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Nutritionist

Feedlotting with Fabstock

In the last 3 decades, intensive feeding of lambs has become commonplace on many farms.

Intensive feeding allows the producer the opportunities to value add their grain in times of low prices as well as the opportunity to finish stock at times of poor pasture availability

The process does not come without its risks. Rumen upsets (acidosis) and poor feed conversion efficiencies can all impact on the profitability of intensively feeding stock.

In order to properly understand the impacts of intensive feeding, we first need to look at the feed conversion process.

The Rumen

Instead of a single stomach, a ruminant has a 4 chambered stomach. Known as the rumen complex, the rumen itself occupies approx. 75%. The rumen consists of 2 layers – an outer layer consisting of smooth muscle that rhythmically contracts and relaxes to mix the rumen contents and an inner layer consisting of small fingers (papillae) which absorb nutrients. The rumen normally has a relatively constant pH level of between 6 – 7.

Contained within the rumen is a complete ecosystem of microbes including bacteria, fungi & protozoa. Of these, bacteria carry out most of the digestion of sugars, starch, fibre, and protein.

Carbohydrate Fermentation

Different types of bacteria ferment different types of carbohydrates utilising them for their life processes and giving of byproducts known as Volatile Fatty Acids (VFA) with the 3 main types being acetate, butyrate and propionate. Whilst

AT A GLANCE

- *Intensive feeding of livestock in order to maximize weight gains is a common practice on many farms*
- *If it is to be profitable, care and time is needed when bringing stock on to high grain diets as the rumen bacteria need time to adapt.*
- *Feedlot Mix is designed to overcome nutritional deficiencies found in high grain diets as well as providing a balanced rumen environment*

these VFA's are waste products to the bacteria that produce them, they are very valuable to the host animal as they provide up to 80% of the animal's energy needs.

The fermentation of **structural carbohydrates** such as cellulose is carried out by Fibrolytic bacteria. As the carbohydrate source they utilize is only broken down slowly, these bacteria tend to reproduce slowly and have poor tolerance for rumen pH levels below 6. The fermentation of these types of carbohydrates results mostly in the production of acetic acid (fat).

Amyolytic bacteria ferment **non-structural carbohydrates** such as starches. As these are broken down much more quickly, Amyolytic bacteria are able to reproduce much more rapidly. The fermentation of starches and sugars leads to the production of mainly propionate (muscle). Amyolytic bacteria tend to be more insensitive to falls in rumen pH as the production of propionate tends to cause rumen acidity to rise.

This is where the challenge with lot feeding begins. To maximize growth rate in young stock, we need to feed a high proportion of non-structural carbohydrates in the form of starch, but the increasing level of rumen acidity as a result of high levels of starch, can suppress the activities of fibre fermenters, leading to an imbalance in the rumen environment.

Feeding unaccustomed levels of starch can lead to the proliferation of lactic acid producing bacteria. Whilst lactic acid is present in the rumen in small quantities, there are bacteria which can utilise it to produce propionate. If however, these lactic acid fermenters have not been given time to accumulate

in the rumen, the lactic producers will rapidly multiply leading to metabolic acidosis and death in the affected animals. Even if they recover, these animals ability to convert feed to meat will be permanently impaired

Fabstock Feedlot Mix

Fabstock **Feedlot Mix** has been designed to allow producers to utilise high starch diets to maximize weight gains in intensively fed animals whilst overcoming the deficiencies that exist with such feeds.

Feedlot Mix is in a 'loose lick' form, allowing producers to feed separately thus making feeding operations much simpler.

Fabstock's Feedlot Mix contains a rumen degradable protein source that can be used by rumen bacteria together with bypass protein that is utilized directly by livestock, reducing the risk of protein deficiency

Feedlot Mix contains balanced levels of calcium, phosphorus and magnesium, all essential for rumen microbes to grow and multiply, as well as sulphur to maintain a balanced rumen environment. Sulphur is also necessary to stimulate fungal activity.

Feedlot Mix also contains methionine to stimulate the appetite as well as a number of B group vitamins to assist with energy metabolism.

Fabstock's **Feedlot** mix, is 'buffered' with acid neutralisers, allowing for a more balance rumen environment and hence an improved ability to profitably utilise available feed

Fabstock **Feedlot Mix** provides a balanced nutritional package, is cost effective and delivers a real return on investment.

Feedlot Management

Whilst it is beyond the scope of this article to fully cover feedlot management, a few points to consider will not go astray.

Prior to entering the feedlot, animals should be worm free (as much as possible). Undertake a

faecal egg count (FEC) and if the number warrant it, drench appropriately.

Also, at least 2 weeks prior to entering the feedlot, all animals should a 5 in vaccine as well as injections of Vitamins ADE & B12.

When intensively feeding animals, water is critical. Water should be of good quality, with troughs cleaned regularly. The rule is, if you won't drink the water, don't expect your stock to.

Don't have pen sizes too small or too big – the accepted industry guideline is about 5m²/head, with about 2 – 300 head per pen.

If you don't have a weigh crate, get one. Too many producers have a too bigger weight range of lambs within a pen. Having no more than 5 kg between the heaviest and the lightest will help eliminate shy feeders. Lambs need to be weighed regularly to ensure growth targets are being met.

Please make sure that all feed inputs are tested. Nutritional variations amongst feeds are common and they can and will have a major impact on profitability.

Finally, take your time in getting stock on to high grain diets. Careful induction often means the difference between a profit and a loss.

Summary

Feedlotting can be profitable exercise. However, producers must realise that as a ruminant is designed to consume a high forage diet and if we are to successfully (and profitably) feed a high grain diet in order to maximize growth rates, care is needed and a good buffering premix is essential.

For further information or clarification, assistance in feedlot management or diet formulation, please do not hesitate to contact the author or your local **Fabstock** reseller.