

Down on the Farm



Forage Alternatives

When hay or pasture just isn't available or appropriate, what are your options?

by **KAREN BRIGGS**

Man may not live by bread alone, but horses can live on forage just fine. As grazing, herbivorous animals they're certainly designed to eat forage (grasses and plants which grow on pastureland).

Forage is more than just a favored feedstuff for horses—it's also essential for their gastrointestinal health. In the wild, horses graze for 14 hours a day or more. So the equine digestive system is designed to process small amounts of fibrous material on a more-or-less constant basis. This is not only the best way for horses to extract the maximum nutrition from the tough grasses and plants they take in, it's the best way to keep the small and large intestine moving material along because the indigestible bits of fiber in the diet

help stimulate contractions in the hindgut. The constant introduction of small amounts of food in the stomach also helps keep acid production there at a reasonable level, cutting down on the risk of gastric ulcers.

Delivering enough forage is easy if you have the luxury of large grassy pastures. Throughout the growing season, your horses can take care of their own forage requirements with little help from you. When drought or winter kills off pasture grasses, though, we generally provide forage in the form of hay. Feeding hay is a tradition that's as old as horse husbandry itself, and for the most part it works very well to satisfy a horse's forage needs.

Hay is not a perfect feed, however. First, it can be difficult to grow and harvest. As a crop, it's hugely weather

dependent—without sufficient time to dry in the field, it will ferment and mold, making it unsafe to feed to horses. Drought or flood conditions can ruin a crop, or make it impossible to get off the field. And other circumstances—such as the extensive forest fires in the western United States a couple of years ago—can play havoc with distribution, leaving horseowners to deal with high hay prices, scarce supplies and extremely variable quality. If you can't manage to purchase enough good-quality hay for your horses' needs, you may find yourself scrambling for an alternative.

There are other reasons to look at hay alternatives, too. Some horses, for example, are allergic to certain hays. If your horse breaks out in hives when you feed him alfalfa, and alfalfa hay is

all that's available in your area, you're going to have to think of some other way to provide him with the forage that he needs. A horse with chronic obstructive pulmonary disease (COPD or 'heaves'), or with small airway disease (common in young racehorses) may not be able to eat any kind of hay because the dust content would aggravate his already-labored breathing.

Geriatric horses may have trouble with hay, both because their digestive efficiency is often compromised by age and they also frequently suffer from dental problems. They may either begin to 'quid' (drop mouthfuls of poorly chewed hay out of the sides of their mouths) or, if they do manage to swallow their poorly masticated mouthfuls, they may run the risk of choking (an obstruction of food material in the esophagus). A feed which is softer and easier to chew is the better choice for many older horses—or for any horse with a dental problem.

At the track, many trainers prefer not to feed hay to their horses before a hard workout or a race because a bellyful of hay helps a horse retain water in his gut—and the total weight of the fiber plus the water can add up to several pounds. Some people feel this weighs the horse down when he's supposed to be performing at maximum speed. In addition, space can be limited at the track, making it difficult to store hundreds of bales of hay. Once again, a hay alternative may be the best solution.

So what are your choices when you're looking for a way to satisfy your horse's need for fiber, and hay and pasture aren't options you can offer?

Haylage

Ensiled hay, or haylage, is high-moisture hay which has been compressed and encased in plastic within hours of harvesting. This creates an anaerobic environment under which bacteria ferment the plant fibers, creating a moist, soft feed most horses enjoy.

In some ways, haylage can be considered a more 'natural' feed for horses than hay. For one thing, its moisture content (which can range upwards of 50 percent) mimics much more closely

the moisture content of growing pasture. And, because haylage is cut and bagged promptly, its nutrient content tends to be more like pasture, too. This is because most of the nutrients in grasses and legumes are contained in the leaves. Dry hay tends to suffer a lot of 'leaf shatter' when it is baled—in other words, the fragile dry leaves tend to crumble and be left in the field, while the stalks get baled. But when haylage is created, more of the leaves make it into the bag, thus preserving those important vitamins and minerals.

Haylage also tends to be much lower in dust than ordinary hay. This makes it an excellent choice for a horse with respiratory allergies. And because it is soft and succulent, it's easier for geriatric horses to chew than regular hay, while its higher nutrient content may help older equines maintain condition better.

