

XLR8 IN STANDARDBREDS

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To appreciate how much the standardbred in training depends on correct nutrition, is to be aware of how dynamic the equine system is. Every second the bone marrow makes millions of red blood cells; every four days the blood platelets and most of the lining of the gastrointestinal tract are replaced; every 10 days, most of the white blood cells are replaced and the number of muscle cells repaired or created in horses that are training and racing is huge. During intense exercise, the lungs move over 1600 litres of air every minute; body temperature rises to over 40°C; force through the cannon bone and hooves approaches 4000kg and muscles use fuel at a very high rate - a catabolic process involving the breakdown and utilization of body reserves.

Muscle must be repaired rapidly to maintain improvement, prepare for the next training session and minimise delayed muscle soreness and stiffness. We are able to switch the catabolic environment into an anabolic (i.e., a building of body tissues and reserves) environment after work by supplying the proper tools. Feeds chosen must contain protein that is profiled properly for amino acids, along with minerals, vitamins, fat and carbohydrates.

The application of steam-extrusion and the provision of high levels of essential amino acids in the correct balance are fundamental criteria in the preparation of XLR8, the latest innovation in racing formulas from MITAVITE. Whereas essential amino acid losses of up to 50% have been measured during dry-extrusion, losses during steam-extrusion are less than 5% and digestibility of the feed increases to over 90% - increasing available energy.

Because energy requirements double in heavy training, an energy-dense formulation is essential for the racing standardbred. Traditionally, this was met by increasing grain intake. The major concern with increased grain intake is the risk of over-heating, gut upsets and increased risk of tying up, colic and laminitis. Oil provides 2.5 times as much energy as an equivalent weight of grain. In a traditional hay/grain diet, horses utilise between 50 and 60% of the energy, whereas they utilise 85-90% of the energy in oil.

Another advantage of oil-adaptation is a reduction in metabolic heat generation. In one study, feeding extra oil resulted in a 14% decrease in total heat production and as a result, over 60% more energy was available for exercise. A high-oil diet works best in conjunction with a high carbohydrate intake and there is no benefit in feeding more than 10% oil in the total diet. There are opinions that suggest a high oil intake compromises intense muscular exercise. However, this has not been observed when adequate carbohydrate is also available.

The raised body temperature associated with hard work, can compromise the normal balance of gut bacteria. Disturbances to the delicate ecosystem of the horse's caecum and large intestine can lead to acid build-up, loss of appetite, manure changes and weight loss. Probiotics have shown promise as a way of manipulating the populations of digestive microbes, inhibiting colonization by harmful bacteria, influencing metabolic activity, stimulating the immune system, improving absorption of nutrients and reducing growth of E.coli. Horses that are under stress show a greater response to probiotic use.

The stress on the respiratory system affects the risk of respiratory disease and the incidence of bleeding. Episodes of bleeding are more frequent with poor stable air quality, increasing age, airway inflammation and fungal material in airways. Further, the incidence is reduced in dust-free

stables. Low dust, low moisture steam-extruded grains reduce fungal and particulate elements in stable air – improving air quality and hygiene.

To minimise stress, changes in nutrient requirements must be mirrored by changes in the composition of the diet. MITAVITE has combined the benefits of probiotics with the advantages of the latest feed processing technology in the formulation of XLR8. Containing PROTEXIN, steam-extruded and micronised grains, XLR8 has been released to assist trainers in reducing the risk of digestive upsets, minimize stable air contamination and to assist the racing standardbred in resisting the negative effects of stress.