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Testing Hay

As producers, we do what we can to make sure the hay we store for winter is in the best shape possible. We cut at the appropriate time, try to bale at optimum moisture contents, and even give the plants we harvest a hand by irrigating and fertilizing when able.

Even with all this help, the nutrient value in hay can change drastically from year to year. Even in the same field cut at a similar time, annual swings of 5% crude protein content and 10% TDN are not uncommon. With crop residues like cornstalk bales, we may have a smaller swing in nutrient differences, but a drop from 5% CP to 3% can have a big impact on supplement strategies and need. When it comes time to feed this winter, knowing what quality hay you have can mean the difference between over or underfeeding hay, and often times supplement as well. This can affect the bottom line as well as have negative consequences for herd health and fertility.

Testing hay isn't hard, it just takes a bit of time and planning. The first step is to get a quality hay probe. Often times your local extension office has one available to loan, or knows where to find one, so try starting there first.

Once we have a probe, divide your hay into lots, these are bales that were harvested from the same field under similar conditions. By dividing into lots, we can ensure our hay is similar in quality and the test results will be accurate.

Sample 15-20 bales per lot, using the probe on the side that will capture the most layers. For round bales, this is the rounded side, for squares, this is the shorter front or back end. Mix these samples together well in a bucket and take out a quart sized Ziploc bag worth. This final sample should be labeled with the hay type, lot number, and producer name and address and either stored in a cool, dry place, or sent to your lab of choice for analysis. Samples that are on the wet side should be frozen before sending. To avoid your sample sitting in the mail, try to ship during the first part of the week so the lab can begin processing before the weekend shutdown.

When deciding what tests to run, protein, energy (labeled as TDN), and moisture content are key and provided in most basic forage analysis packages. Minerals or nitrates may be selected for when the circumstances require. In some labs, the traditional wet chemistry test is the only option. However, many labs have begun offering near-infrared spectrometry (NIRS). This test uses a laser to "read" the sample and compare it to a databank of know similar samples. This can be done quicker and cheaply, when compared to traditional wet tests. However, NIRS tests are best suited for single species samples and work best with popular forages.

Testing hay can take a bit of time, but accurately knowing the value of forages this winter can save money and help when it's time to make decisions about providing supplemental feed. Split hay into lots, and core so as many layers as possible are sampled. Send a representative sample to the lab of your choice, getting at a bare minimum, protein, energy, and moisture content. To save money, a NIRS test can be used on single species samples of common forages.

-Ben Beckman is a beef systems Extension Educator serving the counties of Antelope, Cedar, Knox, Madison and Pierce. He is based out of the Cedar County Extension office in Hartington. You can reach him by phone: (402) 254-6821 or email: ben.beckman@unl.edu