

Avoid Health Problems Through Dairy Nutrition

BY PAT PURCELL

MOUNT JOY — Retained placentas, milk fever and unsuccessful breeding service can be avoided by controlling the cow's weight and by simple nutritional adjustments.

Dave Schwartz, Chester County Extension Agent and Jud Heinrichs, Penn State University Nutrition Specialist, told farmers through proper weight evaluation and correct nutritional practices repeated AI services, and ketosis and milk fever can be avoided.

Schwartz and Heinrichs addressed 20 farmers gathered for the second day for the Dairy Nutrition School sponsored by the Penn State Cooperative Extension Service, Tuesday, November 24, at the Country Table, Mount Joy.

Schwartz explained to the dairymen the method of body scoring to determine the body condition of dairy cows. This scoring method enables the farmer to determine the animals level of dairy nutrients. Dairy cows are scored on a scale of 1 to 5. One is extremely thin and 5 is extremely fat.

"This is an objective tool you can use when you get back to the farm and determine the amount of flesh your cows are carrying. It is difficult for you seeing them everyday to be able to tell when their weights fluctuate," explained Schwartz. "Here in this area we are blessed with tall upstanding cows and a lot of flesh can get lost on those big cows before we notice it."

The goal, according to Schwartz is to minimize body conditioning fluctuations and to minimize cows which are too thin or too fat.

Body conditioning scoring is based on three areas of the body: backbone, short ribs, and tailhead area. You score on the amount the backbone is protruding and the visibility of individual vertebrae. On the short ribs, located behind the rib cage, the farmer examines the amount of flesh around the short rib area and in the tail head area, also.

Score 1 is very thin and rare. The cow is so thin that the vertebrae are quite apparent. At the tailhead area, under the tail is so depressed that a clenched fist can fit into the area. The area under the short rib shelf is actually concave.

Score 2, is usually the stage of early lactating cows. The backbone is extremely visible, but the individual vertebrae are not as pronounced. The short ribs are visible, but not as hollowed out underneath. The tail head area is still depressed and the pins are prominent.

Score 3. This is where cows should be most of the time, according to Schwartz. The area from the backbone to the hooks do not slope and have begun to flatten. They continue to show a shelf effect, but not nearly as apparent. The tailhead area is not depressed and there is more flesh over the pins.

Score 4. Here the backbone shows no sign of individual vertebrae and the area is flt from the backbone to the hooks, and fat has accumulated around the tailhead.

Score 5. It is absolutely flat across hooks to backbone and there is an extreme amount of fat around tailhead.

Problems Of Overweight Cows

In early lactation stages cows should be 3 minus to 3 and at this point need a maximum density of nutrient ration. Those that get thin may need an additional 2-3 lbs. per day to get some weight built up.

At mid-lactation period the cow should be a 3.

Heinrichs and Schwartz stressed that the same person should always do the body conditioning scoring so it is consistent. Heinrichs suggested that farmers take the DHIA report they get back and go along and score every one of their cows.

Extremely fat cows are difficult to get bred. According data from one study presented, the conception success rate was approximately 17 percent. This is due to the imbalance of input and output. Over conditioned fat cows tend to eat less which leads to the break down of fat which has two results and both are negative. Breaking down fat puts fatty acids into the bloodstream which acts to reduce intake and it also leads to ketosis.

The fat cow may continue to produce milk (one pound of fat metabolized equals 7 lbs. of milk produced), however, her output in milk will not match her intake due to her depressed appetite. Therefore her system will be unbalanced and will not allow the cow to go into heat. Also, a buildup of fat around the reproductive organs will cause the reproductive system to be sluggish.

Dry Cows Special Needs

"You can inject vitamin E and selenium three weeks prior to calving and the problem of retained placenta disappears," said Heinrichs. Problems with retained

placenta stem from lack of vitamin E and selenium in Pennsylvania. And the results of applications of vitamin E and selenium achieve results. The comparison is as noticeable as light and dark," said Heinrichs.

