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NUTRITION BASICS



The Wholesome Oat

Oats have many characteristics that make them a highly desirable feed source for horses in work...

- ✓ **High levels of digestible starch** (leading to less gut issues);
- ✓ **Contain digestible fibre** (also good for the gut!);
- ✓ **Source of fat** and a more desirable fatty acid composition than corn;
- ✓ **Highly palatable, but generally consumed slower** than sweet feeds;
- ✓ **Have a more desirable amino acid profile** compared to other grains (which means spending less on additional protein sources);
- ✓ **Less likely to contain mycotoxins** that can result in weight loss and depressed feed intake.

Superior in quality, heavy “racehorse” oats generally contain less foreign material and weigh more per unit of volume and are therefore regarded as the best choice for horses in heavy work.

RACING RESEARCH



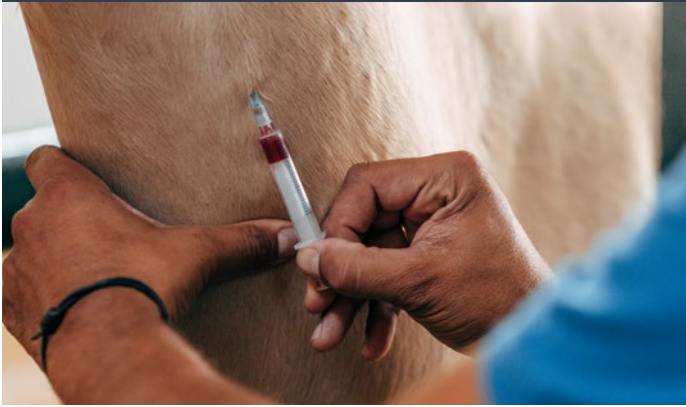
Body Composition & Racing Performance

As fat free mass is indicative of muscle mass and potential muscle strength, it is likely that body composition plays a role in the racing capability of horses.

A research group in the UK found “elite” runners (i.e. winners of Group/Stakes/Listed races) had a higher fat free mass than “non-elite” runners (*Fonseca et al., 2013*). Changes in fat free mass were also found to be associated with training intensity in certain groups of horses. Other studies have suggested increased bodyfat may also impact locomotion asymmetry and delay recovery from exercise (*Jansson et al., 2021*).

As part of our work at a Randwick racing stable, we are measuring bodyfat levels of runners and starting to establish associations between bodyfat and performance over varying distances. Like all performance studies, this work requires extensive data collection and is ongoing.

This research is designed to further our understanding of the importance of optimising body composition through dietary management for optimal racehorse performance.



Diabetic Broodmares?

Studies have demonstrated that insulin resistance is a normal occurrence in the healthy pregnant mare enabling redirection of maternal nutrients to the developing foetus (Morresey, 2012). However, it appears that the diet of late gestating mares can further impact insulin sensitivity and may be linked to the development of osteochondrosis in foals.

In work we were involved with some time ago with the University of Qld, mares offered “high energy” diets during gestation had increased body condition scores and developed hypersulinaemia which was associated with lower basal insulin concentrations in their foals during their first year of life (Bryden *et al.*, 2013).

Furthermore, a link was found between low blood insulin in foals and the development of osteochondrosis.

This and work from other research groups highlights the importance of bodyweight control and nutritional management of broodmares throughout gestation to promote future health and performance of the foal.



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Low Sugar Hay

There are a number of circumstances where horse owners might wish to source a low sugar hay option including:

- **For weight management and/or horses prone to laminitis/metabolic disease;**
- **To reduce behavioural issues;**
- **Where *ad lib* hay is required** to fulfil roughage requirements.

The non-structural carbohydrate (NSC) content of hay can vary depending on the stage of growth the hay was cut as well as seasonal conditions. Based on published averages (Equi-Analytical) and data collected from Australian samples, rhodes and lucerne hay typically have the lowest NSC values (<12%) while oaten and barley hay have the highest (19 – 22%). Grassy/meadow hay typically falls somewhere in between. While NSC is important, other nutrient values of the hay must be considered and testing of individual batches of hay is advised if possible.

We have found that a blend of rhodes and lucerne works well for equestrian horses in situations where pasture is limited. The lucerne improves the nutrient profile of the mix and helps to keep ulcers at bay, while the rhodes tends to slow consumption and reduces overall energy intake when hay is offered *ad lib*.

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