

## Field Day Focuses On Manure Management

**DAVE LEFEVER**

*Lancaster Farming Staff*

LANCASTER (Lancaster Co.) — Manure was the theme of the day and, judging by the size of the crowd, it's a hot topic.

An estimated 250 people turned out Thursday for the manure handling and nutrient man-

agement field day at Oregon Dairy Farm north of Lancaster. The event was sponsored by Binkley & Hurst Bros., the farm equipment dealer near Lititz.

Ken Ferrie, professional crop consultant from Illinois and field agronomist for Farm Journal, spoke on the increasing impor-

tance of good manure management.

According to Ferrie, good manure management not only helps livestock producers take care of the environment and be good neighbors, it also increases their profitability.

Farmers can no longer afford to ignore public concerns about manure issues, he pointed out.

"The more we keep our head in the sand, the bigger a target we become to our neighbors," Ferrie said.

Good nutrient management practices first of all depend on knowing how soil works. That was the topic of Ferrie's first presentation.

"Know your soil test," he said, noting that results will vary from test to test and lab to lab. For that reason, farmers should "stay consistent with the same lab" for their soil-testing needs.

The ability of crops to use nutrients is dependent on a number of qualities in the soil. These include organic matter content, pH, cation exchange capacity, and

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Field day visitors check out a piece of equipment designed to boost manure incorporation in the soil. Rotating tines aerate the soil, allowing faster nutrient uptake.

## Raw Milk Sales Still Allowed By Permit

HARRISBURG (Dauphin Co.) — In an attempt to address concerns regarding Pennsylvania's raw milk regulations, Secretary of Agriculture Dennis Wolff recently reaffirmed that there are no planned changes in the policy.

"It has come to my attention that there are concerns about the sale of raw milk in Pennsylvania," said Wolff. "There are no current or planned actions by the Pennsylvania

Department of Agriculture to remove a dairy farmer's right to sell raw milk or a consumer's right to buy raw milk. Now, as before, all persons wishing to sell raw milk must receive a permit from the department."

The sale of raw milk in Pennsylvania is permitted under the Pennsylvania Milk Sanitation Law. This law is designed to safeguard human health and safety by regulating the issuance of permits, and those enti-

ties that sell milk and milk products. This law also prohibits the sale of raw milk products, with the exception of aged hard cheese, that is cured at temperatures of not less than 35 degrees Fahrenheit for at least 60 days.

"These laws are designed to help insure that milk and milk products sold in Pennsylvania are safe and wholesome for the entire family," said Wolff.

## Land Use, Property Meeting Aug. 13

LEESPORT (Berks Co.) — A meeting on Land Use and Nearby Property Values will be conducted at 7:30 p.m. on Aug. 13 at the Berks County Agricultural Center, five minutes north of the Reading Airport, just west of Rt. 183.

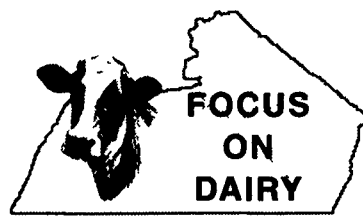
The speakers will review a Penn State study on "The Impact of Open Space and Potential Local Disamen-

ities on Residential Property Values in Berks County."

The speakers include Dr. Richard Ready, assistant professor, and Dr. Charles Abdalla, associate professor of agricultural and environmental economics at Penn State University. They will review their study which used information on 8,000 Berks County homes sold between 1998

and 2002 along with nearby land uses, and will discuss the findings and future impacts and considerations.

For more information or directions, contact Clyde Myers, Penn State Cooperative Extension in Berks County, at (610) 378-1327. The meeting is open to the public and is important to real estate professionals and county and local officials.



Penn State Cooperative Extension  
Capitol Region Dairy Team

### CIRCULATION FANS CAN HELP REDUCE HEAT STRESS

**Dan F. McFarland**  
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York

After providing shade and an adequate air exchange, air movement can be beneficial by reducing heat stress in dairy cattle. Air moving across a cow's body can improve the rate of heat loss from her body and also aid in evaporation of moisture from her skin. Circulation fans in the animal space accomplish this by mixing air and minimizing "hot spots."

To help reduce heat stress during hot weather, proper selection, placement, and operation of circulation fans is important. Studies indicate that an air speed of 220-440 feet per minute (2.5-5 mph) is necessary to be beneficial for dairy cattle. Most circulation fans are able to produce air velocities greater than this for a distance of approximately 10 times their diameter (24-inch diameter — 20 feet; 36-inch diameter — 30 feet, etc.).

However, the guard design, blade design, motor size, and blade speed all affect performance. Dust and dirt build up on the blade and guards can also greatly affect performance.

Some fan manufacturers claim "their" fans are able to move air in the 2-5 mph range for up to 20 times the diameter. However, my evaluation of these fans (with cows in the area) indicates that the spacing should be no more than 15 times the diameter.

Cows influence the effective air movement. Air leaving the fans strikes standing cows and creates a "wind shadow," or an area of little air movement for cows that are downstream. Spacing the fans 10 times their diameter or less (in the direction of airflow) usually provides uniform, effective air movement.

In naturally ventilated shelters, the direction of airflow should

follow the predominant prevailing winds during warm weather. However, if quality fans are placed as recommended, performance is still acceptable when breezes come from the opposite direction. Circulation fans are usually installed with the bottom 7-8 feet above the cow alley (out of cow and equipment reach) and tilted 20 degrees to 30 degrees downward.

Circulation fans should be placed in the areas where the cows spend the most time, the resting area, feeding area, and the milking area. In tiestall barns, a single row over each stall row is adequate. Freestall and loose housing systems generally require multiple rows of fans.

Typical recommendations for freestall shelters place fans over each stall row and at the feeding area. Sometimes a single row of fans is used over head to head rows of freestalls. However, in these head-to-head arrangements, the fans should be spaced no further than 8 times their diameter to provide adequate airflow.

In tiestall shelters, fans are usually placed above the front third of the stall. When sidewall fans and perimeter inlets are used to provide an air exchange, some fan suppliers suggest that fans above one stall row move air in one direction while the other row moves in the opposite direction to circulate the air more evenly. However, circulation fans used in conjunction with tunnel ventilation systems should encourage airflow in one direction — toward the exhaust fans.

Circulation fans are useful when the temperatures go above 70 degrees Fahrenheit (F) (or so) in the animal area. Thermostats or sensors with NEMA 4 enclosures should be installed in the animal area and kept clean to accurately sense the conditions.

During periods of hot weather, circulation fans improve the cow's ability to get rid of heat at night. Research at the University of Missouri found that core temperature of a cow could be reduced up to 1 degree F by using circulation fans to aid cooling at night compared to using fans during the day only.

The most effective heat stress abatement systems use circulation fans along with spray or evaporative cooling during hot weather.



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