

Manure Drying System Cuts Odors, Weight; May Lead to Commercial Product

Is Cloisterdale Pioneering Poultry Industry Breakthrough?

Two Long Island, New York farmers and their county agent were in Lancaster County recently to see a new poultry manure disposal system in operation.

Accompanied by Jay W Irwin, associate Lancaster County agricultural agent, the visitors viewed the new manure drying system at Cloisterdale Farms, Ephrata RDI.

Cloisterdale now has the new system installed and in operation at three of its nine 30,000 bird houses.

The system is the first commercial operation based on research by Dr Glenn Bressler and his associates of the Penn State University poultry staff. Basically, the concept involves a system of stirring the waste with pulley-driven metal equipment and drying it through the use of large fans.

The concept has two key attractions in relation to present manure systems.

First, the drying action kills bacteria which cause odors, thereby eliminating the odor factor which some poultrymen have found to be serious, particularly where the farm is near residential areas.

Second, the system reduces the weight considerably by eliminating a large portion of the moisture. The Cloisterdale operation reduces moisture to about 30 per cent. This in turn greatly reduces the weight and volume of waste to be handled.

Dr. Bressler and the Penn State staff are continuing to work toward development of a system for further drying the manure to the eight to ten per cent level to further decrease the weight and help make the product feasible for commercial sales.

It is hoped that manure, instead of being a liability to poultrymen and a waste product which must be disposed of in the fastest and least costly manner possible, can become a saleable and profitable asset for the poultry industry.

Irwin pointed out that the Cloisterdale drying system has become a model for the industry and that the firm is now receiving visitors from several states and from other producers within Pennsylvania who have waste disposal problems and need to find a permanent solution.

The visitors from New York recently were: Pete Kerber, owner of Kerber's Poultry Farm, Huntingdon, Long Island, and Edward Makinajian, owner of Makinajian Poultry Farm, Long Island, and their Suffolk County agent, Robert L Brown. Kerber and Makinajian each have about a 12,000 layer operation that includes retail stores.

Kerber in particular emphasized that he is surrounded very closely by residential neighbors and that he must find solutions to his waste problem, particularly the odor problem.

Kerber has attempted a system similar to the Cloisterdale system, but he made the trip here because it wasn't working satisfactorily.

In particular, he indicated that the manure wasn't being dried to the 30 per cent level and he wanted to find out why.

The visitors toured the three Cloisterdale buildings which have been converted to the new system. The system was explained in detail and questions were answered by Ed Bowser, production manager. Later, the system was further discussed

with Glenn Herr, farm manager, and Di Bressler, who stopped by with other Penn State poultry specialists.

Kerber was told that probably the air flow is not sufficient under his present set-up to achieve adequate drying. Kerber indicated that his fans blow the air in one direction, but the air is exhausted to one side. It was indicated that he should provide for exhaust of the air in the direction in which the air is blown by the fans. Under the present side exhaust system, not enough moisture is being removed from the building, it was indicated.

During the discussion, the necessity of providing a ventilation system which will remove the moisture was repeatedly stressed.

Cloisterdale has gained considerable experience with its new system and has made several changes and modifications to make it work better and more efficiently. Starting out with 63 fans in the first building, the number was reduced to 52 in the second and to 48 in the third. The firm anticipates that further reductions can be made in the

future as the firm gains experience with converting its present liquid system.

Experience has shown, for instance, that with an even distribution of fans throughout the building a better drying job is achieved at the far end of the building away from the fans. Bowser speculates that this is true because as the fans carry the moist air from the back of the building to the front more and more moisture accumulates in the air.

Since removal of moisture is the key to the whole operation, it's believed that in the future a more even drying can be achieved by placing fewer fans at the rear of the building and more toward the front.

It's steps like these that represent continued perfection of an already going system.

Actually, the biggest hurdles already are past. Bowser noted, for instance, that when the firm was converting the first building, it nearly gave up on the whole idea when high moisture levels began to accumulate in the building. The problem became so serious that the wood was get-

ting wet and if the problem hadn't been solved the building would soon have been destroyed by rot, Bowser said. The firm made several changes in the system at this point and the problem was solved. No one is certain what change solved the problem but Herr said he believes it was probably the introduction of exhaust fans to take the moisture-laden air out of the building.

The firm previously used a pit system involving mixture of water with the waste and removal of it as a liquid.

But the liquid system didn't solve any problems and it created some. Addition of water to the waste, for instance, greatly increased the weight and volume of matter which had to be disposed of.

With increasing public concern about the environment and more stringent enforcement of health and environment laws by government, Cloisterdale officials have indicated there is greater pressure to reduce odor and pollution through water run-off.

A particularly critical problem with the liquid system is timing. Although neighboring farmers have cooperated in taking the waste on their fields, it can only be taken at certain times that will not interfere with crops. Severe run-off problems can occur if the material is spread when the ground is frozen.

The combination of restrictions has limited the spreading of the liquid waste to a relatively short period during the year and this period doesn't always fit well with Cloisterdale's own needs.

