

DRESSAGE, EVENTING, HUNTERS, JUMPERS

VOL. 60

PRACTICAL HORSEMAN

EXTRA

PH'S TRAINER
OF THE YEAR:
LIZ READER

**Expert Advice
on Selecting Hay**

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TRAINER
★ OF THE YEAR ★

PRACTICAL
HORSEMAN

2023

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Hunter/Jumper Trainer Focuses on BASICS BASED IN DRESSAGE

ANETT MINDERMAN PHOTOGRAPHY



Practical Horseman's 2023 Trainer of the Year, Liz Reader, keeps learning fun while instilling the building blocks of correct riding.

As a hunter/jumper trainer, Liz Reader strives to make sure each of her students have the building blocks of riding, which she derives from a background in dressage. But she also works to keep the learning enjoyable. “You have to have the right building blocks,” the hunter/jumper trainer with a background in dressage says. “You have to make sure that all of the basics are there. You have to go back to the basics really often, which, as long as you

make them fun, doesn't have to be boring.”

That philosophy is one of the reasons reader was named the 2023 Practical Horseman Trainer of the Year, along with her outstanding contributions to the equine industry as a trainer and horseperson. Reader runs her training business and horsemanship academy, Pair of Aces Stables, out of the historic Silver Circle Ranch in Reno, Nevada.

The Trainer of the Year award was created to honor the unsung heroes of our sport—trainers who work tirelessly to improve the education of both riders and horses—with a special commemorative gift provided by Nutramax Laboratories Veterinary Sciences, Inc., makers of Cosequin® Joint Health Supplement.

Reader's dedication, positivity and excellence in the art of training and horsemanship has helped her inspire and educate riders for years. To ensure her students are as well-versed in riding as they are horsemanship,

▼ Liz Reader and her own Akeem Foldager at Sierra Nevada Chapter of the California Dressage Society Spring Dressage in 2022.



ANNELISE APPELSETH



GRAND PIX PHOTO

▲ Liz Reader and Famke at HMI Seal of Approval horse show in 2023.

Reader conducts a year-round horsemanship academy to teach the fundamentals to everyone who steps into her stable.

As a rider and competitor herself, Reader has experience in both dressage and hunter/jumpers. She believes that

lessons from both disciplines can be applied to one another to create a more well-rounded education for herself, her students and her horses.

Reader also works as an educator and supporter in her local equestrian community. As president of her local horse show association, she assists all the trainers in the area with their clinics, horse shows and businesses. At a time when many farms and agricultural properties are being developed into housing, Reader remains committed to her horses and the popular historic farm that provides summer camps for children and hosts local horse shows.

Reader's students nominated her by first writing an essay describing why she deserved to be named Practical Horseman's Trainer of the Year. From all the essays entered, 10 semi-finalists were chosen to submit a video highlighting their nominated trainer, and one was chosen as the 2023 Trainer of the Year. Of all the nominees, Reader stood out.

PH What is your training philosophy?

LR It always comes back to looking at things from the whole-horse perspective. I try to make sure that anything we're asking the horse to do is a question that they understand and a question that they physically can do. Then you incrementally increase those things as you go.

It's the same thing with the students and the riders. It's

always going back to those building blocks and making sure that the questions are fun and able to be answered with an appropriate level of challenge. You're always putting the horse first and you're trying to keep things within a learning zone. Pushing them past that comfort zone, not getting into a fear zone ... but always working towards that next step.

PH How do you incorporate your education in both hunters/jumpers and dressage into your training program and why do you think it's important?

LR You don't want your hunter going around in a Grand Prix dressage frame, but you do want them going around in a training frame and you do need them to be truly connected from that hind leg all the way through the topline, stretching down through the neck.

The bascule and everything that's created over the jump comes from that connection and that balance and that subtlety. Being able to have such a strong understanding of dressage really relates to the flatwork and the balance and the symmetry that we work with in the hunters and the jumpers. Their reaction and response time to the aids, both forward and back, and being able to incorporate all of that when I'm training the horse and teaching it to the students is key.

