



Down on the Farm

The Advantages Of Working With A Nutritionist

by HEATHER SMITH THOMAS

Feeding horses properly is both an art and a science. Sometimes it helps to work with a nutritionist to find out which grains best complement your available forages, to design the best diet for a broodmare, a horse in training, or to resolve a nutritional problem. Burt Staniar, PhD (Assistant Professor, Equine Nutrition, at Virginia Tech) says horsemen need to understand the building blocks of diet. "Not only must we supply proper amounts of certain minerals, and protein a certain horse requires, but also be aware of energy in the diet and how it affects the horse's metabolism."

Feeding a horse is like building a house. You can buy all the lumber and other materials needed, but the house can't build itself. You need the means to put it all together, and energy is the driving force. "We must understand how the way we feed horses affects growth, maintenance and performance," says Staniar.

Horsemen often want to create their own rations, and a good nutritionist can help with this. He or she has the years of training to understand how these materials go together, and how to balance everything and make it come out right. "Many things affect nutrition, such as environment and genetics. Genetics affects a horse's potential for growth or performance, but their environment is also a crucial factor in reaching this potential. Management is a big factor; you must be aware of all the aspects of the environment and how they interact with one another," he says.

"For example, with growing foals, when their pasture begins to decline you may not see it right away. The rough measurements we use, like weighing the animal, may not be enough. By the time we see a change in weight, much has already happened at the molecular level in the body.



With horses, your long term objectives are not just growth and weight, but longevity and athletic performance. You also need to consider physiological status (pregnant mare, growing foal or competing athlete)," he explains.

Karen Davison, PhD (equine nutritionist on staff at Purina Mills) says the only way to see if you are feeding horses correctly is to know everything that's going into them (hay, grain and pasture). "Some people take a blood sample to send off for analysis, to try to find out if they are feeding the horse properly. Blood analysis can be helpful in evaluating the level of a few nutrients, but for most nutrients is not an accurate indication of diet," she says.

"The body does many things to try to keep blood levels within a certain range. For instance, analyzing blood calcium is of no value in determining if diet is adequate in calcium. If it's low, the digestive system becomes very efficient in absorbing what's there, and the kidneys become more efficient in retaining rather than filtering out and excreting calcium from the blood. If the horse still can't manage blood calcium levels, certain hormones kick in and start pulling calcium from the bones," she explains.

Amy Gill, PhD, equine nutritionist at Frankfort, Kentucky, works with various feed companies and for Alltech, Inc. (a company that manufactures ingredients, such as organic selenium and chelated mineral complexes, for feed companies), and also does independent consulting for breeding farms. "Working with a nutritionist can be a help to many horsemen. The marketplace can be very confusing; so much has changed in the horse feed industry in the past 20 years. We've gone from doing our own grinding and mixing on the farm to using technology for having feeds already put together and balanced for a variety of nutrients—available in 50 pound bags. There are also a multitude of supplements," says Gill.

The horseman may want to talk with a nutritionist to make sure a horse's diet is on target. Most horsemen overfeed, and this has led to metabolic syndromes, Cushings, insulin resistant horses and foals and animals prone to obesity and laminitis. So a big push now is away from starchy grains and using more soluble fibers and fats. Gill keeps reminding horsemen they need to focus on forage first—since the horse is a grazing animal.

"For clients (breeding farms and racehorse training facilities) I deal with specific things like growth, exercise and metabolic disorders. Some of the problems are nutrition-related and some are management-based; seeing the management practices helps me make helpful recommendations. Depending on which company's products they like to use, (and it doesn't

matter which) I match the product with the horse's needs, or I can put together a concentrate for them that will balance their forages. In most situations, there's a feed company that carries a product that will work for their purposes—but they need to pick one that's designed specifically for the type or class of horse they are feeding," says Gill.

Stephen Duren, MS, PhD (private equine nutritionist at Weiser, Idaho) travels to horse farms all over the world as a consultant. "Most of my consulting falls into three categories—working with feed companies, horse owners and veterinary clinics. I consult for feed manufacturers who put together commercial products for horses, helping them formulate products that are regionally balanced—nutritionally appropriate for their area. I also consult with large breeding farms in the U.S., Canada, Japan and Australia."

Finding A Nutritionist

Horsemen can find a nutritionist through various avenues, including feed companies. "Though a nutritionist works for a certain company and may recommend those products, they are very qualified people and know what they are talking about. Most nutritionists at these companies keep up with the latest science," says Staniar.

Some companies don't have a well trained horse nutritionist; their expertise may be cattle or swine. Extrapolating from one species to another can lead to problems. If you are going to work with a nutritionist, make sure it's an equine nutritionist. Also make sure the person has a graduate degree in equine nutrition.

