



Feed news

SPRING 2017

LET'S TALK ABOUT POO

Anyone who has ever had to look after a horse for any length of time knows that they produce a lot of manure. In fact, a 500kg horse defecates about 4-13 times a day producing 15.5 to 22.5kg of faeces and urine per day which adds up to 8 metric tons a year! While those unfamiliar to horses might think finding no poop in the stall in the morning would be a Godsend, for those of us with horses such an occurrence is a nightmare we hope to never experience.

The ideal poo

While many of us scoop the poop and throw it away giving it little consideration, your horse's manure can tell you quite a few things about his overall health. To start with there is the consistency. Horse manure should be moist with clearly formed balls and it should slightly break apart when it hits the ground. Faeces that pass as defined individual balls is too dry. There will be noticeable stems from the forage portion of the diet although pieces should not be more than a couple of centimetres long.

Moisture levels

Sometimes horses pass very moist manure that is more like the consistency of a cow pad. Often healthy horses pass such manure when they are excited or nervous such as while being loaded into a float or during exercise. In these situations, loose manure is not a concern. Passing a small amount of liquid with or shortly before or after faeces is also generally not considered a concern. However true diarrhoea may indicate something more serious is going on and should

be explored. Diarrhoea may be inflammatory, infectious, cancerous or related to management.

Diarrhoea

Inflammation in the large colon may lead to a reduction in water absorption and loose manure. The cause of the inflammation may be hard to pin point but may be due to damage from internal parasites or due to irritation from the large intestinal contents becoming too acidic due to the formation of lactate in the hindgut. This can result when starch (e.g. high grain meals) escapes small intestinal digestion resulting in rapid fermentation in the hindgut and lactate formation. Grains should be fed in small amounts in multiple meals rather than few large meals to help avoid this scenario. Such fermentation of starch in the hindgut along with other rapid changes in diet, whether it be roughages, hard feeds or supplements will also lead to sudden changes in the hindgut microbial population which

may cause diarrhoea due to microbial die-off. Further, diets containing excessive levels of fat will also result in diarrhoea. When adding oil to a ration, diarrhoea is a sign that you have added too much or introduced it too quickly.

For horses that develop diarrhoea on diets with higher starch intakes, but that need additional calories, using a high fibre supplement such as HYGAIN® FIBRESSENTIAL® that utilizes super fibres (beet pulp, soybean hulls and lupin hulls) or HYGAIN® MICRBEET® as sources of calories rather than high levels of starch is often beneficial.

Bacterial infections such as E. coli and Salmonella will also result in diarrhoea, typically projectile. Exact infections can be hard to diagnose as a negative faecal culture does not necessarily mean that the infection does not exist and multiple cultures may be necessary along with treatment



with antibiotics.

While loose manure may not be cause for major concern it can damage the skin on the horse's hindlegs causing discomfort, and projectile diarrhoea can result in dehydration. Dehydration is of particular concern in foals so veterinary assistance should be sought promptly for foals showing signs of loose manure and for any horse displaying projectile diarrhoea.

Impaction

The other end of the moisture scale is equally concerning. Faeces that are too dry indicate a risk of impaction. Overly dry faeces are the result of inadequate water consumption. This may be due to inadequate access to water, a lack of desire to drink due to electrolyte imbalances or the available water not being to the liking of the horse. Horses do not like drinking water that is overly cold or that tastes different to the water they are used to, this is especially true if horses are used to bore water and are then given water treated with chlorine or water with a different composition of dissolved salts. Transport stress and pain may also reduce water intake. One of the easiest things you can do to encourage your horse to drink and reduce the risk of impaction is to supply adequate daily salt and to use a well formulated electrolyte supplement like **HYGAIN® REGAIN®** to replace electrolytes lost in sweat.

When horses are provided water in automatic waterers it is often impossible to determine how much water is being consumed. Paying attention to faeces can help determine whether water intake is adequate. Horses consume about 50 mg of water per kilogram of body weight per day or 25 litres for a 500kg horse at rest. This amount will go up and down depending on work level and how dry the diet is. Horses on fresh pasture will drink less water than horses fed dry hay. It is important to know your horse's normal daily water consumption. Similarly, know what normal faecal production looks like for your horse from number of manure piles produced each day to normal consistency. This will allow you to spot immediately when something unusual occurs that may indicate a bigger issue.

