Feed budgeting – An important item in the modern farm profitability toolkit

Key points

- Feed budgets can be used to help improve animal performance and profitability.
- They enable farmers to plan for impending feed shortages and surpluses.
- Key parts of the budget are calculations of feed available and animal requirements.
- Feed budgets can be done on a whole farm and/or a paddock-by-paddock basis.
- An expert should be consulted for training when starting out.
- A computer makes the job a lot easier and quicker.

The need for objective information when making farm management decisions is greater than ever before.

As successful sheep, beef cattle and goat farmers push the boundaries of livestock performance and profitability, margins for error are being narrowed.

Many farmers run highly stocked operations. They mate hoggets and highly fecund ewes, and are involved in lamb and beef supply contracts. In these situations, you need to be able to confidently predict the outcome of your management decisions.

Feed budgeting is one of a number of tools that can add reliability to decision making. Indeed, many highly successful sheep and beef cattle operations rely upon it.

Feed budgets allow farmers to match feed supply with feed requirements for the whole farm throughout the year. Feed shortages and/or surpluses can be anticipated.

This enables the use of forage crops, supplementary feeds and/or nitrogen fertiliser, the conservation of surplus feed, and the buying or selling of livestock, to be planned well in advance.

Feed budgets can also help ensure that the correct levels of feed are offered to different classes of stock at different times of the year. This can be worth thousands of dollars in additional animal performance.

For example, achieving appropriate pasture cover, feed intake and ewe condition score targets during late-pregnancy and lactation is estimated to be worth an extra $20 a ewe on many farms.

Putting a feed budget together

The following information is needed to put a whole farm feed budget together:

- Farm and paddock areas
- Whole farm average pasture cover
- Pasture growth rates for each month of the year
- Numbers of different classes of livestock on the farm for each month of the year

- Feed requirements of different classes of livestock for each month of the year
- A utilisation factor — normally 80–90 per cent — to allow for pasture trampling and fouling.

Whole farm feed budgets are best done on a computer. This enables you to complete the large number of calculations very quickly. A computer can also store tables of feed requirements, pasture growth rates, feed quality information and details on supplementary feeds, and give quick and easy access to the information.

Simple feed budgets can also be done on a paddock-by-paddock basis for individual mobs of stock. Let's look at an example:

Feed supply

The first step is to calculate the total feed supply (amount of pasture) available. To calculate this you need to know the paddock area, initial pasture cover and grazing residual.

Starting pasture cover = 1500 kg DM/ha

Grazing residual = 800 kg DM/ha

DM available = 1500 - 800 = 700 kg DM/ha

Paddock area = 7 ha

Total DM available = 7 × 700 = 4900 kg DM

Assume utilisation of 85% = 4165 kg DM

Feed demand

The second step is to calculate feed demand (the total amount of feed required by a particular mob). This is based on the class of stock, their number and their daily feed requirements.

Livestock class and mob size = 1740 mixed age ewes

Daily feed demand = 1.2 kg DM/ewe/day (mid-pregnancy)

Total daily feed demand (whole mob) = 1740 × 1.2 = 2088 kg DM/day

From both these totals the number of grazing days in the paddock can be calculated.

Grazing days

Utilisable DM available = 4165 kg DM

Total daily feed demand = 2088 kg DM

Number of days in paddock = 4165 ÷ 2088 = 2 days

This simplified calculation makes no allowance for the fact that every kilogram of dry matter is not of equal nutritive value.

ME content is the best measure of feed quality and can be easily estimated from green, dead and clover content.

Feed quality is less important when budgeting the maintenance requirements of ewes and cows. For growing or lactating stock, ME levels should be 10 MJME/kg DM or higher.

Starting out

If you are new to feed budgeting, it is important to first seek expert advice and training from a farm consultant or similar specialist. Workshops are run from time to time by Meat & Wool Innovation (MWI), Massey and Lincoln Universities, farm consultants and AgResearch. When this edition of *In The Paddock* went to press, MWI was running a series of two-day feed budgeting workshops for farmers.

Initial set-up costs for feed budgeting are unlikely to exceed $6000. This includes a computer, pasture probe, training and consultancy.

Ongoing costs are likely to be about $500 a month (farmer's time costed at $50 per hour), but this is small in comparison to the economic benefits gained.