If you don't want to work through a feed company, you can find an equine nutritionist through a university animal science program or extension service, says Staniar. You can usually find some of these resources via the telephone or

internet. Depending on how busy that person is, this is often free advice, paid for by your tax dollars. Many of them, however, are busy doing teaching and research and you may not get the details nor follow-up you need.

"The best situation is to find an independent consultant who can come to your farm. You'll probably get your greatest level of help from someone who has been to a lot of farms and has experience in various situations—to evaluate your feeds and pastures, analyze your hay, etc. A nutritionist can evaluate the whole picture. The solution to a nutritional problem, or developing the best diet for a group of horses, is not always simple. It involves evaluation of how the animals are kept, their environment, their status (young and growing, pregnant mares or athletes), what they are fed, etc. We'll take samples of pasture, hay, feeds being fed, sometimes even soil samples, and all those tests must be paid for. It takes time to bring all that data together and come up with recommendations on how the nutrition and management may need to be changed," he says.

Duren adds, "If someone hires me, they hire me as their own. I don't bring a bias of products I want them to use. I evaluate what they are doing and make suggestions, and give an objective overview. They are paying me for that service. The fee depends on time involved—whether I'm working with a few horses or many, and whether it's something that will take a significant amount of time to evaluate." Laboratory fees are charged directly to the farm; these are about \$30 per sample for a forage or grain analysis.

"I wrote a software program to evaluate feeds, and give

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The Nutritionist Is Part Of A Team

The nutritionist needs to be able to look at all factors affecting a horse in terms of growth, reproductive efficiency, athletic performance or health, and investigate everything which affects that animal. "We look at changes of season and how it affects pasture plants, and how that relates to what we need to do to supplement the animals. The nutritionist needs to be a generalist, able to understand all these things, and also able to work with other equine professionals such as veterinarians and farriers. They are coming at it from a different perspective. When you put the knowledge of these people together, you get the bigger picture," says Staniar. If a horse has a certain problem, your veterinarian may advise you to consult with a nutritionist, if the problem is diet related.

Staniar's objective is to work as part of a team (along with veterinarian, farrier and trainer) to help owners attain their goals with their horses. Part of his job at Virginia Tech includes helping train veterinarians, teaching classes on nutrition—since veterinarians don't get more than the bare basics in vet school.

Duren says a team effort between veterinarian and nutritionist can be of great help with a problem horse.

The horse owner often goes first to his vet to ask a nutrition related question, but many vets don't have enough background in nutrition. "We are trying to help today's vet students and let them know there are nutritionists out there to consult. Progressive vets and nutritionists realize there is a professional relationship, that they can work together, and that each has a field of expertise," says Duren. A team effort is very beneficial, like a medical doctor working with a dietician.

Gill explains that diet can be an important factor in managing a horse's health, for a horse who ties up or a horse recovering from illness or surgery. A horse with large colon resection must be fed differently than a horse recovering from small intestine resection. Diet can be the most important management factor for a horse with laminitis or Cushings, or chronic tying up problems. They each need a specific diet. Working with a nutritionist as well as a veterinarian is important to long-term health. If a horse continually ties up, for instance, you need to find out the cause (with the help of your vet) and how to deal with it nutritionally.



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the client a printout—a complete nutrient profile that shows how much of each ingredient is being fed, total amount of those ingredients, nutrient requirements and what the diet is providing, in tabular and graphic form. We make a stall card with feeding instructions for each horse. If I run diets for weanlings, yearlings, pregnant mares, lactating mares, two-year-olds in training, etc., I just charge so much per printout,” says Duren.

“When I’m brought in there’s usually a problem that needs to be resolved. The farm may have DOD (Development Orthopedic Disease) or habitual colic problems or

poor reproductive success or some other problem, and we’re doing more forage analysis. If I actually go to the farm, there’s a day rate fee associated with that, as well,” he says.

Check The Qualifications

Staniar suggests horse owners look at qualifications of the nutritionist whom they consult. “Some people who call themselves nutritionists don’t have training. A veterinarian has a degree in veterinary medicine and must be licensed to practice. A nutritionist doesn’t need a license; anyone can call themselves a nutritionist if they want to. But they need a graduate degree in equine nutrition or animal science. That’s why it’s often safest to go through your vet, feed company or a university to find a good one,” he says.

Taking A Sample For Analysis

It’s very important to have a good sample. A pelleted feed is easy, since the ingredients are well blended. It’s harder to get a representative grain sample, says Davison. “If you take just one handful of a grain mix from one bag, the contents might vary, depending on where in the bag you pulled it out. It’s best to pull a small sample from several bags and combine them to send off for analysis,” she explains.

A hay sample is more difficult. A handful of hay from

one flake may not be an accurate indication. That part of the bale, or the corner of the field it came from, might be weedy or didn’t get as much water or had a different soil type. It’s better to take a sample from several bales, using a hay probe, which you can borrow from your feed company rep or county extension agent. Drill into eight or 10 bales for core samples, and mix them, to have a good representation of that load of hay.