

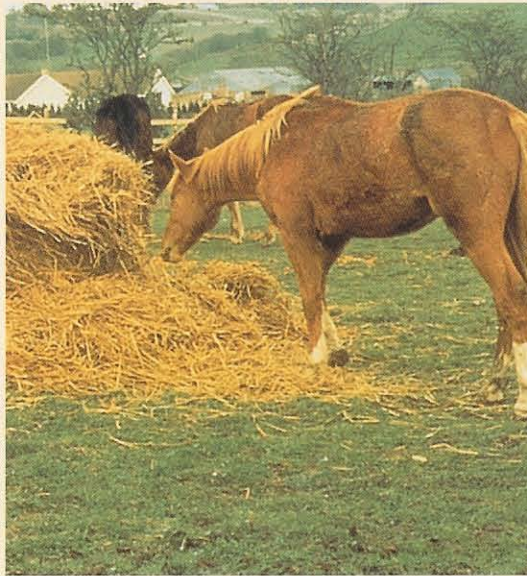
FERMENTED FORAGES

Grass silage and haylage are produced by the controlled fermentation of cut grass. To control the fermentation process you must achieve and maintain anaerobic (oxygen-free) conditions. The nutritional quality of the haylage will depend on the:

- Plant species present.
- Stage of growth of the grass.
- Wilting time/moisture level.
- Microbial activity during storage.
- Degree of compression during packaging.

The micro-organisms which are present on fresh grass are replaced by anaerobic bacteria and yeast as air is excluded in the silo, or the bale is wrapped and compressed. (Anaerobic means they can survive without oxygen). Lactic acid bacteria proliferate and ferment the sugars in the crop to organic acids like lactic acid and the pH drops (acidity increases).

At a certain critical pH, which varies according to moisture content and sugar level, the acids inhibit the growth of undesirable bacteria and microbial activity ceases. At this point the material remains stable unless air is let in (for example, the bale is accidentally punctured). Failure to achieve a stable pH may result in the proliferation of undesirable micro-organisms such as Clostridia, especially where there is a high water content as in silage.



THE DIFFERENCE BETWEEN SILAGE AND HAYLAGE.

SILAGE	HAYLAGE
Harvested when grass is young	Harvested when grass is more mature
Cut close to ground	Cut 1-2 inches above ground to prevent soil contamination
Allowed to wilt and dried for a short while to a moisture level of 70 - 80%	Wilted and dried to a moisture level of 30 - 50%
Chopped and stored undercover in clamp or silo and packed until air tight. Occasionally baled.	Baled in round/oblong bales which are compressed and double wrapped with air-tight polythene

USING HAYLAGE FOR EQUINES

- Once you have opened a bale use within 5-7 days or before mould develops.
- Discard if bales are punctured, hot, torn or "sweaty" on opening.
- Reject bales which are mouldy or "blown", and those which smell very vinegary or rancid.
- Check that your haylage has been made specifically for equine use and that each bale is double wrapped.
- Avoid feeding haylage which has many dense patches of white yeast
- Reject if large amounts of soil are present in the haylage. Soil contamination may introduce undesirable micro-organisms in to the gut which can lead to digestive upsets.
- Discard if dead or decomposing animals are found in the bale.

Please Note:

Horses on a low forage intake may become deficient in fibre and potassium if hay is replaced weight for weight with haylage because of the higher water content in baylage. It is very important to ensure adequate fibre is provided, and you may need to feed up to 50% more baylage than you would hay to meet your horse's fibre requirements. For example, if you were feeding 10lbs of hay to your horse you may need to feed up to 15lbs of baylage to maintain a similar fibre intake. On commercially produced baylages, the nutrient values are usually declared on a dry matter basis. Do remember that on an "as fed" basis these values will be "diluted" by the natural water content of baylage.

For dietary advice on any horse or pony contact the **Dodson & Horrell HELPLINE on 01933 624221**
Fax: 01933 625461

This is one leaflet in a series of useful guides for the horse owner. Other topics include: COPD, Old Horse, Developmental Orthopaedic Disease, Exertional Rhabdomyolysis (Tying Up), General Feeding, Mare and Foal, Feeding Forage, Product Information.

Contact Dodson & Horrell if you would like any other leaflets.



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