



By-product Feeds for Sheep

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Back in September, Alberta Ag put out a factsheet on [By-product Feeds for Sheep](#) and although it had a lot of good information there were a number of points that may need some clarification to make it more relevant and useful to Manitoba producers. To do that Dr Rob Berry, Dairy Specialist MAFRD has provided much of the information that will be presented in this article.

For Manitoba the types of by-products that may be available would be Seed Screenings, Distillers Grain (DG) and to a much lesser extent vegetable waste.

For both Screening and DG's there are two main issues:

1. **Particle Size**-For screenings and DG's the small particle size means the feed is not physically effective at stimulating rumination coupled with the fact they are very high in fermentable fibre. Clinical or subclinical acidosis is a constant risk. You have no means of effectively stopping sheep from sorting so that effectively limits these ingredients as useful feeds if you can only feed 1X day. Ideally they are best fed as a top dress limited to 15% or less of potential DMI for each feeding, 2 to 3 times per day.
2. **Nutritional Value**-Both screenings and DG's are extremely variable nutritionally and unless producers are buying in enough bulk to justify the cost of feed testing each batch they will have to accept the fact that these ingredients will be difficult to effectively formulate rations in [SheepBytes](#). Feed testing is justifiable for large flocks or if a few producers got together to buy a large enough volume of by product.

There are some specific issues that you may want to consider before utilizing by-products:

Distiller's grains are easier to store in winter but the moisture content means it will spoil rapidly in summer. Drying the grains adds to the cost. The distillation process removes starch and soluble proteins but will also concentrate some nutritional components such as fat, calcium and phosphorous which will mean balancing rations carefully. Fat has a depressive effect on forage digestibility in the rumen which may limit the ceiling level of DG inclusion. The high cation content will mean high levels of DG feeding will mean a custom mineral formation for close up and lactating ewes. Mycotoxins will also be concentrated through the distilling process.

Vegetable waste (unsalable potatoes, carrots etc.) are very fermentable with little effective fibre leading to possible rumen acidity issues. If winter fed, the vegetables will freeze making it difficult for sheep to break into them with their smaller jaw size compared to cattle. Contaminants such as dirt on the outside of these feeds if ingested in large enough quantities will irritate the rumen wall lining.

Before you consider the use of by-products for your flock you will need to know:

- your long-term feed requirements, how many days of feed for how many sheep
- your ability to handle and store (sometimes large amounts of) these feeds
- how you will store different feeds (i.e. to avoid mould) to maintain quality
- how you will feed your sheep for maximum feed quality and minimum waste
- how much to order to minimize switching feeds in rations and reduce trucking costs

Before purchasing or feeding any by-product, try to have feeds sampled and tested to determine the nutrient content. This is critically important as the nutrient and moisture content of by-product feeds can vary dramatically with different loads.

In summary, Dr Berry advocates caution. “By-products can substitute for a shortfall in forage availability or quality with the provision that they are feed at ration inclusion levels below 25% DMI. Feeding above this level means that feed test are pretty much a necessity and the overall amount will need to be divided into small top dressed meal sizes throughout the day. The solution is TMR which is not a financially viable option for the majority of MB sheep producers due to their small flock size.”

For additional information go to the links below:

[Development of Livestock Feeding Systems For Grain Screenings](#)

[Value of Distiller's Grains as a Feed for Sheep](#)