# Feed budgeting

In any feed shortage situation, the first question is how much feed do you actually need to buy? As always, it is important to do a feed budget and to ensure that you know what quantities of feed to buy each month to produce the monthly volumes of milk required to generate budgeted milk income and profit. There are a number of feed budgeting methods and tools available (paper and software based) and many dairy advisers who can readily assist you.

Dairy Australia has two tools to assist with feedbudgeting. Go to dairyaustralia.com.au/feedshortage planning and budgeting to access both the feedbudget spreadsheet and the web based Feedtools.

### It's important to plan well before you buy

☑ Do you have the feed requirements of all your stock covered for the coming months?

☑ Do you know how much feed you need to buy?

## A feed budget involves three steps

| **Step 1** Calculate your monthly feed demand | **Step 2** Calculate your total feed deficit for each month | **Step 3** Calculate quantity of bought-in feeds required per month |
| --- | --- | --- |
| 1. Count how many animals there are to feed, and milk production/ growth targets. | 1. Calculate tonnes of home-grown DM available each month based on realistic estimates of growth rates. This includes pastures, other standing crops, silage and hay on hand. | 1. Describe what feeds you intend to buy to fill the feed deficit for each month. |
| 2. Calculate the daily Metabolisable Energy (ME) requirements of each class of stock – milkers, dry cows, yearling heifers and calves. | 2. Subtract projected tonnes of home-grown DM from tonnes of DM required for all stock each month. | 2. Formulate balanced diets for each class of stock – milkers, dry cows, yearling heifers and calves. |
| 3. Calculate tonnes of Dry Matter (DM) required for all stock each month, based on animals' daily Metabolisable Energy (ME) requirements and stock numbers. | | 3. Using these diets and the stock numbers from Step 1, calculate the total tonnes of each feed that need to be bought each month. |

**For more information visit** dairyaustralia.com.au/feedshortage

# Tips for feed budgeting and using the feed budgeting tool

## Step 1  Calculate your monthly feed demand

› Be sure to do an accurate head count.

› Be realistic about the ME requirements of different classes of stock. See Table 1.

› For milkers, adjust ME requirements for expected liveweight gain or loss, depending on stage of lactation.

› Table 2 shows the additional ME inputs needed for body condition score (BCS) gains. Note that cows are more efficient at converting feed into body condition while still milking than when dry. If necessary, seek help from an adviser to calculate ME requirements.

**Table 1**  Daily ME requirements for different classes of stock

| Class of stock | Daily ME requirements |
| --- | --- |
| Milking cows | 70–95 MJ ME for maintenance (depending on liveweight, walking activity, weather conditions) plus 5-5.5 MJ ME per litre of milk. Also allow for any change in body condition. |
| Dry cows | 90–100 MJ ME (depending on liveweight) |
| Yearling heifers | 80–100 MJ ME (depending on liveweight) |
| Calves | 40–80 MJ ME (depending on liveweight) |

**Table 2**  Additional ME inputs needed for body condition score (BCS) gains

| Cow's liveweight | Additional MJ ME per day to increase BCS from 4 to 5 | | | | | |
| --- | --- | --- | --- | --- | --- | --- |
| | in 30 days | | in 45 days | | in 60 days | |
| | Lactating cow | Dry cow | Lactating cow | Dry cow | Lactating cow | Dry cow |
| 400 kg (Jersey) | 49 | 67 | 33 | 45 | 25 | 34 |
| 475 kg (Fresian x Jersey) | 58 | 80 | 39 | 53 | 29 | 40 |
| 550 kg (Fresian) | 68 | 94 | 45 | 63 | 34 | 47 |
| 650 kg (Holstein-Fresian) | 80 | 110 | 53 | 74 | 40 | 55 |
| 750 kg (large framed Holstein-Fresian) | 91 | 127 | 60 | 85 | 45 | 64 |

## Key tips

› Develop a month-by-month feed budget for all your stock.

› When calculating monthly feed demand, use accurate stock numbers and realistic ME requirements for different classes of stock.

› When calculating total feed deficit for each month, use sound estimates of pasture growth and utilisation rates, and quantities of home-grown hay and silage on hand.

› Make realistic allowances for feed wastage based on your intended feed-out methods.

