

Thoughts For Winter Feeding

BY MIKE MEHREN

There's a pretty dramatic shortage of hay and straw for sale this fall. This may force some cowmen to come up with plan 'B' for wintering their cows. Tight supplies may force you to buy hay or straw from a different location or of a type of which you have no experience. Time for an early plug for **Feed Testing**: knowing what nutrients are in your feeds can save thousands of dollars in maintaining productivity of the herd and in purchasing the correct supplement to match the needs of the cows.

Here's a simple example. I have 100 cows and guess that I need a protein supplement to go with my hay. I buy supplement from Dec 1st until March 31st. I feed the protein supplement at 1 lb/cow/day. Protein supplements cost from about \$300/ton to \$550/ton. We'll use the average of those prices for our example. $\$425/\text{ton} = \$.213/\text{lb} \times 100 \text{ cow} \times 1 \text{ lb/day} \times 121 \text{ days}$. My cost is \$2577.30. My wealthy neighbor has his hay tested and determines that he has enough protein in his hay, so all he needs is a vitamin-mineral-salt mix. This costs him \$500/ton. His cows eat 2 oz of this daily. $\$500/\text{ton} = \$.25/\text{lb} \times 100 \text{ cow} \times 2 \text{ oz} \times 121 \text{ days} = \378.13 . He paid \$2199.17 less for his supplement...and now we know why he's so darn rich!

In last month's column I described limit feeding for calves. This is when a high energy finishing ration is fed at a reduced amount to achieve a certain rate of gain. This program can also be used for cows. Instead of feeding 30 lb of hay, a high energy mix of grain and hay (for instance 75% grain and 25% hay) is fed at 20 lb. The cows are fed the same amounts of protein, energy, vitamins and minerals. They just get it in fewer daily pounds of feed. They will be hungry! But they will not lose weight or have unusual problems when calving or suffer any delay in breeding back.

Alternative winter grazing programs would be most appropriate for mature cows in good body condition in the fall. Heifers and thin cows would not be good candidates, because if they lose weight through the winter there can be serious reproductive consequences.

One of the ways to winter cows is to stockpile forage and allow them to graze rather than baling it and feeding it to them. Stockpiling can be as simple as not grazing or haying a field in the spring or summer, then allowing livestock to graze it in the fall and winter.

Another way to do this is to cut and windrow the forage and allow the livestock to graze the windrows in fall and winter. Windrowing immediately after cutting seems to work best in forming a dense windrow that resists wind damage. Using electric fence to confine animals to several days forage seems to reduce the waste more than allowing the animals to graze the entire field for weeks or months.

Winter grazing native meadows was studied many years ago by the scientists stationed in Burns, OR. They compared baled hay, rake bunched hay (hay is gathered in small piles and left on the ground), and grazing the standing hay crop. I believe that rake bunched hay would be quite similar to windrowed hay as far as the animals are concerned. It appeared that the baled hay and rake bunched hay were very similar in nutrient content, while the grass left standing had much less nutritional value. Protein values reported were 7.6%, 8.3% and 4.6% on a dry matter basis. The quality of the rake bunched hay was nearly identical to the baled hay so we would expect those two feeds to perform the same. The grass left standing deteriorated as it matured and nutrients were moved into the plant roots. The cows on the standing hay lost a significant amount of weight during the winter, even though they received a protein supplement.

In other areas of the U.S. and Canada, grain or other annual crops are planted specifically for fall and winter grazing. Perennial grasses are also managed for fall grazing. The crop is grazed heavily in early spring and then allowed to re-grow prior to cutting. It is best to rotate fields when grazing perennials since continuous fall/winter grazing will eventually take a toll on the stand.

Fall/Winter grazing has been done enough years to conclude that snow does not prevent the cattle from eating enough feed to maintain bodyweight. There may be days when a tractor is needed to travel alongside a windrow to crack heavy ice, but this is seldom needed. Cows grazed this way perform equally to those fed hay through the fall and winter. Cows can use snow for their source of water when necessary.

