

Special Report

Lancaster Farming

POULTRY NOTES

CAN LITTER ADDITIVES BE BENEFICIAL?

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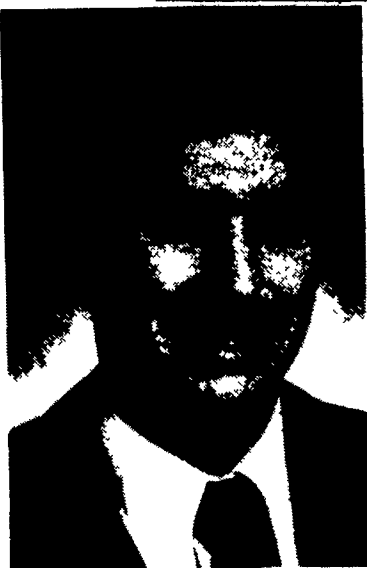
Increased demand and a dwindling supply of new litter bedding have made deep stacking manure in poultry houses more common. This practice brings with it two inherent problems: 1) it increases the nutrients in the litter for the next flock, and 2) it increases the microbe (germ) load in the house for the next birds. Therefore, unless ventilation and management are improved, problems can and do occur.

One theoretical solution to the problem is to treat litter with chemicals (formaldehyde, ferr-

ous sulfate, etc.) that would change the litter pH or other environmental conditions that would reduce the microbe load and in turn, decrease the release of ammonia into the environment.

Recent research conducted by Dr. Patterson at Penn State has shown that a significant portion of the nitrogen in the litter is aerosolized in this stacking process, and, therefore, is lost for use as a soil fertilizer or cattle feed. Anyone who has entered a poorly ventilated poultry house in the winter can attest to the excess nitrogen loss as ammonia.

Research has shown that prolonged exposure to concentrations of ammonia above 25 parts per million (ppm) is detrimental to the performance of broilers. Research has further shown that ammonia can be a



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stress that aids in the occurrence of respiratory diseases in poultry (air sac, colibacillosis, etc.). High concentrations of ammonia are not good for the poultry caretaker, either.

Several attempts have been made to reduce microbial growth and bind nitrogen in the litter to preserve it as a fertilizer by reducing the production of ammonia. The litter used as

ruminant feed would also be more valuable based on its nitrogen content as long as the additive wasn't harmful to cattle.

Dr. B. G. Ruffin from Alabama has reported that "poultry litter is worth four times more as a cattle feed ingredient" than as a fertilizer. He further stated that only "35 percent of the litter produced in Alabama was suitable for cattle feed."

Good management practices suggest the removal of any caked or wet litter material from under water lines and feed lines and drying the litter by tilling or mixing to promote excess moisture removal. Many have proposed additives that change the pH of the litter; however, most of these products aren't effective for the entire growing cycle.

At a recent scientific meeting in Mississippi, Phillip Moore, USDA-ARS at Arkansas reported the use of "alum" as a litter additive. Alum is a strigent used to stop bleeding. This product, when added to litter,

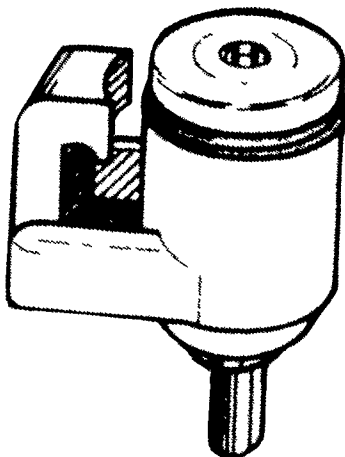
reduces the volatilization of nitrogen as ammonia and can bind all the soluble phosphorus to eliminate its pollution potential into ground or surface water. When used at 200 gms/kg of litter, alum was found to reduce ammonia evaporation by 99 percent.

The average cost to treat a 20,000 square foot facility is about \$440 (\$220/ton). In subsequent field trials using the litter as fertilizer, the nitrogen binding capacity of the alum was shown to increase crop yields over the control litter (without alum). With higher nitrogen concentrations, proportionally less phosphorus will be added to the soil.

Scientific developments in nutrient management help preserve the environment while efficiently utilizing the valuable nutrients (nitrogen) produced as a by-product of the poultry industry. Additives such as alum could also promote improved bird health and performance during winter production periods.

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Referendum To Increase Egg Checkoff

EVERETT NEWSWANGER
Managing Editor

WARSAW, Ind. — The American Egg Board is in the middle of a referendum to increase the mandatory checkoff of eggs from five cents a case to 10 cents a case. The original checkoff started in 1976 and Doug Hoffer, referendum task force chairman says the increase is needed to stay effective and competitive. Without the checkoff moneys there would be no national egg advertising and promotion.

According to the Hoffer, the referendum dates are September 26 to October 14, 1994. Results will be available on November 1, 1994. The final rule will be published on January 1, 1995, and the effective date will be February 1, 1995.

The national board not only advertises eggs, they are the industry's first line of defense against attacks on eggs. The board gets a lot of credit for its work to make eggs a staple in dietary recommendations. In 1989, government research shows eggs contain 22 percent less cholesterol than previously reported.

Right now the industry's new "I Love Eggs" television and radio advertising campaign is sweeping the nation with a good message for eggs. This commercial appeals to the mind, mouth and middle (heart) of the consumer. For the mind, a permission statement tells consumers that it is OK to eat more eggs. To appeal to the mouth, the commercial "triggers the crave" with mouth-watering photos that remind consumers how much they love the great taste of eggs. To reach the heart, the commercial connects emotional appeal of families and the positive feeling they have about eggs.

"Studies by the dairy industry, beef, pork, and other commodities prove that generic advertising works," Hoffer said. "Right now, money spent on egg advertising is far lower than other major commodities. An increase in checkoff money is important to stay competitive."

Egg handling and safety education is a high priority area for the American Egg Board. As eggs and egg products can be mishandled, AEB's objective is to educate foodservice operators on proper egg care and handling.

To date more than 84,000 copies of the board's egg safety and quality chart have been distributed. Later this year, a tear-out copy of the chart with additional safety and handling tips is scheduled to appear in a major food service publication that reaches more than 200,000 food service operators.