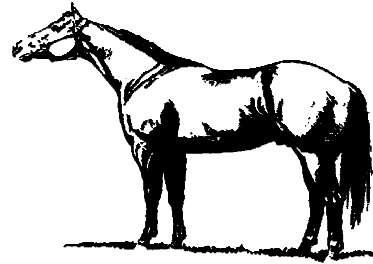


## **Animal Science Horse Information Series**

Phone: 865-974-7294  
e-mail: [fharper@utk.edu](mailto:fharper@utk.edu)  
<http://animalscience.ag.utk.edu>



### **READING A HORSE FEED TAG**

**Dr. Frederick Harper  
Extension Horse Specialist  
Department of Animal Science  
University of Tennessee**

**Do you read the nutritional information on food packages? This has become a common practice as Americans become more weight and health conscious. There seems to be a new diet every week.**

**Some type of nutrients, such as fat, high calorie or high sodium foods are not desirable for some individuals.**

**Have you taken time to read your horse's feed tag? And, what does that information tell you?**

**When asked, "What do you feed your horses?" many owners reply, "A 12 percent protein feed."**

**They do not tell you the brand, manufacturer or type of feed, such as a performance horse, broodmare, senior or growing feed for young horses.**

**Protein is an important nutrient, but it is not the first consideration that one should**

have in selecting a feed for a specific horse.

The feed tag lists the minimal level of protein, calcium and fiber. Some will also list such minerals as copper, zinc and selenium, and probably other nutrients. Vitamin A, D and E are also often listed.

What is so conspicuously missing is a figure indicating the amount of energy in the feed. In human foods, energy is expressed as calories. With horses, megacalories (Mcal) are the common energy term.

Energy is not a nutrient, but it is a nutritional need for all animals. In fact, energy is the basis of feeding a horse or any other animal. Once the energy need is known, the amount of protein, minerals and vitamins can be estimated rather accurately.

Energy is obtained from carbohydrates, fats and protein. Grains (oats, corn and barley) have high levels of carbohydrates, especially starch and sugars. Forages, such as pasture and hay, also contain carbohydrates. Many of the carbohydrates in hay are structural carbohydrates which are less efficiently digested by the horse.

Most horse rations are naturally low in fat, usually about 2-3 percent. In recent years, adding fat to horse feeds has become important. The result is more energy dense feeds. Fat has 2.25 times as much energy as carbohydrates or protein.

Protein in excess of the horse's needs is stored as body fat, an energy source. However, this is both a costly and inefficient process. The nitrogen, which all proteins contain, is removed from the carbohydrate part of protein. This nitrogen is converted to urea and excreted, then converted into ammonia. The ammonia smell in some horse barns during the winter is due to feeding higher than needed levels of protein. Carbohydrate feeds and fats are cheaper sources of energy.

**Protein fed in excess of the requirement can be counterproductive in summer as protein produces body heat that can be a problem for performance horses when it is hot and humid. Some horses have difficulty regulating their body temperature in these situations. Feeding higher levels of protein than needed to horses is not advisable.**

**With the protein, fat, fiber and some minerals and vitamins listed on your horse's feed tag, how can one get an idea of its energy level?**

**You can use the amount of fiber on the feed tag to get a general idea of the energy level in the bag of feed. There is an inverse relationship between the level of fiber and the energy content. As the fiber level increases in a feed, the energy value decreases. If you had a choice of Feed A with 8 percent of fiber and Feed B with 12.5 percent of fiber, which would be best for your barrel racing horse? Feed A would provide more energy which is needed for performance.**

**There are feeding situations where lower levels of energy is advisable. Over fat horses with a high body condition score should not be fed much, if any, grain if they are on good-quality pasture. If grain must be fed, it should have a low energy value, so the fiber content should be high.**

**Horses in good body condition (body condition score of 5 or above) on good spring pasture do better if fed a low energy feed.**

**Research from Virginia Polytechnical Institute has shown that a high-fiber, high-fat ration is better than the typical high-starch, high-sugar sweet feed even when horses are grazing pasture.**

**Mineral and vitamin levels need to be balanced for the use and age of the horse and type of forage being fed. Higher levels are not always good. For example, high levels of**

**vitamin D in a feed or supplement can produce negative results. Horses do not need supplemental vitamin D if they have adequate sunlight and/or fed sun-cured hay. If the ratio of vitamin A to vitamin D is less than 10:1 in a vitamin supplement, it would not be recommended.**

**As a population, we read food labels. As horse owners, we need to also read feed tags.**

**###**

**4/05**