



Feeding food processing by-products to livestock

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Locate a Livestock Producer

Before a livestock producer can accept food by-products for livestock feed they must obtain either an exempt materials (non-meat food by-products that have no chance of contacting meat) or garbage feeder (meat by-products acceptable) permit from the Minnesota Board of Animal Health.

For a list of permitted farms, see MnTAP's fact sheet Livestock Producers Accepting Food By-products [#25], available online at <www.mntap.umn.edu>. Livestock specialists at the University of Minnesota Extension Service can also help locate a livestock producer to accept your by-products. To locate an extension office near you visit their Web site at <www.extension.umn.edu>.

Contact the livestock producers in your area to determine if your by-product can be used as animal feed at their farms. Be prepared to discuss what food items your by-product contains, availability, nutrient analysis of the by-product, and logistical factors such as storage and transportation costs.

By-product Availability

Determine if your by-product supply equals a livestock producer's demand. Consider both the quantity and the frequency that the by-products are available and needed.

If your volume of by-products is too small for the number of animals at the farm, the by-product may not be economical for the livestock producer to use as livestock feed. In this case you may consider contacting other companies in that area to see if

collectively you generate enough by-products for pick-up. If your volume of by-product is too great, the livestock producer may not be able to use it fast enough and will run the risk of having spoilage. If the volume of food by-products is too large for one farm, locate a second farm to use the remainder.

By-product Analysis

Before agreeing to take the food by-products, the livestock producer or nutritionist may require a nutrient analysis of your by-product. Typically farmers are interested in finding out the ash, crude fat, crude protein, digestible energy, dry matter, fiber (crude fiber and detergent fiber), minerals (calcium, magnesium, phosphorus and potassium), net energy, and salt content in the by-product.

The livestock producer will not accept by-products containing anything harmful to the livestock such as herbicides, pesticides, or pathogen residues. The livestock producer will want to know if any chemicals have been added during processing such as preservatives or seasonings that could be harmful to the livestock. Also, the livestock producer may require that the by-product be tested for certain chemicals or other harmful factors (i.e., excessive copper sulfate or salt, mycotoxins and rancid fat) before accepting it. If the food processor does not already have this analytical information, the food processor generally pays for an independent lab to run the analysis.

The farmer or nutritionist will use the information from these analyses to determine how to incorporate the by-product into a ration for the livestock. If the livestock producer has questions about formulating the ration they can contact the Farm Information Line at 800.232.9077

Suitability as Livestock Feed

With the information from the nutrient analysis, the livestock producer or nutritionist will compare a ration incorporating your by-product to the

traditional ration. The livestock producer will want to ensure that the nutritional value is equivalent.

To determine if using the by-product as livestock feed is economical, the livestock producer will examine additional costs that could be incurred such as modifying traditional feed, acquiring feeding equipment for dispensing, and locating storage facilities.

Logistics

By-products must be kept in a non-perishable state until they can be picked up or delivered to the livestock producer. Storage requirements vary depending on your by-product. Examine your storage capacity to determine if you have the space required to store the by-product on-site until it is picked up or delivered to the livestock producer. Discuss transportation costs with the livestock producer.

To help prevent the spread of disease, Minnesota state law requires that food waste containing meat, or that may have come in contact with meat, be cooked at 212°F for 30 minutes and facilities and trucks must be inspected each month. The livestock producer will be responsible for ensuring that this part of its permit is met.



For More Information

MnTAP has a variety of technical assistance services available to help Minnesota businesses implement industry-tailored solutions that maximize resource efficiency, prevent pollution, increase energy efficiency, and reduce costs. Our information resources are available online at <mntap.umn.edu>. Please call MnTAP at 612.624.1300 or 800.247.0015 for personal assistance or more information about MnTAP's services.