# Winter Cow Nutrition

## Monitor body condition for production efficiency.

*by* ***Heather Smith Thomas***

Body condition of cows often determines whether they give birth to strong, healthy calves and rebreed on time. Keeping track of cows' condition can help determine nutritional needs of the herd through winter and spring until they are rebred.

Body condition score (BCS) is rated 1 to 9, with 1 denoting emaciation and 9 obese. Most stockmen try to keep cows at BCS 5 to 6 for optimum health and fertility. Some cows need more cover and condition than others to cycle and breed successfully. Cows that produce a lot of milk may be thinner at weaning time than cows producing less milk. A heavy-milking cow may go into winter carrying less flesh and needs a higher level of winter nutrition to prepare for the next calving season.

### Know your body condition

Karl Hoppe, North Dakota State University Extension livestock specialist, says changing the BCS on a thin cow takes about six months. That's why it is important to check body condition when cows come off summer pasture or at weaning time — whenever you have hands and eyes on them — before cold weather starts.

When assessing body condition, check for fat cover across the chest and brisket, through the throat, over the back and ribs, behind the shoulders and over the hooks, pins and tailhead. These are all the areas a cow can carry fat.

"The main thing is to look for ribs and backbone," Hoppe says. "Those bones need to be covered."

Some people think a cow might be a little thin because she's old, but that's not a good excuse.

"Here in North Dakota, I like to see cows with enough body condition that they don't lose weight during a cold winter; they should be gaining a little weight over winter," he notes. "Even if they only gain half a pound per day, this will equate to one BCS — and that gain is above and beyond what they'll gain just from pregnancy."

In a cold climate, cows need extra body fat.

"Then when it's 20 below, we won't have to adjust their ration; they just won't gain weight that week — but they won't lose weight," Hoppe says. "If we are feeding a cow for a half pound per day gain, and she uses that extra to keep warm instead, she won't lose weight."

When assessing body condition, Hoppe suggests having someone, like the county Extension educator, help — someone who isn't around your cows every day. An unbiased eye can often assess them more accurately.

"In North Dakota, people run cows out on pasture as long as possible or put them on crop residue or cornstalks until snow gets too deep for them to graze on old, dead grass or cornstalks," he says. "Then ranchers bring them in to feed and invariably those cows never come in fat. A good milking cow always comes home a little thin. We must look at putting some weight on to get them back to a BCS of 5."

You don't want thin cows going into winter, and it is important that they maintain their condition throughout the winter, as well. You don't want to compromise their ability to rebreed after calving; if they're too thin, they will often calve late or be open the next year. Cows aren't on high-energy finishing rations like feedlot steers — cows are being fed hay. It takes several months to increase their body condition unless you add something extra, like corn silage.

"I found that when my cows have some corn silage, they eat less hay because they don't need as much. They are content and in good condition, but not porky fat," Hoppe says. "They are in better condition than when I was feeding just hay. And if for some reason a cow loses a calf in the winter, she has more weight to sell when you cull her."

Regarding body condition, feed must be matched with the desired performance from cows. If your ranch environment can't support cows that milk too much and they can't breed back without expensive inputs, you might want to rethink your genetics. You need a happy medium between feed efficiency and milk production.

### BCS tells the tale

If the average BCS of your herd is 4, that means some cows will only be a BCS 3, which is too thin.

"If they have a BCS greater than 4, their breed-back will be pretty good; they will also have better colostrum when they calve," Hoppe says. "A thin cow won't make as much colostrum, and it won't be good quality."

The healthiest, best-doing calves are usually the ones that suckled all or nearly all the cow's colostrum as soon as they were born, and it was good colostrum.

"Some people worry that if they feed their cows too well in the winter, they will have a bigger calf and possibly more calving problems," he says. "I tell them they'll have less problems with cows that are carrying more flesh than cows that are thin."

Generally, calving problems stem from genetics, which are the main driver of calf size. That is what needs to be addressed if the calves are too big for an easy birth.

Dr. Julie Walker, South Dakota State University professor and Extension beef specialist, says mature cows should be in BCS 5 at calving, and bred heifers and 2-year-olds should be in BCS 6. Cattle in this condition should carry adequate

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"We typically think that the lowest nutritional requirement for a pregnant animal is during the second trimester of pregnancy, right after a cow has weaned their present calf," Walker says. She explains that is when they are no longer lactating, and the pregnancy is not demanding much nutrition yet, since the fetus isn't growing as fast as it does during the third trimester.

"I was recently at a conference where it was said that if we are shorting the cow or heifer on nutrients, even during that mid-gestation stage, we could potentially be negatively impacting the unborn calf's performance later — either as a replacement heifer or in the feedlot," Walker says. "So, this is something to think about."

Be careful how you "coast" the cows through that period, to make sure they don't lose weight.

"By January, most spring-calving cows are in the final trimester of gestation, and we need to make sure we are meeting their nutrient needs," Walker says. "We don't have to feed more than their needs, but remember that when temperatures drop, cows eat more. We want to make sure they have that opportunity — with additional feed to consume.

"We also need to provide wind protection and bedding, to decrease the impact of cold temperatures." Cows can stay warmer and won't require as much additional feed to generate more body heat.

**Keep nutrients in mind**

"When you start feeding, you need to do some feed testing and assess protein and energy levels," Hoppe says. "Sometimes feeding extra protein will allow cows to get more energy out of the feed we provide (more ability to digest it and convert roughage to usable nutrients), but we also need to be feeding enough energy in the first place."

Knowing if hay was cut in June, July or August can help determine nutrient levels. If hay is overly mature — especially grass hay — the cows can't eat enough of it to meet their needs. There might be more volume, but a lot less quality than hay cut while still green and growing.

"This is why, for my own cows, I use corn silage to 'dress up' any poor-quality hay," Hoppe says. "It contains a lot more energy and can balance the diet. If you test your hay, you can add extra energy as needed. People generally look at protein first, which is OK, because adding a protein tub can certainly increase digestibility of the feed, but often cows also need more energy than what is available in that feed."

Walker also stresses the importance of understanding the quality and nutrients of your available feeds.

"It is important to test your feeds," she says. "If you have three different hay stacks from different fields or harvested at different times, maybe some of it just grass, or an alfalfa-grass mix or straight alfalfa; you need to know if you should take one bale from each stack and mix them or if you need two of the better quality bales and one of the lower quality."

If you know the nutrient quality of each stack, you can plan how to feed it. You'll also know if you need some kind of supplement along with the hay.

"Do we need to put lots of groceries in front of these cows?" Walker asks. "Not necessarily, and some people feel cows should be able to forage through winter — that they need to be working for us and not us working for them."

This depends on what kind of cows you have, how grass-efficient they are, the quality and quantity of that rough forage and whether you feed supplement.

"Producers need to look at what it might cost them later," she says. "If you get a cold spell, cows will need more than what they can graze. It's important to be prepared to feed them if they need it.

"My dad used to say, 'We're not going to suddenly pour out five pounds of corn for cows if we have a cold snap for a week, but we are willing to go from a poorer quality grass hay to a better grass hay or a better grass-alfalfa mix, and more of it.' If we know the nutrients in our feedstuffs, we are better able to give cows what they need. One hay might contain more TDN (total digestible nutrients) or protein than another. It's easy to balance rations with book values, but you must know what's in your own feed."

If you need assistance, your state Extension staff can help test hay, develop a ration, determine which hay to use and when, etc. And don't forget the importance of water.

"This is the most important nutrient," Walker says. "If cattle don't have adequate water, they won't eat enough. In winter it becomes a bigger issue." **BA**