I've got my hunter and my jumper riders. To me, all of them should be more than capable of taking their horse down centerline in a dressage test if they wanted to and doing really well, because they have the basics, they have the balance, they have the straightness, they have a nice, easy connection to their horses' mouths and they've got that relaxation that's so, so important.

PH Is there a certain exercise that you find helpful for your students?



GRAND PIX PHOTO

▲ Liz Reader and California BF at Sonoma Horse Park Spring Classic 1 in 2023.

LR Transitions and half-halts. I don't think you can do enough of them. Truly making sure that students understand how to apply half-halts and that they can do different things for extension and for collection or balance.

I love exercises that have the students doing lots and lots of transitions. From the beginning, having my novice riders really stop at this pole or between these cones and then trot to here. Just working on the application of the aids and the immediate response from the horse.

If you've got those two things and you add a little bit of bend and suppleness, everything else will follow. So I love any type of exercise, level-appropriate, that involves half-halts and transitions.

PH Can you describe the horsemanship academy at Pair of Aces Stables?

LR All of the students enrolled in the lesson-horse program are part of the horsemanship academy, which means that for every mounted lesson they get, they also have an unmounted lesson. Most of my students ride once a week and then come once a week as well to an unmounted lesson where they learn age- and level-appropriate skills.

We currently have adopted the HorseSense Learning Levels program. It's this great curriculum-based program that "the students really know how to safely lead a horse. They truly understand the barn rules. They can fit their own helmets. They can tack up their own horses. They know what the grooming tools are called and what they do." And then you work your way through eventually being able to longe, being

able to appropriately medicate—giving a tube of dewormer—leg wrapping, polo wrapping, the hands-on things that are so easy for the students who don't own their own horses to never truly learn how to do ... so that when they graduate to either owning their own horses or maybe leasing horses or maybe go to college and ride on a team, they have all of those skills and don't suddenly find themselves in a position where they have horses, but they don't know anything about taking care of them and they become so reliant on someone to help them with that.

The kids really need to understand the importance that so much goes into riding these horses. So much work goes into that one, hour-long lesson. Understanding everything behind the scenes gives them so much more compassion for the horse and so much more understanding of what they're trying to accomplish.

PH Did you always know you wanted to be a trainer? Was it always a calling?

LR It was! I always wanted to be a trainer. I was the little kid who grew up [saying], "I want to be a horse trainer!" It's just something that I always wanted to do. I did follow the traditional path—I went to high school, I graduated, I went to college, I graduated, I had a "real" job. Through college, I always trained and did little lessons on the side. After a couple of years of that, it had grown enough to where I could take that step and really run it as my own business. I was able to really mold the dream that I'd always had as a kid into what I wanted, and I have been able to build that as a business over the past 10 years. 🐾

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SELECTING HAY

Demystify that bale of hay to make sure your horse is getting the nutrition he needs.

BY ELAINE PASCE WITH KRISHONA MARTINSON, PHD

How much thought do you give to the hay your horse eats? Maybe you view hay as a munchable snack that keeps him occupied or the salad course alongside his entrée of grain. The fact is that hay may be the most important part of his diet. The type and quality of hay your horse eats can make a big difference in his overall nutrition.

How can you be sure your horse gets what he needs from his hay?

Read on for a five-point primer, assembled with help from Krishona Martinson, PhD, MS, an equine forage researcher and professor at the University of Minnesota. You'll find out how to choose the right hay for your horse.

Equine nutritionists agree that forage, mainly hay and pasture, should make up most if not all of a horse's diet. The fiber in forage keeps his gut working normally, and forage is a major source of nutrients: energy, protein, vitamins and minerals. Beneficial bacteria in the horse's gut ferment forage fiber, breaking down materials like cellulose (the complex carbohydrate that makes up plant cell walls) into glucose and volatile fatty acids that provide fuel for body tissues.

Hay may not provide everything your horse needs, but the more he relies on forage as opposed to grain, the better off he'll be. Any old hay won't do, though. What's right for another horse may not be right for yours.

