

I am employed at a local feed store. When a customer inquires about this feed or that, one of the first questions she will ask is how much protein it contains. When I ask the customer to describe the horse for which the feed is intended, it invariably turns out to be an adult horse in light work. Can you refresh my memory as to why protein content is not the primary consideration when selecting a feed for such a horse?

As you mention, it is essential to know a few specifics about the horses being fed in order to determine the amount of protein they require. Generally, mature horses that are asked to perform little or no daily exercise require less protein than young horses that are experiencing tissue accretion through growth and gestating mares that are nurturing a developing fetus. Horses in light work require a small amount of protein to help heal minute lesions that occur throughout the body as a result of everyday wear-and-tear.

I suspect those individuals that inquire about the protein level in a feed believe the nutrient is a key provider of energy. While energy can be derived from dietary protein, the conversion is inefficient. From a metabolic perspective, the breakdown of protein to energy produces more heat than the degradation of carbohydrates or fats. Though usually not a problem, excessive heat production might lead to disproportionate sweating and possible heat exhaustion during demanding exercise in warmer climates. Excessive protein in the diet can increase urination and affect fluid balance, which can be cause for concern in performance horses.

Customer education comes into play at this point. Explain to the customer that energy is better provided by the provision of carbohydrates and fat. Carbohydrates remain the principal sources of energy in horse diets and typically originate from forages and grains. One subgroup of carbohydrates that has been receiving considerable attention includes certain feedstuffs called “super fibers” such as beet pulp and soy hulls. The amount of energy in super fibers is slightly lower than that of cereal grains but is considerably higher than that of typical forages. Super fibers are safer to feed to certain horses than cereal grains because their fibrous nature reduces the likelihood of carbohydrate overload.

Fats are being used increasingly to boost the energy density of rations and as a substitute for rapidly fermentable carbohydrates such as those found in cereal grains. Other benefits of feeding a fat-enriched diet include superior energetic efficiency, improved body condition, and diminished excitability.

In sum, I would like to commend you for taking the time to write. Counter employees at feeds stores are often the only people with whom many horse owners will ever speak to about nutrition. Though many feed retailers make a concerted effort to educate their employees, some do not. For that reason, it is important for horse owners to seek out reputable feed manufacturers that not only employ knowledgeable staff members but also have access to professional equine nutritionists.

If you would like to submit a nutrition question, please contact Eileen Phethean at [ephethean@ker.com](mailto:ephethean@ker.com) or mail to: EQUESTRIAN Nutrition Questions, c/o Kentucky Equine Research, 3910 Delaney Ferry Road, Versailles, KY 40383.