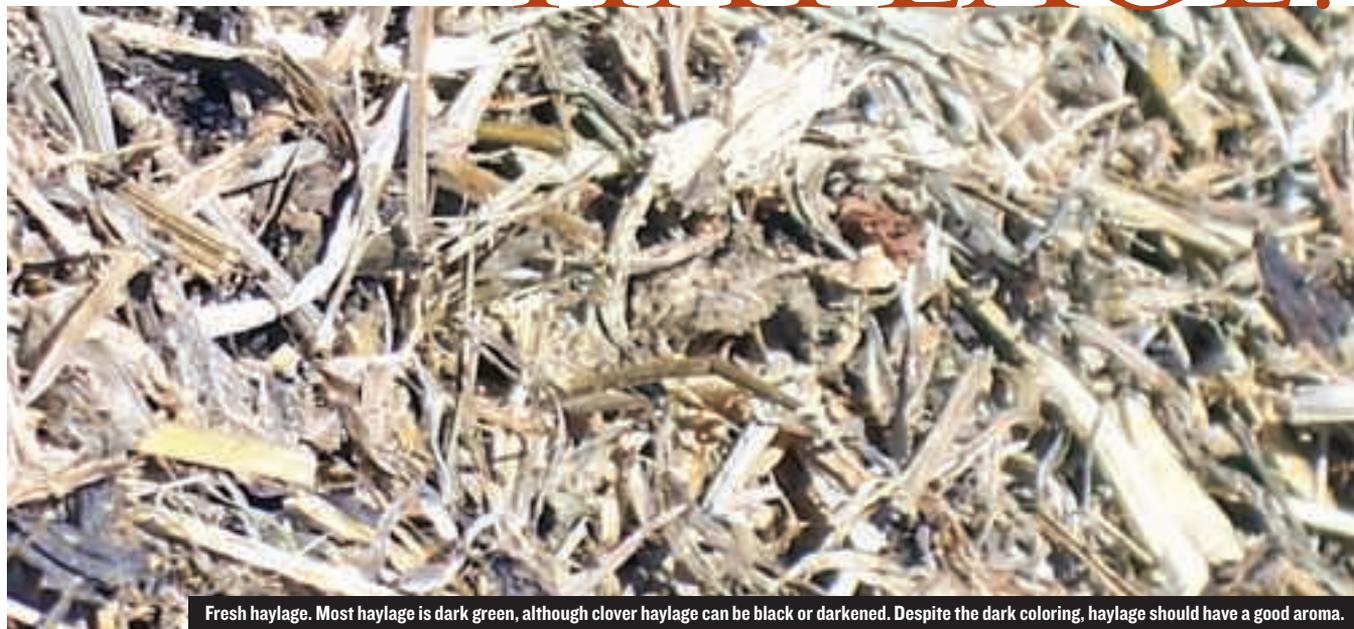


Have You Heard of HAYLAGE?



Fresh haylage. Most haylage is dark green, although clover haylage can be black or darkened. Despite the dark coloring, haylage should have a good aroma.

It can be a safe and nutritional alternative to feeding hay.

Article and photos by Ashley Haffey

AN AROMATIC SMELL HIT MY NOSE AS A DARK-GREEN CLUMP OF fermented grass fell out of the plastic casing. What is this stuff that the barn staff is feeding to the horses? Is it safe? Is it more nutritious than hay?

Haylage is a fermented forage product made out of legumes (such as alfalfa) or grass hays (timothy and brome) that is bagged or wrapped in plastic while it is still moist to facilitate anaerobic fermentation.

“The goal is to seal the product so it can ferment under anaerobic conditions,” says Burt Staniar, assistant professor of equine science at Penn State University. “This ensiling process produces lactic acid, which lowers the pH inside the bale. Once the pH drops below 4.5, the bale becomes anaerobic and harmful bacteria can no longer persist.”

This critical step in the haylage-making process is one reason many horse owners choose not to feed haylage.

“If haylage is fed before it’s been properly prepared, the animal is at risk from pathogens,” explains Lori Warren, equine nutritionist and assistant professor at the University of Florida. She cites a case where more than 100 mares died due to botulism poisoning, which was attributed to contaminated haylage.

Benefits

HOWEVER, THERE ARE MANY BENEFITS TO FEEDING HAYLAGE:

- “It offers a higher nutrient content than hay, which is

useful for horses under high levels of exercise,” Burt says. But to have the high energy content, the forages have to be harvested early, says Sara Muhonen, who specializes in nutrition at the AgroSup Dijon laboratory in France.

- Feeding haylage allows you to cut back on feeding concentrates and yet still provide enough energy for a horse to perform at an athletic level.
- Horses like haylage because it is palatable and easy to digest.
- Haylage is also an excellent forage source for horses with heaves because the higher moisture content reduces dust.
- Because the bacteria in the ensiling process use soluble carbohydrates (such as sugar, starch and fructans), haylage can have a lower nonstructural carbohydrate content than



Haylage can be stored outside as long as the plastic wrapping is not disturbed or harmed.

WEIGHTS AND MEASURES

Because of its moisture content, you need to feed a greater weight of haylage than hay.