Focus on Type and Quality

The nutrition provided by hay depends on many factors, Dr. Martinson says. Here are three:

Type: You can feed grass hay, legume hay or a mix of the two types. Less often, certain small grains—oats, wheat, barley—are harvested for horse hay. Legume hays typically provide more protein and calcium than grass or small-grain hays. Sometimes they provide more energy (that is, calories), too. Within the broad categories your choice is likely to be limited by what's available locally. Coastal bermudag-

grass grows well in southern states, for example, but not in colder regions. You're more likely to find cool-season grass hays—timothy, tall fescue, brome grass or orchardgrass—in northern states. Alfalfa is the most widely available legume hay, followed by clover or, less often, lespedeza or birds-foot trefoil.

Maturity: The growth stage of the forage at harvest affects hay quality regardless of type. Hay is easier to digest and more nutritious when it's harvested at the vegetative or pre-bloom stage, before the plants mature, flower and form seeds. Mature plants also make hay less palatable so more is likely to be wasted. With many cool-season grass hays, the first cutting of the season is most likely to contain seed heads, but it's the growth stage of the plants, not the cutting, that most affects quality.

Growing and harvest conditions: Both drought and excessive rain can affect hay quality. Severe drought may increase concentrations of contaminants in some types of hay. Hay that's soaked by rain while curing can lose nutrients and become less palatable.

Pre-bloom alfalfa, properly cured

▲ Forage—mainly hay and pasture—keeps the horse's gut working normally, and it also is a major source of nutrients.

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▲ **ABOVE:** The growing and harvest conditions affect hay quality, especially if there is drought or excessive rain.

▶ **ABOVE RIGHT:** Cool-season grass hay can be soaked to remove some of the non-structural carbohydrates then fed to horses with insulin resistance, equine metabolic syndrome or chronic laminitis.

▶ **RIGHT:** Legume hays, such as alfalfa, typically provide more protein and calcium than grass or small-grain hays.

and stored, probably packs the biggest nutritional punch of any hay—but that doesn't mean your horse should be getting it. He needs hay that fits his individual requirements based on his work level, body condition, stage of life and in some cases health issues. A few examples:

■ A steady diet of all-legume hay may provide more calories, protein and calcium than the average adult horse in light to moderate work requires. Good quality grass hay or a grass-legume blend suits most mature horses.

■ Mares in late pregnancy and lactation can use the extra nutrients provided by top-quality legume hay. So can thin horses that are being brought back to normal weight and aged horses that have trouble maintaining weight.

■ Overweight horses and those who seem to get fat on air will do better on more mature hay. Mature hay has fewer calories so the horse can munch more of it without gaining weight. Most horses easily consume 2 percent of their body



weight in hay daily so a small reduction in calorie content can make a big difference. Your other option is to limit the horse's hay to keep him trim, but limiting hay too much can lead to digestive problems and vices like wood chewing.

■ Mature grass-alfalfa mixed hay may be a good choice for horses with insulin resistance, equine metabolic syndrome or chronic laminitis, Dr. Martinson says. These horses have trouble processing the nonstructural carbohydrates (sugars and starches) in cool-season grasses and grains and they need a special diet. "Legumes and warm-season grasses tend to be lower in nonstructural carbohydrates compared to cool-season grasses," she says. If cool-season grass hay is your only option, you may need to soak it to remove some of the nonstructural carbohydrates.

■ Small-grain hay is useful for horses who suffer from hyperkalemic periodic paralysis, a genetic disorder that affects certain Quarter Horses and causes uncontrolled muscle contractions, weakness and even paralysis. These horses



do better on low-potassium diets, and small-grain hays (especially oat hay) tend to have less potassium than grass or legume hays.

Some kinds of hay pose risks for certain horses. Tall fescue can be infected with an endophyte, a fungus that lives inside the plant, that causes foaling difficulties and lack of milk in broodmares, although it's harmless to other horses. Low-endophyte varieties are available.

