

Weathering Winter

Tips to manage cattle's nutrition through the winter.

by Purina Animal Nutrition

Winter can challenge cattlemen, but these quick management tips can help producers be prepared for colder weather.

Prepare water sources for winter

Water is the most essential nutrient for cattle production. It's used for regulating body temperature, growth, reproduction, lactation, digestion and many other bodily functions. And while we typically worry more about water intake in summer, it's equally as important in cold weather.

For fall calving herds, water requirements go up drastically as lactation starts. Cows hit peak lactation right when water is at risk of freezing up. With spring calving herds, water access is key to avoid stress and long-term performance impacts to both the cow and unborn calf.

including insulated troughs and pipelines, electric and propane heaters, solar power, and heat tape or geothermic heat. An added benefit of these types of heated waterers is improved water temperature, leading to more optimal water intake by the animal.

Maintaining a continuous flow of water is another option for automatic cattle waterers to prevent ice build-up. But be aware of overflow issues. Set up a drain to remove excess water and only run continuous flow in preparation for and during inclement weather.

Managing ice with natural

Your plan could include tasks like performing regular maintenance, turning on water heaters and starting continuous flow on automatic cattle waterers.

When building a new site, think ahead and consider laying pipes deeper and using insulated pipes to prevent freezing. It will save you a lot of hassle down the road.

Reduce winter hay waste

Feed expenses are one of the highest variable costs for cattle operations annually. The cost of hay to get your herd through the winter months accounts for a significant percentage of those expenses and can impact your profitability. Research has shown that more than 50% of hay may be wasted by poor storage methods or inefficient feeding practices.¹

Let's consider what storage and feeding adjustments you can make to help reduce hay waste.

No. 1: Hay storage — Improving your hay storage strategy (Table 1) is an investment that can pay off in the long run. Storing hay uncovered on bare ground is the cheapest and easiest method, but it comes at a cost. This storage method can lead to almost 30% dry matter loss in six months.¹

One way to reduce hay loss is to add a barrier between hay and the bare ground, reducing the moisture that seeps in over time and causes hay quality to diminish. A layer of gravel under bales or placing hay on pallets allows air to circulate and can reduce dry matter loss by two-thirds or more.¹

Provide further protection by covering bales. One advantage to covering bales is they can be stacked, requiring less ground cover. The most economical cover is a tarp, but individual wraps and a roof structure are good options as well. Research shows that implementing a cover to your hay storage strategy can keep dry matter losses to below 15% after six months of storage.¹

Storage buildings provide the best protection from hay loss during storage at an average of 5%

dry matter loss, but they also have a higher investment cost and may be less convenient.¹

No. 2: Feeding hay — Much of the waste that comes with feeding hay results from hay getting trampled or soiled. Limiting the amount of hay fed at one time can help limit waste. Research demonstrates that adjusting from feeding a four-day supply to a one-day supply can reduce waste by around 20%.³

Utilizing a feeder has also been shown to reduce hay waste by as much as 45%.² However, feeders may also increase the labor required for feeding hay and may not always be practical. Feeding on gravel or concrete can provide a good alternative to help reduce issues. If feeding on the ground, choose a well-drained area. And when feeding on a pasture, move hay feeding areas daily to reduce soil compaction and buildup and spread out the manure and nutrients.

Other hay feeding options include unrolling bales or grinding hay. An advantage to this method is the ability to move feeding areas around the pasture to ensure a more even distribution of manure and nutrients. However, these feeding systems are more practical when feeding daily as they are labor intensive and can result in high losses if too much hay is fed at once.

No. 3: Bridge the gap — A final way to ensure you're getting the most use out of your winter forages is to utilize supplements to fill the forage gap. Supplements can help optimize digestibility and intake of low-quality forages. Implementing these supplements into your nutrition program can help get the most out of your forage investment and assist your herd in maintaining optimal condition, even with lower quality forage. **HW**

Editor's Note: The winter water portion was written by Jon DeClerck, Ph.D., cattle nutritionist with Purina Animal Nutrition, and the hay waste section was authored by Steven Myers, Ph.D., cattle nutritionist with Purina Animal Nutrition.

Storage Strategy	Bare Ground	Gravel or Pallets		Bare Ground, Covered			Inside a Building
	No Cover	No Cover	Covered	Tarp	Wraps	Roof	
Average Dry Matter Loss	27%	22%	8%	13%	13%	5%	5%



Here are a few tips to keep cattle drinking water in winter:

No. 1: Carefully consider water placement — During extreme cold, wind or moisture, cattle typically stand in a shelter for extended periods to conserve body heat. The easier it is to access water in shelter areas and near feed sources, the less likely cattle will go off water or burn body heat walking long distances to get water.

When using natural water sources, place feeding sites close to the water to encourage access and decrease the chance of water icing up, but far enough away to protect water quality.

Water sites should be well-drained to avoid mud and ice build-up, which can become a slipping hazard.

No. 2: Be proactive about ice management — The best way to manage ice is to prevent water sources from icing up in the first place.

Automatic cattle waterers have several options to keep ice at bay,

water sources is more of an art than a science. Water can get muddy if you chop ice too close to the bank, discouraging cattle from drinking. But, if you chop too far out, you increase the risk of slipping, which could lead to broken legs or lost pregnancies. Look for a happy medium to keep cattle safe while maintaining water quality.

No. 3: Prepare for the unexpected — Those in the Midwest and North are pros when it comes to extreme winter weather. But in the warmer areas of the country, we aren't always prepared for that once-every-10-years winter storm. But no matter where you live, the key is to have a plan.

When a winter storm rolls in, don't be left without supplies like water heaters and other essential items. These sell out quickly when storms are looming. Make a checklist of must-have items and stock up long before temperatures start dropping.

Have a pre-storm plan in place and know how to implement it.