

Getting Your First Cut Forage Harvest Date Right

May 2007

Whether you are in the dairy, beef, or sheep business; it was a long and expensive winter to feed through. Many farmers were feeding the worst first cut forage they have likely made in the past 10-15 years. This also came at a time when barley and corn prices were at a painful \$200-250 per tonne. Most of last year's first cut forage was poor quality due to an accelerated May growth (40% more heat units than normal) and a June 15th-30th harvest that was delayed due to five inches of rainfall in western Nova Scotia and other areas that experienced this between June 1st-10th.

As we get ready for the 2007 forage season, we need to remind ourselves of a few things that will be critical to make money with ruminant livestock over the next 10-12 months:

1. Time of 1st cut harvest is by far the most important factor in determining stored forage quality (i.e. fibre digestibility, intake potential and forage energy). In fact upwards of 90% of forage quality is time of cut with the balance contributed by species differences, harvest- storage losses, growing conditions, and fertility.
2. Topnotch grazing management will produce cheaper milk or meat gains than stored forage & imported grains (i.e. proper rotational grazing with good entrance and exit heights, appropriate rest period, split N fertility, plus a clean and readily available water source). Beef cows and sheep need to come off pasture in the fall in great shape with a body score of 3.5 so they can utilize some body fat and good forage in winter to produce adequate milk for their young, and re-breed properly. It is too costly to put weight on beef cows or ewes over the winter. The body score scale is 1= thin and 5=fat, with a 3.5 cow having good fat cover over the short ribs and around the tail head.
3. Become less reliant on off-farm feed purchases where \$200-250 tonne corn is maybe here to stay for a while due to ethanol production demands. High corn prices set the pace for high barley and wheat prices also.
4. Excellent haylage can turn to poor quality feed if not properly packed and sealed.

The remainder of this article will focus on **getting your first cut forage harvest date right**. When I first started in this crop advisory business over 25 years ago, cutting for first cut quality was done by looking at the maturity of the crop. For legumes this was the late bud – early bloom stage and for grasses at early head emergence.

During the 90's we realized that forage quality was already starting to decline before legumes and the earlier heading grasses (i.e. orchardgrass, brome, reed canary and fescues) reached this late bud or early head emergence stage. Excess forage stem cell wall and reduced digestibility

were occurring prior to late bud or early head emergence, so first cut harvest date was then changed to more of a calendar date adjusted somewhat for May growing temperatures. Dan Undersander from University of Wisconsin discusses this “calendar date versus maturity harvesting” in Hoard’s Dairyman (March 25, 2007 issue, page 218).

Recent research by both Dr. Undersander and Jerry Cherney from Cornell University on alfalfa-grass stands now say that first cut harvest date should be based on alfalfa height in conjunction with calendar date. Dr. Cherney’s research says that first cutting of a 70:30 alfalfa – grass mixture should reach the target 41 % NDF at an alfalfa height of 28”. In a first cut 50:50 alfalfa – grass crop you reach the 44% NDF target quality at an alfalfa cutting height of 23”.

In the past, an ADF analysis was done to assess whether the forage harvest timing was good, but now we are evolving to NDF & NDFD lab measurements which are much better predictors of forage energy, intake potential and fibre digestibility. High quality first cut haylage target goals particularly for dairy cows, are 28-31% ADF, and 40-44 % NDF for high percentage alfalfa mixtures or 48-52% NDF for pure grass stands. Regarding Neutral Detergent Fibre Digestibility (NDFD 30 hour test) this is a fairly new measurement which nutritionists think is the best current indicator of digestible forage fibre. The analysis for NDFD (30 hr.) isn’t offered locally, however it can be handled quickly at the Dairy One Lab in New York State at a reasonable cost. I’d encourage you to get at least a couple of haylage samples each year done for NDF & NDFD to assess whether the harvest date was correct and for ration balancing intake estimations. Limited data on NDFD (30 hr.) is showing higher quality 1st cut grasses at 60 – 64% NDFD and high ratio alfalfa mixtures at 55-58% NDFD.

So it all comes down to**What is the right 1st cut forage harvest date for your farm?**

Well this depends on where you’re located in the Maritimes and what type of ruminant critter you’re feeding. If you have high producing dairy cows, feeder cattle/lambs, a fall or early winter beef calving or lambing situation, then harvest for high quality forage and give up some yield. In western Nova Scotia this means that in most years’ our high % alfalfa mixtures, or high% orchardgrass, brome, reed canary and fescue stands need to be harvested May 28 – June 4th. Fields that are predominately timothy or timothy-red clover would be harvested about a week later. High corn and grain prices dictate that we need to be better forage quality managers. Good luck with your forage harvests.

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