Use Your Senses

How can you judge the quality of the hay you're buying? Start with a hands-on inspection, Dr. Martinson suggests. Break open a bale and pull a handful of hay from the middle. It should feel soft and flexible and have a sweet scent. A musty odor suggests mold. Take a close look:

■ Coarse stems and lots of large seed heads (in grass hay) or flowers (in legume hay) show that the hay was cut from mature plants. It may be less palatable, less digestible and provide less nutrition than hay cut when less mature. "Use this hay for horses with low caloric requirements," Dr. Martinson advises.

■ Leafiness is a mark of high quality. Leaves are more digestible than stems and provide more nutrition.

■ A greenish color indicates high levels of a precursor to vitamin A, but color alone isn't a sure indicator of quality. Pale color suggests the hay may have been bleached by the sun and lost some nutrients, but it can still be nourishing.

■ Dark brown or black color suggests the hay was baled with too much



▲ Dark brown or black hay may have been baled with too much moisture and may have molded.

moisture. It may have molded; you may even find a film of black or white mold spores on the leaves. Moldy hay should never be fed.

■ Dusty hay is a health hazard. The dust can inflame the horse's

airways and lead to chronic breathing problems. Dust can also be a sign of mold in hay.

■ Weeds and other foreign materials are tip-offs to poor quality. A few stray weeds always find their way into hay, but they should be the exception—less than 10 percent of the total—and none should be poisonous. Check alfalfa hay carefully for the presence of toxic blister beetles, which can infest alfalfa fields (especially in drought years) and end up, crushed or whole, in baled hay. “Blister beetles are most commonly found in alfalfa hay that has flowered,” Dr. Martinson says.

Your inspection can tell you if the hay is likely to be suitable for your horse. Hay that smells sweet, has good color and texture and contains only the plants it's supposed to contain is probably acceptable. But the only way to know what's really in hay is to ...

Have It Tested

You can find published tables that list

average nutritional values for grass and legume hays. But because hay varies in nutrition depending on where it was grown, when it was cut, how it was handled and other factors, the tables may not accurately reflect the hay you feed. A forage laboratory can analyze hay for basic nutrient content. Find one through your state's cooperative extension service.

Be sure to request an equine analysis, Dr. Martinson advises, since most labs test forage for a range of livestock. A few labs, such as Equi-Analytical in Ithaca, New York, focus on testing horse forage.

Basic testing usually costs about \$20-\$30, and each lot of hay you buy should be tested separately. This isn't a big expense if you buy by the ton. If you buy by the bale, in small quantities, ask your suppliers if they test. “If the supplier is a reputable horse hay supplier, and the horse owner has an established relationship with the hay supplier, then I would rely on the supplier's analysis,” Dr. Martinson says.

If you're arranging the tests, you'll need to gather samples for the lab. The best way is to use a bale probe, a device with a hollow steel tube. Find one online or rent or borrow one through your county extension office or local feed store. There are manual versions and types that attach to a power drill. Push

(or drill) 12 to 18 inches in from the butt end of a square bale so that the probe passes through several flakes and extract your sample. Take samples from at least 10 percent of the bales and mingle them in a sealable plastic bag to send to the lab. If you can't get a probe, grab handfuls of hay from the insides of representative bales.

Basic test results are usually reported in about a week; more detailed analyses may take longer. Values are usually listed in two columns: “As Sampled” (including water) and “Dry Matter” (with moisture removed). “Horse owners should use the dry matter results,” Dr. Martinson says. Here are some important basic measures and the ranges she looks for:

■ Moisture, the amount of water in the hay: 10 to 17 percent. Below 10 percent, hay tends to be brittle and can be dusty; above 18 percent it may mold, and above 25 percent it may ferment.

Fermentation produces heat, which can build to the point of combustion.

■ Equine digestible energy, the energy the horse can get from the hay: 0.76 to 1.0 Mcal per pound of hay for most types. Mcal stands for megacalories, or millions of calories.

■ Crude protein, the protein concentration: 8 to 14 percent in grass hays, 14 to 17 percent in mixed hays and 15 to over 20 percent in legume hays.

