

Speakers See 'Recycled Nutrients' as Pollution Solution

The concept of waste recycling was the center of attention at the Wednesday afternoon session of the Pennsylvania Poultry Federation meeting.

Dr. Charles L. Hosler, dean of earth and mineral sciences, Penn State University, began the discussion with a description and slide presentation of how only minor changes in atmospheric conditions could lead to serious changes in rainfall in the U.S., leading to drought and severe crop reductions. He indicated that manmade and growing pollution levels in the atmosphere can lead to disastrous weather conditions, including drought.

He was particularly critical of state laws which ban study of weather. He said this study may be necessary in the future to offset some of the problems which are being caused by growing levels of pollution.

Pointing to other countries which once had highly developed and wealthy civilizations, Dr. Hosler said the same thing could happen to the U.S. if the environ-

ment changes. He said past experience in other parts of the world show man's activities can lead to weather pattern changes.

Dr. Howard Zindell, Michigan State poultry science department, spoke on work in Michigan to convert animal waste into an important protein source.

Predicting that within five to 10 years "every state will have a law against spreading manure in its present form on the land," Dr. Zindell said a feasible alternative now appears to be to dry the manure and recycle it in poultry and animal operations.

Studies show that dried poultry waste has about 33 per cent crude protein which breaks down into about 12 per cent usable protein for poultry, a figure still higher than corn.

Experiments so far show that best gains are achieved from a combination of one-half urea and one-half recycled nutrients, he said. The process is called "recycled nutrients" because it describes without offending, he explained.

Study also shows that the older the waste, the poorer the quality or feed value of the final product. This indicates a need for a continuous recycling process, he explained.

The Michigan research involves feeding the manure and "this results in a new ingredient," he said.

John Bergdoll, Anderson Box Company, explained his firm's experience with a new Colman Rotary Manure Dryer. He said the problem with early manure drying systems has been that they haven't been able to hold up over time, but he indicated his firm's system will do the job.

Another problem, he said, is getting the manure to the dryer. He said an auger system is good for short hauls and conveyor systems have shown promise, but a gutter is needed.

He indicated that pre-drying, such as the work being done at Cloisterdale Farms at Ephrata, is a help, since wetter manure reduces the capacity of the dryer. While waste normally runs

about 75 per cent moisture, stems from moving the waste to Cloisterdale's system reduces it to 30 per cent.

Bergdoll recommended drying to the 10 to 12 per cent level. He warned against drying it lower than 10 per cent, "if it is going to be used as an organic fertilizer, because drying it completely eliminate any odors. It won't sell well without some odors," he said. He noted that people in many parts of the country prefer this type of organic fertilizer to chemical fertilizer. One farmer in Michigan sells it bagged for \$199 a hundred pounds, he said.

While drying the manure with a new operation specifically designed for it can be very economical, converting existing houses can be quite expensive, he indicated. The cost primarily

He indicated that getting the waste to a 10 per cent dry level will cost \$15 to \$35 a ton. The dry material is worth at least as much as corn, he indicated.

He said the operator of a 25,000 or more bird operation, which is in a position to recycle, can't afford to be without a dryer. A 40,000 bird operation will pay for a dryer in one year, he said.

Primary cost factors, he said, are wetness of the manure, cost of moving it to the dryer, and cost of fuel used in the dryer.

Richard Chumney, assistant to the New Jersey secretary of agriculture, concluded the afternoon session with a wrap-up on the importance of ecology and economics to the poultry industry. (Continued on Page 9)

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