

## Supplementing Cows on Stockpiled Forage

Why do we need to supplement cows grazing late season forages? The answer depends on what forages cows are grazing and what stage they are at in pregnancy. A 1400 lb cow is eating about 30 pounds of dry matter every day. She is selecting the best material when first put out on late grazing land so initially the nutritional intake is adequate for mid-gestational protein and energy intake. Imagine a 300 cow herd eating 9000 pounds of forage dry matter every day of extended grazing. Considering standing dry material at about 10 % moisture it would be equivalent to 9900 pounds of hay or almost seven 1500 pound round bales of hay daily. Hay is fairly uniform in nutrient content but the quality of standing forages in pasture declines through selective grazing whether by beef or sheep. In addition the soluble components are leached out or deteriorate due to sun, moisture and microbial action. This creates the need to begin supplementing protein with a high degradable component to assist the rumen microbial population in digesting the grazed material which is increasing in neutral detergent fibre (NDF) as time passes. We are at that point in the year right now with early November weather going up and down adding more pressure on the cows. Protein intake for our example cows sits around 560 grams (1.25 lbs.) per day of degradable protein (RDP). Her body requires 880 grams (1.95 lbs.) leaving her short 320 grams (.7 lbs.) per day of degradable protein to optimize body condition. A persistent short fall over weeks or months can start the cow's body system sending signals to start restricting nutrients to the calf preconditioning it for poor health and growth. Supplementing can be done with alfalfa hay, screenings of peas or soybeans, or a by-product such as DDGS, and cereal grains or combinations of forage and grain.

Delivering this accurately is easily accomplished with a Highline Bale Pro<sup>®</sup> equipped with a Feed Chopper<sup>™</sup> and Metered Grain Tank (MGT<sup>™</sup>). The example herd of 300 cows at 1400 pounds each on stockpiled forage today would benefit from delivering the needed 320 grams (.7 lb) of RDP per head or 96 kg/day (212 lbs) of degradable protein for the herd. As an example using cull peas for a protein supplement with 22% crude protein, it would be necessary to deliver 515 kg (1133 lb.) of peas daily for 300 cows. It is possible to use straw (5 lb/cow) as a carrier for a least cost product. Put this blend through the Bale Pro<sup>®</sup> in a small windrow or in the bunk and all cows will have access. This approach also spares pasture forage since the supplement is replacing grazed forage. If peas are \$100/T then this supplement costs \$0.19/cow/day, and straw about \$0.05 per cow /day. Approximate cost of operating the Bale Pro<sup>®</sup> for one hour is \$20\*, and a 140 hp tractor is about \$50\*/hour for a total of \$70/hour. If it takes one hour to supplement the cost is (.05+0.23+0.19) or about \$0.47/cow/day total cost for cows grazing stockpiled forage in this example. Another option is 7 pounds of alfalfa at 12% crude protein (85% RDP). If alfalfa hay is \$125/ton then 7 pounds cost \$0.44/cow/day plus \$0.23 machinery operating cost totaling \$0.67/cow/day.

You can do your own calculation knowing that supplementing can be done accurately and cost effectively using a Highline<sup>®</sup> Bale Pro<sup>®</sup>.

\*Cost drawn from Saskatchewan Farm Machinery Custom and Rental Rate Guide - 2020-21

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