By eliminating the odor and greatly reducing the weight, Cloisterdale hopes eventually to provide a much broader usage of its manure, perhaps even making it a profitable commercial fertilizer or ingredient in existing fertilizers.

Instead of competing for time and space to unload a waste product, Cloisterdale hopes there will come a time when others will compete to obtain a desirable product.

Kerber of Long Island thinks this is a realistic goal. Even with his present product, which isn't

nearly as good as the Cloisterdale product, Kerber says he already has a demand from his residential customers. He envisions the poultry fertilizer as a potential major sale item at his retail outlet.

But first Kerber has to solve his production problems. That's why he came to Cloisterdale, talked to Cloisterdale officials and the Bressler staff to find out how to do the job right.

The Long Island group is only one of many to show deep interest in the Bressler-Cloisterdale system. While the local operation is one of the most advanced using the new drying concept, similar research is reported underway in many other states.

There's growing conviction that the new drying system will be the biggest breakthrough in the poultry industry since Marek's vaccine.

Many within the poultry industry consider the waste problem as by far the industry's most critical problem. And the feeling is growing that the Bressler-Cloisterdale system will solve this problem.

Grange Leadership School Slated

Key personnel from the 60,000-membership Pennsylvania State Grange will be enrolled from nearly every county in the state in the 48th Grange leadership school, June 22-24, at Gettysburg, according to A. Wayne Readinger, instructor.

For the fifth consecutive year, the three-day in-service training program will be on the Gettysburg College campus where dormitories and dining commons will provide food service and lodging.

Readinger said discussion and workshop programs will focus on techniques aimed at developing leadership potential. Training will be directed to masters, overseers, lecturers and chairmen of junior, youth and women's activities. They will represent nearly all of the 57 Pomona granges and more than half of the 623 subordinate bodies throughout the state.

Heading the four major divisions of the school will be Miss Mildred M Shultz, Somerset, state lecturer, Mrs Ross Metz, Allensville, state chairman of women's activities, Mr and Mrs Kenneth Schlegel, Fleetwood RD3, youth co-chairmen, and Mrs. Alan Merkel, Kutztown RD3, junior chairman.

O Walker Shannon, Aliquippa, Regional Agency Manager for the National Grange Mutual Insurance Company, past state lecturer and past state overseer, will be keynote speaker at the opening session. Dr Frank B Williams, dean of students, will give a welcome address for the College.

Guest speakers will include Dr William M Smith Jr, from the Pennsylvania State University, and L S Willson, liaison manager for the Dupont Company, Wilmington, Del. Willson will address the school banquet June 23. Readinger will preside.

See Editorial Page

Editor's Note See editorials, Max Smith column and Rev. Lawrence W. Althouse column on Page 20.

This page, which we call the editorial page, has been permanently moved to the fourth page of Section Two. While it has a new location, the page itself is the same as before.

It's easy to find. It's in the same location as before, except it's in Section Two instead of Section One.

The change also allows some of our markets, particularly the poultry markets, to be carried on page four. Markets now are on pages two, three and four.



Masonic Homes, Conebella Ayrshires Honored

Two area Ayrshire farms received recognition for outstanding achievement at the 96th national Ayrshire meeting and banquet in Louisville, Kentucky, recently.

Masonic Homes Farm of Elizabethtown received one of 12 French Memorial Trophies awarded for outstanding milk production for herds enrolled in official DHIR milk testing programs.

Having the second highest milk production for Ayrshire herds of 75 to 100 cows, Masonic Homes' 86 cows averaged 12,288

pounds of milk at 4 per cent butterfat in 305 days.

A Masonic Homes' older matron was recognized for her lifetime milk production achievement of 100,000 pounds during 1970. She was Mt Harmon Preferred Belinda with 111,610 pounds of 4.5 per cent milk with 4,982 pounds butterfat. A special certificate was presented for this achievement.

Elsewhere at the annual meeting, Charles H Gable, owner of Conebella Farm, Elverson, earned his thirteenth Constitutive Breeder Award in recognition of herds in which the owner

excels in breeding for both milk production and superior body conformation. Some 48 breeders qualified for this honor in 1970.

On a strict twice-a-day milking schedule for 305 days, Gable's cows made an annual production average of 14,113 pounds of milk and 561 pounds of butterfat. The type classification score average was 85.7.

One of Gable's older cows was recognized for her lifetime milk production achievement of 150,000 pounds. During 1970, Conebella Champion 2nd reached 151,062 pounds of milk and 6,915

pounds of butterfat for a 4.6 per cent test. A special certificate was awarded.

Conebella R C Sue, a junior yearling heifer owned and exhibited by Gable was Junior Champion at the Kentucky National Ayrshire Show.

Later she sold in the Grand National Ayrshire Sale to Paul & Iva Hebbe of Fort Atkinson, Wisconsin for \$775.

R C Sue is sired by Conebella Ruth's Commander, a bull bred by the Gables and in service at Atlantic Breeders Cooperative at Lancaster.