



Optimizing the Power of First Cut Forage

Managing that all important first cut requires good agronomic practices and a timely harvest. In recent years many farms have discovered the feeding power of first cut forage. Cut at the optimum time, first cut forage generally has greater digestibility and intake than second cut forage. Growing under cooler conditions forage grasses and legumes mature slower, have less cell wall and higher amounts of soluble sugars. The optimal growing temperature for most of our forage plants is thought to be near 20 °C. Under warmer conditions, such as in mid summer, the plants produce more cell wall and have less digestibility and lower intake potential.

Harvesting should be timed to maximize yield and quality. The harvest window to maximize yield and quality for any given forage species is about 10 days. Completing the harvest within the harvest window is the most important factor affecting the quality of first cut.

The digestibility and crude protein of first cut declines rapidly as the stem of the plant elongates and develops. Local research shows digestible energy of first cut declines at a rate of about 0.5 percent per day, while crude protein declines at 0.25 percent per day. Though protein is important, digestible energy is the single most important index of quality in forage. A high producing dairy cow needs ten times more energy than protein. Not only do energy and crude protein decline each day harvest is delayed, but intake also drops by about 0.5 percent per day. The combined effect of lower digestibility and lower voluntary intake decreases animal production potential from June 7 to June 28 by over 54 percent.

For optimum yield and quality, first cut grass should be harvested in the boot stage when the ADF value is 28-32% and the NDF value is 50-58%. Based on maturity, harvest sequence for grasses should be: (i) orchardgrass, (ii) bromegrass, (iii) meadow fescue, (iv) reed canarygrass and (v) timothy. Legume stands such as alfalfa should be harvested when the plant is in the mid to late bud stage. Cutting alfalfa at this stage will result in three cuts per season for many areas of the Maritimes. The increased quality as a result of a three cut system must be balanced against possible reductions in stand longevity. As a general rule try to harvest the youngest legume fields first and the oldest fields last. This will help slow the spread of plant diseases resulting in keeping stands healthier for a longer period of time.

Producing high quality forage of consistent quality is the foundation of good nutrition. Managing first cut forage for quality results in higher digestibility, increased forage intake, higher milk production and lower feed costs.

For more information, please contact:

Bill Thomas, Forage Management Specialist
(902) 896-0277