

MEASURE AND MANAGE

First Cut Forage Report 2007

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Relatively dry conditions throughout the area allowed early and rapid harvest of first cut forages. Much of the haylage was harvested by, or shortly after, the first of June, with baleage and hay soon to follow. A preliminary forage summary for the individual forage types can be found on the website.

This year, the heat accumulation profile as per GDDs was similar to that of 2003, and lagged behind 2006 by several degrees. Cooler temperatures early on, followed by a gradual and steady accumulation resulted in early grass growth and maturation. The alfalfa lagged slightly behind with respect to growth rate due in part to cool night temperatures, but not to the point that growth was seriously impeded.

A harvest window at the end of May (24th-28th) allowed many acres to be cut. The analysis of the samples received from these areas resulted in high protein (20%) as well as high NDF (45-50%). Usually these two parameters are inversely related. Similar results have been previously reported (2003, first cut harvest).

The high NDF was attributed to the grass content of the stand (NDF of 60% from Scissors Cut data). The high protein can be attributed to the immature alfalfa (Protein of 25% from Scissors cut data). The alfalfa was not at the bud stage at this time. The NDF digestibility of these samples was very good, since the grass was not overly mature, and the alfalfa was immature. The digestibility was greater than 54% at 48 hr. The contribution of grass was indicated by the mineral values associated with these samples. The calcium was less than 1 % in a significant number of samples.

Stands that contained a larger percentage of alfalfa exhibited more “normal” results. The protein was approximately 19%, NDF was 42%, and calcium and potassium were ~1.5 and 2.5% respectively. The NDF digestibility was still quite good as well (>50% at 48 hr.).

With the weather continuing to co-operate, most of the dry hay was harvested at this time. From the summary, the grass and alfalfa had matured resulting in average protein of 14-15% and NDF almost 50%. Average NDF digestibility was less than 50%.

As well as these results, a few less significant trends have been noticed.

Several samples have been found to have calcium values very close to those for potassium. (i.e. 1.2 for Ca and 1.7 for K). It is difficult to determine the reason for this, but some possibilities do exist. These include mix of species, fertilizer applications, cutting maturity or drought conditions in the area from which the samples originated.

A significant number of samples of fermented (or partially fermented) forage have exhibited ADF-Cp values greater than 1.5%. ADF-Cp can be an indicator of “heat damage” or complexing of sugars to fibres. This process results in higher fibre values, and if serious enough, renders a portion of the protein and fibre fractions less available to the animals. This is also an indicator that fermentation may not have progressed as efficiently as desired.

Another indicator of fermentation efficiency is pH. Since pH is reported on all CPM analysis packages, this allows more opportunity to assess fermentability. Again, a significant number of samples have recorded pH values higher than desired. Baleage (pH of ~4.8-5.0) usually has a pH higher than haylage (pH of 4.2-4.5).

Many samples have reported pH significantly above 5 for baleage and greater than 4.5 for haylage. This may be an early indicator that fermentation issues exist.

Early reports indicate that forage quality for this cutting is thought to be above normal and animal response has ranged from acceptable to exceptional.