

For Immediate Release

U.S. Poultry & Egg Association

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Researchers Assess Using an Electrostatic Precipitator to Improve Indoor Air Quality in Cage-Free Layer Houses

USPOULTRY and the USPOULTRY Foundation announce the completion of a funded research project by researchers at North Carolina State University that assessed using an electrostatic precipitator to improve indoor air quality in cage-free layer houses. The research was made possible in part by an endowing Foundation gift from Cal-Maine Foods. The research is part of the Association's comprehensive research program encompassing all phases of poultry and egg production and processing. In total, more than \$36,000,000 has been invested in research by the Association and Foundation. A summary of the completed project is below.

Project #F90: Using Electrostatic Precipitator to Improve Indoor Air Quality in Cage-Free Layer Houses

(Sanjay Shah, Ph.D., Biological and Agricultural Engineering Department, North Carolina State University, Raleigh, N.C.)

Dr. Sanjay Shah and colleagues with North Carolina State University recently completed a research project with the overall objective of developing and evaluating a recirculating electrostatic precipitator (ESP) for its ability to improve indoor air quality in cage-free layer houses with litter floors. Specific objectives were to design and fabricate a full-scale recirculating ESP unit; evaluate the removal efficiency of the ESP in the cage-free layer house for particulate matter, ammonia, and airborne bacteria and fungi; and evaluate the impact of the ESP on barn indoor air quality for particulate matter. The central hypothesis of this research was that a recirculating ESP could reduce dust concentrations and thermal stratification in winter when ventilation rates are low and dust concentrations are higher.

The research [summary](#) can be found on the USPOULTRY website. Information on other Association research may also be obtained by visiting the USPOULTRY website, uspoultry.org.

About USPOULTRY

U.S. Poultry & Egg Association (USPOULTRY) is the All Feather Association progressively serving its poultry and egg members through research, education, communications and technical services. Founded in 1947, USPOULTRY is based in Tucker, Georgia.

About USPOULTRY Foundation

The USPOULTRY Foundation's mission is to support the recruitment and training of the brightest students, seek and fund scientific research, foster student scientists and promote careers in the poultry and egg industry.