

# Feeding Urea May Reduce Ration Costs

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Dairy and Animal Science, PSU UNIVERSITY PARK (Centre) — Lower prices for milk in some markets and somewhat higher feed and other costs have caused dairymen to look for ways to ease financial pressures. Use of ingredients that are more economical sources of nutrients in a well-balanced ration can help maintain margins. Discontinuing the use of oats and including barley or ear corn and more economical protein supplements in the diet may appreciably reduce feed costs. Further reductions may be possible from proper use of urea in concentrate mixtures. Its use at a moderate level of 1% in a finished dairy feed may lower costs by \$8.00/ton or more. The use of urea as a partial substitute for natural protein is probably better suited to rations containing corn silage and hays or low protein haylages than those with high protein haylages. The latter contain considerable levels of naturally-occurring non-protein nitrogen (NPN).

An adjustment period of 2 to 4 weeks is necessary to allow the

rumen microflora and lining to adapt to the higher levels of NPN coming from urea. During this period milk production may drop slightly, but return to normal if the ration has been properly balanced. To aid in this adjustment and avoid concentrate intake problems, it is best to gradually increase levels of urea in a finished feed. Start at a level of 0.5% in the feed and build to 1.0% or a maximum of 1.5% over a period of 3 to 4 weeks.

Urea should not be used in a grain mix or TMR containing soybeans, unless they have been properly heat-treated to reduce urease activity. This could liberate ammonia before the feed is consumed. Concentrate mixtures containing over 86-88% moisture may result in some liberation of ammonia from urea via microbial growth. This can reduce palatability and protein equivalent intake by the cattle. Farm grains that run as high as 20% moisture at times or the addition of relatively high levels of molasses often are the sources of excess moisture in a grain mix. Urea or urea-containing feeds may be used in total mixed rations, especially if they are mix-

ed at least once daily and not for long periods ahead of feeding.

Since the use of urea reduces the level of high-protein ingredients in a feed it is important that a ration be properly balanced for most minerals as well as protein, energy and vitamins. The total NPN or soluble protein levels should be kept at a level of 33% of the total protein equivalent present in the entire diet (forage plus concentrate). Rumen undegradable or by-pass protein content should be maintained at 35-37% of total protein in the diet. Inclusion of 4 to 5% liquid molasses or 2 to 3% dried molasses may improve the palatability of urea-containing feeds fed conventionally.

Proper levels of urea used in a well-balanced ration should not be harmful to health, reproduction or production in adapted animals. If urea is used in rations for milk cows, it should be kept in the ration of dry cows to maintain adaptation. If it is fed to heifers at breeding time, it should be used in the ration of young stock at least 3 to 6 months prior to expected breeding. Heifers require a longer adaptation period than older animals, espe-

cially in regard to reproduction.

Sometimes a combination of urea and rumen by-passable protein sources may provide an economical, as well as nutritionally sound ration. An intake of .25 lb. to .45 lb. of urea per head daily for average to high cows, respectively, often may be possible on some forage rations.

A preferred way of feeding an NPN source such as urea would be to apply it at proper levels to corn

silage at ensiling. While urea can be used on whole plant silage, a nutritionally preferred source would be liquid anhydrous ammonia. Between now and another harvest of corn silage, proper use of urea in a feed could be of value in a well-formulated ration fed under good conditions. Protein concentrates containing urea are available from some feed concerns.

## Farmers Union Offers Drought-Relief Proposal

DENVER, Co. — With the drought of 1988 spreading in to more and more states, the National Farmers Union and state Farmers Union organizations have proposed a slate of legislative and administrative proposals aimed at providing farmers financial relief from production losses.

In a plan adopted this week, the Farmers Union introduced a four-pronged approach to relieve the economic woes farmers in drought states are facing. The plan, which was forwarded to some members of congress and USDA officials, asks for legislation that would allow farmers to enter failed acreage into the 0-92 program in counties declared as disaster areas. Under the proposal, those farmers would not be allowed to harvest the newly-enrolled acreage and would have to take steps to control erosion on the land.

Secondly, the Farmers Union is recommending legislation allowing livestock producers with feed grain under loan to buy the grain at 75 percent of the loan rate in order to help them maintain their herds. Farmers in several northern states already have had to sell all or part of their foundation herds due to the severe feed shortage.

The last two proposals ask Agri-

culture Secretary Richard Lyng to use already existing programs for drought relief: the emergency feed program whereby producers cost-share feed grain purchases with USDA, and the haying and grazing of conservation reserve and water-bank acres.

The Farmers Union statement says the emergency actions are needed not just to offset the immediate impact of the drought, but to head off a potential credit crisis in the coming months. This crisis, the statement says, will be brought about by the loss of production occurring in many states and the loss of deficiency payments due to drought-related market rallies.

During a joint appearance on the NBC "Today" show with Secretary Lyng, NFU President Leland Swenson said that the administration must move faster in implementing such programs. "The noose that's been around the necks of many farmers and ranchers has become extremely tight," said Swenson. He termed the administration's efforts at drought relief a "drought of action" for farmers in states where crops and livestock herds have already been lost.

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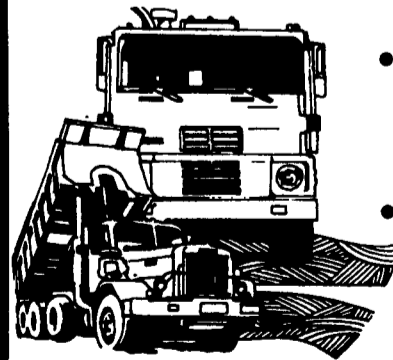
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