Date:
December 2002

Forage Fact #19

To Hay or Not To Hay: That is the Question

"I make haylage because it enables me to cut hay or green feed one day and bale it the next. I can get more consistency in the quality of my feed, which provides me with excellent forage for my young stock and heifers."
Glenn Hogberg

Harvesting Hay In Our Weather

Harvesting forage as hay in the variable weather we have had the last few years has been a challenge, to say the least. Dry matter losses may have ranged from 30 to 50% or more and quality has fluctuated significantly. Some producers have been considering the use of hay preservatives to enable them to bale the hay at higher moisture levels, while others have been contemplating silage.

Bill Wilson in front of his silage storage area.

Hay Preservatives

Moisture is the most important factor in storing hay. Hay above the safe moisture level will allow microbial growth and spoilage. Long term safe storage moisture level is about 12%, however it can be baled at somewhat higher levels and allowed to "sweat". The safe moisture level for baling large round bales is about 15 to 17%, with small square bales it is closer to 20%.

There are 3 basic types of hay preservatives: ammonia producers, propionic acid and biologicals, each with their own claims and drawbacks. If you would like more information on them drop by or call your BC Ministry of Agriculture, Fisheries and Food office and ask for the fact sheet on "Hay Preservatives".

The idea behind hay preservatives is to enable you to bale at higher moisture levels either to beat the rain or save more leaves. In theory and in some instances they can work. However, many hay preservatives are often not economical for the response you get. This is due to the handling problems associated with the preservative, or because they may not allow you to bale at the moisture level you may need to get the hay baled before the rain.

For More Info on Hay Preservatives Contact:

BCMAFF 250-787-3240
Ask for Fact Sheet on Preservatives
Or
Peace River Forage Association of BC
250-782-5745

"I silage because I can get better quality feed, less wastage and I can reduce the freight of my feed. I can finish silaging in 8 days and I could hay all summer. I also don't lose much feed to spoilage from year to year"
Bill Wilson

Silage

Silage wilted to 65% moisture is a better alternative when you can't rely on the weather. Rain on forage above 50% moisture will not cause as much deterioration as the same amount of rain on forage with less than 50% moisture. This is one of the biggest advantages to making silage.

In the Forage Quality Seminar in January 1998 you will remember that there is no advantage in waiting until July to cut your hay. In fact, the long term averages showed that slightly more rain falls in July than in June. The moral of that story is that you can't rely on the weather. In order to get consistently better quality for your young and lactating stock, you may want to switch to making silage.

Published by P.R.F.A. of BC:

P.O. Box 908

Dawson Creek, B.C.

V1G 4H9

Peace River Forage Association of British Columbia

Nutrients of Selected Forages Silaged:

Forage	Protein%
Alfalfa	10.6-25.7
Alfalfa/Grass	6.8-23.3
Barley	4.3-18.8
Brome	8.8-12.0
Canola	8.1-20.5
Clover *	10.7-20.6
Sweet-Clover	7.8-20.5
Clover/Grass	7.4-21.1
Grass *	8.3-31.5
Legume/Grass	6.8-22.6
Mixed Cereals	6.3-18.3
Oats	4.4-18.8
Triticale	5.9-18.4
Wheat	6.5-18.5

* Unspecified
Source: Silage Manual, Alberta Agriculture AGDEX 120/52-2, 1988

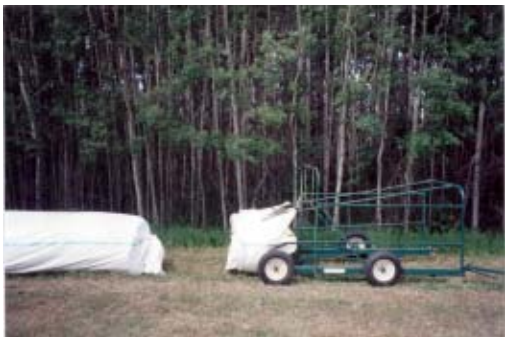
"By silaging I can feed a third more cows per acre of land than when I hay; and my wife and I can put up enough hay for the cattle in 10 days."
Bob Tubb

"Remember if you are going to make silage, start off with it in mind. You can always make a decent hay if the your silage gets too dry but you can't make good silage with wet hay."
Jim Forbes

Advantages of Silage

Advantages of silage include:

1. Flexibility in timing of the cut: you can harvest in most weather conditions, often resulting in better quality feed in fewer calendar days.
2. Close to 10% advantage on harvesting losses: which leads to harvesting more nutrients per acre.
3. Wider range of crops can be ensiled.
4. Practical method for salvaging damaged crops:
   ⇒ many weed seeds are killed by ensiling.
   ⇒ hailed, frozen or drought stressed crops can be made into palatable & nutritious feed.
5. Properly sealed, silage can be stored indefinitely with little loss in quality.
6. Uniform quality for balancing rations.
7. Reduction of many feeding problems.
8. Easy to completely mechanize feeding if desired.



Haylage bagged in long sausage like tubes.

Why Isn't Everyone Silaging

Silage does have some disadvantages too. Which include:

1. Extra labor requirement:
   The Alberta Agriculture "*Silage Manual*" indicates that it actually takes less time/labor to get the crop from the field into storage with silage (233 hrs vs. 255 hrs for 500 Tons of Dry Matter*****). The labor is however concentrated in a shorter period and may require more machine operators.
   ***** equivalent to 1429 Tons of silage at 65% moisture or 588 tons of hay at 15% moisture.
2. Capital costs:
   As with any machinery on the farm, too much iron will drag you down; however there are opportunities to optimize your labor costs, minimize your capital costs and produce your winter feed requirements as cheap or cheaper than with hay.
3. Silage is heavy so you don't want to have to haul it very far (less than 5 miles).
4. Some people don't like the odor.
5. Switching to silage requires a significant change in management.

Using custom operators is one way of addressing the labor and capital concerns. But as Bob Tubb says "Silaging doesn't have to be expensive, we can use older equipment and put our piles on the ground."

Is Silage For Everyone?

Definitely not! But depending on your capitalization, herd size, and the location of your fields it could be a viable option. If you want more information on making silage have a look at these websites:

http://www.gov.mb.ca/agriculture/crops/forages/bjb00s25.html (Bale Silage)
http://www.uwex.edu/ces/crops/uwforage/storage.htm (Silage Harvesting)
http://www.uwex.edu/ces/crops/uwforage/mgmt-bunkers-piles-bjh2.PDF (Silos)

Compiled by: Jim Forbes and Julie Robinson in the Fall of 2002
Nutrient Project Funded by: PRFA of BC & Beef Cattle Industry Development Fund, Peace River Agriculture Development Fund, Norwest Labs
Forage Facts Project Funded by: PRFA of BC, Investment Agriculture Foundation and the Peace River Agriculture Development Fund. The PRFA of BC would like to thank all the donators and supporters at their Forage Goods & Services Auction on Feb. 22, 2002.