

# THE BIG SCOOP ON FEEDING RIGHT

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**Many horse people can analyse the movement, conformation and suitability of a horse at 100 metres, correct a faulty Grand Prix dressage movement with just a touch more outside leg and coax a horse truck to start in subzero temperatures. However, a startling quantity of horse owners continue to be completely mystified by the basic philosophies of equine nutrition. We are more than satisfied with the legends, fables and fairytales that have been handed down from generation to generation, to feed whatever our friends recommend, to go by the picture on the bag... or to just plain get snowed under by the whole subject! The result is that a great many horses are fed more according to tradition or fashion than any logical scientific basis, and their overall health and performance may be compromised as a result.**

But feeding our large furry friends shouldn't test us unduly. It's pretty simple to understand, if you try. In this article we review some of those persistent unwritten rules, and substitute them with solid facts on which you can base your feeding programme.

**True or False: Maize, oats, barley, sweetfeed type concentrates will make my horse "hot" or uncontrollable.**

**FACTS:** A wide variety of feeds have got bad press for altering a horse's temperament and turning him into an instant fruit loop, much like food colouring or sugar get the blame for causing hyperactivity in children. It goes without saying that horses naturally want to burn off their excess energy so, if the diet is supplying over and above what their current level of exercise demands, for sure they will start bouncing off the walls. It is also true that a very fit and healthy horse tends to feel really good, so his level of exuberance might well increase. Beware of allocating the blame - no one type of feed is likely to be responsible; rather, it is the amount of feed that causes the problem!

Some grains might have gained a reputation for being "hot" feeds because they've been substituted randomly for a similar volume of a lower-energy feed. Maize and barley, which have no fibrous hull, are more concentrated energy sources than oats, which do have a hull. So, if you substitute a baked bean tin of maize for a baked bean tin of oats, then you'll have a problem! This illustrates why it is much wiser to feed your horses by weight, not by volume. If you want to make a feed substitution, weigh your tin full of oats... and then measure out the same weight in maize, barley, sweetfeed or whatever. The chances are your tin won't be full! But you'll know you are providing your horse with a comparable amount of energy

so you shouldn't end up with an equine who thinks he's a member of a flying circus!

Molasses, as an aside, has had a bad rap. The amount of molasses in an average sweetfeed only comes to about 1 to 2 percent of its total content - hardly enough to give your horse a "sugar buzz." If your horse loses the plot when he's fed a sweetfeed type supplement, it's more than likely because he's not used to the increased amount of concentrated carbohydrates.

**True or False: Horses need grain in their diets.**

**FACTS:** Horses have evolved as grazing animals. Their digestive systems are designed to cope with constant small amounts of food and forage (pasture and/or hay) is still the basis of their dietary needs. The equine digestive system is designed to break down tough, stalky plants and extract all the nutrition and energy they need from those materials. A great many horses get along very well on a forage-only diet; if your horse has finished growing and is only in light work, is a good doer, or is basically a happy paddock potato, he may have no real need for grain.

So what are the advantages of feeding grain? Grain supplies concentrated energy, in the form of carbohydrates. Many horses do need this extra supplementation if they're being asked to do more work than what they would normally do in the wild. Show and other high performance horses, racehorses and nursing broodmares can all use the extra nutritional support of grain to help fuel their higher energy expenditure. However you need to bear in mind that the equine digestive system is poorly designed to digest large quantities of carbohydrates. There is a limit to how much grain you can feed without risking dangerous conditions like colic and laminitis. Timing is important also. One massive feed a day might make you feel you are looking after your horse really well but, in fact, will be doing him less good than the same amount of feed spread over three or more meals. While he will eat and no doubt enjoy his huge meal, his digestive system simply cannot cope, so much of the goodness will pass through him and out the other end intact. This is false economy on your part! As a rule of thumb, remember that every horse should consume between 1.5 and 3 percent of his body weight in feed every day, and at least half of that should be forage, by weight. So to translate, using a 500kg horse (a big horse...), he would ideally require between 7.5 and 15kg of feed per day, at least half of that forage (grass and/or hay). Obviously it is difficult to calculate by weight how much grass he is actually eating, but you can generally assume that if he seems happy and contented and the grass is available, then he is eating it!

**True or False: A horse in full work needs higher levels of protein in his diet.**

**FACTS:** Protein can certainly be used by the horse's body as an energy source. However it is a very poor way to fuel performance because, on a par, protein doesn't produce as much energy. Also, the horse's body has to go to great effort (in chemical terms) to extract it. By a long way carbohydrates and fats are better energy sources—far more energy-packed than protein, and easier to break down and absorb.

There is an important role for protein to play in the diet still. It provides amino acids, the "building blocks" for the construction and repair of muscles, bones, ligaments and all the other structures of the body. Young, growing equines and those being used for breeding have higher protein requirements because they are building new tissues. On the other hand, mature horses not being used for breeding only need about 8 to 11 percent basic protein in their overall diets to provide enough amino acids for the occasional tissue repair. The necessity for protein doesn't really increase as a horse's energy demands do either, so there are no benefits to be gained from switching to a higher protein feed if your horse is in high-intensity work.

