

## Feeding Corn for Wintering Beef Cows

The cost of feeding a cow over winter is the most influential factor in determining profit. Many studies have made this point and producers who are in the top third for cost of production have routinely demonstrated management techniques for controlling wasted feed and generate low winter feed costs per cow. For 2021 Highline® presents our new updated 60 series Bale Pros® with expanded Grain Tank capacity and more rugged construction. These machines can blend grain and chopped forages on demand allowing the feeding of different groups of cattle with differing nutritional requirements simply by adjusting the grain flow or the aggression settings. Grain production for 2021 is down as well as forage production which has the effect of increasing prices. Relative values show that corn can start coming into rations and displace barley. As harvest progresses it may be that feed wheat becomes available to cattle producers at an attractive price and so regular updates are needed as well as flexibility in ration formulation.

The reason to look at corn for this year's rations is because this grain is appearing in Canada coming from the US. Feed ingredient price is quite fluid so keep monitoring all grains and by-products for changes. Producers are asking the question about whether or not Highline® Bale Pros® can process corn through the chopper. The answer is YES. Corn processes the best of the grains through the Feed Chopper™ when blended with forages. It is the grain used most frequently when we do demonstrations. Combining our experience and anecdotal reports from producers, corn grain will process at 80% completely fractured kernels when all forages are dry but drop back to 70% when ingredients are tough. This compares to 50% for barley or wheat when dry. Is this enough to get good digestibility? A paper published in 2016 by the University of Saskatchewan says yes. This paper by Rosser et al<sup>1</sup> showed the digestibility of whole crop barley and oats cut as green feed or ripe then baled. It showed that when grain is fed along with a high forage component of the diet that digestibility was not different between cut stages for the green feed. Further we can see that a crop harvested ripe is high in grain content and the cow chews the grain along with the forage component when ruminating achieving high utilization so that further processing would add cost but not necessarily increase digestibility. Total tract digestibility did not differ for organic matter, dry matter, and digestible energy. Intake of gross energy did not differ between treatments which infers that eating whole grain in a high forage diet will result in high digestibility of grain without processing. When we see 50% scarification of small grains and over 80% broken kernels in corn when passed through the Feed Chopper™ we can have confidence this grain is getting digested.

To ensure this is happening examine manure frequently once the cattle are adjusted to the grain in the ration. Check to see that escapes from the digestive tract are 10% or less than what is being fed. Always monitor BCS to ensure the cows are in a positive energy status.

1. Effect of maturity at harvest for whole crop barley and oats for dry matter intake, sorting and dry matter digestibility when fed to beef cattle. Rosser et al, J. Ani. Sci. 2016.94:697-708.

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