

## LOSS OF APPETITE©

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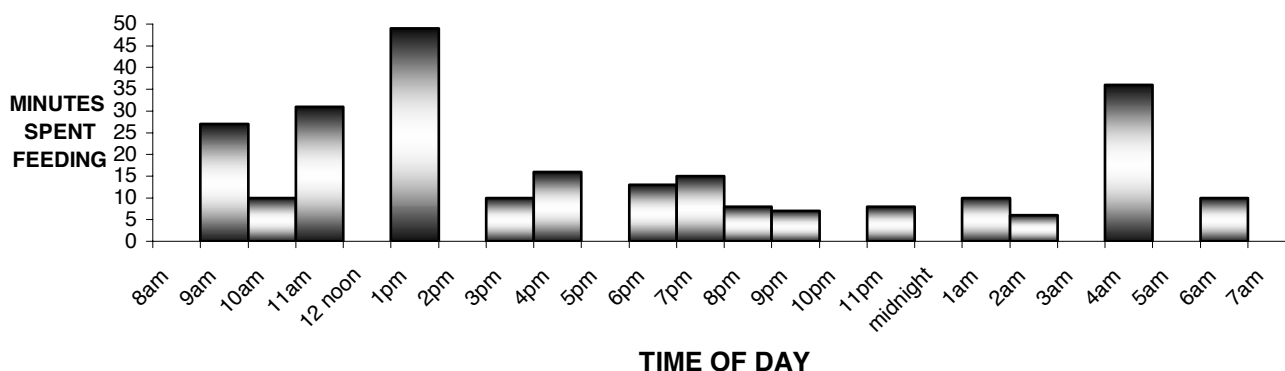
The primary purpose of eating is to meet energy requirements to survive and horses vary intake in response to energy density. When grain was diluted with sawdust (indigestible fibre) ponies increased their intake, when the sawdust was removed, intake decreased. These intake changes occurred over a couple of days, indicating that horses did not detect the change in caloric intake on the basis of taste, but in response to a signal from general body energy stores.

The senses of taste and smell combine – as they do in us. Once a horse becomes accustomed to one particular type of feed they will often choose this in preference to newly introduced feeds. When the preferences of horses for grains are measured, they prefer oats and corn to other grains and mixed sweetened grains most of all. Other factors affecting preference include temperature, appearance, texture and any sound the feed makes when being prepared or during eating. Taste preferences and palatability are also affected by the physical nature and smell of the food. Whole oats and cottonseed are consumed more readily if first passed through a hammer mill and mixed with molasses.

Many horses show a preference for sugar and phosphorus – similar to our general liking of sugar, fat and salt. Palatable flavourings can promote feed intake through taste receptors located in the oral cavity. Certain flavourings added to the diet of lactating sows increase piglet milk consumption. Horses show a predilection for a range of flavours, including apple, carrot, raisins, molasses, dark brown sugar, licorice, strawberry, kiwi fruit, grape, tropical punch, banana, vanilla, peppermint, cinnamon, corn syrup, honey, fresh grass, cider vinegar, sprouted grains, aniseed, yucca, garlic, salt, chocolate and sugar.

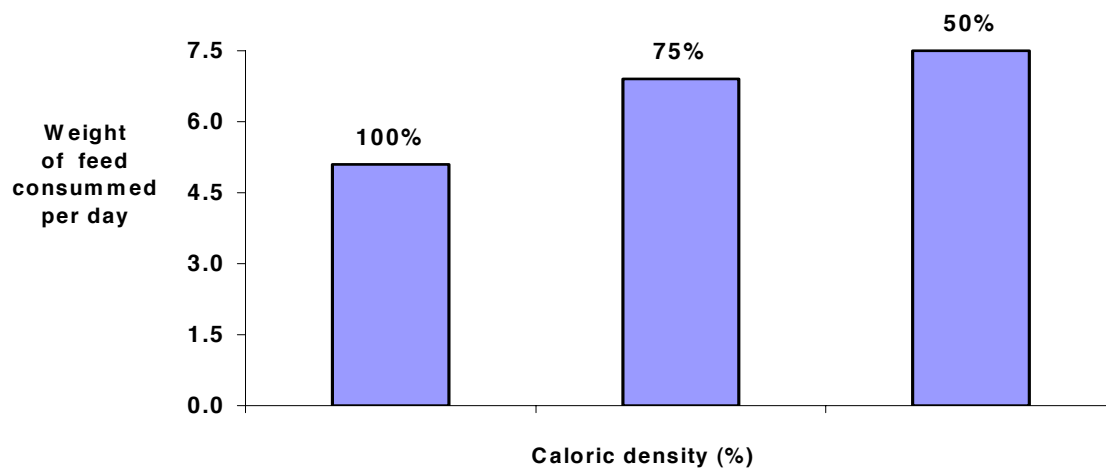
While taste does to some extent affect appetite. however horses have a

