K-STATE Research and Extension | Meadowlark District

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Accurate Forage Sampling

The October fifth USDA Hay Market Report for Northeast Kansas showed steady prices even as movement remains low. Price per ton for large round bales of native grass hay hovered around $60, while brome was closer to $95 and alfalfa at $150.

Pricing of these forages is based on a number of different factors, with quality likely being the largest. Even within a forage class, quality numbers can differ significantly. According to 'book values' for bromegrass hay, protein values from pre-bloom to mature may drop as much as 10 percent and energy values as much as four percent. Those value changes – and our ability to know what we have – or what we're buying/selling – can make the time and effort it takes to get a good forage sample well worth it.

One challenge with a forage sample is getting a small sample for submission representing *tons* of the actual hay crop. Variations in hay quality are seldom an issue at the lab testing level, but are instead due to extreme variations that can occur in sampling procedure.

Start by sampling by individual forage lot, with a lot defined as forage harvested from the same location/field/farm from the same cutting of like maturity/rain damage/weed pressure/etc… within a 48-hour period. Do not combine hays of different qualities/cuttings.

Use a forage sampling tool to get a good cross section of the forage package. We have core samplers available from any of our District Offices you can check. Collect at least 20 cores per sample (less than 20 will result in greater variability) from widely separated bales/stacks representative of each identified lot. Large and small rectangular bales are collected from the center of the ends of bales. Large round bales should be sampled on the rounded, tight side at waist height. Cores should be collected from a depth of 12 to 15 inches, avoiding weathered portions of the bale that will not be fed. Mix cores in a clean, plastic pail and place the entire sample in a heavyweight plastic bag, sealed tightly to retain moisture. Sampling should be done as closely to feeding as possible.

Samples should be shipped immediately to a lab of your choice to prevent moisture loss and microbial deterioration. Mail samples early in the week to minimize shipping time to the lab and avoid shipping over weekends/holidays.

For additional information on forage sampling, including equipment or testing labs, contact any Meadowlark Extension District Office.

Working Garden Soil in the Fall

One of the (few) helpful aspects of a dry fall is the opportunity it provides to work garden soils. Spring can be too wet, making soil preparation difficult without damaging soil structure. Fall gives us better soil moisture contents for fall tillage – plus time for freeze/thaw action to 'correct' mistakes our tillage operations may make.

There are other advantages as well. Incorporating garden debris reduces survival rates of overwintering insects and helps reduce disease issues as well while increasing organic matter. If you want to add additional organic matter, fall is a great time. Lots of material is available and there's lots of time for it to break down prior to spring.

Avoid over doing tillage. You should end up with grape nut size or larger particles. Working until you have dust means you've gone too far and soil structure has been destroyed.