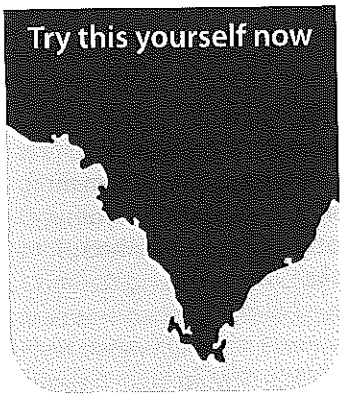
Why is Testing Feed Value Important for Sheep?

Emma McInerney
SARDI, Minnipa Agricultural Centre

Extension



Key messages

- **Test feed for nutritional value to optimise animal production.**
- **Supplement cereal grains with a stocklime and salt mix.**
- **Money is wasted on supplement products if they are not needed.**

Why test stock feed?

Poor performance in weaner growth rates can be linked to any number of health, genetic or environmental problems, but often it will come down to understanding and reacting to animal nutrition. A good deal of time can be spent speculating on various health and nutrition issues to decipher why livestock are not performing equally well in the paddock. Poor growth rates, a struggling minority in the mob who have always looked scraggly or more obvious symptoms such as lameness, scours, deaths, poor lambing percentage and ill thrift are good reasons to get feed quality right. Sending samples to a laboratory for analysis is the best way to monitor livestock nutrition.

What does it mean?

Money invested in sampling the quality of feed is much better spent than buying supplements for problems you are not sure exist. Feed testing provides a summary on all the essential components below.

Metabolisable energy (ME)

Necessary all the time but in higher levels during pregnancy, production of milk and putting on body condition. Excess energy can make livestock fat. Energy is usually the limiting factor to stock production in dry feed on EP. Grains are a good supplement to a low energy ration.

Target: 8 mega joules (MJ) of ME/kg DM for maintenance, 11 MJ/kg DM for young, quick growing lambs and for lactating ewes.

Digestibility (DOMD)

Refers to the percentage of feed that is used by the animal i.e. for 1 kg of feed that is 55% digestible - 0.55 kg can be used by the animal and 0.45 kg is wasted (converted to dung).

Target: no lower than 55% for maintenance and 75% digestibility for production feeding.

Crude Protein (CP)

Necessary for muscle growth and function, milk production, wool growth, growth of the lamb during late pregnancy and to develop rumen microbes. Grain protein readings at the silo are done on a "wet weight" basis, i.e. grain is not 100% dry. Silo tested protein should be multiplied by a factor of 1.1 to give protein on a dry matter basis. Excess protein is a burden to the animal, as it requires an increased energy supply in order for the body to excrete it.

Target: 8% CP for maintenance and 16% for lambs and lactating ewes.

Fibre (NDF)

During rumination fibre is broken down in small particles mechanically, (chewing the cud) which stimulates saliva production (5-20 L per day for sheep and 50-200 L for cattle), aiding chemical breakdown and stimulating rumen microbes.

Target: over 30% (up to 50% for maintenance/drought feeding).

Calcium (Ca) and Phosphorus (P)

Calcium is necessary for bone growth and muscle function (note: the rumen is also muscle! Ca deficiency reduces rumen ability to contract and therefore will reduce feed intake). Lactating animals have a high demand for calcium and severe deficiencies at lambing can result in 'milk fever'. As cereals are low in calcium, it is important to make sure that calcium supplies are kept up over summer to prevent deficiency at lambing time. This can be achieved by offering a stocklime supplement to compensate for low calcium and to balance the relatively high phosphorus content. It cannot be assumed that pastures on highly calcareous soils have adequate calcium, as a lot is tied up and unavailable to the animal.

Target: ideal calcium to phosphorus ratio is 2:1. Stocklime should be offered at 1.5% and salt can be added at 0.5%.

ry matter (DM)

ry matter is the remaining mponent after moisture has een removed from a feed. 1 DSE quires approx 1 kg DM/day if ed is green and 1.5 kg if feed is y. On green pasture containing 0% DM, the animal would have consume 10 kg of green feed to take 1 kg of DM. An animal has work hard to process the 9 L of ater and may result in scouring.

sting nutritional value of feed ll identify components of e diet that are lacking or in cess of stock requirements. pplementing to meet specific quirements can often be mplicated and may require her advice and is equally portant for cattle as for sheep.

y points for dressing ill thrift and oor production of eaner lambs

- Nutrition of the ewe is important throughout pregnancy – target condition score 3.
- Encourage early rumen development – it takes twenty one days after birth before the rumen begins to develop. Introduce grain to the diet while lambs are still on the ewes to teach them to consume grain and also encourage development of the rumen microbes more quickly. Nutrition and rumen development in the first three months of a lamb's life directly affects the animal's production for the rest of its life – if it has a tough time, it will never recover to reach full potential.
- Meet nutritional requirements – if essential components are lacking, lamb growth will be restricted, regardless of whether it has been drenched, vaccinated or even kissed.
- Have a target weaning weight – aim to get merino lambs to a minimum of 20 kg and crossbreds to 36 kg.
- Measure weaning weights and consider splitting the mob. Lighter weight lambs are commonly twins and consequently the genetics for higher lambing percentage is slowly culled from the mob.
- What are your market options – is it profitable to finish your own lambs and if so how, or should they be sold as weaners? If buying in ewes, ask your agent about seasonal conditions at the time they were lambs, i.e. if the ewes were born in a year when feed was poor, they may have suffered during the critical first three months and affected their lifetime potential.

Further information

MLA website - Best practice for production feeding of lambs: A review of the literature.

http://www.mla.com.au/TopicHierarchy/InformationCentre/AnimalProduction/Lamb+Finishing.htm

Feeding and Managing Sheep in Dry Times, available from your PIRSA office

Nutrient Requirements of Domesticated Ruminants, CSIRO Publishing

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