

Feed and Forage

SAMPLING PROCEDURES

Feedstuffs are grown, harvested, and stored under varying conditions that impact quality. Proper sampling procedures are essential for obtaining a representative sample, which is key to accurate analysis.

Sampling Procedures

Defining a sample "lot" helps to obtain an accurate sample. Divide the feedstuffs to be sampled into "lots" using separate fields, cuttings, maturity at cutting, fertility history, mixer batch, or source of the feedstuff as criteria. Sample and analyze each lot separately.

Sampling Procedures

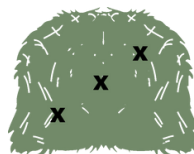
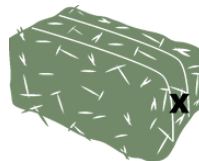
Sample container required: 1 gallon plastic bag. Sample hay as close to the date of sale or feeding as feasible. Wait at least three weeks after harvest to allow the curing process to complete.

Square and round bales: Select 20 random, typical bales from each lot. Using a hay probe, collect a sample from each bale by coring into the end of square bales or into the circumference of round bales. Avoid collecting hand-grab samples.

Core in an upwards direction to reduce moisture spoilage. Place the samples in a plastic bag, exclude excess air, seal tightly, and ship.

Hay Stacks: Select four to five stacks from each lot. Using a hay probe with a 24-inch long barrel, collect three samples per stack. Collect the samples from the side of each selected stack as shown.

The top sample should be taken two feet from the top edge of the stack and the bottom sample at two feet above the ground. Place the sample in a plastic bag, exclude air, seal tightly and ship.



Grain and Bulk Feed

Sample container required: two quart plastic bag

Use a grain probe and collect five to six samples from various locations within the storage structure. A probe that penetrates to at least three-fourths of the storage depth is best. Mix the samples and reduce sample size if necessary. Place in a plastic bag, exclude air, seal securely and ship.

Pasture and Standing Forage

Sample container required: 1 gallon plastic bag.

Select eight to ten locations with similar moisture and fertility history. Remove the forage to a grazing height from a one square foot area at each location. Chop the sample into two-inch or three-inch pieces and quarter to reduce sample size. Place in a plastic bag, exclude air and seal tightly. Ship samples promptly.

Quartering Procedures

Sometimes when forages and rations are sampled, the total of the aggregate samples is too large to send to the laboratory. Quartering allows reduction of the sample size and maintains the representative sample.

HAY SAMPLES SHOULD NOT BE QUARTERED, since leaf loss can drastically affect analysis.

Mix the entire sample thoroughly, then pour it into a pile on clean paper or plastic.



Quartering a Sample

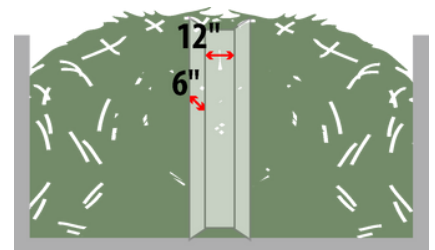
Silage

Properly ensiled forage closely reflects the fermented product, except for nitrate levels and crude protein. Forage with seepage, heat damage (caramelized smell), or mold may degrade over time and should be tested periodically.

Fresh Sample at Harvest: Collect samples routinely as loads are brought to storage. Keep the sample container closed to prevent moisture loss. Mix the samples thoroughly. Use the quartering method to reduce the sample size. Place the sample in a plastic bag, exclude air, seal tightly and ship.

Upright Silo: Sample after the ensiling process is complete (three to four weeks). Collect random subsamples from the unloader. Avoid collecting from the very top and bottom of the silo. Mix the samples together thoroughly and use the quartering method to reduce the sample size. Place the sample in the plastic bag, exclude air, seal tightly, and ship.

Horizontal Silo: Sample after the ensiling process is complete (three to four weeks). Collect samples along the vertical center of the open face pile. Take several handfuls from the top, middle and bottom of the pile, as illustrated. (Safety note: Watch for collapsing silage.)



Avoid dried silage or surface crust from the pile. Mix samples well, use the quartering method to reduce size, then seal in a plastic bag with minimal air and ship.

Comparing Laboratories

Splitting samples in the field can lead to differences, even with careful subsampling. To compare labs, have each dry, grind, and analyze their split sample, then exchange dried portions for cross-analysis. Evaluate differences by comparing results of the dried-and-ground samples.

For more information and supplies, contact your nearest ServiTech Lab in Hastings, NE; Dodge City, KS; or Amarillo, TX, or call 1-800-557-7509.



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