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Obstacles to Corn Silage Quality

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There has been tremendous improvement in corn genetics over the last decade, especially for corn silage. And yet, corn silage continues to suffer in an area where haylage in general does not – how it is made has a significant impact on its digestible energy. Many producers follow the old rule of thumb that if corn looks too green it's too wet. Even if they know the actual dry matter (DM) of the corn silage standing in the field, the color can be the tie breaker on whether to chop or wait.

There is still a debate among nutritionists about whether it pays to lose a few points of corn silage DM to gain a few percentage points of starch, especially with high corn prices. If corn silage is processed properly, that should not be a problem. But in the real world there is still too much corn silage that is processed too dry. For example, Dairyland Laboratories Inc. includes statistics on their website citing that the average corn silage sample DM was 37 percent in 2009 and 36 percent in 2010, with fairly large standard error, meaning a significant number of samples came in above 40 percent. Additionally, according to the MILK2006 calculator, lowering corn silage moisture 5 percentage points drops milk per ton 5 percent on processed corn silage and 12 percent on unprocessed corn silage. This leads to the understanding that dry corn silage really is leaving energy on the table.

The second area that significantly affects corn silage digestible energy is processing. In my experience, close to half the corn silages I see are not optimally processed. There are several reasons for this, including poor understanding about optimum processing practices and opening the roller to gain speed. Prior to corn silage harvest, I make a point to discuss correct processing procedures and best practices with my clients. I suggest they look at every field harvested so the processor can be adjusted due to changes in variety and DM, and to use a simple test such as putting corn silage in a bucket of water and looking for whole kernels and large cob pieces that separate out. But often in the rush of getting harvest done, these checks are not made.

Thirdly, it is imperative to look at how new corn silage is feeding. I often find that forage tests do not accurately reflect how new corn silage will feed. In recent years I have been running a fecal starch before and after a new crop of corn silage is fed. If we see an increase in fecal starch on new corn silage and I feel it is related to the degree of processing, that is a teachable moment with the client. But that also needs to be reinforced 11 months later when corn silage is made again to make sure we get it right next time.



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SILAGE

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In conclusion, producing high-quality corn silage is very important, and the entire dairy management team holds a high stake in getting this right. The seed corn representative wants his corn to perform well, the nutritionist wants the cows to milk well and the producer wants to maximize profit. The agronomist often has the most input on when to chop, so working together as a team is ideal. I try to make sure the agronomist sees the samples I take so they know if optimum corn silage DM targets were hit. With the dairy management team working together, corn silage can continue to improve in quality.

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