



HYGAIN®

# Feed news

AUTUMN

## HOW TO FEED THE OFF-THE-TRACK RACEHORSE

Adoption of off the track Thoroughbred (OTTB) racehorses is becoming an increasingly popular way for horse owners to be able to access fabulously athletic horses. These horses can be amazingly rewarding to work with however they do come with a unique set of challenges a big one being how to feed them.

### Why OTTB tend to lose weight quickly

Often OTTBs are adopted after very little if any spell and therefore are racing fit. It is common for their new owners to give them a spell to recover from the stresses associated with track life. Therefore, work level drops significantly and feed intake is frequently decreased as well. The thought here being that they are no longer racing and therefore do not need all the high calorie grain they were consuming at the track. However, while it is true that they are unlikely to need the levels of high starch feed typically fed at the track they do in fact still need quite a considerable amount of additional calories thus requiring some kind of high calorie full feed.

Fit racehorses have very high lean muscle mass and therefore higher metabolic rates even when not at work. This increases their daily caloric requirement above a similar sized horse at maintenance, which has a lower lean muscle mass. If inadequate calories are fed the horse will lose weight. This scenario is just one reason why OTTB racehorses may lose weight after retirement from racing often to the surprise of their new owner.

### Feeding strategies for the OTTB

**Initial weeks:** An initial strategy would be to feed the same type of feed as fed at the track, which is typically a high starch textured feed (e.g. HYGAIN® MICRSPEED® or HYGAIN® TRACKTORQUE®) and or oats but at a lower amount than at the track. Reduce amount to 3-4kg per day and divide over at least two meals per day. While this may still seem like a lot of feed it is likely about half the quantity that was being fed at the track! This will avoid a sudden diet change that could lead to digestive tract distress.

**Early changes in feed:** Minimizing sources of change and stress is normally a good idea with a new horse and this is the reason for initially keeping the OTTB on the same type of feed as was fed at the track. However, after a few weeks, once the initial stress of a new stable and routine have subsided the high energy, high starch textured feed can be transitioned to a higher fat, higher fiber feed such as HYGAIN TRU CARE® or HYGAIN EQUINE SENIOR®. These feeds would be a good choice as senior feeds are easy to digest and tend to have a slightly higher

protein level which will help maintain muscle mass. Replace 250g of the higher starch textured feed with 250g of the higher fat and fibre feed each day until fully transitioned per the feeding directions for your horse's body weight. By this point you should have a sense of whether your horse is holding their weight or losing weight and whether the total amount of fortified feed should be increased.

**Extra weight gain:** If maintaining condition is a struggle, instead of increasing the amount of feed further another option is to increase the amount of fat in the diet by adding a



fat supplement. This is a safer option than increasing the amount of starch in the ration as if excess starch should reach the hindgut it will disrupt microbial fermentation. While fat also disrupts hindgut microbial fermentation, fat provides 2.25 times more calories per gram as compared to an equal amount of carbohydrate so you can feed less total fat for the same effect thus reducing the risk of overwhelming the small intestine and fat entering the hindgut. HYGAIN TRU CARE® is an excellent example of this kind of feed with 20% fat and 10% protein and can be fed at up to a kilo per day in addition to the before mentioned fortified feeds to increase overall calorie intake. Alternatively adding oil in from of HYGAIN RBO® rice bran oil to the ration is also an easy way to further add calories.

**Cool conditioning:** High fat diets have the added benefit that they may also lessen excitability. Traditional grains such as oats, barley and corn are rich sources of starch which when digested in the small intestine results in glucose. This glucose is readily absorbed directly in to the blood stream. Fluctuations in blood glucose can lead to changes in behavior. In fact research that looked at reactivity to stimuli in

horses fed the same number of calories but from either starch or fat showed that the horses fed fat had lower reactivity and response to stimuli. Switching from the typical high starch race feeds to a feed higher in fat and fermentable fiber may help manage the overly excitable OTTB.