Locally, we plant varieties of forage triticale for grazing calves during the fall and winter. This crop is planted under irrigation following early crops such as carrots or grain. Our winters have been so mild the last 5 years that cattle have grazed through the first of the year. Although not done frequently, cows and calves have grazed triticale especially when summer feed has been very mature and in short supply. This feed is rich enough that it may cause a lung disease in the cows, where they suffocate from fluid collected in their lungs. If grazing cows, introduce the triticale very slowly; you may need to turn them in when they are full and move them out after several hours. Doing this for a few days allows their system to adapt to the protein-rich feed.

When available, grass seed straws can be fed to cows in place of part of the hay. The perennial varieties of bluegrass, ryegrass, bentgrass, and fescue have more protein than wheat or other grain straw. Like any other roughage, the straws vary tremendously in their nutrient content, protein may range from 4 to 11% but color and smell won't tell you which is which. A fairly easy program for feeding straw with some alfalfa is to begin feeding 25% hay and 75% straw; then when cows are within 60 days of calving change to 50% hay and 50% straw; and finally when they begin calving change to 75% hay and 25% straw. Using a program like this provides the cow with her protein and energy needs. The only supplement needed is one that provides vitamins and minerals. The exact proportion that you should use depends on the quality of your alfalfa hay and straw (tah tah...time to get a feed test!). Cow body condition and age (heifer vs. cow vs. old thin cow) also plays a big role in what and how much needs to be fed. Cows that are old or thin and heifers might be fed the 75% alfalfa hay and 25% straw from the beginning so that they can gain weight and remain a healthy and productive part of the herd.

After years of feeding grass seed straws and screenings with very few endophyte problems, the law of averages seems to have caught up with us. We have seen more endophyte and ergot problems in the last few years. Bluegrass is not supposed to be contaminated with endophytes. However, turf varieties of ryegrass and fescue have these fungi. The endophytes are primarily found in the seed head, but we have seen reports of their presence in young growing fescue and in straw. If you feed grass seed screenings it would definitely pay to have them tested. If you test before you begin feeding then you will have numbers to use for figuring out how much of that particular feed you could use without getting in trouble.

Samples can be sent to: Morrie Craig Lab, OSU Vet Diagnostic Lab, 30th and Washington Way, MacGruder Hall, OSU, Corvallis, OR 97331. Call the lab for sample care and shipping info. The number is 503-737-2872. The other lab that tests for endophytes is located at the Univ. of Missouri, Vet Med Diagnostic Lab. Attn: Dr. Tim Evans, 1600 Rollins, Columbia, MO 65211. Phone number is 573-884-9270.

Dr. David Bohnert, from the Eastern Oregon Ag Experiment Station in Burns gave an excellent presentation at the Pacific Northwest Animal Nutrition Conference last week on work done with grass seed straw at that station and at Union Oregon. One very important point he made was that the toxins in grass straw are not uniformly dispersed through a field. This means that you could do an excellent job of sampling the bales you buy and still have more or less endophyte than the lab finds in your sample. This doesn't mean that you shouldn't sample, but if your sample comes back showing a low level of endophyte toxin, don't just assume that all is ok. It still pays to watch the cows daily and if any show up lame or with sore feet, find out whether it's foot rot or fescue foot. They look quite different. The following table shows toxic levels for the different alkaloids in different farm animals.

Straw Variety :	Fescue	Ryegrass
Alkaloid Name:	Ergovaline	Lolitre and Ergovaline
Horse	300-500 ppb	-----
Cattle	400-750 ppb	1800-2000 ppb
Sheep	500-800 ppb	1800-2000 ppb*

***parts per billion**

NOTE; IN COLD WEATHER, MUCH LOWER LEVELS OF ERGOVALINE MAY CAUSE PROBLEMS.

Dr. Bohnert further reported that preliminary results showed that cows had greater milk production when fed endophyte infected straw if the feed additive MTB-100 (a product readily available in the Northwest) was added to their supplement. If you're forced into changing the way you winter your cattle, investigate the new feed or wintering area long before it's time to feed. Hopefully this will provide you with an opportunity to foresee and correct problems before they turn into disasters.

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