› Revise your feed budget at least monthly, and also when your circumstances change.

## Feed Budgeting Tool makes it easy

Dairy Australia's Feed Budgeting spreadsheet can help you estimate what quantities of feed you need to buy each month in three easy steps.

### Features of the tool

› Calculates tonnes of feed dry matter required and supplied based on megajoules of metabolisable energy (MJ ME).

› Provides estimated daily growth rates for pastures at locations across all regions.

› Factors in wastage during feed-out.

To download this Excel spreadsheet tool, visit dairyaustralia.com.au/feedshortage.

**It may be worth getting an adviser to help you do your feed budget, or to at least double check it.**

## Step 2  Calculate your total feed deficit for each month

› The Dairy Australia Feed Tools estimates tonnes of pasture dry matter available to cows each month using monthly estimates of daily growth rates for locations across Australia based on simulations using the DairyMod model. (See Figure 1 for an example). For the nearest location to your farm, for a specific pasture type, select one of five alternative growth rates – exceptional, very good, good, fair or poor – based on how conditions expected for the coming month compare with long term trends for that month. Then select a high, moderate or low utilisation rate.

› If necessary, seek help from an adviser to estimate quantities of pasture and other home-grown feeds on-hand (tonnes Dry Matter).

**Revise your feed budget when circumstances change. For example, available feeds, number of animals to be fed.**

**Figure 1**  Example: Colac, SW Vic. Pasture growth rates for perennial ryegrass (dryland)



Legend:
- Exceptional (90th %)
- Very good (75th %)
- Good (50th %)
- Fair (25th %)
- Poor (10th %)

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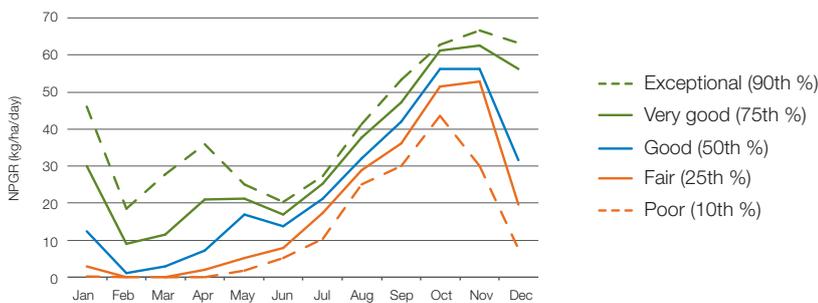
## Step 3  Calculate quantities of bought-in feeds you require each month

› Quantities of grain/concentrates and bought-in fodder entered should be based on formulated diets that are nutritionally well-balanced, and will maintain healthy rumen function and feed conversion efficiency. If necessary, seek help from a nutrition specialist.

› In this season, if pasture availability is greatly reduced during the period budgeted, you may need to buy in a supplement with a higher level of crude protein or fibre than in normal circumstances.

› Make realistic allowances for feed wastage based on your intended feed-out methods. See Table 3. For more information on feed wastage, visit dairyaustralia.com.au/feedshortage.

Dairy Australia Feedtools is a web based program that uses data from your region to assist with the planning and tracking of your farms feed requirements. Features include:

› calculating feed required

› checking the ration is balanced

› tracking forage and concentrates inventory.

Go to dairyaustralia.com.au/feedshortage.

**Table 3**  Feed wastage using different feed-out methods

| Feed-out method | Minimum | Typical | Maximum |
|---|---|---|---|
| In the dairy at milking | 0% | 1% | 2% |
| In grazing paddock, on pasture | 5% | 15% | 25% |
| In sacrifice paddock, fed on bare ground, in ring feeders, or under a fence line | 5% | 25% | 35% |
| On permanent feed pad incorporating a compacted surface and purpose-built feed troughing | 2% | 5% | 10% |
| On permanent, fully developed feed pad with concrete surfaces | 0% | 3% | 5% |

*These figures assume dry conditions. They may not reflect the full range of wastage that might occur under wet conditions.*

### Example of wastage costs

The cost of wasting 25% of a $14,000 load of hay is $3,500. Reducing this wastage from 25% to 10% would save $2,100, leaving a feed wastage cost of $1,400.

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