

# Dry Cow Management Key To Healthy High Production

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**LANCASTER** (Lancaster Co.) — Two dairy experts traded off in a fast-paced, fact- and opinion-packed Lancaster County Dairy Day seminar held Tuesday at the Lancaster Farm and Home Center.

Like a tag-team duo, the two doctors alternated with a series of short slide presentations, that reinforced what each other observed, while giving their own reasons.

The experts were Brian Perkins, PhD, a dairy expert with DairyTech Management Service Inc., of New Haven, Vt.; and Dr. Robert Fry, a veterinarian with Atlantic Dairy Management Service, of Chestertown, Md.

The same two speakers had been scheduled to speak at Prescott Fire Hall in Lebanon County on Wednesday for that county's dairy day program, but it was cancelled because of a winter storm.

According to Ken Winebark, Lebanon County extension agent, Lebanon County people who were interested in attending the program can still pick up information papers that were to be distributed.

Also, the Lancaster program was video taped and according to Glenn Shirk, Lancaster County dairy extension agent, copies are available for a nominal charge to cover the cost of reproduction. For more information, call (717) 394-6851.

Lancaster County has also scheduled a second all-day Dairy Day seminar for Tuesday, March 1, also at the Lancaster Farm and Home Center, located on Farm and Home Center Road, off of Rt. 72, near Rt. 30.

The theme of this Tuesday's program was management for high producing cows through all stages of life and lactation, with an emphasis on nutrition, reproduction and herd profits.

Glenn Shirk started off the program reviewing the basics of dairy farm management and outlined goals for success, and problems and practices to avoid.

Perkins and Fry then proceeded to discuss several topics, taking questions from the audience of about 150, throughout the day.

Because of audience interest, the two even continued a question and answer session for a half hour as the morning session finished, cutting into the lunch break.

Fry started off explaining that, in order for any type of management program for high producing cattle to become effective, teamwork is required.

He said a three-way team relationship should exist between the dairyman, his veterinarian and his nutritionist.

"The very best nutritionist or vet can't do it without the dairyman," Fry said. "All have to work very closely together."

According to Fry, the person with the biggest responsibility in the relationship is the dairyman, charged with at least 50 percent of the responsibility for a successful program.

This is so, because the dairyman has to understand and carry out the advice of the nutritionist and vet. He has to be the one who recognizes the subtleties of the herd and make the nutritionist and vet aware of them.

And the dairyman is the one who has to make sure records are kept and that the information being recorded is accurate and dependable.

Fry then outlined the topics he would cover; replacement heifers, dry cows, calving, peak milk production, and late lactation.

He said the goal for replacement heifers is to, "Get from calf to milking as fast, as healthy, and as efficiently as possible."

According to Fry, the goal should be to go from calving to milking at 24 months with an average daily gain of 1.7 pounds. That way body weight at pre-freshening should be around 1,350 pounds, counting the calf.

The loss of income to the dairyman for maintaining a heifer to 26 months before freshening "is tremendous," Fry said.

According to the veterinarian, it can cost from \$1 to \$1.20 per day during those two extra months, with no offsetting production to pay for itself.

For 50 heifers, that amounts to an extra \$3,000 being paid out because the first calving is at 26 months, instead of 24 months.

The loss of milk income during those two months makes the loss even more significant.

Furthermore, over the duration of a dairyman's herd's life, he is losing years of opportunity to be increasing the genetic value of the herd.

He said the key to freshening heifers at 24 months is to start with healthy newborn heifers and that means maternity stalls in a clean, dry, isolated (from other animals and people) area so that the dam cow doesn't have any problem with internal natural hormonal mechanisms which promote a healthy calving.

The newborn calf should have fresh, full-strength colostrum

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within the first eight hours and preferably within the first couple of hours.

A rule of thumb both experts offered is a gallon of colostrum in the first eight hours, but better if that gallon can be given within the first hour or two, even if it means stomach tube feeding.

The reason for this is because once the initial wave of colostrum passes through the intestines, the walls of the intestine become less absorbing of the protection of the colostrum. After eight hours, any potential for the colostrum to give the calf protection is negligible.

Keep the calf, clean, dry and fed well, but not fat, they said.

"This care is more important that all the vitamins, etc., that you can give a calf," Fry said.

He also said to use a 7-percent iodine solution (not teat dip which is usually around 1 percent) on the naval and to keep the newborn clean and dry.

"It doesn't have to be fancy," Fry said.

As far as feeding the calf, use whole milk or whole milk replacer with at least 20 percent protein and 20 percent fat.

"Check the label," Fry said. "If you have 24 percent replacer and dilute it according to the label, you're going to have 2.4 percent fat, 2.4 percent protein."

He said that many people use milk replacer as recommended on the labels, because it appears to be more inexpensive than whole milk.

However, Fry said to consider the real value. He said that while feeding whole milk might seem

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expensive, it is much cheaper than feeding milk replacer diluted only to the point that it equals the food value of milk.

Regular whole milk runs about 3.67 percent or higher in butterfat, and at about 3.2 percent protein. Compared to the amounts of those components in replacer, the dairyman is actually paying more when he uses replacer as it should be mixed.

Fry said that a heifer should be vaccinated twice — once during pre-breeding at age 8 months to a year; and again after being confirmed pregnant.

