

FORAGE: HAY

The Nutritional Foundation for Horses



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THE BASIS OF HEALTHY HORSE FEEDING

Hay is the essential fiber-rich feed for horses and cannot be substituted by any other feed.

Hay suitable for horses must be stalky and firm. Proper horse-appropriate hay is only produced by a late first cut (from June). However, excessive fertilization of fields, particularly in spring, has significantly altered the composition and energy content of modern hay. Stalky grass varieties, which are particularly beneficial for horses, are often replaced by sugar-rich, leafy grasses.

Dandelions growing in hay meadows are an indicator of high nitrogen levels, as are leafy grasses and clovers. Additionally, many hay meadows are cut so early that herbs have not yet fully flowered. This allows leafy grasses and clovers to dominate, reducing the variety of herbs in the hay and increasing its protein and sugar content.



QUALITY RISKS WITH HORSE HAY

The Right Time to Cut

The nutritional value of hay depends not only on its botanical composition but also significantly on the timing of the cut and the preservation method. Every preservation process results in some loss of nutritional value; in hay, this loss can range from 20–50% compared to fresh forage. Cutting too late or poor drying conditions increase crude fiber content while decreasing nutrient levels. The ideal time to cut is at the beginning of the flowering period of the main grasses. Cutting too early is inadvisable, as after flowering, crude fiber increases, while protein, energy content, and digestibility decline.

Minimizing Crumbling Losses

Most nutrients—about two-thirds—are found in the leaves, flowers, and seeds of plants. Gentle handling during the hay harvest is crucial to prevent crumbling, particularly of the nutrient-rich leaves. Adjusting harvesting equipment properly helps minimize crumbling losses, ensuring a better nutrient supply for feeding.

Avoid Toxic Plants in Hay!

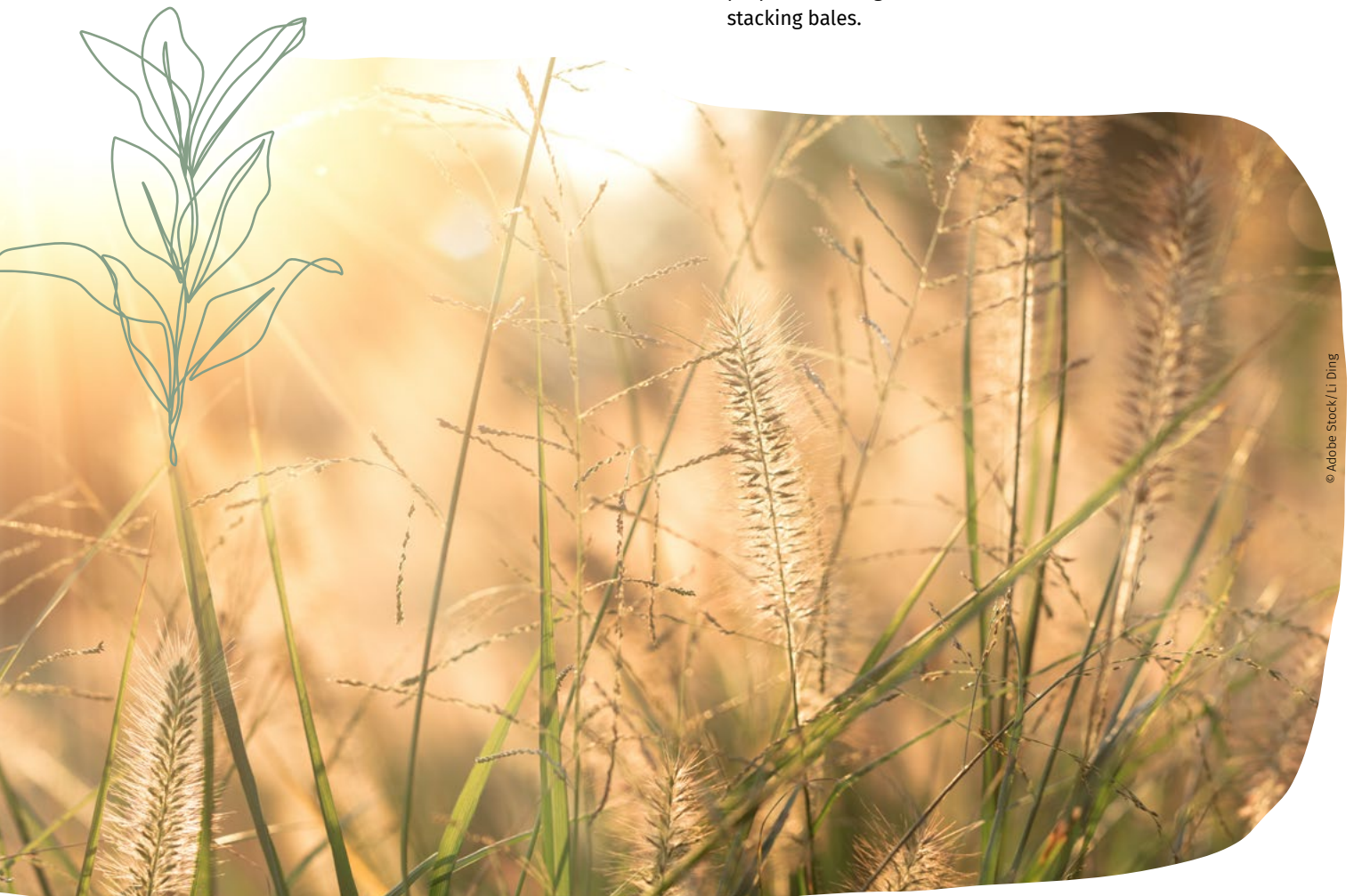
Plants such as marsh horsetail, hoary alyssum, autumn crocus, adonis roses, ragwort, and bracken must be excluded from hay meadows, as they remain toxic to horses even when dried. However, buttercups lose their toxicity within the first eight weeks after harvest during the hay's 'sweating phase.'

