

# Feed Budget **Tables**

for drought conditions in  
southern Australia



lifetimewool

more lambs, better wool, healthy ewes

The following ewe maintenance requirements have been calculated using Grazfeed®. Values generated for paddock conditions are based on ewes grazing low quantities of short, dead feed on mixed perennial/annual pastures of low clover content.

## Step 1. What they Need:

| TABLE 1a. Energy Required by Ewes @ Condition Score 3 to maintain weight |                                    |      |                                     |      |                                    |      |  |      |
|--|------------------------------------|------|-------------------------------------|------|------------------------------------|------|--|------|
| Maintenance energy (MJ/d) for ewes under drought paddock conditions      |                                    |      |                                     |      |                                    |      | Confinement Fed                                      |      |
| Day of pregnancy   | small frame (45kg) maintain @ CS 3 |      | medium frame (50kg) maintain @ CS 3 |      | large frame (60kg) maintain @ CS 3 |      | medium frame maintain @ CS 3                         |      |
|  | single                             | twin | single                              | twin | single                             | twin | single   | twin |
| dry  | 7.4                                | 7.4  | 8.0                                 | 8.0  | 9.3                                | 9.3  | 6.7  | 6.7  |
| 50   | 7.6                                | 7.8  | 8.4                                 | 8.6  | 9.7                                | 9.9  | 7.0  | 7.2  |
| 70   | 8.0                                | 8.4  | 8.7                                 | 9.1  | 10.1                               | 10.7 | 7.4  | 7.9  |
| 100  | 9.0                                | 10.2 | 9.9                                 | 11.1 | 11.5                               | 12.9 | 8.6  | 9.8  |
| 130  | 11.3                               | 14.1 | 12.3                                | 15.4 | 14.4                               | 17.7 | 10.9   | 14.1 |
| days lactating   | maintain @ CS 3                    |      | maintain @ CS 3                     |      | maintain @ CS 3                    |      | ewes and lambs                                       |      |
|  | single                             | twin | single                              | twin | single                             | twin |  |      |
| 10   | 17.3                               | 21.7 | 18.7                                | 23.4 | 21.5                               | 26.9 | ask for advice on confinement feeding ewes and lambs |      |
| 30   | 18.7                               | 23.9 | 20.2                                | 25.8 | 23.2                               | 29.6 |  |      |
| 50   | 15.5                               | 19.1 | 16.7                                | 20.6 | 19.2                               | 23.7 |  |      |

| TABLE 1b. Energy Required by Ewes @ Condition Score 2 to maintain weight |                                    |      |                                     |      |                                    |      |  |      |
|--|------------------------------------|------|-------------------------------------|------|------------------------------------|------|--|------|
| Maintenance energy (MJ/d) for ewes under drought paddock conditions      |                                    |      |                                     |      |                                    |      | Confinement Fed                                      |      |
| Days pregnancy   | small frame (45kg) maintain @ CS 2 |      | medium frame (50kg) maintain @ CS 2 |      | large frame (60kg) maintain @ CS 2 |      | medium frame maintain @ CS 2                         |      |
|  | single                             | twin | single                              | twin | single                             | twin | single   | twin |
| dry  | 6.6                                | 6.6  | 7.1                                 | 7.1  | 8.1                                | 8.1  | 6.0  | 6.0  |
| 50   | 6.8                                | 7.0  | 7.3                                 | 7.6  | 8.5                                | 8.8  | 6.2  | 6.5  |
| 70   | 7.2                                | 7.5  | 7.7                                 | 8.2  | 9.0                                | 9.4  | 6.7  | 7.1  |
| 100  | 8.2                                | 9.2  | 8.8                                 | 10.0 | 10.2                               | 11.6 | 7.7  | 9.0  |
| 130  | 10.0                               | 12.5 | 10.8                                | 13.4 | 12.5                               | 15.4 | 9.6  | 12.3 |
| days lactating   | maintain @ CS 2                    |      | maintain @ CS 2                     |      | maintain @ CS 2                    |      | ewes and lambs                                       |      |
|  | single                             | twin | single                              | twin | single                             | twin |  |      |
| 10   | 14.7                               | 18.8 | 15.5                                | 20.5 | 17.9                               | 23.9 | ask for advice on confinement feeding ewes and lambs |      |
| 30   | 15.8                               | 21.2 | 17.6                                | 23.1 | 19.6                               | 26.6 |  |      |
| 50   | 12.8                               | 16.6 | 13.4                                | 17.8 | 15.8                               | 20.5 |  |      |

**IMPORTANT: This is a guide only. Monitor your sheep to check that feeding rates are adequate.**

The Chief Executive Officer of the Department of Agriculture and Food and the State of Western Australia accept no liability whatsoever by reason of negligence or otherwise arising from the use or release of this information or any part of it.