### **FREQUENCY & DURATION OF FEEDING IN A PONY UNDER FREE-RANGE CONDITIONS**



So if feeding is a default behaviour ie animals eat unless actively inhibited – what factors cause horses to lose their appetite? Appetite and feed intake are affected by body weight, stage of growth or pregnancy; activity level (1-3% of body weight); rate of digesta passage; energy density of feed; electrolyte imbalance; environmental temperature; general health; dental care; fatigue and the absence of other horses (social factors). There are also central (ie sensors in the brain) that affect appetite. Loss of appetite can be due to compromised ability to taste and smell, decreased ability to chew and digest (facial, oral, pharyngeal, oesophageal or intestinal problem), pain, fear, stress associated with illness or

#### EFFECT OF CALORIC DENSITY ON FEED INTAKE



disease. B vitamins, especially thiamin, can stimulate appetite and anorexia is the first sign of B-vitamin deficiency.

High grain diets increase the production of acids during caecal fermentation. These acids can be converted to glucose, but this requires B-vitamins. B-vitamins are produced during roughage breakdown in the caecum. Production is limited on low roughage-high grain diets and if the demand for B-vitamins exceeds supply, acid levels rise. This has a central depressing affect on appetite and promotes coprophagy, bedding and wood-chewing. In high performance horses where the requirement for energy is enormous and loss of appetite a major problem, the temptation to reduce the roughage in the hope that the horse will eat all the concentrate, in fact compounds the appetite-suppressing affect of excess acid. In these cases, increasing the access to roughage often leads to a return of appetite for the concentrate. Using specially formulated racing feeds reduces the amount of concentrate needed to meet the huge demands of racing. MITAVITE combines steam-extrusion and oil-enrichment with a high nutrient density and selected enzymes, so nutrient requirements are met even in the face of reduced appetite.

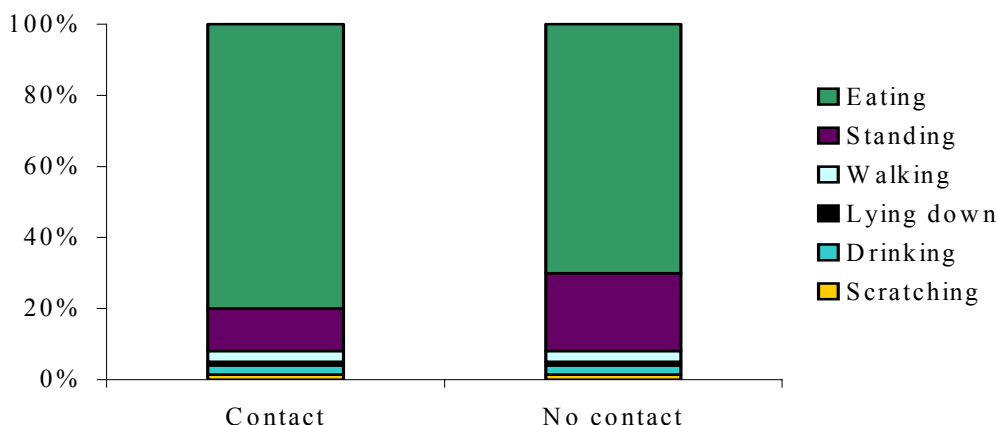
Horses that eat constantly maintain a higher stomach pH (lower acidity). Stomach acid levels are significantly lower when horses have constant access to hay. Protein in food acts as a buffer against acidity and this buffering power of food play a major role in affecting ulcer formation. When eating lucerne hay, stomach acid levels are lower for 6 hours after eating, than when fed grass hay. This is thought to be due to the antacid effects of protein and calcium – both high in lucerne. Studies in Hong Kong and Singapore have found ulcer formation is

