



# Strategies for Winter Feeding

**Proper winter-feeding strategies help maintain forage and pasture quality and increase profitability.**

by **Heather Smith Thomas**

**W**inter feeding is often the biggest cost when raising cattle; therefore, many producers try to reduce the number of days they feed hay. In some situations, with careful management, cattle can harvest their own feed year round, especially in mild climates. Even in northern climates with cold weather and snow, year-round grazing can sometimes work — in certain situations and with good planning — as long as there is a backup plan for when snow is too deep or winter storms make grazing impossible.

Lorne Klein, retired range management Extension specialist, Weyburn, Saskatchewan, says there are four sources of forage: native pastures, seeded perennials (alfalfa, grass, sainfoin, etc.), annuals for grazing (oats, barley, spring and winter cereals, corn, cocktail cover crop mixtures, etc.) and crop residues.

Fall and winter grazing is utilized more today than it was 60 years ago. “Four inventions changed everything,” Klein says. “One is portable electric fence. Second is portable windbreaks. Now, we can put cattle anywhere and give them a windbreak. Third is snow as a water source. Fourth is summer calving. As ranchers get older or cattle herds get bigger, [ranchers] may be forced into [summer calving] because early calving is so labor intensive. Those four things allow stockmen to graze cattle more effectively in fall and winter. You can now winter livestock nearly anywhere that you choose if you get adequate snow for a water source.” If you do not get snow, you need a backup plan for water.

## **Annual forages**

“There is a long list of annual forages that producers are using today,” Klein says. “Some are being reinvented and there are also new varieties. Some cool-season cereals and many warm-season crops are now being utilized for grazing at different times of the year.”

Fall rye can be stockpiled for winter. “You can seed it in the spring or later in summer, let it green up in the fall, and graze it in winter. Italian ryegrass seeded in spring will green up again nicely in the fall if you get rain. Ryegrasses and corn are usually grazed standing,” he says.

Many people grow corn all summer and leave it standing for winter grazing. “Depending on maturity of the kernels when it freezes and stops growing, there can be risk of overload when grazing standing corn, depending on how many acres you give the cattle at once,” Klein says. “If you give them 10 days at a time and the cobs are mature, and the animals go through and eat the cobs first before they start on the stalks, they may suffer grain overload, causing death.” It’s best to strip graze corn if possible, allowing cattle a few days at a time to eat stalks on one strip of ground and not go through the whole field only eating cobs.

For the purposes of this article, strip grazing refers to grazing standing forage in a limited portion of a pasture or field. Swath grazing refers to grazing windrows of cut and raked forage.

“The most common fall-winter grazing in some areas is swath grazing with annual cereals such as oats, barley and millet. Some cocktail cover crops like sugar beets, collards, turnips and plantain can be grazed standing. There are many options now, but a person might need to check for nitrates. In certain conditions some of them might be risky for high nitrate levels,” Klein says. “Some of the cover crops get so green again in the fall that you need to strip graze like you would alfalfa in the summer, to avoid overeating and problems. It takes good management to make this work,” he says.

Most of the other annuals are generally cut for swath grazing. Windrows are best strip grazed rather than giving cattle access to



the whole field. If you give cattle too much at once, they only eat parts of the windrow and waste more feed than if you limit them to a certain amount at one time.

“It also depends on which month you plan to graze it, the amount of snow you typically get, and whether soil is frozen or dry when you graze—or muddy,” Klein says. If it gets muddy, you may need to pull cattle out of that field for a while and have a backup plan for how to feed them during that time. Always have a backup plan for fall and winter grazing in case of unusual weather conditions, or windrows and stockpiled pastures are snowed under.

It helps to have experienced cows for swath grazing in snow. Place experienced cattle with a group of cattle that have not swath grazed to show new cattle where the windrows are. Otherwise, inexperienced cattle do not realize there is available feed under the snow and will wait around to be fed. By the time they figure it out on their own, they may have lost too much body condition.

## **Utilizing crop residues**

Crop residues are sometimes an underutilized source of winter grazing. “It depends which crop it is, whether you have to supplement, because some of these have high nutrient levels,” Klein explains. “It also depends on how cold it gets in the winter and your time of calving.”

Crop residue may or may not need supplements, depending on temperatures, the condition of the cattle, time of year and calving season. If they are not calving until late spring or early summer, this is an ideal situation with multiple options.

The crop type and harvesting method, such as collecting only the chaff or the chaff and straw together, can make a difference in feed quality. “There is nothing more palatable than flax chaff, and cattle do well on it because if you get a few seeds along with some oil content, there will be high energy and protein levels,” he says.