Manure colour

The next manure variable is colour. Manure should have a fairly uniform colour that will depend on what your horse is eating as it will take on the predominant colour of the diet. Horses consuming large amounts of fresh pasture will have manure that is bright green in colour, those consuming dry forages may range from green to the colour of straw. Large amounts of beet pulp may result in manure turning to a brownish red colour and diets containing a lot of oil may have a grey hue and if excessive oil is fed an oily film may develop.

Equine faeces typically do not have a mucus covering and the appearance of mucus in faeces may indicate that passage through the digestive tract has been delayed due to impaction. Rarely will you find evidence of blood in faeces but if you do it indicates that bleeding is occurring in the digestive tract. Blood from the lower tract will show up as red in faeces, blood from the upper tract will appear black. If you believe you are seeing evidence of blood in your horse's manure you should contact your veterinarian.

Faecal odour

Faecal odour is generally due to microbial metabolism of amino acids in the hindgut. Dietary amino acids should be digested and absorbed in the horse's small intestine, however, some will make it to the hindgut where they are metabolized by microbes. Smell is typically mild especially compared to carnivores although sometimes horse faeces can omit a strong odour. Faecal smells arise from microbial fermentation in the colon and when protein levels entering the colon are high and microbial growth is inefficient, putrid smelling end products can result. Therefore, strong smelling faeces may be an indicator that there is too much protein in the diet and/or that the microbial population in the hindgut is not functioning optimally. Interestingly one of the end products from the microbial breakdown of the amino acid tryptophan results in a smell that may attract flies. If your horse has consistently strong-smelling faeces work with a nutritionist to determine whether dietary protein levels need to be altered.

Composition of faeces

While it is tempting to only look at faeces from a distance you can learn even more if you get up close and personal. Take a closer look at the composition of faeces. Are the contents well chewed? Appearance of overly long pieces of forage and whole pieces of grain suggests that your horse is not chewing his feed adequately and indicates that your horse's teeth may require a visit from your veterinarian or equine dentist. Should you find whole pieces of grain in the manure be sure to investigate whether this is just the indigestible hull or whether it also contains the internal contents of the grain. Finding undigested hulls is not a concern.

Your horse's manure may harbor unwanted guests in the form of eggs from internal parasites. Having your veterinarian perform a faecal egg count on your horse's manure can tell you whether your deworming program is effective and may allow you to cut back on deworming depending on the findings. Horse manure can also contain sand that the horse has consumed. It is wise to evaluate your horse's manure for sand on a regular basis as sand in the gastrointestinal tract can cause colic. This is easily done by taking a few freshly produced pieces of manure that have not touched the ground and placing them in a clear plastic bag. An exam glove used for rectal exams works particularly well. Next put water into the bag or glove and break apart the faecal balls. Then hang the bag and allow the content to settle. Forage material will float and the sand will sink to the bottom in the glove it will collect in the glove's fingers. If you find sand in your horse's manure discuss with your veterinarian management steps you should take to reduce the sand in the digestive tract and reduce the consumption of further sand.

While on face value your horse's manure is just waste to get rid of, on further investigation it is so much more. Paying careful attention to your horse's manure can give you vital information not only about gastrointestinal health but your horse's overall well-being.

IS YOUR HORSE A CANDIDATE FOR A GRAZING MUZZLE?



The horse has evolved as a grazing animal, hence, pasture plays a pivotal role in equine nutrition. Reported intakes of fresh pasture by horses can range from 1.5 to 5.2 % of body weight per day. With such a large intake of pasture possible, can horses over consume? What components of pasture grass can cause problems if taken in at excessive levels?

What's in grass?

Pasture has been implicated in the onset of several metabolic disorders in horses. During photosynthesis, green plants 'fix' atmospheric carbon dioxide in the presence of light, resulting in the production of simple sugars. When sugars are produced in excess of the energy requirement of the plant for growth and development, they are converted into storage, or 'reserve' carbohydrates. These carbohydrates make up the non-structural carbohydrate (NSC) fraction of the plant. These non-structural carbohydrates follow a seasonal pattern with highest values in spring compared to summer and winter, and intermediate values in the autumn. The over consumption of non-structural carbohydrates by grazing horses has been implicated with disorders including insulin resistance and laminitis.