Low Levels of Impurities

Hay should be free of impurities like stones or soil. Soil contamination, particularly from root bulbs, can create dust during feeding and trigger coughing. Harvesting tools should be adjusted to avoid damaging the turf.

Hay should only be harvested once it has dried to a moisture content of over 85%. The 8 to 12-week 'sweating phase' must be observed, as it enhances flavor, digestibility, and bacterial density while breaking down toxins like those in buttercup plants. Proper storage during this phase reduces the risk of digestive disorders and laminitis.

During the sweating phase, germination dormancy in seeds occurs only after reaching a water content of 10–15%. To facilitate this process, hay must be loosely stored to allow proper 'sweating'. This should be taken into account when stacking bales.



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Caution with Mould!

A musty smell, heavy dust formation, compressed layers in the hay, or whitish spots are clear indicators of mould infestation. Poor or mouldy hay promotes allergic reactions and chronic respiratory diseases, suppresses appetite, and slows digestion, potentially leading to severe health issues like colic. Additionally, mouldy hay can cause abortions in pregnant mares.

Low Clover Content

High clover content in hay can result in excessive urination, ammonia-scented feces, and horses that smell of urine. Good-quality horse hay should consist of stalky stems and a diverse range of plant types. Hay with a high leaf-to-stem ratio contains more protein and sugar but less crude fiber, making it unsuitable for horses.

Use of Weathered Hay

Hay that becomes wet from dew or rain during the drying phase loses soluble carbohydrates and minerals, with greater losses occurring the drier the hay was beforehand. However, this can be used therapeutically: for horses prone to weight gain, laminitis, or sweet itch, weathered hay that was thoroughly dried can serve as excellent forage, providing high fiber and low sugar content. In such cases, the horse's mineral needs must be met with appropriate supplementation.

