From now through Spring 2007, hay production and hay supplies are expected to continue to decrease in the southern Great Plains. Although not usually a major problem across a large region, increased hay feeding in the southern Great Plains over the past year has many producers concerned about the availability of hay that will be fed through the winter. In years when hay supplies are low, the hay purchase price will likely be high, even for low quality hay. It is important to do some comparison shopping and not be forced to purchase the first hay that can be located.

Some good news is that even during times of tight hay supplies, there will be much hay of sufficient quality that little or no supplementation will be necessary to meet the animal's nutritional needs. However, there will also be hay of such poor-quality that additional energy and protein will be required to meet the animal's nutritional needs. A forage analysis is the only way to determine whether or not additional supplementation is required. A forage analysis is not practical when buying small lots of hay, but the purchase of large hay lots should not occur without a forage analysis. Also, feeding a large portion of hay for an extended period without a forage test should not occur due to the expense of providing supplemental feeds. For more information please see OSU Extension Fact Sheets F-2589 (Collecting Forage Samples for Analysis) and F-2117 (Forage Quality Interpretations).

One of the first considerations when purchasing hay is that it be based on individual animal requirements. For optimal production, forage quality should be matched as closely as possible to the nutritional needs of the animal. The nutritional needs depend on several production factors, which include the type of animal, reproductive cycle, sex, and age. Feeding animals excessively rich forage wastes nutrients and can result in health problems for the animal. Low quality forage can result in reduced animal performance and increased supplemental feeding costs. Do not purchase hay that has a higher quality than you can use. Limited feeding of high quality hay could be more economical than free-choice feeding hay that was purchased at a bargain price.

Oftentimes, when hay becomes available for purchase, there is no forage analysis. The following factors can be used as general guidelines for evaluating potential forage quality until the hay can be properly sampled and analyzed for forage quality. For more information please see OSU Extension Fact Sheet F-2588 (Hay Judging).

**Plant maturity**

The maturity of the forage plant at harvest influences forage quality more than any other single factor. The reason for this is that as forage plants mature and yield increases, the amount of stems also increases. The presence of stems and many seedheads indicates overly mature forage and lower forage quality.

**Leafiness**

Another characteristic often related to maturity is leafiness. Based on this, the ratio of leaves to stems can also be used as an indicator of forage quality. Since the majority of the compounds that result in high forage quality are located in the leaves of the plant, it is important that as many of the leaves as possible be retained during the hay-making process.

**Color and Texture**

Although not always 100% fool-proof, green-colored hay is a good sign that the hay has potential to be good quality. The most desirable colored hay will have a bright green color. There can also be high-quality hay with the color bleached out by sunlight that can be just as good as green-colored hay and sometimes better. Hay texture is another characteristic that can give some indication of the hay quality. Many times, this is related to plant maturity and is based on the amount of leaves and stems present. High-quality hay should not be stiff or have a rough, abrasive texture.

**Smell (the nose knows)**

Properly cured hay will have a fresh smell. If the hay has a dusty or musty odor, it usually indicates that the hay was baled too wet. Often the forage quality may not be substantially lower, but livestock acceptability may be decreased.
Soil Fertility

Some hay is advertised as having been fertilized. Fertilization increases forage yields more than forage quality. With the exception of N fertilizer increasing the crude protein concentration, additional fertilization seldom has an influence on forage quality.

Be cautious and do not pay for hay with high forage quality if it is not needed or if the hay is low quality. If possible, purchase hay that has been tested for nutritive value. It is also important to consider purchasing the hay on a "per ton" basis and not on a "per bale" basis. Saving or spending an extra $0.10 to $0.25 per bale can make a difference of several dollars with hay purchased by the ton, especially when purchasing small, square bales. Even with the purchase of larger round bales, saving or spending an additional $1 to $2 per bale can also make a difference of several dollars when hay is purchased by the ton.

-- Daren D. Redfearn, Extension Forage and Pasture Management Specialist
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Hay Feeding

For guidelines on reducing losses from hay feeding and storage please refer to the following links on Round Bale Feeders Worth the Investment and Hay Loss from Storing Round Bales Outside

CONTRIBUTIONS WANTED

Do you have a comment about some aspect of forage production that you would like to share?

Do you have a question about some aspect of forage production?
Have you read something that helped your forage production and want to share it with the readers of Oklahoma Forages Newsletter?

Send comments, questions, or articles you have seen and want to share to Daren Redfearn daren.redfearn@okstate.edu To remain anonymous, just let us know.

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