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YOUR GUIDE TO EQUINE HEALTH CARE

Feeding Performance Horses

Optimal nutrition is essential for working horses to perform to their potential

Small errors in feeding can make a big difference in competitive horses' performance. This fact sheet reviews athletic horses' nutritional needs and describes how to determine if your feeding program is working. As with any nutrition recommendations, be certain to temper your enthusiasm and make changes to your horse's diet slowly to avoid colic or other detrimental health issues.

What's a Performance Horse?

By nature, horses are athletes. A once or twice weekly trail ride or training session does not qualify him or her as a performance horse. "Performance horses" are those actively in training for a competition and are typically ridden or trained at least than five times per week. Even among performance horses, nutritional needs will vary depending on the level of work: light work (such as Western and English pleasure); moderate work (such as ranch work, roping, or jumping); or heavy/intense work (such as polo, racing, or endurance).[1,2]

Nutrient Basics

All horses need a balanced daily ration consisting of six things: water, carbohydrates, proteins, fats, vitamins, and minerals. For performance horses, "energy" is widely considered the most important part of the diet.[2,3] This energy is what fuels the body and is primarily derived from metabolizing carbohydrates. Fat is also an important energy source. The exact amount of energy a horse needs (measured in megacalories per day) depends on his body condition and work level. Exact energy, protein, and mineral requirements for horses in various levels of work are detailed in *Nutrient Requirements of Horses: Sixth Revised Edition*,[4] are summarized online by various equine extension specialists,[5] and are touched on here:

Feeding Horses in Light Work Like most non-performance horses, those in light work can usually meet all their energy requirements from a forage-only diet (pasture and/or hay). If you choose to feed a lightly working horse concentrates, decrease the amount of forage so the total daily energy intake does not exceed the recommended maximum daily energy intake, or your horse will go from fit to fat. For example, an average-sized (1,100 lb) lightly working horse can be fed 20 lbs of hay (a mix of alfalfa and grass) or only 14 lbs of the hay if 3-4 lbs of oats are added. The amount of hay that should be fed will change again if only grass hay is fed (which is lower in energy than the alfalfa/grass mix) or if a commercial grain mix, rather than just oats, is added to the diet.[2]

ANNE M. EBERHARDT

Energy is widely considered the most important part of a performance horse's diet.

Feeding Horses in Moderate Work Moderately working horses do need more energy than lightly working horses, but they can often still meet their energy requirements from forage alone. If additional calories (energy) are required, add concentrates as described above for horses in light work, being sure not to overfeed.

Feeding Horses in Heavy Work Horses in heavy work are unlikely to meet their energy needs from forage alone. These horses will need concentrates (and probably fat) to meet their energy needs. For example, intensely working horses might need 15-17 lbs of alfalfa/grass hay plus 10 lbs of oats. Alternatively, they will need 18 lbs of grass hay plus 10 lbs of a commercial grain.

If large amounts of concentrates (i.e., more than 5-7.5 lbs) are needed to meet your horse's daily energy requirements, consider replacing some of the concentrates with a dietary fat source such as corn, canola, or soybean oil. These vegetable oils have significantly more energy than oats; 1 cup of vegetable oil has the same number of calories as 1.5 lbs of oats.[2]

When to Feed

In general, experts advise feeding grain no less than four hours before riding. Similarly, for light, moderate, and intense workers, remove hay four hours before riding to avoid "gut fill." Endurance horses are the exception to this rule; offer free access to hay right up until riding, and offer hay when possible during the competition.[2]

Nutritional Supplements

Depending on hay quality and choice of concentrate, some performance horses could benefit from vitamin, mineral, or other nutritional supplements for the coat, hoof, musculoskeletal system, or as a source of antioxidants. Various products are available either as single-ingredient or multi-ingredient products. Be cautious not to oversupplement, as this can have deleterious health effects (e.g., toxicity) and is expensive. To avoid oversupplementing, carefully review the type and amount of each ingredient included in all of the feeds and supplements you provide your horse.

Challenges

Although feeding performance horses might seem relatively straightforward, there are some key issues that owners

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and trainers should recognize.[3] Some important feed-related considerations are:

1. High-performance horses need concentrates to meet their daily energy requirements; however, there is a limit to how much concentrate they can eat in a day. Replace some concentrates with oil, and feed the grain in small amounts throughout the day to minimize the chances of laminitis due to grain overload;
2. Horses fed high-concentrate diets eat their meals quickly, leaving hours with nothing to do. Bored horses can damage their stalls or develop stereotypies such as cribbing, weaving, and headshaking;
3. Oats and other single grains are not balanced foods. Oats are high in phosphorus, and if fed in conjunction with poor-quality forage, the phosphorus:calcium ratio will be reversed from recommendations. In turn, horses can potentially develop a disorder called secondary hyperparathyroidism, which can cause bone deformities and predispose the horse to fractures. Some nutrition experts recommend not using single grains at all, but rather commercial concentrates that are nutritionally balanced;
4. Hay quality varies markedly from batch to batch, making it difficult to know the mineral or protein contents. Type of hay, where it is grown, and what time of the year it is cut all impact the hay's quality and content (e.g., minerals and selenium levels). Have your hay analyzed by a local extension service.

Monitoring Success

One of the best ways to determine whether your feeding regimen is working is to routinely assess your horse's body condition score (BCS). Details on accurate condition scoring is available at www.TheHorse.com/pdf/nutrition/bcs.pdf.

Finally, consider working with an equine nutritionist.[7] Olivia Martin, owner of Performance Feeding Inc., studied the diets of 181 horses competing at the 2008 Winter Equestrian Festival. Various disciplines such as polo, pony hunter, show hunter, show jumper, and dressage were included in the analysis. Many of the performance horses had significant nutrient deficiencies, except those whose owners/trainers worked with an equine nutritionist.

"This survey revealed that some of the fundamentals of feeding horses were understood; however, much of the decision-making surrounding feeding practices was based on folklore, tradition, and misinformation," said Martin.

KEY REFERENCES

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Further reading and free horse health e-newsletters: TheHorse.com/Nutrition

Authored by Stacey Oke, DVM, MSc; reviewed by Brian Nielsen, PhD, Dipl. ACAN