Excess grass consumption

In addition to sugar and starch (NSC) causing metabolic issues, the sheer over consumption of pasture grass can cause obesity in horses. Obesity can result in further problems such as insulin sensitivity as body fat mass increases. Over-weight in horses can result in a cascade of problems that at the very least leaves your horse fat and intolerant of exercise to far more

severe conditions such as insulin insensitivity and laminitis. It has been reported that excessive pasture intake accounts for nearly 50% of all reported cases of laminitis. Obesity therefore must be corrected.

Setting up a new diet

The first step in any weight reduction program is calorie control. Elimination of all grain from the diet is a logical step for overweight horses. A low intake vitamin and mineral supplement pellet such as **HYGAIN® BALANCED®** should be added to the diet as a means of supplying key nutrients to the horse without excess calories. Another key to success is limiting or eliminating access to pasture. Pasture grazing represents an unregulated source of calories that cannot be easily quantified. It is therefore necessary to limit pasture access until weight loss has been achieved.

Grazing muzzles and how they work

Physical prevention of excessive pasture intakes by horses can be achieved using grazing muzzles. The

use of grazing muzzles reduces bite size and restricts intakes to the tops of leaves, where the concentrations of sugar (NSC) tend to be lowest. Grazing muzzles may be favoured by owners over other methods of intake restriction that limit animals to very short turnout times or confinement to stables or small bare paddocks. Grazing muzzles enable the animal to graze larger areas and for longer periods and owners do not have to implement severe changes to their facilities. In addition, a horse that is allowed to graze with a muzzle continues to move around in the paddock and get some exercise.

While grazing muzzles are recommended to reduce pasture intake there is limited data on their effectiveness. A recent study utilizing ponies aimed to determine the extent of intake restriction imposed by grazing muzzles. Ponies fitted with grazing muzzles on average ate approximately 83% less forage than those without grazing muzzles. Ponies with muzzles were only able to consume 0.14 % of their body weight during 3 hours. Grazing muzzles appear to be an effective means of

restricting pasture intake by ponies.

Does my horse/pony need a grazing muzzle?

The first step in determining if your horse is a candidate for a grazing muzzle is to determine its laminitis risk. It is generally accepted that ponies are more commonly affected by laminitis than horses. Ponies and horses that have been previously affected with laminitis or are affected with other diseases (e.g. Cushings disease or insulin resistance) are at higher risk of developing laminitis. For those animals identified at high risk of developing laminitis a grazing muzzle may be necessary. A less radical solution compared to using a grazing muzzle would be to restrict pasture

access by controlling the amount of time they graze. Simply restrict the grazing opportunity to two hours or less per day. Further, grazing can be restricted during times of high risk such as during spring and autumn.

How and when to use the grazing muzzle?

The pasture is the most dynamic and most dangerous component of the diet if the horse has previously suffered from laminitis. If an affected horse is returned to pasture, use of a grazing muzzle is recommended to limit grass intake. Grazing muzzles can be worn every day or only during months when the pasture grass is more abundant and contains higher concentrations of non-structural carbohydrates. Turnout

on pasture should be avoided when the pasture grass is growing rapidly in spring after the weather turns warmer or during summer after heavy rain. Temperate pasture grasses also accumulate sugar when they are stressed by drought or the onset of winter. When a horse is returned to pasture after being confined to a stall, reintroduction should occur gradually with no more than 1 hour of grazing at a time for the first 2 weeks.

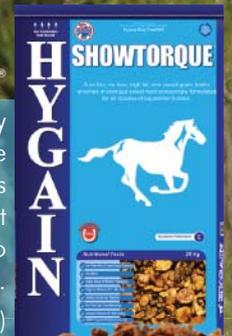
SMALL DOSE, IMPRESSIVE RESULTS

Effectively manage the stresses of training and competition this season.

HYGAIN® SHOWTORQUE®

HYGAIN® SHOWTORQUE® is not only a low dose, high fat, cereal grain free fully fortified cool feed, that promotes lean muscle mass development (topline), no, on top of all that it also enhances hoof growth and coat shine.

From 1kg/day (500kg horse)



HYGAIN® BALANCED®

A low calorie fully fortified concentrate that provides high levels of natural Vitamin E and Selenium, biotin for hoof and coat health, chelated minerals, quality protein and essential amino acids for muscle development.

From 500g/day (500kg horse)