Grazing crop residue is a low-cost way to winter cattle. “You already have the crop, the combine has bunched it, so you don’t need to make another trip over the field to put it in bunches or windrows for cattle to find in the snow,” he says.

Choosing to put crop residue in rows behind the combine, or bunch it in piles the cows can access in deep snow, will depend on what month(s) you anticipate grazing. “If it’s later in the winter, you want it in bunches, but if it’s early in the fall, you can leave it in rows,” he says.

Timing has to be right, Klein says. Cattle on crop residue where the soil is not frozen can be a problem with any added rain.

“You need plan B for when it rains and the soil is not frozen. Have a way to get them off to be fed somewhere else. As long as the soil is frozen, cattle won’t hurt it,” Klein says. “They simply speed up the cycling of nutrients, which is good for soil health and fertility.”

## Stockpiled perennial forages

“Any time you stockpile perennials, whether seeded or native, you give up quality to graze when they are mature. They have higher quality in summer when green and growing,” Klein says. If cattle are grazing native range in late fall or in winter, meter it out with strip grazing, to limit cattle to one portion at a time — for three to seven days. You have to figure out what works for your own situation.”

Cool season grasses will green up again in the fall if there is rain, he says. These grasses will be of good quality and high in protein.

“A beef cow can carry protein for five days to keep utilizing in the rumen and doesn’t need high quality protein every day,” Klein says. “If cattle are receiving a protein supplement, it can be fed every five days or less. You don’t need to feed it every day. Twice a week works nicely. That’s what you are doing when you give them several days of pasture at a time. They eat the best quality in that strip during the first day or two, and then the next few days are eating the drier, lower-quality portions of the plants.”

If you do not meter out high-quality forage, cattle have good feed for about the first three weeks, and then, the forage will decline in quality for the next weeks or months, creating the need to supplement. This works with native range. With seeded pastures like an alfalfa-grass mix, sainfoin or cicer milkvetch, the legume adds protein to the seeded grass.

“There’s been a lot of discussion over the past two decades looking at cost of cutting and baling, but it’s also expensive to leave forage standing for cows to harvest because you lose quality. Unless you meter it out for them to graze a couple days at a time, there will be significant trampling loss. If you have a good stand of seeded grass that produces two or more big bales per acre, 3,000 pounds per acre or more, it may be best to cut it for hay. If you are getting that kind of yield, it may be better to lock it up at optimum quality, and baling it to feed in the winter. There may be less waste and loss of quality,” Klein says.

Stockpiling grass — not grazing it during the summer to leave for winter grazing — is not always best. Klein says halving the number of days cattle are grazing poorer quality feed, rather than putting grass into bales, may not be the best choice, unless the native pasture is on terrain unsuitable to hay.

“There are many variables in this decision, however. It depends on how far away from home [the pasture] is and how far you have to haul the bales,” he says. “Every time we make a statement about what works best or is more profitable, someone will have a scenario where it doesn’t work at all.”

Some people say it is best to move electric wire every three days to rotate through a pasture, but this may not work for other producers. “If you have wildlife ripping your fence down, or terrain and vegetation that make it impossible to run an electric fence every three days, it won’t work,” Klein says. Stockpiling native or tame grass may work for some people, but not everyone.

Whether pasture greens up again in the fall also depends on if you have fall rain. New fall growth boosts forage quality, but if volume is required, stockpiled pasture can be utilized with higher protein supplemental feed. In some pastures stockpiling is the best practice, but it may change from year to year. One fall might have enough green regrowth that additional supplements are not required for quite a while, and in another fall, supplement may be needed all the way through.

With native range or seeded pastures, the forages are better quality when harvested by animals over the summer. Stockpiled forages will decline in quality but can be harvested throughout the winter by grazing animals.

## Bale grazing

“If you are putting out big bales once a week, [bale grazing] is a lot less labor and fuel than going out there every day. There might be some scenarios, however, where bale grazing would be hugely expensive,” Klein says. “If you are hauling two bales at a time on

## Planning, management promotes year-round grazing

by James Rogers, Ph.D.

