

BASIC RUMINANT NUTRITION

Ruminant nutrition is primarily about feeding rumen fermentation. The order of importance of the various nutrients is energy, protein, fibre, macro-minerals, trace elements and vitamins. To ensure optimum feed utilisation, they are, however, all necessary in balanced amounts. Super-imposed on the need for nutrients are the need for appropriate animal performance, relative feeding safety and minimal environmental impact.

The most cost-effective source of nutrients for growth is usually grazing but this alone frequently fails to meet complete nutrient requirements for production of high-quality meat, milk or fibre. Supplementary feeding is invariably utilised to fill the gaps in the annual cycle of pasture and crop growth. The ideal supplement is one that complements the existing feed base.

Cereal grains are a concentrated source of energy primarily as starch. They are not a viable stand-alone ration because they are relatively low in fibre, protein, calcium and sodium. They are however a core ingredient in WA ruminant rations. Feed barley is the **Kojonup Feeds** preferred option due to its overall suitability.

Lupin is usually the chosen option as a protein supplement in WA due to its availability, palatability, low starch, high protein, high energy and moderate fibre. Canola meal is an alternative usually more suited to monogastric nutrition.

Field peas and faba beans may also be used when expedient. Ruminants can utilise non-protein nitrogen (NPN) sources such as urea but these are not used by **Kojonup Feeds** due to less efficient utilisation and higher levels of cereal grain in NPN containing feeds.

Fibre is required for rumen fermentation and is effectively incorporated into **Kojonup Feeds** pellets in the form of oat hulls. Oat hulls do not require processing or pre-conditioning and are available as a co-product of rolled oat production for human consumption.

All **Kojonup Feed**s products contain a species-specific comprehensive macro-mineral, trace element and vitamin package to meet WA feeding requirements. Cattle products also contain monensin to improve feed conversion efficiency, reduce methane emissions and reduce the risk of digestive disturbance. Sheep products also contain Agolin, a proprietary blend of plant extract essential oils to optimise feed intake, improve feed conversion efficiency, reduce methane emissions and reduce the risk of digestive disturbance.

Kojonup Feeds is a small mill and can utilise novel feed ingredients to create bespoke products to meet specific customer requirements. The mill is Feedsafe accredited to assure the highest level of product integrity.