“The nutrients are not in the water, they are in the dry matter of the feed,” says University of Florida nutritionist Lori Warren. “So we have to account for water weight.”

If you feed your horse 25 pounds of 10 percent moisture hay, 2.5 pounds is water and 22.5 pounds is dry matter.

Second, figure out how much haylage to feed based on the haylage moisture content. If the haylage is 40 percent moisture and your horse requires 22.5 pounds of dry matter, divide the 22.5 pounds by 0.40 and you get 56 pounds of haylage.

The numbers will change based on the amount of dry matter you want to feed your horse and the moisture content of the haylage you buy.

Feeding round bales of haylage might be an alternative if you have a large herd. Remember, the haylage must be consumed within two to three days after being opened.

Lori estimates that a round bale of haylage would equal 2,000 pounds. Using the same horse needing 56 pounds of haylage, it would take one horse 35 days to eat one round bale, but it would only take two to three days for 10-15 horses to finish the bale.

forage preserved as hay, which might be useful for horses that are sensitive to metabolic or lameness problems, Lori says.

Haylage vs. Silage

DAIRY FARMS FEED CATTLE CORN SILAGE. SO WHAT IS THE difference between silage and haylage?

Moisture content, Burt says. Haylage and silage both are fermented under anaerobic conditions and they contain more moisture than hay (which is usually 10-18 percent moisture). Of the two, however, haylage has a lower moisture content (40 to 55 percent), while silage is usually 50 to 75 percent moisture.

“For horses, it is better to feed the lower moisture content (40-50 percent) as opposed to the 60-65 percent moisture content,” Burt says.

The higher moisture content results in a more robust fermentation process, which decreases the palatability of the forage product.

Harvesting, baling and packaging haylage has its advantages for forage producers.

“Haylage can be harvested with a higher moisture content than (baled) hay, which means you can harvest and package that forage in one or two days,” Burt says.

In some parts of the country, it is difficult to find a three-to four-day window of clear, sunny weather to properly dry out and bale hay. So producing or purchasing haylage might be a cost-effective alternative for horse owners in the rainy Northeast, Pacific Northwest or Florida.

Keys to Good Haylage

THE EXPERTS WE VISITED WITH RECOMMEND ONLY BUYING haylage from an experienced producer.

“One of the most critical stages is packaging the haylage,” Burt says. “After the haylage is baled, you have only two to six hours to seal the product. If you wait longer than six hours, too much aerobic process occurs.”

If aerobic fermentation is excessive, the temperature and

the risk of internal combustion in the bale increases.

After packaging, you need to prevent oxygen from getting into the bale and causing mold. Even a small hole in the plastic wrapping can be a source of oxygen.

“Mold will form (within hours) once the anaerobic seal on the package is disturbed,” Lori says. “These molds produce mycotoxins that have harmful effects on horses.”

If you find any holes, even if they are tiny pinpricks, discard the bale. Also, to reduce the risk of spoilage, haylage for horses needs one or two more plastic wraps than for cattle to make sure the bale is sealed.

And once you open a bale, you have only a certain amount of time to feed it because it is once again exposed to aerobic fermentation, Burt explains.

“Plan to feed a bale in two to three days,” he adds. “If you can’t feed an entire bale in that amount of time, then don’t feed it.”

Botulism is another threat, and something your horses should be vaccinated for. The *Clostridium botulinum* bacterium grows in moist conditions and is more prevalent in rainy years. The key to avoiding this deadly bacterium is to prevent it from occurring. If haylage is made properly, the bacteria cannot persist under anaerobic fermentation when the pH drops below 4.5.

Botulism can also contaminate the soil that produces haylage or infect small animal carcasses baled into the forage. You can reduce contamination if you cut the forage at a higher height so that soil is not incorporated into the product.

“If I open a bale and find a mouse or an animal bone, I won’t feed that bale,” Burt says.

Buying Haylage

HAYLAGES CAN BE PACKAGED AS LARGE ROUND BALES KNOWN AS “baleage” or as small square bales. Either way, the bales can be stored outside as long as the risk of damage to the plastic is minimized.

Although less commonly available, feeding haylage in small square bales is a convenient alternative for most horse owners. In Europe, haylage square bales are often delivered in pallets. Square bales are easier to transport because they frequently have baling twine underneath the plastic wrapping.

Burt suggests purchasing haylage from a dairy farmer, but he recommends that you make sure that you and the dairy farmer have the same understanding of the definition of haylage:

- Make sure the haylage is 40-55 percent moisture.
- Tell the producer that you will be feeding the haylage to horses, explain the risk of botulism and discuss alternatives to minimize risk, such as cutting the grass at a higher height.
- Discuss the amount of plastic wrap that will be put on the bales (two extra layers if it’s going to be fed to horses) and how soon the bales will be wrapped (two to six hours after cutting).
- Inspect stored bales and look at the product. Some types of haylage may be black or darkened, but the product should always have a good aroma.

Although there are some definite pros and cons to feeding haylage, it may be the right product for you and your horse. Produced, stored and fed properly, haylage can be a safe and nutritious alternative to feeding hay. 🐾

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