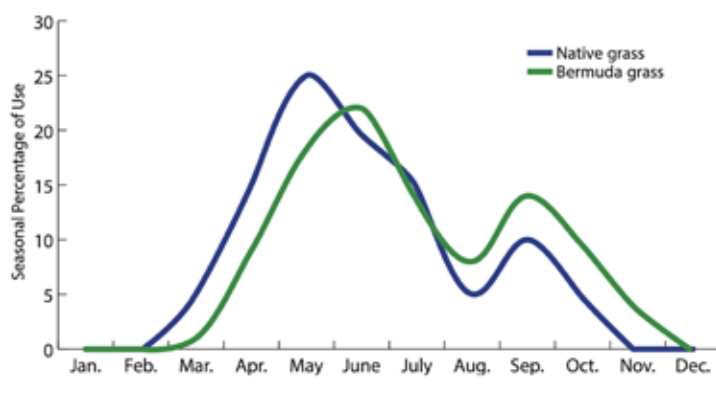
Grazing season is most commonly thought of as grazing during a period of time while the base forage is actively growing. This works great for producers who are seasonal in nature, such as stocker operators who grow winter annual pasture and then completely utilize the pasture with stocker calves. However, for a cow-calf producer, thinking this way is very limiting to grazing management. For example, the figure below illustrates the percentage of Bermuda grass or native grass available for grazing during the growing season. Planned grazing during the growing season only limits grazing management options for the remainder of the year. Grazing managers should not limit their thinking to a season or period in time but rather expand their thinking to planning for multiple seasons and year-round grazing management.

As a grazing manager, success is tied to stocking rate or the number of animals grazing an area of land for a period of time. As mentioned previously, cow-calf producers should think of the period of time as a year. Note in Figure 1 that the majority (70%) of Bermuda grass and native grass growth occurs prior to mid-July. This means the amount of forage available for grazing is greatest in spring and early summer. Animal performance is directly tied to forage availability; therefore, animal performance should also be greatest in spring and early summer. For a spring-calving cow herd, it is time for the cow to maximize milk production, add body condition and rebreed. If stocking rate is set too high in an attempt to utilize all of the abundant seasonal spring growth, then there is risk of limiting forage intake and cow performance due to restricting forage availability. Other risks include reducing total forage yield, possibly reducing plant persistence and increasing cow carrying costs due to increased supplementation from reduced forage availability the remainder of the year.

For long-term sustainability of both the livestock and the forage base, set a stocking rate based on a time period of a year and the amount of forage the operation can produce in a normal rainfall year. Excess forage will likely be available during the spring, but that can be utilized later in the year. Combine this with a controlled rotational grazing plan. Rotational grazing presents additional forage management options such as allowing for stockpiling forage for fall grazing. Grazing intensity and duration can also be controlled through rotational grazing. Highly productive pastures can be grazed harder, and weaker pastures can be given an opportunity to rest and recover. A side benefit to rotational grazing is that over time, the cow herd will become easier to handle and work.

Preparation is key for making a year-long grazing system work. The grazing manager needs to be thinking at least one season ahead and maybe two. Learn the yearly flow of both perennial and annual forages. Take into account rainfall that is received in one season and how that will affect forage production in the next season. In summary, be flexible, proactive and have a mindset of year-long forage flow in addition to solely seasonal grazing. **HW**

Figure 1: Forage Growth Curve



James Rogers, Ph.D., is a contributing writer for the Noble Research Institute and a former associate professor. This article was reprinted with permission from Noble. Read the original article at [Noble.org/news/publications/ag-news-and-views/2015/may/planning-management-promotes-year-round-grazing/](https://www.noble.org/news/publications/ag-news-and-views/2015/may/planning-management-promotes-year-round-grazing/)

your front-end loader and driving three miles down the road to get to the field where the cattle are, it’s not going to work. You need a system where you are getting bales out there in a hurry at low cost.”

Hauling bales from the field and back to cows as they need them in the winter takes more time and cost than simply letting cows eat bales where they were made. However, that savings must be balanced with other factors.

“Some people just leave the bales in the field where they were made, but on my place, I haul the bales in, and during the winter I take out seven days’ worth at a time to the livestock. I put them where I want them,” Klein says. “Generally, where I am feeding in winter is not a hayfield. It’s somewhere I want to improve pasture fertility with the aftermath of the bale grazing.”

Klein views the bales as fertilizer packages. “In the fall, I plan where I am going to spread those fertilizer packages this winter. You don’t want to put bales in the same exact spot for the next four years,” he explains.

Also, consider what is holding the bales together.

“Some producers use sisal twine, and don’t have to pull off plastic twines or net wrap,” he says. Sisal breaks down in the rumen; whereas plastic and net wrap stay intact and will plug up the rumen or block the gastrointestinal tract, potentially causing death for cattle. Ingested net wrap and twines are a huge cause of indigestion and weight loss, especially when the rumen gets partially blocked. Cattle can die suddenly if the rumen becomes totally blocked. It is important to remove twines and net wrap before the cows eat the bales. **HW**