

Energy

Energy is a vital nutrient for growth, maintenance, reproduction and lactation. The prime source of energy in our northern grazing systems is the grass in the paddock. The level of energy available varies throughout the year with more energy available from the grass in summer. The energy levels in the grass fall away as the pasture hays off. The aim of supplementation is to maximise the energy gained from the pasture. This occurs in two ways. Firstly supplements increase the total energy extracted from a given amount of grass by increasing the digestibility and secondly the total amount of pasture eaten is increased by increasing the speed of digestion of the pasture. Bovatec also increases the efficiency of use of the energy taken in making it more available to the beast and reducing the amount lost as methane. Methane is a potent greenhouse gas so using Bovatec is good for the environment. The actual energy supplied from almost all supplements is minimal compared to the total requirement of a beast. By feeding Quickclick we can maximise the energy available to the beast from dry standing grass.

Feeding energy is usually very expensive in term of the productivity gained. The main sources of energy fed are usually molasses and grain. Protein meals also contain quite good levels of energy. The usual reasons for feeding energy are to finish cattle quickly and so turn them off or as a survival ration in conditions of extreme drought where there is no pasture left to utilise.

The energy requirements of cattle vary enormously. The efficiency of use of energy for maintenance and production vary depending on the source of the energy. Roughage diets are less efficiently used for gain than are concentrate diets but are only slightly less efficient for maintenance. Younger animals use energy for gain more efficiently than older animals and require less energy for maintenance.

When feeding energy sources it is vital to make sure that all the other nutrients are supplied in adequate quantities. The principal of the primary limiting nutrient is very important here as if there is not enough of other nutrients supplied then the amount of gain achieved with the energy fed can be severely limited. If excessive energy is fed without the protein available to use that energy then the gain achieved will shift from muscle to fat. As it costs a lot of energy to put on fat then the cost for this gain will be increased.

A good estimate of the energy available in pasture is the digestibility or total digestible nutrients (TDN). When looking at protein supplementation we use the ratio of digestibility to crude protein in the diet. This gives a good estimation of the relationship between the energy and protein in the diet. A ratio of 6:1 to 7:1 is considered ideal. Green grass can get down to 4:1 while dry hayed off grass can get up to 14:1. In this situation supplementing protein will increase productivity.

Energy is vital for production and the cheapest source is the grass in the paddock. By supplementing the cattle we can maximise the energy the beast can obtain from the pasture and increase productivity. Feeding energy is economic only in certain situations such as production or survival feeding.

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