

AGRISYSTEMS



FACT SHEET

BALE GRAZING

Bale grazing is one of several extended grazing practices used by beef cattle producers to support cattle nutrition and enhance environmental sustainability. Perennial forages are most frequently used for bale grazing but greenfeed and straw can also be used. The quality of the feed varies depending on forage type and stage of harvest. Adding legumes will increase the protein content making them a good option for feeding cattle during winter.



SITE SELECTION

The main goal of bale grazing is to reduce winter feeding costs without compromising the health, comfort or performance of the livestock. When choosing a location, ideally the site should:

- Be easy to access and monitor
- Be on or near the field(s) where the bales were made to reduce handling and transportation costs
- Be on land that is already fenced or can be fenced at a low cost
- Have a water source if adequate soft snow is not available
- Have wind protection for the livestock (this may include planted shelterbelts or portable windbreaks)
- Have access to a handling facility if needed.

BALE PLACEMENT

Bale grazing involves strategically placing hay bales in a field about 9-10 meters apart. This bale placement allows for optimal management and provides sufficient space where cattle can graze freely during the winter months. It is necessary to plan the bale placement properly with consideration for typical winter conditions, which may influence animal movement between bales. Bales should also be positioned away from bodies of water to prevent surface runoff during snow melt.

BENEFITS OF BALE GRAZING

Improved Soil Health: Soil organic matter will improve through manure and wasted hay deposited on pasture. Increases in organic matter will increase soil mineralization of nutrients, particularly nitrogen, and will improve the water-holding capacity of the soil. Bale grazing can be implemented on sites where soil improvement is necessary.

Cost Savings: Bale grazing can reduce the costs for labour, machinery and fossil fuels, both in the feeding of the bales and manure handling

Environmental Stewardship: Proper site selection, bale placement and bale density ensures that nutrients from manure, urine and feed residue are deposited at acceptable rates to enhance forage growth and minimize environmental impacts on water quality.

Increased Forage Utilization: With proper bale placement, cattle tend to waste less hay leading to higher forage utilization.

Improved Animal Health and Welfare: Improved animal health may result from constantly moving the feeding area and having less accumulation of mud and manure. Livestock also benefit from a more natural and stress-free environment (as in confined feeding) having the freedom to move, graze, and exhibit natural behaviors.

The Alberta AgriSystems Living Lab (AALL) is utilizing a participatory action research model to support Alberta's producers to adopt beneficial management practices (BMPs) including **Bale Grazing**. Our team of researchers from the University of Alberta (UoA), Agriculture and Agri-Food Canada (AAFC), subject matter experts and consultants are measuring the impacts of these BMPs on the profitability and environmental sustainability of the whole farm. AALL is led by the Alberta Beef Producers collaborating with over 16 other livestock, crop and environmental organizations aimed at improving the sustainability and resilience of Alberta's livestock, crop and forage producers. For more information, please visit our website at agrisystemsll.ca.



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ON-FARM IMPLEMENTATION

"Once you figure out how to bale graze effectively, chances are good you will never go back to conventional hay feeding. I've never met anyone who did."

Greg Halich-Winter Bale Grazing - University of Kentucky

Fact sheet content was adapted from The Government of Saskatchewan- Agriculture Knowledge Centre, Beef Cattle Research Council (BCRC) and Greg Halich's article published on AgProud.

Cattle producers are encouraged to explore bale grazing alone or in combination with other extended winter grazing approaches to improve feeding efficiency. Bale grazing combines well with stockpiled pasture, which enables cattle to get both hay and a strip of stockpiled pasture with each move.

Producers should select an appropriate, easily accessible bale grazing site, and provide high-quality hay. The amount of land needed for bale grazing varies depending on the density at which bales are positioned and the amount of hay needed for the herd. Fencing is used to control livestock access to the bales. Bales should be positioned away from bodies of water to prevent surface runoff of nutrients and manure during snow melt.

Producers should provide protection from adverse weather including very low temperatures, snow storms, high winds and cold rain. Portable windbreaks should be used for wind protection if there is insufficient natural shelter.

Hay bales should be strategically distributed across the grazing area, ensuring that the animals have easy access to feed. The spacing and arrangement of bales should encourage even foraging and prevent overgrazing in specific areas. One example would be placing bales on hilltops where there is shallow topsoil and low fertility. Bales can also be placed on fields with the lowest overall fertility.

Cattle benefit from a more natural and stress-free environment where they have the freedom to move, graze, and exhibit natural behaviors, leading to healthier animals and increased productivity.

KEY ELEMENTS OF THE ALBERTA AGRISYSTEMS LIVING LAB

Producer-led practice change implemented on-farm in real-life setting.

Practices backed by sound scientific principles.

Strong partnerships with producers, researchers and industry organizations

Measure impacts of practices and improve overall sustainability