

Lancaster Dairy Days II Offers Range Of Tips

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LANCASTER (Lancaster Co.) — Farmers who attended the second installment of Lancaster County Extension's Dairy Days program Tuesday were provided a variety of usable information for better managing their operations.

Lancaster County's annual offering has developed into a two-day affair. The first day, held Feb. 23, was practically identical to Lebanon County's program, held Feb. 24.

The second day for Lancaster is unique.

During the first program, featured was Paul Greenough, recently retired from the Western College of Veterinary Medicine in Saskatchewan, Canada. Greenough is an expert on cattle hoof structure, care, genetics, and management.

While his indepth and fact-filled talk comprised the majority of the first day's program, the second day for Lancaster County offered expert advice on a variety of practical dairy issues.

Arlyn "Jud" Heinrichs, with Penn State University, talked about the importance of feeding colostrum to calves during his talk on meeting the needs of growthy heifers.

According to Heinrichs, dairy-men in the Northeast are doing the worst job, on a national basis, of getting the recommended amounts of antibiotics into the bloodstream of their calves.

He said that the study, done by pulling blood samples from a large number of calves, showed that blood serum levels of antibiotics were relatively low in calves in the Northeast, which is where many older cattle management techniques persist.

He said research has also shown that dairymen are doing a much better job of getting antibiotics into calves than they had been.

He said a study that looked at 80 percent of the dairy production industry showed that about 20 percent still manage raising calves in an unassisted manner, which Heinrichs said is of concern to him, because those calves are not getting the advantages of protection from life-threatening illnesses afford those calves which get from three to four quarts of high quality colostrum within the first 24 hours.

Heinrich talked about the variability in quality of colostrum, from the standpoint of antibody levels.

In the past, experts have explained that in order to get the best care to a calf to minimize mortality, enough antibodies need to

get to the linings of the intestinal tract to protect the wall from attack by bacteria and other destructive organisms.

The key to doing that is to get at least three quarts of colostrum into the belly of a newborn calf before the calf starts to lick and mouth different things.

While assisted feeding from the dam is an acceptable means for getting colostrum into a calf, it poses more potential problems, and in practice, more problems, than bottle or bucket feeding colostrum.

Though some animal rights activists and those who hold to "natural practice" philosophies have stated support for non-intervention in getting calves to get colostrum, all research data readily available shows that calves are healthier, perform better and have a higher chance of survival if they are given three to four quarts of high quality colostrum as soon as possible.

One researcher had expressed its importance as a life-and-death race between the farm manager getting the colostrum into the animal and the animal's intestinal tract being infested by bacteria and pathogens.

If the bacteria get there first, they do irreparable damage. If the antibodies get there first, within the first hours, they protect the intestinal lining, which is where the calves absorb nutrients.

There is a much greater chance of a calf becoming infested with pathogens before getting the protective colostrum if management is left to nature.

Heinrichs also suggested that herd managers also get and use an esophageal tube to use in those instances when a calf is too weak to suckle properly from a bottle or bucket.

Though some unfamiliar with the technique of "force feeding" three or four quarts of colostrum to

a calf may consider it to be an abuse of an animal, Heinrichs said it is far from that.

First of all, he said, the tube is inserted through the aid of the calf's natural sucking response. He said that if some colostrum is smeared around the exterior of the smooth end of the tube, the calf practically inserts the tube itself.

Heinrichs said there is truly no force used in force feeding colostrum with the esophageal tubes.

The amount of colostrum is as important as the quality, for what the calf needs are high levels of antibodies in the colostrum. Heinrichs said that two or fewer quarts of colostrum within the first 24 hours are not enough to deliver the proper amount of protection.

"We have a fair number of calves at high risk because of low levels of antibodies," Heinrichs said, adding that research shows that as many as five out of every 10 calves in the Northeastern United States has low level of antibodies.

The survivability of calves which receive adequate levels of colostrum is higher. Another way to look at it is that the mortality rate of those calves not receiving adequate levels of colostrum is twice that of calves receiving at least adequate levels.

