

# Cows Need Amino Acids, Not Protein, Says Nutritionist

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**MOUNT JOY** (Lancaster Co.) — Dairy farmers need to understand that cows don't need protein. They need amino acids.

And feeding them a special protected rumen bypass, or undegradable intake protein, in combination with diet-added fat can pay off in terms of overall milk and protein production.

Data on specific tests of exactly what types of bypass protein (specifically methionine and lysine) can do if incorporated into a feed program were examined at a special dairy seminar sponsored by White Oak Mills, based in Elizabethtown, Pa., last week.

Dr. Edward A. Moser, MS VMD, and director of technical support for Bio Nutritional Products, urged farmers at the seminar to carefully examine their feed programs to see if special nondegradable bypass protein can be used in diets supplied by feed manufacturers.

## Essential amino acids

Proteins are strips of amino acids placed together. After proteins are fed to the animal, they are broken down into essential amino acids that are carried through the bloodstream and used by the animal.

"All proteins are not created equal in terms of the amino acids they contain," he said.

However, Moser cautioned that if farmers feed protein to their animals without energy, the protein is being wasted.

Based on studies, he said that heifers and dry cows would benefit, based on studies, on increasing the protein (especially rumen-bypass protein) in the diet.

## More dry intake

Also, farmers should consider that, the more dry intake the cows obtain, the more milk and percentage of protein is produced.

"There is an advantage to not only a little bit higher level of protein in the diet, but considering,

depending on the price, using an undegradable source, a rumen bypass source of protein," said Moser.

Moser provided data on protein and how it relates to milk:

- Milk protein percentage increases with increasing days in milk.

- Milk protein is depressed with fat feeding. If too much fat is added to the diet, protein percentage drops.

- Cows on too high of a fat diet had less milk flow to the udder.

- Older cows have a decreased level of protein production.

"But remember that cows don't need protein (in their diets)," said Moser. "They need amino acids."

## Main protein source

Dry matter intake is the main source of the needed protein containing essential amino acids. If farmers don't want to incorporate the special bypass protein, then increasing dry matter intake may improve production.

"I really encourage you as you're looking at things you're going to be doing for the next year in your dairy operation to say, 'I know that there are a lot of things I can do to affect dry matter intake, and maybe what I should do is pick out a few of them that this year I'm going to work at and measure dry matter intake over time.' You can do it in any sort of situation — in stanchion barns, in TMRs, all these types of situations you can figure out a way to get a pretty good estimate, even if you're feeding very different feeds in different places," said Moser.

Moser said farmers should keep the feed in front of the cows. Cows will eat more if the feed is kept in front of them, and milk production, in most cases, should increase.

"Farmers see that when the lights and the radio come on for a couple of hours, cows eat," he said.

## Test feed

Farmers should also have their feed tested regularly. Often times



Dr. Tom Drake, Penn State University, examined the importance of looking at the ways in which animal parasites affect dairy production at the White Oak Mills seminar.

the feed program outlined by their nutritionist is not the actual feed given to the cows. Moser said farmers should set up a "phantom cow," a 55-gallon feed bin, where samples of the feed can be placed as in a regular program, and then have that tested.

Also, farmers should "dry cows off at the same body condition as we'd like to freshen them," said Moser.

"We all have to look more closely at some of these ancillary feeding programs, which tend to look at the lactating cow and maybe forget about some of the other ones," he said. Other dairy animals should not be overlooked.

In some cases, according to Moser, in the feed tests he looks at, there are very high potassium forages. Because of the increase of potassium in the forages, "sometimes magnesium is not absorbed as well. And so I'm cautious when I see very high potassium forages for dry cows. Maybe farmers should start adding some magnesium to those diets."

## Older cows pushier

Dairy farmers should also consider splitting their animals into

two groups — the cow and heifer groups. The older cows "are pushier," he said, and the heifers usually will eat more if they are not in a competitive situation with the cow group.

With heifers on a special undegradable protein feed (using bloodmeal), the total dry matter intake necessary was lowered. The feed efficiency increased, there was more gain without overconditioning, and the animals had better body conditioning.

Overall, farmers should be taking a closer look at their feeding programs if they want to improve their lot.

"I think it's well-established that, when you're adding any fat to your diet, the next thing you should be looking at is, can I afford and can I find an appropriate method of adding bypass rumen protein?" he asked the farmers.

Information about rumen protein isn't complete, but Moser said that studies are on the right track. "(We're) trying to supply the animals either with natural ingredients or, if possible, and if expense will allow it, feeding them a purified amino acid that is pro-

TECTED. And if we know that's the thing the cow needs, depending on expense, that may be where to go."

