

Extensive Wintering of Beef Cattle



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Extensive winter site management focuses on how cattle are fed, watered and sheltered in a field setting during the winter months. These sites can be used by producers to lower costs associated with yardage, facilities and feeding while having positive agri-environmental impacts on their operation by adding nutrients back into the soil.

Site Characteristics

When selecting a suitable site for extensive winter feeding, site and environmental characteristics need to be taken into consideration.

Slope

Slope is the natural slant of the ground in a given area and impacts nutrient runoff, overland water flow and bank erosion. Care should be taken to ensure that a wintering site slope is neither too steep nor too long. Wherever possible, wintering sites should be placed on the upper slope (the highest point and farthest distance from a water course or water body). As steepness and length of the slope increases, the greater the potential for erosion.



Best management practice

- * Recommended steepness – less than 2 per cent.
- * Recommended length – less than 300 ft. or 90 m.

Groundcover

Good groundcover limits the amount of nutrient runoff. Little to no groundcover increases the risk of nutrient and or pathogen contaminants in waterways by increased water movement across pastures and cropland. Keeping groundcover in good condition will reduce the risk of excess runoff, soil erosion and introduction of sediment to bodies of water. Annual cropland typically has more bare ground than perennial forage stands. It is recommended that when possible, producers choose perennial forage stands dominated by rhizomatous (creeping rooted) grasses as these plants are better able to withstand livestock and equipment traffic and will recover quicker if high feed residues are left on-site after winter feeding.

Best management practice

- * Recommended groundcover perennial pasture with < 25 per cent bare ground.

Soil Type and Depth to Groundwater

Select wintering sites where water from the site does not enter groundwater sources. Sand or gravel sites are poor wintering sites with shallow (< 50 ft) to groundwater.

Shallow groundwater can be at greater risk of nutrient contamination. This is an important consideration when selecting a water source. Placing a water source on high ground or using a source that is at least 50 ft deep are suggested.

Best management practice

- * When possible, avoid selecting winter sites with coarse soil texture such as sand or gravel.

Clay soils have the lowest potential for leaching nutrients and contaminants into the groundwater. Sandy, gravelly, peaty soils or soils with shale or bedrock outcroppings have greater potential for groundwater contamination, as coarser textured soils can provide a direct pathway to groundwater and peat soils indicate a high water table.

Runoff Control

Runoff can transport nutrients, sediment and other pathogens to waterways, while also risking bank erosion. Water should not run on or off the site. Run on and run off can be managed by installed works, if necessary. Installed works include: diverting clean surface water, vegetative cover of the wintering site, vegetative buffers to treat runoff and installing a catch basin. Remember, reducing runoff losses improves retention of nutrients in the soil.

Best management practice

- * Don't locate a wintering feeding site in an area near (> 300 m if possible or 100 m minimum with controls) a water run or water course, prone to spring flooding or where a flood could be expected once every 25 years.



Cattle winter swath grazing

Water Source

Selecting a quality watering site is an important factor in selection of a wintering site. Cattle will consume 10 to 15 gallons of water per day in the winter. Different options are available for winter watering, including water wells, springs, dugouts, natural bodies of water and snow.



Solar and wind powered remote water system

Best management practice

- * Using snow as a water source can have negative impacts on cattle being fed high fiber diets and cattle that are in lactation.
- * 12 inches of snow will provide roughly one inch of water.

Feeding Systems

Reducing feed waste is an important part of winter feeding management. This can be achieved by allowing cattle to access only a small portion of the field at a time. Feeding systems are classed into three categories for winter feeding practices: low input (swath grazing), high input (corn grazing) and imported feeds (bale grazing/round bale feeding/silage).

Best management practice

- * For imported feeds move feeders or feed location often to allow for more even nutrient distribution.

Cattle Groupings

Grouping cattle can be beneficial for animal health, welfare and management strategies. Cattle can be potentially grouped three ways: mature cows, bred heifers and second calf heifers, and thin/old cows.

Post-Wintering Site Management Considerations

Managing of the site after the winter feeding season is important. A build-up of manure or feed residues may need to be addressed before the growing season starts. Follow-up management may include harrowing to spread manure or feed residue or tillage operations on annual cropland prior to seeding. In areas where a dense bedding pack exists, the manure and residue can be stockpiled then spread across the site.



Bale grazing residue

Rotating wintering sites annually will help to manage residues as well as nutrient levels. It is recommended that the same wintering site is not used more than once in three or four years. Monitoring nutrient levels through soil tests can optimize the crop use of available nutrients, while reducing the need for fertilizers and/or re-seeding perennial forages due to low production from a lack of fertility.

Additional Considerations

A mature cow will consume feed at two to four per cent of their body weight in dry matter per day, depending on feed quality and her stage in the production cycle. Feed an additional pound of grain per head per day for every 5 C the temperature is below -20 C. Ensure cattle enter the winter feeding season with an optimal body condition score of 2.5 to 3.0.

For more information on how to assess body condition, visit saskatchewan.ca/livestock.



Assessing body condition score of a mature cow

Shelter and Bedding

Shelter and bedding are important for animal health and welfare. Shelter can be natural, portable or fixed.

- **Portable or permanent windbreaks** – allow for moving of the bedding sites and ensure a greater distribution of manure and other nutrients. As a general rule, one foot of fence protects enough area for one cow. A minimum of two units in a field is required so they can be placed at different angles to give protection from all wind directions.
- **Open front sheds** – fixed form of shelter.
- **Shelterbelts** – natural form of shelter.
- **Bedding** – wintering sites should contain several bedding areas to avoid the buildup of excess manure and nutrients.



Portable windbreak panels

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