

Manure Can Yield Economic Benefits With Proper Handling

BY SALLY BAIR

Lancaster Co. Correspondent
LANCASTER — Lancaster County Dairy Days gave dairymen an opportunity to hear the latest in manure application, fly control and heifer housing.

With spring planting season close by, Mitchell Woodward, nutrient management specialist with Penn State, offered dairymen tips on getting the most from that manure, a byproduct from dairying with definite economic benefits.

Woodward pointed out that a 50-cow herd produces 1,000 tons of manure a year, offering dairymen a rich resource for nitrogen, phosphorus and potash. To use this resource most wisely, Woodward encouraged all dairymen to have their soil tested at least every three years, and to have a manure analysis test.

Looking at manure as a resource for its nutrient content, Woodward called it "the least expensive source of fertilizer for the farm." To manage it in the best way, he said testing is essential because there is a tremendous percent variation from farm to farm.

Incorporation affects the available nutrients, and he said that immediate incorporation into the soil will result in 50 percent availability, while waiting just two days decreases that to 35 percent.

Spring is the best time for incorporating manure because there will be the least nitrogen loss, and because it can easily be incorporated into the ground. Summer is the next best time when it is used on small grain stubble, idle acreage, and grass stands. It should never be used on legumes at this time because it will increase



Clarence Collison



Mitcheli Woodward

competition from weeds.

In the fall the potential loss of nitrogen is greatest except for cover crops, and winter is the least desirable season because of nutrient loss and runoff problems.

Woodward explained that a form comes with the soil test to help farmers apply the nutrients most efficiently. He also encouraged farmers to look at the crop rotation over a long period. The county extension office has available a computer program to help farmers determine the application rate for manure and commercial fertilizer.

He told the group that in the cost of production of corn, the largest percentage of cost is in fertility, at a rate of nearly one-third the total cost. In producing alfalfa, fertility represents one-fifth the cost. Woodward cautioned against nutrient excesses, saying, "After you reach a certain point, more doesn't bring in increased yield.

More is not necessarily doing any good."

He stressed that maximizing economic yield should be their goal, not just maximizing yield.

Extension Agricultural Engineer Robert Graves said that proper restraints and facilities can make handling dairy cows safe and efficient.

He said that one person should be able to isolate any animal, and noted that pens should be injury free, with no pinch points or hidden snags. Pens must be rugged, with running water and perhaps be located close to a parking area. Good lighting is a necessity for ease in treating animals.

Pens should be built at least 66 inches high to discourage jumping, and there should be a 16 to 18 inch space to allow an adult to roll out of the pen if necessary. Hinges must be properly placed to allow the gates to move in the proper

direction, and latches should be firm and easy to manipulate, Graves said.

Ideally, pens could be built with gates that allow the dairyman to block off certain areas, and to encourage an animal into a specific restraining area.

Graves said it is extremely important to have separate maternity and treatment areas so that newborns are not exposed to the germs of a sick animal that previously used the area.

Such restraining areas should be at least 12 feet by 12 feet, and ideally should have stanchion at one side of the pen. Self-locking gates make it easier to use.

Addressing the need for adequate calf housing, Graves stressed that dairymen should remember that the temperature should be suitable for the calf, not necessarily comfortable for the dairymen. He urged consideration in placing newly weaned calves into group facilities, explaining that if it is the first group experience it will be a stressful time.

Not only is the environment being changed but also the feed and the method of feeding. He suggested weaning a few calves as a group, and said they should never be put directly with older heifers.

Another continuing consideration of dairymen is the need for fly control. Clarence Collison, extension entomologist with Penn State, said, "Fly control is essential in any well managed dairy operation." He said flies have a detrimental effect on farms, including reducing production, increasing bacteria in milk, increasing susceptibility to diseases, and making cows more

difficult to handle.

Another important consideration in fly control is the need for good public relations as suburban housing moves closer and closer to farms.

The major flies to concern dairymen are the housefly and stable fly, both manure breeding flies; and the horn fly and face fly, which breed in fresh manure pats, within minutes after it is dropped.

Effective fly control relies on both the use of insecticides and good sanitation. Collison said that flies quickly build up a pesticide resistance because of their very high reproductive potential, their short life cycle and their limited migration between farms.

Furthermore, not a lot of new chemicals are being developed, so dairymen must rely on those currently on the market.

To slow down resistance, Collison said that dairymen should offer flies "a smorgasboard" of insecticides. He said it is important to offer insecticides with different active ingredients, not just different brand names.

He added, "Insecticides don't take the place of good sanitation." He also told dairymen to wait until they have a problem to do something about fly control.

Flies need the proper temperature, the proper breeding material, and an appropriate moisture level to reproduce, and changing any or all of these greatly reduces the reproduction of flies.

He concluded, "Flies can be controlled, but it takes a lot of effort and good sanitation, manure management, moisture control and chemical control."

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