

# Strategies To Save Feed \$



PHOTO BY NORMAN SUVERLY

**You don't necessarily have to spend money to save money when feeding cattle through the winter.**

by **Ed Haag**

**W**hen the experts talk about the most cost-effective approach to dealing with rising energy costs due to increasing demand, most agree that changing old habits to cut wasteful consumption offers the most bang for the buck because no new energy source has to be tapped.

A similar case can be made for feeding cattle during the winter.

"If you combine losses due to improper storage and wasteful handling, you can easily say goodbye to half of your feed before it gets to the cow's mouth," Dan Undersander says. "With the cost of feeding replacement hay being what it is, that can be the difference between a profit and a loss for that year."

He adds that the good news is that most of that loss can be avoided by initiating some low-cost measures that pertain directly to storage and feeding. Undersander, University of Wisconsin Extension forage agronomist, speculates that the reason more beef producers don't embrace those practices is that they are often unaware of the true financial implications of not changing with

the times.

"When feeder hay was under \$50 a ton, the issue of waste wasn't so critical," he says. "Now that it is over \$100 a ton and money for replacing that hay is probably tight, it is a different story."

Undersander cites as an example the seemingly insignificant effect an improperly stored hay bale, left in the field, can have on a beef producer's bottom line. He adds that it is not uncommon for bales that are exposed to the elements to exhibit significant surface deterioration within a short period of time.

The effect of that deterioration can be deceptive, Undersander says. "If you lose the top 2 inches all the way around on a 48-inch bale, that is about a 15% dry-matter (DM) loss," he says. "Four inches is 30%, or almost a third of your bale."

But the problem doesn't end there, Undersander says. "If you are looking at visual deterioration on a bale, the actual spoilage is probably double that. And if you try mixing some of that spoiled hay in with good hay, there is a real possibility that the cattle will refuse to eat any of it."

As Undersander points out, you don't have to spend a fortune or devote a great deal of time to protecting your forage investment.

"With hay bale storage, the key objective is to get it off the ground," he says. "What a lot of people don't realize is that when the bale is

making contact with the soil, it is soaking up moisture like a sponge."

He adds that it doesn't take much more than a couple of boards, a pallet or some old tires to break that contact. "Even a fraction of an inch of coarse gravel will make a difference," Undersander says. "And that is important for both tied and netwrapped round bales."

For even greater protection from spoilage Undersander recommends tarping or moving hay under a roofed shelter.

## **Mineral matters**

Sarah Smith, Washington State University (WSU) Extension educator sees mineral storage and delivery as one area of calf production that can cost an operator more than it should. "Between five years ago and today, minerals have jumped significantly," she says. "And, yet, I still see people just dumping it into something the cows are just going to walk over and tip. These days, that is like throwing away gold."

Instead, Smith recommends purchasing a feeder specifically for minerals.

"I am talking about one that can be anchored to the ground and has some sort of cover to prevent the supplements from getting wet," she says. "With the price of today's supplements, it will pay for itself in no time."

**Feeding & Feedstuffs**

► **Above:** Mike Wilson's poor man's feedbunk reduces field-feeding waste dramatically.

For those who have some skills with a welder or hammer and want to save a few dollars, Smith suggests looking at the possibility of building a supplement feeder. The Noble Foundation has a design available online at [www.noble.org/Ag/Forage/CattleRub/page7.html](http://www.noble.org/Ag/Forage/CattleRub/page7.html) for an all-purpose supplement feeder constructed from a 55-gallon drum.

### Maintain bale feeders

Smith says another way to reduce feed waste is to keep stationary hay feeders in good repair. Those that are beyond repair should be retired.

"A round-bale feeder the bull has torn up seven times will probably not be as effective as a replacement," she says, adding that before investing in a new bale feeder it makes sense to look at the performance of the various designs.

A Michigan State University (MSU) research team evaluated four of the most commonly used round-bale feeders — the cone feeder, the ring feeder, the trailer feeder and the cradle feeder. In the process, the team studied the relationship between feeding behavior, feeder design and feed loss.

