



# Saskatchewan Forage Council

## Silage Opportunities

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Silage production is a well-established method of preserving nutritive quality of forage and for maximizing yield. Some of the issues to consider when deciding if silage is a good option for your operation are outlined below:

- Barley silage is widely used in western Canada for beef steer backgrounding rations, as the fibre source in feedlot rations and in dairy rations. The dryland yield of 65% moisture silage is usually 5 to 8 tonnes per acre (1.6 to 2.6 tonnes of dry matter).
- In recent years, feedlots have paid \$26 to \$30 per tonne of chopped forage at the silo, giving an average gross return of \$140 to \$225 per acre.
- Steers fed barley silage and 0.5 kg of supplement will gain 2 to 2.5 pounds daily depending on the quality of the silage. Dairy cow rations may contain barley silage as the only forage if the NDF (neutral detergent fibre) content is less than 55% in the dry matter.
- For maximum energy content, barley silage should be harvested at the mid-dough stage. This is later than some USA recommendations where growing conditions and varieties are different. If harvested earlier than mid-dough, net energy is less due to high NDF and if harvested later, quality of stem and leaf is reduced.
- Oats can also be used to make good quality silage but they must be harvested at late milk stage for maximum net energy value, resulting in some yield loss.
- Choice of barley silage varieties depends on local growing conditions. High yield and low NDF at mid-dough are primary considerations. Rough awned varieties should be avoided, especially for younger animals.
- Protein content will vary with soil fertility. Barley silage should average 11 to 12% protein.
- Good quality silage can be made with many types of storage systems. The main requirement is exclusion of air with little delay in filling the silo. Moisture content and packing as well as method of sealing are the main factors. For concrete tower and bunker silos, 65% moisture is optimum, while as low as 40% can be used for wrapped bale and oxygen limiting silos and less than 65% can be used for bagged silage if it is well packed and sealed.

- Good silage packing can be achieved with a 3/16 inch (9 millimeter) theoretical cut. Longer cut silage is difficult to pack, and shorter cut forage may not provide enough effective fiber in some rations. Silage harvester equipment manuals contain information on setting theoretical cut length.
- Silage preservatives are designed to give faster and more complete preservation. Results with cereal silage are somewhat variable but longer feed-bunk life before heating or mold growth becomes noticeable has been observed.
- Losses in the silo and spoiled silage can vary from 5% to over 20% depending on conditions. Bunker silos should be covered with plastic held in place with tires or other material. Rodent control may be necessary for bunker silos and for bagged, wrapped or piled silage. A plastic PVC pipe containing bait may be placed near the silage.
- Silos give off a lethal gas in the month after filling. Entry into any confined space near any type of silage within 2 months of ensiling that has not been well ventilated can be fatal within minutes. Silo gas is heavier than air, and has no color or odor at lethal concentrations.

For more information, contact Dr. Dave Christensen at (306) 966-4152.