

Studies Confirm That Poultry Workers Experience Health Risks

ANDY ANDREWS
Lancaster Farming Staff

Management Seminar at Kreider's Restaurant.

MANHEIM (Lancaster Co.) — Poultry house workers who use proper breathing equipment and protect their health in confinement operations are safer than most operations in the rest of the world, according to a Penn State extension veterinarian.

But in researching various types of exposure risks, Dr. Bhushan M. Jayarao found some surprising information on a review of the published results on studies of how confined operations affect the health of workers.

In general, broiler houses don't fare as well as poultry houses. According to the extension veterinarian, broiler houses consistently show a higher amount of dust, greater ammonia levels, and higher endotoxin levels than layer houses.

Jayarao discussed the results of his findings in literature searches on occupational disease on a search of peer-reviewed scientific publications through the PubMed service in the Library of Medicine. He spoke to more than two dozen poultry producers and agri-industry representatives Monday afternoon at the Penn State-sponsored Poultry Health and

In the past 20 years, however, a lot of changes have taken place. Scientists have a better understanding and knowledge of disease-causing agents, they can detect disease carriers a lot better, and producers have responded by making the houses a lot healthier for people and birds.

The research looked at five different countries and poultry house health, including Denmark, England, Germany, Netherlands, and the U.S., and was published in 1984.

Overall, in broiler houses, the U.S. led the other countries in lowest amount of agents overall, with one of the lowest inhalable dust (4.4 milligrams per cubic meter). The lowest was Denmark at 3.8. The U.S. had the lowest respirable dust at .24 milligrams per cubic meter, the lowest inhalable endotoxin at 61 nanograms per cubic meter, and one of the lowest respirable endotoxin at 15 nanograms per cubic meter (Denmark had the lowest at 6). The U.S. also recorded one of the lowest ammonia levels, at 25 parts per million (ppm), within the levels established by monitoring and regulatory agencies. The lowest ammonia



Poultry house workers who use proper breathing equipment and protect their health in confinement operations are safer than most operations in the rest of the world, according to Bhushan M. Jayarao, Penn State extension veterinarian, center. At left is John Schwartz, Lancaster extension director and at right is Mike Hulet, Penn State professor of poultry science.

levels in this study were recorded in Denmark, at 8 ppm.

For undocumented reasons, Germany recorded the highest

levels of inhalable endotoxins, at 6,000 nanograms per cubic meter.

Also, the highest levels for ammonia were 27.1 ppm in England.

What the studies pointed to, generally, was that endotoxins are higher in broiler than layers and ammonia levels are also higher compared to layers in the study.

Dust particles come from a variety of sources, including automated dry-feed handling systems, feces and feathers, dust mites, manure particles from birds on solid floors, and viral, bacterial, and

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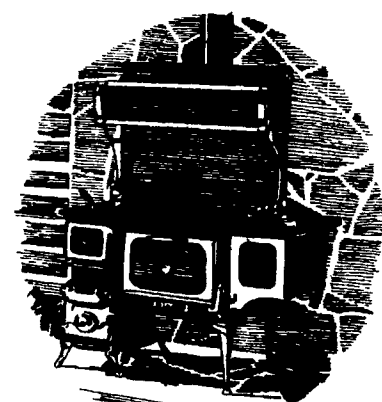
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