**True or False: When you feed a complete feed, you don't have to feed hay.**

**FACTS:** Well, maybe... sometimes. Definitions of "complete feeds" will vary from manufacturer to manufacturer - sometimes the term is used where a feed supplement is fortified with vitamins and minerals to make it "complete" but is still intended to be fed with forage (hay and/or pasture). Sometimes the term is used for a feed that contains both concentrates (grain) and forage (chopped or pelleted hay, or another fibre source such as beet pulp) and is designed to make up 100 percent of your horse's diet. In the main, it's best for your horse if he horse does eat long-stemmed forage (hay and/or grass) along with his grain ration, for two reasons: firstly, it will assist in helping keep his digestive system humming along as it should and secondly; it will help satisfy his natural grazing urge. To curb this usually only results in complete and utter boredom, which translates to vices and other destructive and unwanted behaviours. We are fortunate in New Zealand to have a climate that is conducive to leaving our horses outdoors much of the time, so let him be a horse!! (You may, of course, have to watch the grass intake, depending on it's quality/species etc as it can cause temperament changes and/or mineral imbalances).



**True or False: Sugar beet is high in sugar. And if it's not properly soaked in water, it will expand inside your horse's gut and could cause him to explode...**

**FACTS:** Sugar beet pulp is the fibrous matter that's left over after the sugar has been extracted from sugar beets. It contains almost no sugar in itself, although the manufacturer adds a little molasses to improve the flavour. Sugar beet pulp is naturally quite high in moisture and this makes it prone to mould so, for that reason, it is dehydrated and made into pellets before it is packaged.

Sugar beet is an excellent digestible source of fibre. It is comparatively low in protein (about 8 percent) and high in Calcium, which makes it a suitable feed for almost all adult horses. If you are feeding supplements, oils, or giving your horse medication, sugar beet can be an excellent place to hide the nasty ingredients. It is a great addition

to the diet if your hay is not good quality (not that I advocate feeding poor quality hay ever), if your horse has tooth issues and trouble chewing properly or for horses recovering from an injury or illness. As an added bonus, it's generally not the most expensive option in the feed store.

The best way to feed sugar beet is to soak it in water before meal-time; use double the water quantity to beet, and leave it to swell and absorb the moisture, (sugar beet has a tendency to ferment in warm weather, so only make up what you will use in a day at a time). The resulting brown, gooey stuff can be mixed in with your horse's grain if you are an equine chef, or served on its own. Don't worry if you think you've added too much water or too little. You are highly unlikely to actually explode a horse with unsoaked sugar beet. From personal experience, I had a foal that helped himself to a bag of sugar beet on an escapade one day. On my return from work he was lying down, which was

odd. I soon discovered the reason for his discomfort (a close to empty sugar beet bag). After a panicked phone call to the vet, it was decided to walk the foal, keep an eye on him and summon said Vet if he got any worse. After a twenty minute tour of the property with foal in hand (quite boring, not a large enough property...) he lifted his tail, deposited a manure pile and promptly recovered. All was well that ended well.

There have been more formal experiments conducted with ponies and large amounts of dehydrated sugar beet, with no ill effects whatsoever. Not only did they not detonate but they also suffered no signs of colic, nor did the water content in their manure change. However, most people prefer to soak beet pulp - it's more palatable that way and useful to dampen the feed.

**True or False: A weekly bran mash is good for my horse's digestive well being.**

**FACT:** Bran is junk food for horses. While they love it, it's not really all that good for them. Bran contains about 13 times as much phosphorus as calcium, an imbalance which can eventually have an effect on a horse's bone structure. As a fibre source, it's not that digestible. And, to add insult to injury, the celebrated laxative effect doesn't really exist. Horses are generally quite sensitive to any sudden changes in their diet so, when you feed your horse a bran mash before or instead of his regular feed, it often causes a mild digestive upset. The result the next day is loose droppings. An occasional bran mash on a cold night or as a treat does no real harm but the digestive system of your horse would prefer sugar beet soaked in warm water for a similar effect. If you insist on feeding bran on a daily basis, minimise the impact by using smaller portion sizes. Try to avoid bran if you're feeding a young horse - the calcium/phosphorus imbalance can interfere with his growth. Overall, there are better choices for your horse than bran.

**True or False: Lucerne hay is the best-quality choice for my horse.**

**FACTS:** Though horses do definitely seem to prefer lucerne over meadow hay, Lucerne is far too high in protein for most adult horses. Depending on when it is cut, it can potentially range up to about 24 percent protein—way too rich for any horse other than a young, growing one or a nursing broodmare. The surplus protein in itself doesn't do any major harm but the kidneys have to work overtime to excrete it and the result is an excess of urine with a strong ammonia smell, which is not desirable in the stabled horse! Lucerne is usually more expensive than ordinary meadow or clover Hays.

Meadow hay is a better choice for most adult horses. Even though it is not quite as high in some vitamins and arguably doesn't look to be quite as sweet and tasty, it does have a more appropriate protein level than lucerne and is also often not as dusty. Mixed hays, which contain either lucerne or clovers as well as grass, can be a good compromise where available.

Don't be afraid to pick the brains of your vet or local horse feed professional if you have questions. They should be able to provide you with plenty of common-sense advice and help you make the best feed choices for your individual horse.