### **Roughage**

Remember that all diets must have a foundation in good quality forage. While horses at the track are fed forage the amount of forage consumed is often less than the amount of grain they are eat. Combine this with the fact that the daily intake of grain is often fed in only two large meals, meaning that undigested grain may have been reaching and disrupting the hindgut, a racehorse leaving the track may have a less than optimally functioning microbial population. How long it will take to return their hindgut to optimal function will vary between individual horses but there are steps you can take to help. Try to provide forage ad lib. Forage is vital for helping to restore a healthy hindgut as the complex carbohydrates in forage are key nutrients for the microbial population. Forages also require more chewing and thus result in more saliva production and stomach

buffering. In fact the forage itself acts as a buffer especially the higher calcium content in lucerne. Feeding a grass-lucerne mix or adding 25% of the forage as lucerne will provide more calories from forage and reduce the reliance on calories from grain sources which is beneficial to digestive health.

### **Hindgut Health**

HYGAIN® feeds contain quality pre and probiotics that help support a healthy gastrointestinal tract and improved feed utilization. Pre and probiotics are especially beneficial to hindgut health which has often been disturbed in racehorses due to the high levels of starch that is fed whilst in training. Starch must be digested and absorbed in the small intestine otherwise it enters the hindgut where it disrupts microbial fermentation and ultimately has a negative impact on fiber utilizing bacteria. HYGAIN® feeds utilize micronized and extruded grains to help insure that starch is digested and absorbed in the small intestine. The hindgut bacteria play a number of important roles including the production of B vitamins that the horse's metabolic pathways require to function optimally.

# FACILITATE AN EASY TRANS



**HYGAIN TRU CARE®** provides calories from the three main energy sources including highly digestible fibre, extruded barley and HYGAIN RBO (100% pure rice bran oil). **TRU CARE®** is fully fortified and contains concentrated levels of bio-available minerals and vitamins, as well as immune and gut defence properties that may help with your horse's overall health and well-being.

### How to work with (potential) ulcers?

Digestive health is often not optimal in OTTB racehorses and this can pose a real challenge to their new owners. A large percentage of racehorses suffer from gastric ulcers as a result of their relatively low forage-high starch grain diets and the intense level of training required. One study has indicated that the risk of ulcers in racehorses goes up 1.7 times for each week that they are in training. In fact, in some populations of racehorses incidence of ulcers may be higher than 90%.

Unfortunately, horses that have ulcers or have had ulcers can be picky eaters. This is likely due to the association of eating and discomfort. High intakes of grain can exacerbate ulcers because they take less chewing and therefore there is less saliva production. Saliva that is released during chewing acts as a buffer to stomach acid reducing overall acidity. Additionally, starch encourages the limited population of microbes that live in the stomach (there are very few when compared to the number in the horse's hindgut) to secrete a number of acidic volatile fatty acids which have been shown to reduce the integrity of the stomach lining.

When horses are fed a lot of high

starch grain versus eating a lot of forage, there is less of a physical barrier created by the feed between the stomach acid and the upper portions of the stomach where ulcers are common. Once a horse has developed gastric ulcers, each of the above factors will result in untreated ulcers being aggravated causing discomfort to your horse. Therefore, an association may develop between eating and discomfort which can result in a horse that does not want to eat.

Adding to ulcer risk is the change in lifestyle and routine. Racehorses tend to have very regimented lives and routine is strictly adhered to. An adopted OTTB is now in a completely different environment and this can be quite stressful and may cause ulcers so that even if the horse left the track without ulcers he may well have them now.

It is a very good idea to have a new OTTB scoped for gastric ulcers. Do not be tempted to just treat for potential ulcers because two kinds of gastric ulcers exist; those in the upper squamous areas and others in the lower glandular region of the stomach. While Omeprazol alone is an effective treatment for squamous ulcers, glandular ulcers often require the addition of other medication for treatment to be fully effective. Without

scoping the horse it is impossible to tell what kind of ulcers are present and therefore to create a truly effective treatment plan.

