



LITCHFIELD ANALYTICAL SERVICES

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Feeds Forages Mycotoxins Soils Plant Tissues Manure Fertilizers Lime Water

Sampling Baled Hay for Nutrient Analysis

Forages are the most important source of nutrients for horses. They are also the feed source most variable in nutrient quality. Therefore, testing hay and other forages for nutrient content is an integral part of ration balancing.

Hay for horses is typically harvested as small, "conventional" bales weighing 40 to 60 pounds. To sample hay from this type of bale, follow these steps:

- ✓ ***Sample each "lot" of hay individually.*** A "lot" of hay is defined as all hay cut and baled at the same time from the same field. The nutrient composition of hay varies greatly with cutting and stage of maturity. Therefore, if you have multiple "lots" of hay, it is best to sample and test them individually.
- ✓ ***Sample bales with a coring device.*** It is imperative that multiple bales be sampled and that the samples are a true representation of the proportion of leaves and stems in the hay. In order to get such a sample, it is necessary to "core" several bales. A "core" is taken by drilling with a sharp, hollow instrument into the bale. This cuts a sample of hay that can be collected from the inside of the coring device. A list of commercial sources of hay coring devices as well as directions for making a homemade coring device, are included on the back of this sheet.
- ✓ ***Sample from the end of the bale.*** Insert the coring device into the middle of the end of the bale. Insert it straight through the center of the bale, not at an angle.
- ✓ ***Sample at least ten bales.*** A core should be taken from each of at least ten randomly selected hay bales in each "lot" of hay. This can be a lot of work, but in most cases taking an adequate sample is the single most important step influencing the accuracy of the hay testing procedure.
- ✓ ***After each core is collected, deposit it in a zip-lock bag.*** Have a one-quart zip-lock bag available for each "lot" of hay to be sampled. Place all of the cores from each "lot" of hay into their respective zip-lock bag.
- ✓ ***Press as much of the air from the zip-lock bag as possible before sealing.***
- ✓ ***Send us all the material sampled. Do not attempt to sub-sample***

Hay Coring Devices

Hay coring devices are available from numerous commercial sources at prices ranging from about \$50 to \$400. The following list provides some examples, but other are available. We do not endorse any particular brand.

Star Forage Probes (\$175 - \$275)

Star Quality Samplers
5719-114A Street
Edmonton, AB, Canada T6H 3MB
780-434-3367

www.starqualitysamplers.com

Forageurs Hay Probe (\$140 - \$150)

Forageurs Corporation
P.O. Box 564
Lakeville, MN 55044
612-469-2596

Penn State Probe (\$110 - \$120)

NASCO
P.O. Box 901
Fort Atkinson, WI 53538
800-558-9595

www.enasco.com

Oakfield Probe (\$80 - \$155)

Oakfield Apparatus Inc.
P.O. Box 65
Oakfield, WI 53065
920-583-4114

www.soilsamplers.com

Coring Tool (\$135 - \$140)

Frontier Mills, Inc.
2002 SD Hwy 314
Yankton, SD 57078
605-665-2441

Hay Chec Sampler (\$400)

Hodge Products Inc.
P.O. Box 1326
El Cajon, CA 92022
619-444-3147

www.haychec.com

Colorado Hay Probe (\$160 - \$225)

UDY Corporation
201 Rome Court
Fort Collins, CO 80524
970-482-2060

www.udycorp.com

HAYPROBE (\$225 - \$275)

Hart Machine Company
1216 SW Hart Street
Madras, OR 97741
541-475-3107

Sierra Hay Probe (\$50)

Sierra Testing Service
9450 E. Collier Road
Acampo, CA 95220
209-333-3337

www.sierratestingservice.com

AMS Hay & Forage Probe

AMS, Inc.
105 Harrison Street
American Falls, ID 83211
800-635-7330

www.ams-samplers.com

Best Harvest Hay / Forage Probe

Best Harvest
4115 – 7 Mile Road
Bay City, MI 48706
888-947-6226

www.bestharvestore.com

Homemade Hay Coring Device

A very satisfactory hay-coring device can be made from an old golf club. With a hacksaw, cut the shaft of the club at the point where the diameter is between 3/8 and 1/2 inch. Also cut off the end of the club handle, leaving as much of the grip on the club shaft as possible. You will then have a tapered tube that is open at both ends. With a flat file, sharpen the edge of the cut shaft. A rat-tail file can be used to de-burr the inside edge and complete the sharpening process.

Grasp the shaft by the handle and, with a twisting motion, drive the shaft into the bale of hay. Insert the shaft at least 13 to 15 inches. Then, pull the shaft from the bale and collect the sample into the sample bag. Hay will frequently lodge in the shaft and have to be pushed out with a clearing rod.

Use a 1/4 to 3/8 inch dowel to make a clearing rod for removing hay from the golf club shaft. Cut the length of the small rod just longer than the golf club shaft. Use a 1 inch dowel rod, or other suitable piece of wood to make a handle for the smaller dowel rod. Drill a hole in the handle to accept the small dowel rod and glue the small rod in place. ***To avoid personal injury, it is very important to make a suitable handle for the clearing rod.***

Insert the clearing rod into the coring device from the cutting edge, pushing the hay out from the end of the handle. ***Frequently, hay will dislodge suddenly causing your hand to move quickly toward the sharpened edge of the shaft. To prevent cutting your hand, always grasp the clearing rod by the handle such that the handle, not your hand, will strike the cutting edge.***