



Grass-Fed Beef Initiative Extension Series

Finishing Cattle on Forage in Nova Scotia

Fact Sheet 10 of 11

Nutrition, Minerals and Rates of Gain

Finishing cattle for slaughter and sale is a skill that requires attention to detail and an understanding of cattle feeding, including feed requirements. Finishing cattle on forage also requires excellent cattle and forage management.

In a typical feeder operation a major concern is the cost of energy and protein in the finishing diet. In a forage finishing program, the biggest challenge is ensuring that sufficient energy is provided to the cattle to ensure that they can lay down enough fat to finish. Harvesting forage, by grazing or as stored forage, to ensure the highest quality possible, is critical to ensure success.



The Perennia fact sheets “Grazing Management”: “The Key to Raising Grass-Fed Beef” and “Forage Management Practices to Produce High Quality Conserved Forages for Finishing Beef” provide valuable tips to get you started.

Access to clean water is critical in all parts of the cattle growth cycle. Water should always be available in unlimited quantities. Do not force the cattle to walk too far to get water. If they are walking to find water they are burning up valuable energy that could be used for growth and fat deposition. Install water systems in your pasture to limit travel distance.



The first thing to consider when planning your forage finishing program is your resources. These include: your own skills and knowledge; farm infrastructure, including barns and land base; and, most importantly, your forage inventory.

When conducting your forage inventory consider your pasture, its capacity and quality, and the stored forage that you can produce or purchase. In the case of purchased forage, it may be a good idea to have someone with high quality forage and experience custom feed your finisher cattle according to your protocol.

When you consider your forage inventory remember that it is changing constantly, both in volume and quality. To understand your forage quality, you need to forage test. This is particularly vital for finishing cattle. Cows have evolved to survive on forage, and they can survive on average quality forage. However, if you want to finish cattle and produce a consistent quality product, you need to ensure that feeder cattle receive consistently high quality forage.

Timing when cattle reach finished weights is one way to simplify this process. If you time the last couple of hundred pounds of gain for the early part of the pasture season, when the pasture is growing actively and forage quality is at its best, you can finish the cattle effectively. Vigorously growing pastures with high legume content are capable of supporting gains of more than one kilogram (2.5lbs) per day. The higher the rate gain you can achieve, the better the fat deposition in the cattle once the body frame is developed.

It is also important to ensure you have adequate quality forage for periods of poor pasture growth. You can achieve this by growing fodder crops to be grazed when your pastures are less productive. Crops could include annual crops, small grains like oats or barley to be grazed in the pre-dough stage, or brassicas. Adopting these management and grazing techniques can help you manage and improve permanent pastures.

In Nova Scotia it is impossible to rely on pasture year round. You will have to feed stored forage though a significant part of the year. Feeder cattle will need high quality stored feed to ensure adequate weight gain. It is recommended that the ratio between crude protein (CP) and total digestible nutrients (TDN) be close to 0.2 to maximize feed utilization and weight gain (*Producing Forage Finished Beef in Manitoba*). In addition, if the protein level in the forage exceeds 18 % CP it can be detrimental to the finishing process. This is because the animal uses valuable energy to remove the excess protein rather than laying down fat.

Minerals and vitamins also need to be considered. The calcium (Ca) to phosphorus (P) level in feed should be between 1:1 to 2:1. Selenium (Se) is deficient in our region and needs to be supplemented; this is usually done in combination with vitamin E. Commercial and custom mineral mixes are also available to supplement cattle feed. Forage testing is vital to ensure that you are providing the right combination of minerals for the cattle on your farm. Feeding minerals free choice with forage diets is often the only option. Make sure your cattle are consuming the minerals required. In larger operations with access to a precision chopped silage system and a Total Mixed Ration (TMR), the minerals should be included in the mix.



Forage finishing is possible and can be profitable. It requires attention to detail, good management and the right cattle. There is no substitute for quality forage.

For more information

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Bibliography

Manitoba Forage Council. *Producing Forage Finished Beef in Manitoba*. 2007.

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