## Step 2. What they can eat:

**TABLE 2a. Metabolisable Energy Intake (MJ/day) from dry paddock feed - perennial pastures**

| Feed On Offer<br>kg DM/ha | Digestibility |     |     |     |     |      |
|---------------------------|---------------|-----|-----|-----|-----|------|
|                           | 35%           | 40% | 45% | 50% | 55% | 60%  |
| 500                       | 0.3           | 0.7 | 1.3 | 1.7 | 2.2 | 2.8  |
| 1000                      | 0.9           | 2.2 | 3.5 | 4.6 | 5.8 | 7.2  |
| 1500                      | 1.4           | 3.3 | 4.8 | 6.3 | 7.8 | 9.3  |
| 2000                      | 1.8           | 4.0 | 5.6 | 7.2 | 8.8 | 10.2 |

**Perennial Pastures – Rules of thumb:** When pasture dries off, digestibility is around 60%. Thereafter it declines by around 5% per month until it reaches a minimum of 35%.

**TABLE 2b. Metabolisable Energy (ME) intake from dry paddock feed - annual pastures**

| Feed On Offer<br>kg DM/ha | Digestibility |     |     |      |      |
|---------------------------|---------------|-----|-----|------|------|
|                           | 45%           | 50% | 55% | 60%  | 65%  |
| 500                       | 1.8           | 2.3 | 3.0 | 4.0  | 4.8  |
| 1000                      | 2.7           | 3.5 | 4.5 | 5.8  | 7.1  |
| 1500                      | 4.4           | 5.7 | 7.1 | 8.3  | 9.5  |
| 2000                      | 5.8           | 7.3 | 9.0 | 10.4 | 12.0 |

**Annual Pastures – Rules of thumb:** When pastures dries off, digestibility is around 70%. It declines rapidly during the first 2 months to around 50% with slow decline thereafter.

## Step 3. Losing or gaining weight?

**TABLE 3.**

| Surplus<br>MJ/day | expected gain<br>g/h/d | CS in 30<br>days (45kg) | CS in 30<br>days (50kg) | CS in 30<br>days (60kg) |
|-------------------|------------------------|-------------------------|-------------------------|-------------------------|
| 1.0               | 17                     | 0.07                    | 0.06                    | 0.05                    |
| 2.0               | 33                     | 0.13                    | 0.12                    | 0.10                    |
| 3.0               | 49                     | 0.20                    | 0.18                    | 0.15                    |
| 4.0               | 66                     | 0.27                    | 0.24                    | 0.20                    |
| 5.0               | 82                     | 0.33                    | 0.30                    | 0.25                    |
| Deficit<br>MJ/day | expected loss<br>g/h/d | CS in 30<br>days (45kg) | CS in 30<br>days (50kg) | CS in 30<br>days (60kg) |
| -1.00             | -29                    | -0.12                   | -0.11                   | -0.09                   |
| -2.00             | -57                    | -0.23                   | -0.21                   | -0.17                   |
| -3.00             | -85                    | -0.34                   | -0.31                   | -0.26                   |
| -4.00             | -113                   | -0.46                   | -0.41                   | -0.34                   |
| -5.00             | -142                   | -0.57                   | -0.52                   | -0.43                   |

## Step 4. How much to feed?

**TABLE 4. Approximate Feed Values**

| Grain     | ME (MJ/kg DM)* | Crude Protein % | DRY MATTER % |
|-----------|----------------|-----------------|--------------|
| Oats      | 10.4           | 8.8             | 90           |
| Barley    | 12.3           | 10.8            | 90           |
| Wheat     | 13.1           | 14.2            | 90           |
| Triticale | 13.0           | 12.0            | 90           |
| Lupins    | 13.1           | 31.3            | 90           |
| Oaten hay | 9.0            | 6.0             | 85           |

\* grains vary considerably, where possible have your feed tested.

# Feed Budgeting Worksheet

## Step 1. What they need

Choose Table 1a for ewes @ conditions score 3  
Choose Table 1b for ewes @ condition score 2  
Choose the column for the frame size of the mob  
Choose the correct day of pregnancy/lactation

## Step 2. Energy derived from dry pasture

Refer to Table 2 and identify the estimated ME intake from dry paddock feed using Table 2a for perennial based pastures or Table 2b for annual clover-based pastures.

## Step 3. Losing or Gaining weight?

Energy derived from dry pasture (Step 2) - What they need (Step 1) = energy deficit or surplus. Use Table 3 To find out how much of a condition score they will lose or gain in 30 days.

## Step 4. What is the ME (Metabolisable Energy) value of the feed to be supplemented?

Obtain value from Table 4 or from your Feedtest results.

## Step 5. How much to feed?

Divide the ewes daily ME deficit (Step 3) by the ME value of feed per kg DM (Step 4). Multiply this value by 1000 to give the total grams of dry matter required per head per day.

To determine the 'as fed' quantity of feed to be fed per day, multiply the grams of dry matter by 100 and divide by the DM%.

For example Barley with a dry matter value of 90%,  
 $400 \text{ grams barley} \times 100 / 90 = 444 \text{ grams 'as fed'}$ .

Note: converting to an 'as fed' basis is particularly important when formulating rations for low DM% feeds such as silage.

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