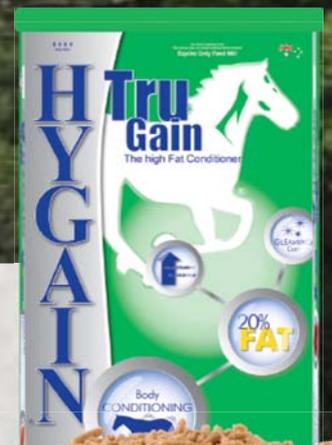
### Lack of appetite and picky eaters

Another, often not considered, reason racehorses may become picky eaters is over training. Heavy training can impact the part of the brain that controls the release of several hormones that play a role on appetite and metabolism. Overtraining occurs when horses are trained too hard, too long or are not given adequate time to recover from work. Obviously in a discipline like racing where intense exercise is necessary there is a fine line between getting the horse fit for the job and pushing too far. Appetite should improve if support for gastric ulcers, and time to recover from intense training are provided.

It has also been speculated that inappetence in racehorses may be solved by providing supplemental B vitamins in particular vitamin B1 (thiamine). B vitamins have a number of important roles acting as cofactors in a range of metabolic pathways. Adequate amounts of B vitamins are generally produced by the microbial

# ITION!

**HYGAIN TRU GAIN®** is a safe (slow release) and effective extruded high fat supplement, providing your horse with a cool energy source along with bio-available Vitamin E and Selenium. The increased energy density is designed to rapidly boost your horse's body condition and assist performance horses in meeting their energy requirements.



population in the horse's hindgut and by the typical equine diet. However, storage is short lived due to them being water soluble and reserves may only last 1 to 2 weeks in hard working horses. If hindgut function has been disrupted and or dietary intakes are suppressed it is possible that production may not keep up with demand and additional provision of these vitamins may be beneficial. HYGAIN® PAK-CELL® and HYGAIN® RECUPERATE® offers a great source of supplemental B vitamins that may benefit the picker eater.

### Hoof Problems

Sadly it is often a true stereotype that Thoroughbreds have bad feet, some of this may be diet related but a lot may also be environment and management. At the track the horses have extremely limited access to any kind of footing other than what they run on. The walk ways are often sand/dirt, there might be rubber pavers in the aisles, their stalls are bedded very deep so they really don't come in to contact with anything particularly hard. The environment is also very dry with stalls being mucked multiple times a day. This can mean that when you first expose them to something like a gravel driveway they act as though they are crippled.

Exposure to damp pasture and damper bedding than they are used to may cause feet to expand and then shrink when in contact with arena sand resulting in cracking.

A good farrier should be able to advise you about whether or not your horse may need support from pads and corrective shoeing techniques. Many people believe that high starch diets have a detrimental impact on hoof integrity. Certainly they increase the risk of laminitis as does concussion something that race horses are exposed to. Any low grade non-clinical laminitis will have a negative impact on overall hoof quality.

As mentioned above higher starch diets fed in large amounts may negatively impact the hindgut microbial population and therefore B vitamin production. Biotin is a B vitamin typically made in high enough quantities such that no dietary requirement exists. However there are some studies that show that for horses with poor hoof quality supplementation with biotin may be beneficial. Biotin increases the production of the intercellular glue necessary for strong hooves. It can take many months for an improvement in hoof wall quality to be seen.

Before reaching for a hoof supplement, make sure that the entire diet is correctly balanced and providing the nutrients necessary for healthy feet such as zinc, methionine, copper and fatty acids. A well-balanced diet will be providing all these things without the need for a hoof supplement. This means careful selection of a fortified feed fed at the recommended amounts so that the required amounts of these nutrients are being provided. From here if hoof issues continue to be a problem a hoof supplement, such as HYGAIN® GLEAM® may help. Additionally talk to your farrier about whether the use of a topical hoof hardener or a sealant around nail holes could be of benefit.

Adopting an OTTB can be a wonderfully rewarding experience. With an understanding of the nutritional challenges facing these horses and a well thought out plan of how best to feed them, it is possible to better meet their needs and reduce the frustrations that sometimes accompanies the initial months of owning these amazing athletes.

Your horse needs  
extra **condition**,  
but you **don't** want  
to add grains?

THE **NATURAL** WAY  
OF ADDING  
SAFE **CALORIES**

Improve your horse's body condition with HYGAIN® FIBRESENTIAL®, featuring **reduced sugar** levels and providing superior conditioning from **highly digestible** super fibres.