## Animal parasites

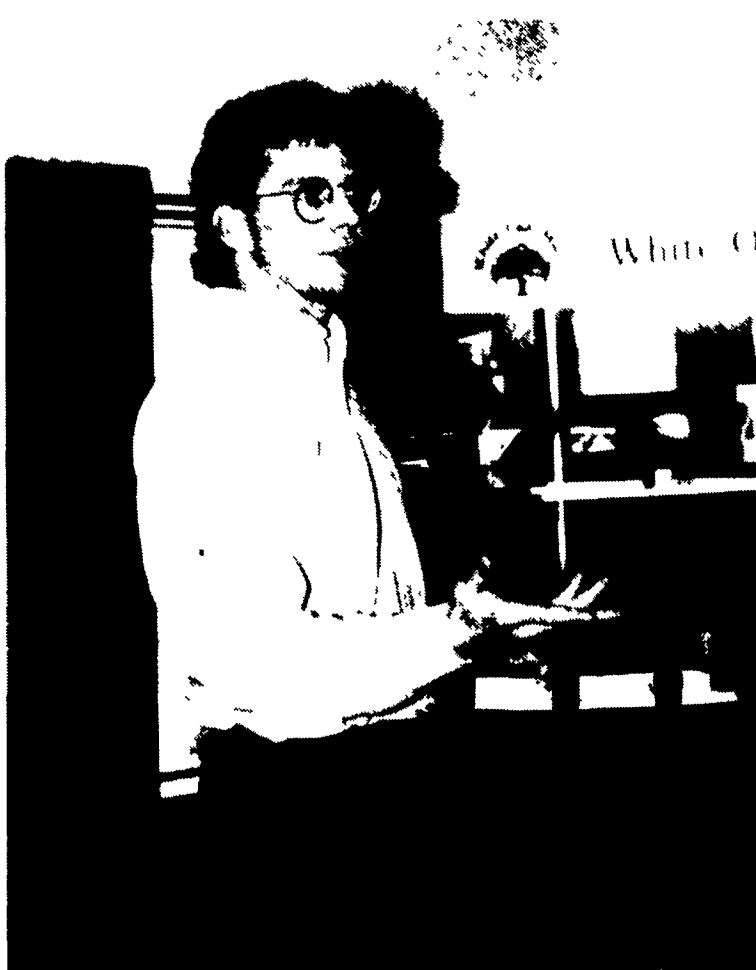
Dr. Tom Drake, Penn State University, also examined the importance of looking at the ways in which animal parasites affect dairy production at the seminar.

"If you're not doing something about parasites, it's costing you money," he said.

Farmers in North America face an approximately \$350 million loss annually to parasites. Cows affected with parasites do not eat as much and thus do not produce as much milk.

If parasites are treated on time, the benefit to the farmer could be as high as \$200 per cow, said Drake.

He suggested farmers consult their veterinarian for various ways to treat the parasite problem. He also went over a special metabolic profile chart, a \$150 test which may help examine if the cow suffers from nutrient or other deficiencies, which can be used to improve dairy operations.



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# Tax Meetings Set For January

UNIVERSITY PARK (Centre Co.) — Tax preparers, farmers, agribusiness people and other interested individuals can secure information about federal income tax at the 1991 Penn State income tax meetings to be held throughout Pennsylvania during January. Meetings will be offered at 14 locations covering all areas of the state.

Topics to be covered at the meetings range from new developments in tax law to important tax principles. The program will include a discussion of tax provisions affecting individuals and businesses, changes in tax forms, and critical issues to consider when filing the 1990 tax return.

Penn State faculty members from the University Park campus

will be the instructors for the meetings, and will hand out background materials on the topics they discuss.

The meeting locations and dates are:

- Tunkhannock, Jan. 2
- Lewisburg, Jan. 3-4
- DuBois, Jan. 8
- Butler, Jan. 9
- Indiana, Jan. 10
- Bedford, Jan. 11
- Tamaqua, Jan. 15
- Franconia, Jan. 16
- Lancaster, Jan. 17
- Chambersburg, Jan. 18
- Wellsboro, Jan. 22
- Warren, Jan. 23
- Edinboro, Jan. 24
- Mercer, Jan. 25

Each one-day session will start at 8:30 a.m. and conclude at 4 p.m.

A registration fee of \$40 per person includes lunch and reference materials provided throughout the program. Additional reference materials, including a "Master Federal Tax Manual," may be purchased at the meetings for a small extra fee.

The meeting registration fee is reduced to \$30 for people who register and pay before December 15.

A brochure, registration form, and more information about the income tax meetings are available at all Penn State Cooperative Extension offices. Questions about the meetings may be directed to your county extension director. Questions about topics covered at the meetings should be directed to the meeting coordinator at (814) 863-4580.

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