

Feed Budget **Tables**

for drought/dry conditions in
southern Australia



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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	
Day of 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.

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Step 2. What they can eat:

Feed On Offer 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

Mixed pastures - eastern Australia – 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%.

Feed On Offer 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?

Surplus MJ/day	expected gain g/h/d	CS change in 30 days (45kg)	CS change in 30 days (50kg)	CS change in 30 days (60kg)
1	20	0.1	0.05	0.05
2	35	0.15	0.1	0.1
3	50	0.2	0.2	0.15
4	65	0.3	0.25	0.2
5	80	0.35	0.3	0.25
Deficit MJ/day	expected loss g/h/d	CS in 30 days (45kg)	CS in 30 days (50kg)	CS in 30 days (60kg)
-1	-30	-0.1	-0.1	-0.1
-2	-55	-0.25	-0.2	-0.2
-3	-85	-0.35	-0.3	-0.25
-4	-115	-0.46	-0.4	-0.35
-5	-140	-0.55	-0.5	-0.45

Step 4. How much to feed?

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 mixed pastures (eastern Australia) 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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