The feeder to receive the highest marks was the cone feeder, with a dry-matter hay loss of 3.5%. The next was the ring feeder with 6.1%, followed by the trailer feeder with 11.4% and the cradle feeder at 14.6%.

What was learned from the behavioral side of the study was that cows feeding from the cradle feeder had nearly three times the antagonistic interactions and four times the frequency of entrances compared to cows feeding from the other feeder types, and feed losses were positively correlated with antagonistic interactions, frequency of regular and irregular entrances and feeder occupancy rate.

With the cradle feeder, cows tended to walk alongside of it and butt several of their herdmates out of the way at the same time. The reaction of the cows being butted was to back up and drop what they were eating on the ground.

Similar behavior was observed in cattle using the trailer feeder, but it was nearly absent with the cone and the ring feeders.

### Feed the right cow

Smith points out that another strategy for reducing feeding waste by cutting the number of antagonistic interactions is to separate the larger, more aggressive cows from the rest of the herd. "If you have the facilities available for two groups of cows, this strategy can be an effective way to cut feed losses," she says, adding that this approach could also improve the distribution of supplements among the cows.

A Montana State University study using

external feed markers to determine each animal's intake of a loose supplement concludes that up to 30% of the cattle in a given herd don't even get to taste the contents of the feeder in a cow herd environment. Younger, lighter animals — the ones that really do need the supplements — are the ones being left out.

Further studies concluded that by separating the older, larger animals from the smaller, younger animals the cows that were excluded in the initial studies did manage to consume supplements in the segregated herd. This was accomplished without an overall increase in the level of supplements being fed.

### Poor man's feedbunk

When Norm Suverly, WSU Okanogan County Extension director visited Mike Wilson's cattle ranch in Brewster, Wash., he was impressed at how little chopped hay was wasted when his cows were field-fed off the wagon.

"Normally the cows would trample on it and ruin much of it before it got eaten," Suverly says. "With Wilson's setup, none of that was happening."

The secret behind Wilson's system was a single strand of electrified barbed wire transecting a 60-acre pasture. On one side of the wire the cows stood patiently waiting for their next meal. On the other side Wilson fired up his tractor and feed wagon and began dropping a long straight row of chopped hay next to and parallel with the wire. The hay was close enough to allow the cows to extend their necks under the wire and eat but far enough away to prevent them from damaging what they didn't consume immediately.

"We call it a poor man's feedbunk," Wilson says. "I first learned about it when I was

herdsman for Rathbun Angus several years ago."

During the winter, Wilson manages his 150 cows on the 60-acre pasture. To support the quarter mile of electrified wire, he uses 3/8-inch fiberglass posts.

"I spread them out about every 30 feet," he says. "Then I have a T-post on one end and a railway tie on the other."

He adds that once those cows are used to the system, they will line right up along the wire and not even touch it.

Wilson morning-feeds approximately 22 pounds (lb.) of chopped alfalfa-grass hay per cow per day. He adds some water to the mix.

"Because it is usually cold enough to freeze in the morning, the water makes the hay tacky and helps stick the fines together," he says. "By the time the cows get to them, these fines are partially frozen, mouth-size clumps."

In the evening, Wilson feeds his cows wheat straw on the cow side of the wire.

"This gives them something to chew on at night, as well as giving them something warm to bed down on," he says.

As for any additional labor requirements moving the wire, Wilson says that as long as the ground remains frozen and doesn't turn sloppy there is no reason to relocate.

"This year it doesn't look like we are going to have a lot of moisture," he says. "That means I probably won't move the wire even once."

Wilson agrees with Suverly that using the hot wire reduces feeding waste dramatically.

"It is amazing how much feed you save with this simple system," he says. "I recently ran a blade over the feed area and when I looked at the pile of leftover fines from two months of feeding, I figure I lost less than a bale of hay over that whole ground."



► Feeding from a ring feeder discourages aggressive behavior and reduces hay spillage.

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