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FORAGER

RENAISSANCE NUTRITION

Agronomics with livestock in mind!

LET WHOLE-PLANT MOISTURE GUIDE YOUR CORN SILAGE HARVEST

Harvesting and ensiling corn silage at the correct moisture for your storage structure is critical for producing quality feed. Research has shown that the best livestock performance and milk production occur when whole-plant harvest moistures are 65-70%. Whole-plant moistures of 65-70% are appropriate for horizontal storage. Corn silage harvested for storage in up-right silos may need to be chopped a little dryer than 65% moisture to minimize seepage. The recommended moisture for whole-plant corn stored in Ag-bags is 65-68% moisture. Harvesting whole-plant corn higher than 70% moisture increases seepage losses, can lower dry matter intake and reduce dry matter yields per acre.

For corn harvested at 60% moisture or less, research has consistently shown reduced fiber and starch digestion, along with reduced milk production. Drier silage also creates a greater potential for mold problems. Whole-plant corn harvested at 60% moisture or less will benefit from either a finer chop or whole-plant processing. When buying or selling corn silage, use 65% moisture as the “standard” to determine a fair market value.

Kernel milk line has not been an effective indicator for when to begin harvesting whole-plant corn for silage. This is especially true in a year [like this] where areas of drought have impacted the corn crop. Reports of corn silage harvest are under way in some areas because of more localized drought conditions. Note that water-stressed corn plants may re-hydrate following significant rainfall.

In order to determine whole-plant moisture prior to harvest, collect a representative sample from the field (5-10 stalks). Chop the sample with a landscape-type chipper/shredder and submit the sample to a forage testing lab for NIR analysis. NIR will provide the most accurate moisture results. Using Koster testers or microwave ovens tend to over-estimate the dry matter content of whole-plant corn by approximately 3% units.

University of Wisconsin research shows that whole-plant moisture is expected to drop an average of 0.5 percent per day under normal growing conditions. In dry warm years, the drying rate will be more rapid. In wetter, cooler years the drying rate will be slower.

Length of Chop

Based on research (Shaver, Lauer, Shinners – U of WI), the recommended chop length for corn silage being harvesting with a crop processor is ¾” theoretical length of cut (TLC). Chopping at ¾” TLC will usually result in 20%-30% of the processed silage being in the coarse particle fraction when separated. This provides a forage source with more effective fiber. For those not harvesting with a crop processor the recommended TLC is 3/8”. This recommendation may vary between ¼” and ½” TLC depending upon whole-plant and kernel moisture. In either situation, when whole-plant moisture is less than 60% moisture the TLC should become shorter.

Evaluate Your Crop Processor

The general recommendation is that roll clearance should be in the one to three millimeter range. This is determined using feeler gauges. However, a visual inspection of the silage to determine how well kernels and cobs are broken is the best method to evaluate the effectiveness of processing. All kernels should be well broken, and pieces of cob (if discernible) should be no larger than the end of your little finger. If kernel and cob breakage is not thorough, reduce clearance on rolls or consider reducing your TLC.

Harvesting whole-plant corn at the correct moisture for your structure will result in improved fermentation, improved fiber and starch utilization, and better animal performance.

(edited from an article by Mike Ballweg, U W Extension Crops & Soils Agent, Sheboygan County, WI)

THERE IS STILL TIME FOR FALL SEEDING IN SOME AREAS

CHECK FORAGE INVENTORIES ON FARMS FOR THIS FALL & WINTER

SAMPLE FORAGES & HAVE THEM TESTED… KNOW WHAT YOU ARE FEEDING THE COWS!