reduced and healing increased when horses are fed once a day, compared to the response to anti-ulcer drugs. Reports are that the greedy feeders settle down within 3 to 4 days and adopt a more continuous grazing/browsing feeding behaviour.

Dental problems affect appetite and the incidence of abnormalities such as hooks, wave and shear mouth are reduced when horses are fed at ground level. When horses eat with their heads down, the mandible (lower jaw) drops forward and the teeth grind in the correct position. Eating with the head up prevents the correct alignment of the teeth and results in dental abnormalities and cuts and abrasions to the mouth tissues.

Social facilitation means that a horse tends to do what other horses in the group are doing. For the same reason, a strange horse can cause other horses to become nervous (pack behaviour, shying), a feeding horse will encourage other horses to eat. The effect is small, but can be important. Visual contact is important for social facilitation to occur, so horses should be able to see one

EFFECT OF VISUAL CONTACT ON BEHAVIOUR



another eat. The reason horses eat more when other horses are present is probably part of their anti-predator strategy. If one horse raises its head and looks for wolves, the other horses can keep eating. The vigilance of each individual is reduced if it lives in a herd.

Many of us believe that horses have innate nutritional wisdom – ie they have specific appetites or cravings for nutrients that are deficient in their diets, the only nutrient for which mammals appear to have an increased preference when deficient, is salt. Horses eat to maintain energy levels, not eat to maintain mineral levels. For example, horses on a calcium-deficient diet will not voluntarily consume more calcium than those on a calcium-sufficient diet. The significance of this is that horses cannot be expected to choose the correct vitamin and mineral mixture from the dietary ‘smorgasboard’. The correct nutrients must be provided in the proper proportions and imbalances can arise if a very palatable supplement is consumed to excess.

Dirt-eating is another sign of a dietary imbalance. However, the latest thinking is that the horse is searching for the micro-organisms and nutrients that live around the root zone of plants. Called ‘humates’ or ‘phytochemicals’, humates are fossilized plant material originating from a period which pre-dates dinosaurs. Modern farming practices have stripped the soil of its humus, and no replacements have been used. Stabled and yarded horses, with little access to grazing often consume dirt – looking for humectins, not minerals. Some trainers

of racehorses in Australia and New Zealand have been discovering the value of adding humates to the diets of their intensively housed racing animals, and observing the increased level of health and performance that then follows. A recently developed Equine phytocomplex (EPC) makes humates available to horses. This intestinal support system contains humates and other acids, microflora and minerals that enhance digestion, appetite and energy intake.

Underlying causes of reduced appetite should be addressed. Veterinary advice and treatment for anorectic horses may include depressants such as benzodiazepine and phenothiazine derivative tranquilizers, which stimulate feeding by removing active inhibition of feeding. The benzodiazepam tranquiliser, diazepam (Valium) is of particular value for stimulating feeding in anorexic horses, but should only be prescribed by a veterinarian. MITAVITE ANAZOLIC has a protective effect against ulcers and this results in increased appetite and muscle mass.

Other treatments include 100ml of cheap red wine per feed – reportedly improves appetite after 2 to 3 days. The less expensive wines have more skin solids (and therefore B vitamins) than filtered wine. If there is a likelihood of the 'help' drinking the wine, add 100ml of blackstrap molasses per 5 litres of red wine. But always, both the type of feed and the feeding management must be examined for a successful outcome. Trying to increase a horse's appetite without investigating an underlying problem does not make sense - they came up with the phrase "eating like a horse" for a reason.