Heinrichs explained that the way colostrum works is that the first big amount of colostrum which goes in — three to four quarts during the first feeding, which should be within the first hours of the 24-hour period following birth — clots up into a protein and fat ball within the abomasum. The antibodies are more or less squeezed out and pass on to the intestines.

The longer the delay to get the colostrum into the animal, the less effective the treatment.

After 24 hours, it won't make a difference, because the intestinal walls won't use the antibodies.

Heinrichs said that while high

quality colostrum is key to getting calves off to a good start, the best way to get good colostrum is to have a good management program for the dry cows so they are healthy and can make the antibody rich first milk.

For weaning, Heinrichs said that should be done within the first three to eight weeks. "They are ruminants. Feed them as ruminants, not as a (one-stomached) animal," Heinrichs said.

He suggested getting the on grain, water and then forage. In that order of importance.

He also said that as far as forage goes, the first feed should be of top palatability, especially the first hay offered.

"When you're feeding a calf, grab and squeeze the hay as hard as you can, and if have to pull slivers (of stem) out, its probably not going to like it."

For socialization, he also recommended the use of putting the animals in small groups of about equal age.

He said the first grouping experience "has a tremendous impact" on the social behavioral development of the animal. "The first experience has to be a good one," Heinrichs said, adding that farmers should especially be sure to provide a clean dry stall area with lots of ventilation.

For ration formulations, Heinrichs said that ration balancing should be done for four different stages in development — from weaning to six months age; from six months to breeding age; from breeding age to pre-calving; and then for pre-calving.

The matter of developing a pre-calving ration and making the transition to a milking diet, is probably the weakest area in current dairy farm management practice, he said.

The feed materials for dry mater should be tested, even if the material is being used because of

poor quality. Heinrichs said this is so because it doesn't matter how bad the starting main ingredients are. What matters is knowing how much and what type of nutrients are included on a dry matter basis so that a ration can be balanced to the nutrient level the animal needs.

Also, despite some recent claims that research is imminent that would show that a dairy herd can be pushed to grow to full adult size and calve when 18 months to 22 months of age, Heinrichs said that was a mistake.

"We know that growing too fast before puberty can cause long term effects on mammary growth and development," he said.


Other problems are caused, especially laminitis, which is a result of high levels of lactic acid in the animals bloodstream which most commonly is directly related to the ration.

Also talking during the dairy day were James Ferguson, from University of Pennsylvania's New Bolton Center in Kennett Square, who is heavily involved with practical dairy research; and David Galligan, also from New Bolton, who has been looking at old problems in some new ways, such as the actual follow-up results to cows that had corrective surgery for a displaced abomasum.


Ferguson talked about his work on using prostaglandin injections on a repeated 14-day cycle to do a better job of breeding back cattle and being in a position to make culling decisions for other problems, such as dairy production.

His presentation has been reported previously in *Lancaster Farming*.

Also during the dairy day, a panel discussion was held which was comprised of three farmers and a nutritionist for a Franklin County feed cooperative association. The topic for the panel was working with a nutritionist to maximize profits.



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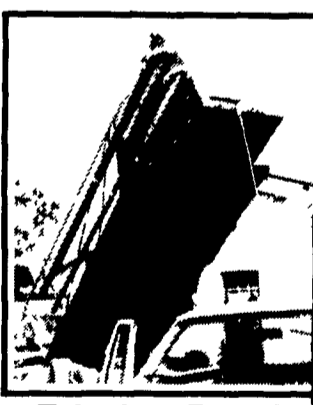
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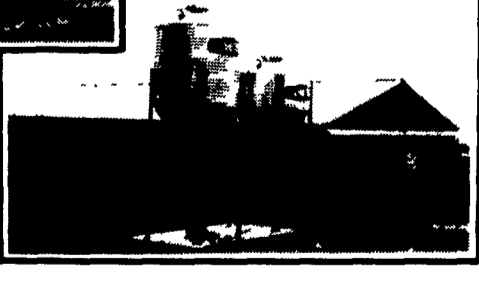
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