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Nutritive value of concentrates in Horses

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Proportion of concentrates in the diet of horses range from 10-40p100 for mares, growing horses (sports horses) and horses exercised at light or medium intensity to 50-70 p100 for growing horses (races breeds) and horses exercised at high intensity (sports and races breeds). Concentrates fed to horses are either raw materials or/and compound feeds, which are formulated by feed companies.

Yearly feed companies formulate a great number of compound feeds to supplement a large variety of basal diets or as a complete feed. Most often the formula of a compound feed is fixed (type and proportion of raw materials) for a type of utilisation. As a result the nutritional quality of the compound feed is expected to be constant to balance adequately the diet. Sometimes linear fitting is implemented by feed companies to formulate compound feeds at the lowest cost. In this situation type and proportion of raw materials can vary but the nutrients supplied by the compound feeds are theoretically constant.

Whatever the method for formulating feed companies should determine the nutritive value of the compound feeds, namely energy and protein value. Feed companies should state the capability and opportunity of the choice and proportion of raw materials included in each formula to balance the basal diet of the type of horses which are concerned, and to optimise the cost of the compound feed to be commercially competitive. Feed companies should provide to end users technical information which are displayed either on the label of compound feed bags or/and on the marketing notices which are disseminated. End users such as: breeders, trainers, managers of horse riding schools, horse riders and horse keepers are using increasingly compound feeds eventhough raw materials are still popular . End users wish increasingly to know the characteristics of the feeds: type of raw materials, the nutritive value and conditions for use. The regulations implemented in the different European countries e.g. chemical composition, nutritive value, are still variable but the regulation should be harmonised at EU level at short term using the new knowledge obtain by research this last decade.

Nutritive value of concentrates depend on their physicochemical characteristics, the amount of end products of digestion in the different compartment of the digestive tract and the metabolic efficiency of these end products. These characteristics can be affected either by technological process elaborated and implemented by feed industry or/and to some extend by the condition of utilisation. Hence the prediction of the characteristics of the concentrates should be easily implemented either by feed industry or/and end users via routine laboratories in both situations.

The aim of this special issue is to give the recent data obtained in referenced European groups on the evaluation and prediction of the energy and protein value of concentrates using the most relevant concepts , criteria and methods. These data were presented in the scope of a session nutrition organised by the Horse commission at the 54th annual EAAP meeting held in Rome 2003. These new figures are now discussed in the scope of the Harmonisation of feed evaluation systems in Farm animals(horses included) implemented by EAAP at the 56th annual meeting held in Uppsala in 2005 . It could contribute to improve the statement of European regulation on the information to be provided by feed industry to end users of concentrates in horses as well.