

The Basics and Benefits of Bale Grazing

Benefits of Bale Grazing Beef Cows

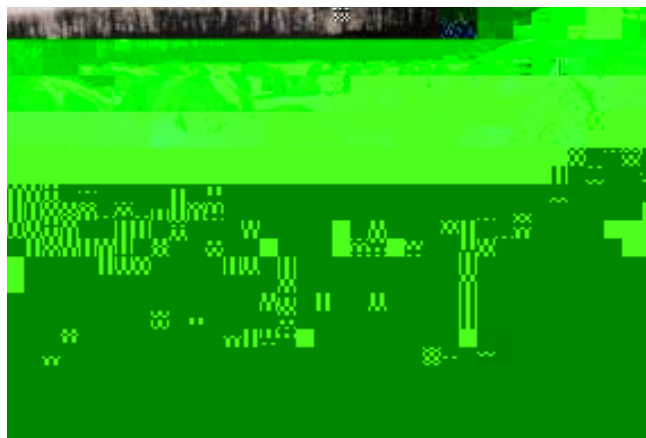
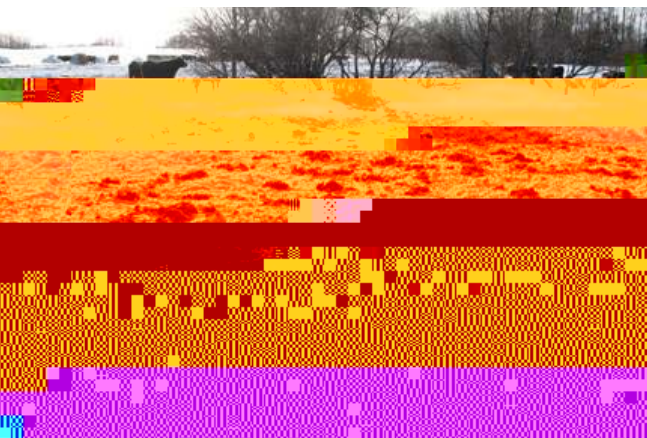
Bale grazing beef cattle during Manitoba's long winters can save producers time, effort and money and, with proper management, reduce environmental risk.

Bale grazing involves setting a large number of feed bales out in the fall and regulating the cows' feed intake using electric fencing. Producers move cows to a new set of bales in two-to-five-day rotations. To ensure all cows have equal access to the feed, a minimum of two days of feed per move is needed. The longer the rotation cycle, the more feed is lost as a feed source on the field.

While bale grazing does reduce the amount of manure concentrated in a confined feeding area, nutrient management is still necessary. Producers should adopt management practices that maximize benefits and minimize risks on bale-grazed fields.

Benefits of Bale Grazing

- animals feed themselves
- tractor wear and tear is reduced as tractor use is concentrated to one period in fall when bales are placed
- operating costs are lowered
- less manure to manage in the corral means lower haul-out costs and reduced greenhouse gas emissions from manure piles/packs and diesel burning
- less wear and tear on corral fencing
- land fertility is improved
- manure nutrients are spread out and increase future forage production
- residual feed conserves soil moisture
- chore time is reduced



Getting Started

The number of cows you are feeding and the length of time are used to calculate the amount of land and the number of bales required for bale grazing.

Calculations:

$$\begin{aligned} &\# \text{ of cows} \times \text{cow's weight} \times \text{dry matter (DM) intake per day \%} \\ &\times \text{feeding period (number of days)} = \text{feed (dry matter) needed} \end{aligned}$$

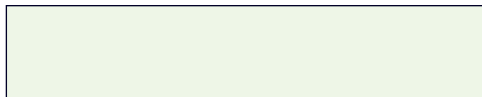
$$\frac{\text{amount of feed (DM) needed}}{\text{feed dry matter \%}} = \text{feed needed (as-fed)}$$

$$\frac{\text{feed needed (as-fed)}}{\text{bale weight}} = \text{bales needed}$$

Note: The amount of dry matter/feed needed will be 2.5 per cent to three per cent of each cow's bodyweight. The amount of feed waste can be up to 20 per cent of the feed needed and must be included in the calculations.

Example:

You have 200 cows, each weighing 1,400 pounds (635 kilograms). Daily dry matter/feed intake is 2.7 per cent of cow's body weight and the feeding period is October to December (92 days). The bales are 1,200 pounds (544 kilograms) each and the feed is 85 per cent dry matter.



*Remember to allow for feed waste.
See calculation below.

682 bales \times 20% = 136 bales in addition to the 682 bales calculated may be needed for feed wastage.

- Rotation of fields to allow recovery of any damaged standing crop and draw down soil nutrient levels with subsequent crops
- Soil testing

Selecting suitable sites based on soil and landscape characteristics will reduce the risk of nutrient loss to the environment from leaching and runoff. Producers should avoid or more carefully manage bale grazing on very coarse textured soils in which water drains downward quickly as excess nutrients can be carried with the water and enter groundwater. Similarly, sloping lands as well as very fine textured or dense soils on which water runs off the surface need to be managed to ensure that manure contaminated water does not enter a surface watercourse. Compaction of soil caused by cattle traffic also promotes surface runoff. Parts of the landscape with consistently high water tables should be avoided.

Annual soil testing will provide producers with the soil nutrient status of their bale grazing sites and ensure that

Figure 1

