

## Forage Testing for Horses

Forages are the most important part of the diet for all classes of horses. Horses should be fed a minimum of 1.5 percent of their bodyweight in long-stem roughage each day in order to avoid digestive disorders. In other words, a 1,000 lb horse would need a minimum of 15 lb of forage per day. When fresh pasture forage is not available, hay is fed to provide roughage or fiber to the horses diet. Hay should be selected based on nutrient content and physical characteristics. Laboratory analysis (or a "forage test") is the only way to determine the actual nutrient content of forages.

### Collecting Hay Samples

- Use a 12-18" hay probe (attached to drill)
- Collect samples from 20 bales (per 100)
- Insert probe at end of square bales or the side of round bales
- Fill a 1 quart Ziploc bag with collected sample (sample should weigh 3/4 to 1 lb)
- Submit samples to your County Extension Office or directly to The University of Tennessee's Soil, Plant and Pest Center  
<http://soilplantandpest.utk.edu>



\*Pasture samples can also be submitted for analyses. Collect pasture samples by clipping the top 6" of forage (no closer than 2" from the plant base) using hand scissors or clippers. Collect random samples by walking in a "W" throughout the field or paddock. Submit samples immediately to the laboratory.

### What is tested and how much does it cost?

The "Basic Forage Test" from the Soil, Plant and Pest Center Laboratory includes moisture, dry matter (DM), acid detergent fiber (ADF), neutral detergent fiber (NDF), total digestible nutrients (TDN), digestible energy (DE), relative feed value (RFV), calcium, phosphorus, potassium and magnesium for \$10.00 per sample. The "Basic Forage Plus" (recommended) includes sulfur, manganese, copper and zinc in addition to the Basic Forage Test for \$20.00 per sample. For horses prone to digestive or metabolic disorders (ex. laminitis) hay should also be tested for nonstructural carbohydrates (NSC). Equi-analytical Laboratory is the most widely used lab for NSC testing (\$27) [www.equi-analytical.com](http://www.equi-analytical.com).

### How are the results used?

Analyzing forages for nutrient content is necessary to determine if additional feed and supplements are needed to meet the horse's energy and nutrient requirements. While forage is the most essential component of the equine diet, some forages may be deficient in certain nutrients and may not meet the horses energy requirement, thus additional supplementation may be needed. Forage testing is important for all classes of horses. Contact your County Extension office for additional information on forage testing.

Questions or comments? Contact Dr. Bridgett McIntosh, UT Extension Equine Specialist

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<http://www.masterhorseowner.utk.edu>

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