



## **Animal Health & Nutrition Specialists!**

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### **The Economics of Supplementary Feeding**

Whether supplementary feeding is a profitable strategy will depend on the cost of feeding and the response of the stock to the supplement. The response will be related to what the primary limiting nutrient is in the pasture. By correcting deficiencies increased production in terms of extra weight gain, improved fertility or improved or lower drops in body condition can be expected. The effect of this improved production will flow through the herd structure and should be considered in feeding decisions. A livestock schedule is invaluable in making decisions on supplementary feeding especially when feeding breeders for improved fertility. For instance if steers can be turned off 6 to 12 months earlier more breeders can be run on the same area.

There are varying levels of supplementary feeding from a low level urea feeding program through to full feeding for production or survival. Full feeding for survival is rarely profitable and should only be used for limited numbers for a short time. The economics of full grain feeding are usually very tight and each situation should be considered on its merits. Feeding protein meals, grain or molasses in the paddock to increase production can be profitable in the right situation.

The primary limiting nutrient is the nutrient that is available in the least amount compared to requirements. During the dry season this is usually protein. When plenty of green feed is available a mineral such as phosphorous or energy will become the primary limiting nutrient depending on the soil type that the pasture is growing on. By supplying the primary limiting nutrient in sufficient quantities production can be increased. In dry season feeding by supplying rumen degradable protein the efficiency of the rumens digestion is increased and more pasture can be taken in thus increasing supply of energy and all other nutrients. Urea supplementation on dry feed can increase pasture intake by 20% to 50%. Responses from feeding urea can be expected to be in the order of 300 grams extra live weight per head per day in the right conditions. A rumen modifier such as Bovatec will also increase the availability of the energy taken in to increase weight gains by 60-100 grams per head per day. Urea supplementation can increase pregnancy rates by improving body condition score in breeders. Studies on feeding urea in an extreme dry season have shown increases of 14% more cows pregnant. Additional benefits can be expected if the supplement is correcting phosphorous or trace mineral deficiencies.

Any supplementary feed on pasture should aim to minimise negative disturbances to the rumen. High levels of fat or starch can negatively affect fibre digestion. Intakes should be kept at or below 1% of bodyweight and should be designed to stimulate the rumen to improve fibre digestion. Grain should be processed to slow starch digestion and limit fed and available every day to prevent acidosis. Roller milling, soda grain and steam/heat treatments are the best methods. Protein meals can safely be fed 2 or 3 times a week. This type of feeding may not increase pasture intake but should increase overall (pasture+supplement) intake.

The benefits of supplementary feeding will depend on the response achieved and the costs of feeding. By looking at the situation and the aim of the program, the right type of supplement can be used to achieve these targets.