The biggest down-side of haylage is that the plastic packaging needs to be handled extremely cautiously. If the plastic is pierced before you are ready to feed the haylage, aerobic bacteria move in along with the oxygen, and begin a secondary fermentation which can spoil the feed and make it unsafe for horses. Mold spores, too, find moist haylage an ideal environment in which to multiply. Haylage should be fed within a day or two of the plastic wrapping being opened—which may make it an unsuitable feed for small operations (particularly in the case of plastic-wrapped round bales which can weigh as much as several hundred pounds). Any haylage which is discovered to have had its wrapping compromised prior to feeding should be discarded.

Because haylage is a high-moisture feed compared to regular hay, it's heavy—almost twice the weight of a comparably sized bale of dry hay. That high moisture content also means that you may have to feed slightly more haylage than hay to provide the same amount of fiber. Many handlers have found, to their surprise, that their horses lose weight when first switched to a haylage diet—until their rations are increased to compensate for the moisture content.

Finally, botulism is a rare, but documented, problem for horses on haylage diets. Researchers believe that because haylage is harvested and bagged within hours, there's an increased risk of small rodents, reptiles or birds being caught up in the forage as it's baled (with sun-cured hay, they have time to make their escape). When dead animals are trapped in the haylage in an anaerobic environment, the botulism bacterium can multiply—and unfortunately, the problem isn't immediately obvious when you open the package. Haylage infected with botulism looks and smells perfectly normal, which is why many veterinarians now recommend vaccinating your herd against the disease ahead of time if you plan to feed haylage.

Hay Cubes and Pellets

If securing a steady supply of good quality hay is a problem, or if storage space is at a premium, processed hay cubes or pellets may be your solution. These products are made from coarsely chopped dry hay which is compressed into cube or pellet shapes. They're easy to handle and store, have a guaranteed nutritional content which usually varies very little from bag to bag, and are very low in dust and fines. They can even be soaked in water to make a soft, easy to chew fiber source for older horses or those with dental problems.

One of the problems with hay cubes is that they often have a high alfalfa content, making their protein content excessive for most adult horses. The reason for this is that alfalfa acts as a natural 'binder' when the cubes are made, helping to keep the chopped fiber sticking together—grass hays such as timothy, in contrast, don't stick together that well.

Hay cubes are favored by many trainers because they tend to be highly digestible and less 'bulky' in the gut than long-stemmed hay. But that very digestibility, and the ease with which they are chewed and swallowed, can also be a potential problem. Horses who are fed exclusively on hay cubes

Continued on next page

DOWN ON THE FARM Cont.

rather than regular hay tend to find themselves with an unsatisfied grazing urge, which may result in chewed lumber, a lot of consumed bedding, or even vices like cribbing or stall walking. Horses who tend to bolt their feed may also be at increased risk of choke when fed hay cubes (though soaking the cubes in water for about 10 minutes before feeding tends to slow these characters down somewhat).

Beet Pulp

Beet pulp is the fibrous material left over after the sugar is extracted from sugar beets. It's an excellent source of digestible fiber, with both a relatively low crude protein content (averaging eight to 10 percent), comparable to good quality grass hay, and a digestible energy level somewhere in-between that of hay and grain. Because it's usually fed after having been soaked in water, it's a succulent feed which can help boost a horse's water intake.

