



## Three Options for Cleaning Barn Exhaust Air

March 29, 2019

2:30 pm (eastern), 1:30 pm (central), 12:30 pm (mountain), 11:30 am (pacific)

Reducing aerial emissions and improving air quality is a common goal in the livestock and poultry industries. This webinar will present three approaches to reducing aerial emissions from barn exhaust air, using combinations of wet scrubbing, electrostatic precipitation, filtration and enhanced dispersion. The efficacy of an odor removal system using electrostatic particle ionization and a geotextile fence was evaluate at commercial swine production building in Iowa with the system showing removal of both odor and particulate. While wet-scrubbers have been used for years for emission control, these systems are typically expensive. A low-cost version, using a trickling water curtain as the wet scrubber was developed to provide a lower cost option. The webinar will describe the approaches, and highlight research conducted at production-scale barns. *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.*



**Dr. Daniel Andersen** is a Associate Professor and Extension Specialist with Iowa State Univeristy. The goal of Dr. Andersen's research and extension work is to improve soil, water, and air quality by developing, implementing, and promoting manure management practices that help farmers make more of this resource. Several of his recent projects have worked to quantify potential reduction of odor from swine livestock facilities at the field- and lab-scales, including evaluation of an electrostatic precipitation with barrier fence and the use of a water curtain wet scrubber. His other work as focused on anaerobic digestion of manure, causes of foaming swine manure during storage, the economic feasibility of different manure treatment and handling systems, and manure appicaiton uniformity from different liquid manure application techniques. Phone: (515) 294-4210; Email: [dsa@iastate.edu](mailto:dsa@iastate.edu)

**Sanjay Shah** joined NC State University in August 2003. He teaches courses on structural design and environmental control of livestock barns, agricultural air quality, biofiltration, and composting. He does extension and applied research in the areas of livestock barn indoor air quality; mitigating pollutant emissions from livestock barns; ventilation, heating, and cooling of livestock barns, including the use of renewable energy sources; and animal waste management.

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**Erin Cortus** joined the Department of Bioproducts and Biosystems Engineering at the University of Minnesota in August 2017. The broad mission of Dr. Cortus' program is to work with producers and communities to understand and continually improve the quality and productivity of livestock environments. Erin was born and raised in Saskatchewan, Canada. She earned her Bachelor of Agricultural and Bioresource Engineering degree and PhD at the University of Saskatchewan, and also spent time at Purdue University and South Dakota State University. Her past and ongoing projects include measuring the air quality impacts of different manure management practices in swine, poultry, dairy and beef cattle barns, and the impacts of providing additional microenvironment control for grow-finish pigs and cattle. Erin will serve as the moderator for this webinar. Phone: (612) 625-828; Email: [Erin.Cortus@sdstate.edu](mailto:Erin.Cortus@sdstate.edu)

### How Do I Participate?

On the day of the webinar, go to [www.extension.org/58813](http://www.extension.org/58813) to download the speaker's power point presentations and connect to the virtual meeting room. First time viewers should also follow the steps at: [www.extension.org/8924](http://www.extension.org/8924).