Problems with ketosis are corrected by niacin. Niacin helps break down fat. According to Heinrichs it works very well.

Preventing Milk Fever

Milk fever is caused by an imbalance of calcium, phosphorus and Vitamin D. A dry cow will require approximately 40 grams of calcium per day and a milking cow will require up to 160 grams per day. Heinrichs suggests dry be put on low calcium diets two weeks before lactation. This will not hurt the fetus.

"This will get that cow's small intestine working very efficiently so that when she calves and you give her a high calcium diet she will be able to absorb a much higher percentage of it," explained Heinrichs. "If in her last week if you give her a high calcium diet it will shut down her system and you will push her into milk fever."

"If you don't have a separate dry cow feeding group, you are in trouble. If you feed a dry cow the same ration you are feeding a good lactating cow you will be putting tremendous weight on those dry cows," warned Heinrichs.

The dry cows must be held to a 1 to 1 1/2 lbs. gain per day once they reach 3 to 3 plus. That amount of gain is just due to fetus growth.

"I strongly suggest you have two dry cow groups on your farm. I challenge you to have two dry cow groups," said Heinrichs. "Dry cows and those cows which are

either two weeks prior to calving up until five days after calving should be separated. Many people jump from the dry cow ration directly into the milking cow ration. We need that transitional group," said Heinrichs.

Forage Preservatives

Heinrichs discussed four types of forage preservatives are: mold inhibitors, Inoculations, Enzymes and Anti-oxidants, and nutrients and buffers.

Heinrichs recommended propionic acid as a mold inhibitor. It works well on all crops and works rapidly. As for enzymes and anti-oxidants there are few of them and they are very expensive, according to Heinrichs. Basically they speed up reaction for fermentation enabling production of lactic acid faster, however the costs nearly prohibit their use.

Nutrients and buffers are to be used on haylage. They increase carbohydrates and mineral content and should be a common practice on oatlage, wheatlage and ryeilage. Heinrich recommend application at 100lbs. per ton of haylage. Heinrichs also pointed out that dried or liquid molasses are as effective and may be less expensive.

Inoculants work well, but Heinrich stressed that they should only be added when absolutely needed. If the cutting of hay has been thick and the ground moist underneath and if the hay has been allowed to lie in the windrow for one or two days, then additional bacteria will not be needed.

Heinrichs suggested that when putting up corn silage you should add anhydrous ammonia, however, he noted the safety factor of

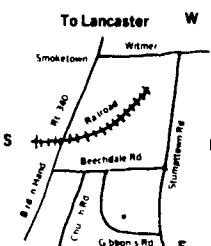
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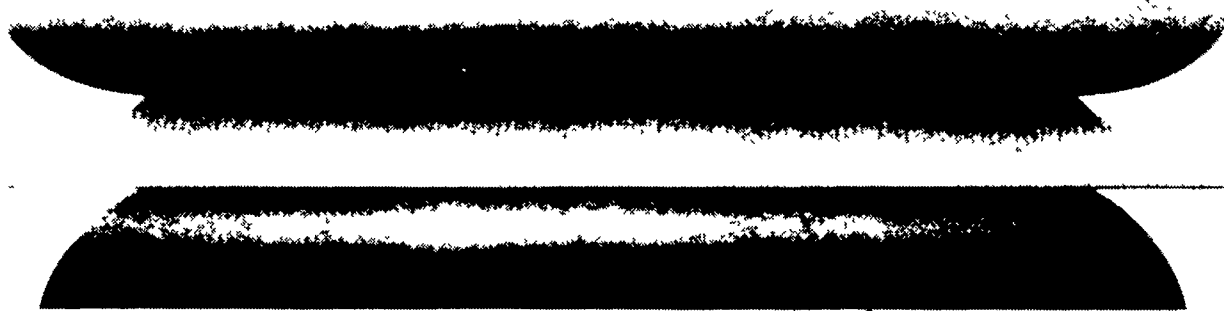


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