■ Acid detergent fiber, hard-to-digest components such as cellulose and lignin: 30 to 35 percent. The lower the ADF, the more digestible the nutrients in the hay are. Hay with ADF above 45 percent may have very little nutritional value.

■ Neutral detergent fiber, a measure of palatability: 40 to 50. Horses may refuse to eat hay with NDF levels above 65.

■ Calcium and phosphorus, essential minerals: varying amounts in different types of hay. A horse's total diet should provide these minerals in a certain ratio. For an adult horse at maintenance, the Ca:P ratio should be between 3:1 and 1:1.



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▲ **ABOVE:** Hay must be stored in a properly protected, well-ventilated place to prevent spoilage and maintain its nutritional value.

◀ **LEFT:** In addition to hay, all horses require supplemental salt to replenish what they lose in sweat.

Council's *Nutrient Requirements of Horses*) or with the help of a qualified equine nutritionist. A nutritionist can be especially helpful for performance, breeding and growing horses and those with health issues. Your county extension office may be able to help you find one, and many feed companies provide this service.

Many types of hay provide enough calories and crude protein to meet the needs of adult horses at maintenance or light work. Even so, hay rarely meets all the needs of any horse. All horses require supplemental salt to replenish what is lost in sweat. Beyond that, even the best hay may be low in certain nutrients, especially minerals. For that reason, Dr. Martinson says, a horse who isn't fed a commercial grain product in amounts recommended on the feed-bag label should get a ration balancer in addition to his hay. Most commercial feed companies make these products, which are formulated to fill vitamin and mineral gaps in grass or legume hays.

Hay alone will lack the calories needed to fuel moderate or hard work. It should still be the basis of the horse's diet, but he'll need concentrates for energy. Commercial concentrates also provide protein, minerals, vitamins and

other essentials so in most cases other supplements aren't needed. Remember to consider the total diet—hay and grain—when you choose feed. If your hay is high in protein, you can complement it with a commercial mix lower in protein. If the hay is low in protein, try a higher protein grain mix.

Stretch Your Dollars

Hay prices have been rising sharply in most areas, and cost has to be part of your hay-choice calculations. When you shop,

■ look for local hay, which can be cheaper than hay shipped from out of state.

■ buy in quantity for the best price. But don't buy more than you can store in a dry, protected and well-ventilated place, or much of it will go to waste.

■ price by weight. The same hay may be priced differently depending on whether it's put up in small square bales, large square bales or round bales, so even if you buy by the bale, calculate the cost per ton. Larger bales are often a better buy but not if you don't have the equipment needed to move and stack them or enough horses to consume them efficiently.

After the hay is delivered, store it properly to prevent spoilage and maintain its nutritional value. A protected, well-ventilated place is essential because dampness and poor air circulation can cause hay to mold. How you stack your bales can help prevent damage, too. Here are three tips:

■ When you stack at ground level, start on a base of wood pallets to keep ground moisture from penetrating the bales. Do this even on a concrete floor so that air can circulate under the stack.

■ Set the bales on their sides so hay stalks run vertically. The air spaces between the stalks will act like tiny chimneys, helping moist air rise out.

■ Don't jam the bales together. Set them close enough for support (a loose stack can topple easily) while still allowing air to move between them. 🐾

Hay can also be analyzed for potassium, magnesium, sodium, iron, zinc, copper and other minerals. And you can get a breakdown of the nonstructural carbohydrates—the sugars and starch. Sugars are reported as ethanol-soluble carbohydrates or water-soluble carbohydrates, depending on how they are extracted. Fructans (plant sugars found in cool-season grasses) are included in WSC. "To estimate nonstructural carbohydrate content, add WSC and starch," Dr. Martinson says. You may pay a little extra for these tests, but they're essential for some horses—for example, those with metabolic problems or the muscle disorder polysaccharide storage myopathy, who need rations low in nonstructural carbs.

Find the Balance

Knowing what's in the hay you feed will help you balance your horse's rations so that he gets the right amounts of energy, protein and minerals. You can do this using published nutritional tables (such as those in the National Research