sustainable animal agriculture systems. She earned her Bachelor of Agricultural and Bioresource Engineering degree and PhD at the University of Saskatchewan. **The broad mission of her program is to work with producers and communities to understand and continually improve the quality and productivity of livestock environments.** Contact Erin at [ecortus@umn.edu](mailto:ecortus@umn.edu).

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