Avoid Drying with Hot Air

Drying hay with hot air diminishes its nutritional value, altering vitamins and proteins so they become less bioavailable. This can also trigger allergies. Over-drying may impart a burnt smell, making the hay unpalatable to horses. Conversely, drying with dehumidified warm air can produce excellent, mould-free hay, particularly useful in rainy areas where normal hay production is a challenge.

FEED HAY CORRECTLY

Always Provide Plenty of Hay

Horses eating hay freely, consume an average of 2–3% of their body weight daily. The amount eaten correlates with the crude fiber content: the higher the fiber content and lower the nutritional value, the more hay horses will consume. As a rule of thumb, offer 1.5–3 kg of hay per 100 kg of body weight, with ad libitum feeding (until satiated) being optimal. Some horses may eat up to 25 kg of hay daily, depending on its quality and their workload. Inadequate hay feeding is a common cause of recurrent colic and metabolic issues like gastric ulcers. Thanks to its fiber content, hay regulates the colon, balances the intestinal microbiome to produce sufficient B vitamins and vitamin K, and supports a stable mineral balance.

Avoid Empty Periods

Forced fastening—times when hay is not available—can promote the development of stomach ulcers, cause stress, and lead to deterioration of the hindgut microbiome.

Using Slowfeeders

Feeding from hay nets slows down eating speed and prevents horses from mixing large amounts of hay with manure or bedding. However, caution is required with shod horses. Some may paw at the hay out of greed, risking entanglement in the metal shanks of their horseshoes. For safety, horses with metal shoes should initially be supervised when eating from hay nets until they adapt to this controlled feeding method.

Hay nets should be hung low to allow horses to eat in a natural feeding position. For large groups, hay nets for round bales, which can be pulled over the bales, are a practical option.

HOW DO YOU RECOGNISE GOOD HAY?

Hay suitable for horses should have a fresh, pleasant smell and a greenish color. It must not have a musty odor.



Hay Pellets and Grass Pellets Only for Dental Problems

Hay pellets and grass pellets are a good source of forage for older horses with dental issues that prevent them from chewing hay, provided the cobs are thoroughly soaked. However, they are less suitable for healthy horses, as they do not require sufficient chewing. They reduce tooth wear, saliva production, and chewing activity, all essential for normal digestion and dental health.

Avoid Chaff

Short forage components like chaff are counterproductive. Like concentrated feed in general, they are not chewed sufficiently. Their fiber length of 1–3 cm slows intestinal passage, allowing fermentation in the hindgut for up to a week. This causes improper fermentation and places a significant burden on the metabolism. Chaff is not a healthy horse feed!

Foliage and Reed Hay

Foliage is an excellent supplement to regular hay, particularly in winter. It is rich in bioavailable minerals, helping to compensate for deficiencies in standard hay. However, foliage is challenging to obtain, as many farmers consider it waste and avoid collecting it.

Reed hay, while often avoided by horse owners because horses may not find it palatable, is an extremely healthy source of forage. It is very low in protein and sugar and requires thorough, prolonged chewing, promoting optimal tooth wear.

Tip: Storage with Hayvlies

Many farmers and stable managers cite lack of storage capacity as the reason for opting for haylage wrapped in plastic film for outdoor storage. A simple and cost-effective solution is the use of Hayvlies—a fabric designed for hay storage.

When hay is stacked as a pyramid and covered in Hayvlies, the sloping edges allow water to run off. If water penetrates the material, it can evaporate during subsequent dry days. Unlike tarpaulin, which traps condensation and promotes mold formation, Hayvlies prevents this issue.

To protect the hay from below, a double layer of pallets can create an air gap, preventing bales from becoming moldy due to ground moisture. Hayvlies provides a practical, mold-free storage solution for hay outdoors, offering a cost-effective alternative to building a barn or erecting a weatherproof hay tent.

No healthy horse without hay!