

Drought Feeding

Alternative Hays

by Dr John Kohnke BVSc RDA

The current drought has been building up over the past 5-7 years in many areas, depleting stores of grain and hay and increasing prices due to short supply and high demand. It is widely predicted that chaff will increase by \$10-\$12/bag and hay to \$25 per square bale by early 2007 in many areas. Although grain supplies have dwindled with a high demand from other livestock industries, there are still a wide range of pelleted and other prepared feeds to supply energy, protein and other nutrients available, usually at an increased cost as ingredients are generally more expensive.

Hay is in Short Supply

Roughage as chaff and particularly hay is in short supply and almost unattainable in some areas. Large produce stores often secure supplies but smaller feed stores may have rationed hay to supply their regular customers. Silage and haylage is also available in some areas but care must be taken when feeding these cured feeds to horses due to the risk of spoilage during curing and botulism poisoning. Consult your own vet for advice before feeding these feeds.

Horses have a daily need for at least 1% of their bodyweight of roughage to maintain their hindgut microbial fermentation of fibre and optimum digestive function, water storage and uptake of many nutrients including natural B group vitamin synthesis.

Luckily, horses are able to adapt to a large variety of roughages as a source of cellulose fibre, provided they are palatable and do not contain toxic compounds. **Note: It is best to try to avoid letting horses lose too much weight as it takes less feed to maintain a horse in reasonable condition, than to try to regain condition after it has lost condition, especially in aged horses.**

Hay should have a high leaf to stem ratio, with early cut lucerne hay having less than 25% flowering heads, be free of mould, contamination with weeds or foreign matter and dampened before feeding to reduce dust, waste and help improve the palatability of coarse, more fibrous hay.

Dry hay is a source of dust and airborne moulds that can be inhaled as a horse eats. It's more easily pulled apart and wasted, with up to 50% of dry hay dropped as it is eaten. A simple way is to place a biscuit or allocated portion into a polywoven chaff bag and spray it with 1-2 litres of clean water over the narrow (cut ends) edge so that the water soaks down through the hay. Hang above ground as it soaks and drains for 10-15 minutes and then feed it out – damp hay is non-dusty and less is wasted. You can prepare hay in the morning for the evening feed and vice-versa, but don't let it remain damp for more than 12 hours. Wastage of hay, and saving in feed, can be reduced to 5% when hay is dampened and fed in a trough or bin.

Stored Hay

Supplies of new season's and irrigated hay are limited but shedded or stored hay is still available in some areas. Loss of Vitamin A and E, the two vitamins that must be supplied in the diet (vitamin A as carotenes) occurs during storage, with over 80% depletion of Vitamin A activity over 6 months of storage, and 70% of the vitamin E content under summer conditions. Working horses may require a daily supplement of these and other vitamins to maintain health, performance and vitality.

Handy Hint

Make-up Nutrient Shortfalls

A supplement of trace-minerals and vitamins, such as provided by the Kohnke's Own range of products, including **Cell-Vital** (working horses), **Cell-Provide** (lightly worked horses, aged horses, miniatures) and **Cell-Grow** (growing and breeding horses) will help to make up shortfalls of micro-nutrients at an affordable price.

Hay that is bleached with colour loss, may have lost carotene content (precursor of vitamin A) but normally still retains other micronutrients, provided these have not been leached out by paddock rain prior to storage.

Feeding New Season's Hay

If freshly cured lucerne and oaten hay is available, ideally it should be stored for 2-3 weeks to allow volatile nitrogen compounds to dissipate before it is fed to horses. These compounds can irritate the intestinal lining, leading to loose droppings.

Improving Feeding Efficiency

Hay and chaff can be wasted as horses eat. Ensure the horse's teeth are in good condition, it has been wormed out and the hay is dampened to reduce leaf loss and improve its palatability. Refer to Factsheet 21.

Feeding out Round Bales

Although large round bales (150-175kg) are less expensive per kilogram of hay than traditional square bales (25kg), it is wasteful to allow horses to self select hay from a round bale – it is better to portion out each day's supply of hay, checking for mould, animal matter, stones then dampen and feed the hay in a bin or trough.

Note: Large bales have a higher risk of botulism from decaying animal matter – thoroughly check by teasing the hay portions apart and look for dead animal matter (feathers, hair, skin, bone etc) and a 'rotten' odour before feeding to horses.

Be Aware of Sand Accumulation

Horses grazing short pastures, or eating hay off the ground in sandy holding yards, can ingest significant amounts of sand that may accumulate in the caecum and large intestine. 'Hoovering' type, hungry or fossicking horses confined to small paddocks or yards are most likely to be affected, including horses harbouring large populations of 'resting' larval stages of small strongyles (small redworm) in the hindgut that slow bowel motility, resulting in higher risk of sand retention.

Monitoring Sand Ingestion

Are you concerned that your horse may be eating sand? Check the water trough or tub to see if sand is being washed out as a horse drinks. Horses that graze continuously and nibbling on short grass or fossicking for food morsels may take in excess sand. Fine, beach-like sand mixes with mucus in the large bowel and can accumulate to eventually partially block the bowel. The weight of the sand can also reduce blood perfusion in the gut lining, leading to severe colic. Collect about 5 balls of fresh manure – place in a bucket, add 1 litre of water, mix with a stick to wash out the sand. Any more than 1 teaspoon of settled sand indicates excess sand ingestion as a horse feeds, especially if it is fine, beach-like sand. Consult your vet for advice.

Handy Hint

A thorough check by your vet, and feeding a prescribed course of psyllium husk in the feed (70-100g/100kg bodyweight) on 2 consecutive days once a month will help offload sand from the hindgut. Smaller dose rates of psyllium are not effective. Regularly worm out every 4-6 weeks to control Small Strongyle worms. Consult your vet for advice.

Check for Mould

It is important to check hay and even grains for mould. The incidence of moulds (fungi) in feeds has increased worldwide, and under drought conditions, when growing plants are stressed by lack of water, mould can colonise grains and stems of hay. Check for 'fumey', discoloured (often black) and a 'mouldy', sour odour – always examine hay in good light, not at night when feeding out. Mycotoxin compounds produced by mould can cause colic, abortion, depression, airway disease and affect athletic performance, as well as severe debilitation and death.

As silos empty out, condensation on the metal walls increases the risk of mould growth. A test for mould and mycotoxins in grain, chaff and hay can be carried out by Agrifood Technology, Werribee, Victoria, phone (03) 9742 0555 or website www.agrifood.com. Keep feed bins and water vessels clean – molasses residues encourage mould growth.

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