Deworming can be done through incorporating it into the heifer feed. It should be done twice in the spring, not in the fall or winter.

It should be done early to knock out the first wave of roundworms, etc., and then repeated later to reduce the second wave and kill the adults and any new infections.

If a herd manager puts the heifers out and then waits until the fall to worm them, the heifers will have already suffered the whole summer and not grown to potential.

Many parasites go into dormancy during the late fall through winter and treatment is ineffective.

First breeding of the young heifer should be done based on the animal's age, height and body weight.

The time to breed is a combination of the (Holstein) heifer being 52 inches tall at the shoulder, have a body score of 3.5 and be 14

inches at the withers, 1,250 pounds at freshening (which he later said was the weight of the heifer without the calf), and have a body score of 3.3 to 3.5, "No 4s!" he said loudly.

Height is important, he said, but body score and weight are more important. Height is a variable trait, but one of the most inheritable in cattle. If the size of the parent cattle is not great, given proper nutrition, then the height of the offspring can be expected to be similar.

To get fast gains on heifers, both experts recommended feeding higher quantities of protein than what the NRC recommendations are.

A typical ration for a young heifer would include a 14 percent protein grain source, in addition to hay. Perkins said that instead, to promote better and faster growth, a 32-percent protein grain be used, and the grain should not be corn.

Grouping of heifers should also be done — at least four groups and more if possible, Perkins said — in order to diminish competition between different age animals which can prevent a heifer from getting proper access to food and water.

With respect to calves, Perkins also said to give colostrum as soon as possible.

"Colostrum is the No. 1 guarantee of a healthy calf." He recommended a gallon in the first two hours, "even if you have to stomach tube."

He reiterated the recommendations for calf starter being of proper composition, and warned against going with inadequate starter.

Perkins also warned against starting calves out on first cutting hay. "It is too high in fiber for a baby to digest," he said. He said to give them a "nice mixture of grass and alfalfa" second or third cutting, and free choice water from the day they are born.

Water is important Perkins said. If they don't get enough water it reduces the calf's growth potential. Also, while calves have been known to bloat on free choice water, Perkins said giving water free choice from the first prevents that. He said that waiting two weeks to offer water can result in bloating.

Both experts said that dry cow care is very important.

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much over the past 30 years. According to the expert, in 1962, the average age was 27.5 months. In 1986, it was 27.8 months. "There's been no progress, what's wrong?" Perkins asked rhetorically.

Being from Vermont, Perkins said the cattle there average a little smaller in stature than those in the Lancaster and Maryland. However, his recommendations for breeding were close to those made by Fry.

He said at breeding at 13 months they should be about 750 to 800 pounds and be about 50 inches high. They should be experiencing about a 1.8- to 2-pound-per day rate of gain at that time.

Perkins said they should be 55

"If you have trouble making milk, especially peak milk, look back 60 days and say, 'What did I feed those dry cows?'" Perkins said.

He said the number one goal should be to freshen a cow with a "sharp" appetite. That does not mean that any food should be withheld a prefresh cow. Just the opposite is true, according to the two experts.

The key in keeping a cow healthy and on feed as she goes through the calving process and freshens, is to make sure she is fed a lot of fiber (grass hay) that has below 1.2 percent potassium content.

"Please put up enough quality hay to feed to a prefresh group for a year," Perkins said.

The concept is that bulk in the rumen and abomasum will keep those organs stretched to normal capacity during the pre-fresh period and immediately afterward, when the cow normally reduces feed intake.

Perkins compared it to eating a large meal and then being hungry the next day. It is because the stomach is stretched out from the large meal and as it empties, "wants" to be filled back to that volume.

Specifically, Perkins said that in the lower Susquehanna Valley, Lancaster in particular, because of the high density livestock operations and the amount of manure used for fertilizer, that potassium levels in the hay are much too high to feed to upclose cows.

The reason he singled out potassium is because it interferes with the magnesium availability and the magnesium is necessary for proper muscle contractions. It also interferes with the cows normal ability to use calcium from its bones to support itself and the developing calf. "Yes, we are feeding calcium, but she has to get calcium from her bones," he said.

High potassium levels interfere with the cow's normal hormonal mechanisms which pull calcium from her bones for use during this time.

Further, though there is not scientific evidence to bear it out, he said his field observations are such that, if the potassium levels in the hay fed to prefresh dry cows is from 1.2 percent to 1.5 percent, there will probably be a higher incidence of ketosis, displaced abomasum, and they may clean, but have a pussy discharge. He said all are classic signs of high potassium intake while prefresh.

He said those who feed hay with greater than 1.5 percent potassium should use anionic salts which bind the potassium and render it benign.

Instead, however, he said the best thing to do is to sell a bunch of high quality alfalfa hay to someone in upstate New York and buy some high quality grass hay from there that was grown on land that didn't receive any manure for the past 10 years.

As far as scoring animals, Fry said that he has found a minimal, but very practical strategy for scoring. He said that, as a minimum, once a month two groups should be scored — those scheduled to be dried off within the next 30 days, and those coming fresh within the next 30 days.

"Those two groups give a report card," Fry said. "I used to score at peak milk, or through lactation, but you can't do anything about it then."

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