

A USDA multi-location project monitoring ammonia deposition near animal production sites

MAY 16, 2025

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

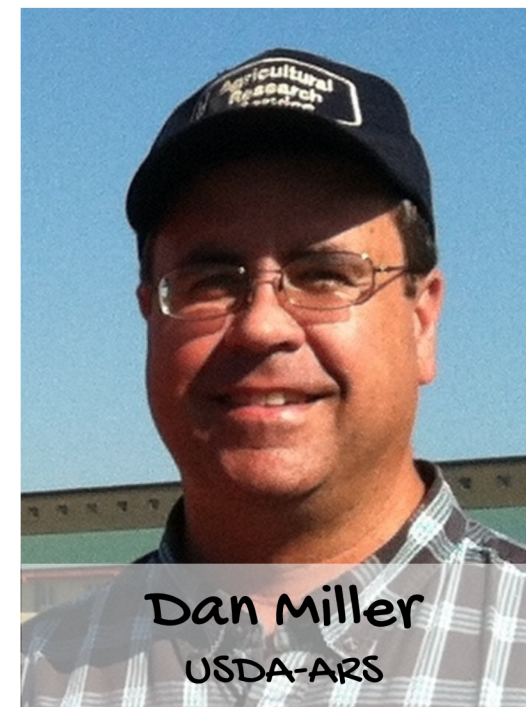
Animals excrete a lot of nitrogen as they grow with a large fraction escaping into the air as ammonia. What happens to that ammonia, and **can we predict how that excess nitrogen might be beneficial to nearby crop production?** A multi-location, multi-agency project (ADAPT) was developed utilizing established protocols to define various ammonia components in the soil, plant, and air near animal production sites to estimate potential depositions and emissions and to better understand how ammonia moves and interacts with the local agroecosystem. **Initial results from areas near two beef cattle feedlots** will be presented.

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.

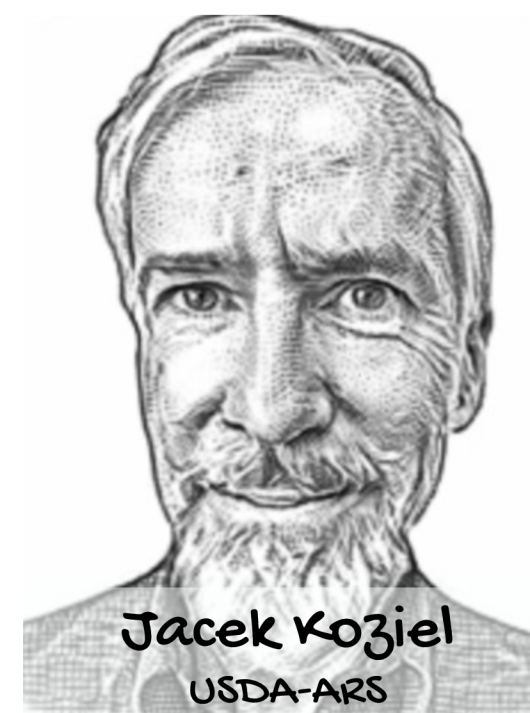
Additional Information

- The Role of Agriculture in Atmospheric Nitrogen Deposition: Sources, Impacts, and Management
<https://lpelc.org/the-role-of-agriculture-in-atmospheric-nitrogen-deposition-sources-impacts-and-management/>

Dr. Dan Miller is a Research Microbiologist with the USDA-ARS Agroecosystems Management Research Unit in Lincoln, NE. His **research focuses on how microorganisms affect environmental issues in animal production systems** (odor and ammonia) and on microbial nitrogen transformations ranging from the soil surface to groundwater. Dan earned his graduate degree from Cornell University and has worked for the USGS followed by 26 years in the USDA. Contact: dan.miller@usda.gov



Dan Miller
USDA-ARS



Jacek Koziel
USDA-ARS

Dr. Jacek Koziel serves as a Research Leader with the Livestock Nutrient Management Research team at the USDA-ARS, Bushland, TX since 2022, delivering **scientific solutions on the nexus of beef, dairy and crop production in the Southern High Plains**. Jacek served as Professor at Iowa State University, Department of Agricultural and Biosystems Engineering (2004-2022) specializing in mitigation of gaseous emissions from swine and poultry operations. Jacek earned graduate degrees from Warsaw Technical University, University of Alaska, and the University of Texas at Austin. Jacek is a Fulbright Scholar and AAAS Fellow. Contact: jacek.koziel@usda.gov

Mindy Spiehs is a Research Animal Scientist at the USDA Roman L Hruska Meat Animal Research Center (USMARC) in Clay Center, NE. She earned her BS degree in Animal Science from the University of Nebraska – Lincoln and her M.S. and Ph.D. in Animal Nutrition from the University of Minnesota. She has spent the last 20 years doing research in manure management – first as a Regional Extension Educator in Livestock Manure Systems at the University of Minnesota and for the last 18 years at USMARC. Her **research has focused on lowering odor and gas emissions from beef facilities** through housing management, pen surface amendments, and animal diets. Mindy will serve as our moderator for this webinar. Contact: (402) 762-4271 or mindy.spiehs@usda.gov



Mindy Spiehs
USDA-ARS



Bobbi Stromer
USDA-ARS

Bobbi Stromer is a Research Chemist at the USDA Roman L Hruska Meat Animal Research Center (USMARC) in Clay Center, NE. She earned her BS degree in chemistry from the University of Nebraska at Kearney and her PhD in Chemistry from University of Connecticut. She has focused her career on **understanding analytes in the environment, developing methods of detection, and developing remediation materials**. Contact: bobbi.stromer@usda.gov

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