In terms of nutrient content, beet

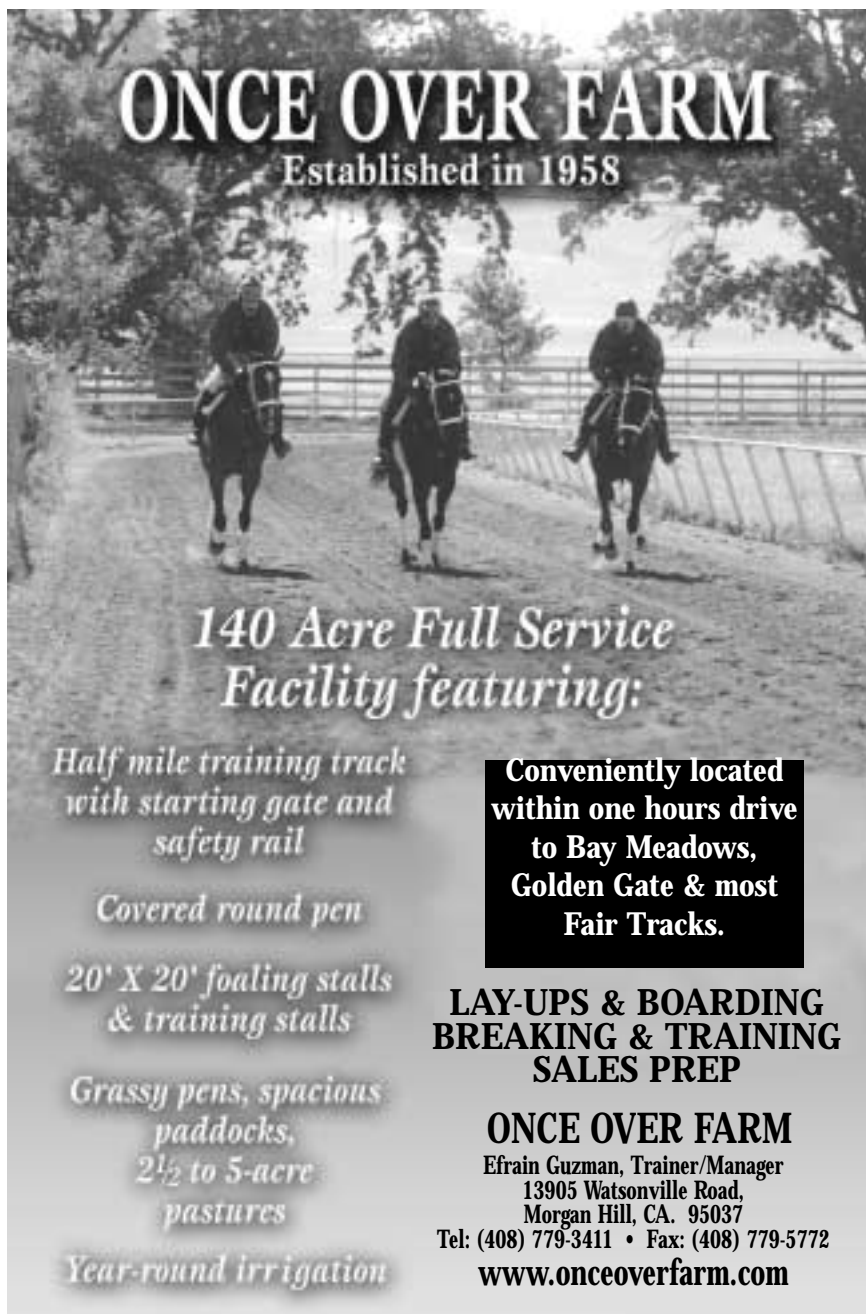
pulp is not a stand-out. It contains fairly high levels of calcium, relatively little phosphorus and no significant quantities of vitamins or other minerals. Because of this, it's not really an adequate 100 percent substitute for forage (unless you also feed a vitamin/mineral mix to compensate), but it can serve as a soft, easily digestible supplement to your horse's fiber intake. And, as it's very low in dust, it can be a very useful feed for horses with respiratory allergies. (In fact, most feeds formulated for high-performance horses or racehorses with bleeding problems contain a high proportion of beet pulp.)

Consider feeding beet pulp if your horse is a stressed-out 'hard keeper', if he has dental problems that make chewing hay difficult, if the quality of your hay is poor, or if you have a geriatric equine who has trouble chewing or digesting hay or pasture. Beet pulp's excellent digestibility also makes it a great choice for a convalescing horse—one recovering from illness or surgery, for example.

Because most people prefer to soak beet pulp before feeding it, however, it is a high-maintenance feed. In hot weather, soaked beet pulp tends to ferment, significantly changing its odor and flavor—so it's best to make it up in small batches, just enough to feed in a single day. Not everyone is prepared to fuss with this feed, but those who do find it a valuable addition to the diet, especially when hay is expensive or scarce.

In some regions, other by-products of the human food industry have also served as fiber sources for horses—almond hulls, for example, are sometimes available in California, and citrus pulp in Florida and Central America. These products tend to be similar to beet pulp in terms of digestibility and nutrient content, but are regional in availability, which means you may have difficulty securing a steady supply.

As with any feeding decision, it's up to you to weigh the pros and cons when you're considering feeding your horses something other than pasture or hay. There are lots of choices available, but only you can determine what's going to be most appropriate for your animals.



ONCE OVER FARM
Established in 1958

140 Acre Full Service Facility featuring:

- Half mile training track with starting gate and safety rail*
- Covered round pen*
- 20' X 20' foaling stalls & training stalls*
- Grassy pens, spacious paddocks, 2½ to 5-acre pastures*
- Year-round irrigation*

Conveniently located within one hours drive to Bay Meadows, Golden Gate & most Fair Tracks.

**LAY-UPS & BOARDING
BREAKING & TRAINING
SALES PREP**

ONCE OVER FARM
Efrain Guzman, Trainer/Manager
13905 Watsonville Road,
Morgan Hill, CA. 95037
Tel: (408) 779-3411 • Fax: (408) 779-5772
www.onceoverfarm.com