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FORAGER

Agronomics with livestock in mind!

MANAGING LOWER QUALITY FORAGES

Can cattle survive on poor quality forage? How bad is too bad? What problems does feeding low quality forage present? When feed is in short supply and that old field of mature grass is baled up (especially for heifers and dry cows), these questions may arise.

Forage Intake

Poor quality forages do not usually digest very quickly. They take longer to go through the digestive system. Furthermore, intake is lower than normal when cattle are eating very low quality forage.

For example, a 600 lb. heifer should consume about 2% of its body weight, on a dry matter basis. This works out to about 14 lbs. of hay, on an as-fed basis. But using percent (%) of body weight as an indicator of intake does not account for the quality of the forage. A better thumb rule is that cattle can eat about 0.9% of their body weight in Neutral Detergent Fiber (NDF). Therefore a 600 lb. animal could actually eat 5.4 lbs. of NDF fiber. NDF indicates the amount of digestible fiber in the ration. The more fiber the animal eats - the less actual intake (of feed) by the animal. Looking at two different types of forage will show why this thumb rule works better. If we have an average quality hay with 42% NDF, the heifer will consume about 15 lbs. of hay (5.4 ÷ 0.42 ÷ 0.85 {hay being 15% moisture}). However, if we feed a poor quality hay of 62% NDF, then that same animal can only eat 10 lbs. of hay (5.4 ÷ 0.62 ÷ 0.85). Not knowing the difference in quality of feed, and the intake of the animal could mean that the heifer does very poorly, even though full of feed.

Forage Testing

Step one for a farmer should be to test forages for protein, total digestible nutrients (TDN), acid detergent fiber (ADF), and neutral detergent fiber (NDF), as well as major minerals. NDF will give an indication of digestible fiber, while ADF provides an indication of the energy in the feed. The higher the ADF in the forage… the lower the actual energy value of that forage. When you have high fiber and low energy feeds, the intake and energy consumption problem is compounded.

Forage Feeding Issues

Feeding poor quality feed will decrease an animal's performance, since the animal can not maintain itself or grow. Other symptoms (of eating poor quality forages and feed) may manifest themselves with breeding females (especially heifers) through reduced growth, weak calves freshened, lower quality colostrum, and a tendency to slow the re-breeding process.

Since poor feed also tends to have more dust or molds, more of it is usually wasted. Producers might consider reducing chop-length (of silage or hay) to help reduce sorting and feed refusal, as part of a management plan using poor quality forages. This might (also) increase the digestion of the feed and help cattle (and the producer) when poor quality forages may be the best that is available.

(edited from an article by Barry Potter, Livestock Spec., Ontario OMAFRA)

Note: When using CPM, physically effective NDF (peNDF)is calculated and reported on the "Met E and P" report page. Animals should be provided the minimum peNDF required for normal rumen function and should not be expected to consume more than the maximum capacity peNDF. Monitor peNDF and adjust rations as needed to be in the range.

CHECK FORAGE INVENTORIES ON FARMS FOR THIS FALL & WINTER

ENCOURAGE YOUR PRODUCERS TO SAMPLE FORAGES & HAVE THEM TESTED. KNOW WHAT YOU ARE FEEDING & WHAT YOU HAVE TO WORK WITH WHEN DESIGNING QUALITY RATIONS!

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