

Feed Alternative To Poor Corn Silage

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NEWARK, Del. — Many dairy farmers made corn silage this fall from poor, drought damaged, low-ear-yielding corn fields. They had no choice; it's better than nothing at all.

After fearing the worst and testing this silage for nitrates, most farmers did not find high nitrate levels. (Some did, however, so test!) Those farmers who found their corn silage relatively clean assumed they could proceed with feeding this corn silage as in other years.

Wrong. The low ear content makes most of this silage energy-deficient.

In this situation, what can you feed your cows so that they milk as they should or as their genetics allows them?

In recent years, especially for fresh and peak-yielding cows, the direction has been to seek higher energy density in the cow's feeding ration. After all, she has only so much stomach capacity and digestion time, which will determine how much of her ration meets her requirements.

It is basic nutrition that most cows in early lactation produce milk first, and then look to how they meet such requirements from the feed ration or, when the ration is deficient, from their body reserves.

After losing body condition for a while, cows adjust their milk production down, usually irreversibly. This upsets dairy farmers, who know from previous lacta-

tions that their cows have better genetic potential.

This could be the scenario this fall and winter on many dairy farms if farmers depend on silage made from drought-damaged corn.

How can we increase the needed energy density of the dairy cow rations?

Add fat. This is not an easy solution because the microbes in a cow's rumen have trouble with fat supplementation, except within very narrow limits. Fat increases energy density of a ration because fat has 2.25 times as much energy as any other feed nutrient.

But what kind of fat supplement? Fat comes in many different types — plant fat, animal fat, liquid, solid, saturated, unsaturated, oilseeds, homogenized, etc.

Much-needed research has focused on the question of fat, but more clear-cut answers are needed. Some commercial fat supplements have met with success while many others have resulted in lower milk production.

It is known that fat supplementation can reduce feed consumption, milk fat contents and milk yield. It also will affect rumen digestion of fiber, which is crucial for healthy cows and normal fat levels in the milk.

So what are safe levels of fat supplementation? Forages normally contain little fat and mixed grain or commercial concentrate rations contain no more than absolutely requested, simply because it costs money.

Recent research in Wisconsin (Journal of Dairy Science, September 1993) with high-yielding cows sheds some light on this question. Tallow was studied as a supplement at the levels of 0, 1, 2 or 3 percent per dry matter of the total dairy ration, which was fed twice daily free choice as a total mixed ration.

All cows continued their usual feed intake, milk production and milk composition regardless of the level of fat supplementation.

This proves that these 3 levels were not detrimental. It also proves that the cows were already so well fed that the additional fat made no difference in production.

Now these were no ordinary cows. These were 16 1,500-pound Holsteins beyond their first lactation, averaging 47 days in lactation (between 21 and 105 days) and milking on average 100 pounds per day.

To cover their nutrient requirements, their ration on a dry-matter basis consisted of one-third alfalfa silage, one-third ground corn, 12 percent corn silage, 9 percent soybean oil meal, 14 percent roasted soybeans, 1.2 percent dicalcium phosphate and limestone half and half, 0.2 percent magnesium oxide, 0.5 percent salt, 20 percent protein with an 8 percent undegradable protein portion, 22 percent neutral detergent fiber, plus the 4 experimental supplement levels of 0, 1, 2, or 3 percent tallow fat.

The remarkable thing about this ration was that it already contained 3 percent fat from the

roasted soybeans, to which the experimental tallow levels were added. Thus, the high supplementation group of cows received a total of 6 percent fat from the roasted beans and the tallow combined.

Although this feed was without detrimental effects, there was also no boost to milk production. The basic ration with the roasted soybeans alone already satisfied the nutrient requirements of these high-producing cows.

The lesson is this: With drought-damaged corn silage and its poor ear contents, the energy density of the ration must be increased in order to have high-genetics cows produce high milk yields. This is especially true now, in fall, when most cows should be in their beginning lactation. Roasted soybeans are one of the most effective ways nutritionally to accomplish this energy density increase.

Mobile bean roasters make this an affordable alternative to fat supplements. The nice thing about

roasted beans is that a cow's rumen microbes seem to like them better than, for instance, tallow or oil. And roasted soybeans have a considerable protein content, especially undegradable protein, which helps ration balancing considerably.

Here in this region we don't have as much alfalfa silage as in the Wisconsin study cited above. However, many of our dairy farmers have excellent alfalfa haylage in uprights or in plastic bags or wraps; some have early-season rye with vetch or clover haylage; and some have canola or rye grazing as alternatives.

Instead of assuming corn silage is fine this year, even from short stands, the low ear content should warn dairy farmers that it is short on energy. Given this, we must do something about increasing the energy content of the ration. Roasted soybeans, or some fat, are ideal to assist our cows in producing at their genetic capability, which, in turn, will help us pay our bills.

Bradford Extension To Meet

TOWANDA (Bradford Co.) — Penn State Cooperative Extension of Bradford County will hold its eightieth annual meeting on Thursday, November 4.

The meeting will be held at the Wysox Presbyterian Church. It will begin with a dinner served at 7:45 p.m. The cost for dinner is \$6.75 per person.

Guest speaker will be Ken Hunter, a wildlife artist, writer, photographer, and lecturer. Hunt-As a certified scuba diver,

Hunter also photographs and sketches underwater. In addition, he also mixes paint underwater to assure accurate color.

The evening's program will also include the presentation of the Bradford County Extension Cooperator Award to two county residents, and two new members will be elected to the extension executive committee.

Contact the extension office for more information.

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