



NUTRITION NOTES

Innovation + Research from Kent Nutrition Group

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CORN SILAGE – DON'T OPEN 'TIL CHRISTMAS

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For most, the 2014 corn crop is in the silo, cooled down, and is now being fed. The variety was carefully selected, harvested at the correct maturity and dry matter, and may even have been processed. However, many cows are not doing as well as expected. As we look back, this is an annual trend. Actually, cows don't seem to reach their stride until December or January. Researchers are now beginning to understand what is going on; **ensiled corn silage does not begin to reach maximum feed value until four months after ensiling.**

Ward and de Ondarza summarized data collected by Cumberland Valley Analytical Services Inc., Hagerstown, MD. They showed that ensiled corn silage does improve with age. All measurements indicated that fermentation continues for months post-ensiling and that maximum feeding value is not achieved for at least 3-4 months.

1. Lactic acid and pH do not reach optimal levels until four months after ensiling.
2. Soluble protein does not stabilize until four months after ensiling.
3. Sugar levels continue to decline through December.
4. Available starch increases significantly during November and December.

Over the past few years, the cost of growing corn has continued to increase. Dairymen need to get the best possible return for these dollars and avoid milk production losses associated with feeding new crop corn silage. What can be done?

1. Let the new crop ferment as long as possible before feeding. It will be more effective and less expensive to feed fully-fermented forage than try to compensate.
2. Plan for excess inventory so it is not necessary to feed new crop until several months after ensiling.
3. When feeding from a bunk silo, fill one end while feeding from the other.
4. If feeding from Ag-Bags, keep bags of old crop for feeding until January.
5. Process the crop, pack tightly, and treat with an inoculant to speed fermentation. This will help, but only to a point.
6. Consider time after ensiling when formulating diets.
 - When balancing using Solids Solutions, use the fall corn silage template until January.
 - Add more soluble, degradable protein with new corn silage.
 - Compensate for changes in starch digestibility that occurs over time. It doesn't start to improve until 3-4 months post-ensiling, then by units of about 3% per month through six months. It may be necessary to feed additional fine ground corn meal as the corn silage improves.
 - There is little improvement in NDF digestibility over time.

It may not be practical to wait until Christmas to start feeding new crop corn silage, but it is useful to understand that the fermentation process is not complete within weeks of ensiling. With inventory planning and ration adjustments, it is possible to make the best possible use of this valuable forage.

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