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How to Collect a Hay Sample

Hay should routinely be tested because forage quality can change based on forage species, maturity, management, harvest conditions, storage conditions, rain damage, or insects/disease damage. Forage quality results in animal performance. Guessing the quality of hay being fed to livestock could result in underestimating or overestimating the nutrient content and thus cutting profitability. Hay sampling can also help diagnose management at harvest to find ways to improve quality during the season or at harvest.

1) Sample each HAY LOT separately. A hay lot would be a cutting from the same field, same environmental conditions and same forage composition. Every field and cutting will be different.
2) Representative sample using a HAY PROBE that is 12" to 24" long and 3/8" to 5/8" in diameter. Grab or hand pulled samples will not provide uniform samples. Poor sampling will result in misleading values which could lead to reduced animal performance.

3) Sample multiple bales out of hay lot representing at least 10% of lot, usually a minimum of 15 random bales.
4) Sampling method will depend on bale type:
    a. Large Round – Take sample on curved side of bale and remove outer layer if moldy. Avoid outside bales.
    b. Large Square – Take sample at a 45° angle on the side or 90° angle at the end.
    c. Small Square – Take sample through center and the end of the bale.
5) Keeping each hay lot separate, mix samples thoroughly in a bucket and place enough to fill a quart size plastic bag. Samples are perishable and should be sent off to a lab the same day of sampling. If this is not feasible, keep samples away from heat and store in a cool, dry place until you can send them off.
6) Identify the sample by date, cutting, location, livestock and owner before shipping to lab.
7) Refer to the "Understanding Forage Test" for information once your sample comes back from the lab.

Producing quality hay is dependent on many in-season management practices such as fertility and weed control. Harvest timing will also influence quality as indicated by table below.

	Composition	Quality	
Forage Group	Leaves	CP	NDF
	% DM		
Grasses			
Vegetative	>50	>18	<55
Boot	40 – 50	13 – 18	55 – 60
Head	30 – 40	8 – 12	61 – 65
Mature	20 – 30	<8	>65
Legumes			
Vegetative	40 – 50	>19	<40
Bud	35 – 45	17 – 19	40 – 46
Early Flower	25 – 40	13 – 16	47 – 51
Late Flower	<30	<13	>51

Source: Schroeder, 1996.