

## **Myths and Realities about Nutrition for Sports Horses**

Due to the increasing knowledge in Equine Nutrition during the last 10 years, many concepts from the traditional feed management for sport horses have changed. Myths around sports horse nutrition (e.g. mainly about complete forage diets and large amounts of concentrates) have been overruled. However, it is necessary to properly evaluate the requirements of the equine athlete (1) to cover all the necessary nutrients in adequate amounts. Moreover, the best nutritional management should allow horses to express their innate feeding behaviour.

Horses' requirements vary considerably according to the influence of different factors such as gender, age, breed, sport activity and body weight and should be evaluated individually. Determination of energy requirements using any of the current different systems (2, 3) for maintenance and sport activity of the horse is only one part of the process. Forage content and ratio Forage/Concentrate on dry matter basis, sugars and starch, proteins, minerals and vitamins intakes are also parameters that need to be evaluated (4).

Pathological conditions are also a common finding in horses with improper ration formulation. Particularly in high-level sports horses, stress, management, training and diet have a strong impact on the equine health. Gastrointestinal pathologies such as Equine gastric ulcer syndrome (5) or colic (6), insulin dysregulation (7), etc. Due to imbalances, shortage of fibre structure or forage content (4) as well as overfeeding, any of the above mentioned disturbances could be the result. Consequently, the microbial fermentation and/or gastrointestinal environment (8), will change with detrimental effects to equine health. Additionally muscular pathologies are not rare to find at a high level of training. Some muscular conditions such as Recurrent Exercise Rhabdomyolysis (RER) and Polysaccharide Storage Myopathy (PSSM) (9) can be triggered by nutritional factors, although, in other cases malnutrition together with management and environmental factors could directly produce muscular alterations (e.g. Atypical Myopathy).

It is very important to highlight the role of nutrition and improve rations on a daily basis to support the equine athlete by improving health, preventing pathology and maximising performance.

### **References**

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