

**Table 4 - Total drought rations for sheep \_ DPI Vic**

Weekly energy requirements for maintenance and minimum dietary protein concentrations for different classes of sheep, assuming no paddock feed is available. Check adjustments to rations for allowances needed for larger breeds, and setting your own rations for more detail.

Class of stock	Energy requirement MJ/week	Minimum crude protein % DM	Feed	Ration kg per head per week	Remarks*
1. Adult dry sheep, ewes in early stages of pregnancy in store condition					
• 40 kg liveweight – medium framed	42	6	Wheat	3.5	
			or Oats	4	
			or Hay (good)	5	
			or Hay (poor)	7	
• large framed, or crossbred ewe at 60 kg liveweight	57	6	Wheat	4.75	
			or Oats	5.7	
			or Hay (good)	7	
			or Hay (poor)	10	
2. Pregnant ewes, last 4-6 weeks before lambing					
• medium framed	62	8	Wheat		Some hay (or dry paddock feed) is desirable but, if in short supply save until after lambing and increase grain ration by 0.5 kg as a substitute.
			or Oats		
			or Hay (good to av.)	5.6	
• Large framed, or crossbred – 60 kg liveweight	84	8	plus Hay (good)	1	
			or alone	7	
			Wheat		
			or Oats		
			or Hay (good to av.)	5.5	
			plus Hay (good)	1.5	
			or alone	10	
			Wheat		
			or Oats		
3. Ewes with lambs at foot*					
• Medium framed	84	10	Wheat		Rates apply to mobs with normal lambing patterns from start of lambing. If lambing is concentrated, increase Rations by 1 kg grain plus 1 kg hay for first 3-4 weeks following the lambing peak, for full milk production. Wheat alone is not a satisfactory feed for lactating ewes.
			or Oats		
			plus Hay (good)	7	
			or Hay	9	
• Large framed	120	10	plus (average)	1.5	
			or Hay (good)	2	
			or alone	10	
			Wheat		
			or Oats		
			plus Hay (good)	8.5	
			or Hay	10	
			plus (average)	2	
			or Hay (good)	2.8	
			or alone	14	
			Wheat		
			or Oats		
4. Lambs					
• Early-weaned lambs up to 15 kg liveweight gaining 1 to 2 kg per hd/wk	35	12	Mixed cereal grain (3 parts) and lupins (1 part)	Feed to Hay (good) appetite at 10% (3.5)	Combine the mixed grain feed with hay and feed the combined ration.
			plus		
			Wheat		
			or Oats		
• Weaned lambs greater than 15 kg liveweight	35	10	Hay (good)		Give access to the best grazing at all times. If no useful grazing is available, give extra 1.5 kg good hay (or 2 kg average hay). If hay is very scarce, reduce to 0.3 kg and increase grain by 0.8 kg (per week).
			plus grazing		
			or (about 1/3	2	
			or ration)	2.3	
			plus Hay (good)	3	
			or alone	4.5	

\* Energy requirements for lactating ewes assume that ewes maintain body condition. If lambs are kept on the ewes longer than 6 - 8 weeks, requirements will increase as the lamb requirements increase.

## Feed supplied from pasture and crop residues

It is relatively easy to estimate a fully supplementary ration for a particular class and weight of sheep but it is very difficult to estimate what proportion of this ration to feed if stock have access to pasture or stubble.

The simple answer is to start with about one third to a half of a full ration and monitor the sheep for weight gain or loss. The ration can then be altered appropriately. Of course, this starting proportion can depend on what fodder is being fed, the condition of the sheep, the aims of feeding and how much paddock feed is available.

Experience from previous droughts indicates that more paddock feed is available than would first appear. Sheep can scavenge quite a bit of feed from sparse, dry pasture and buried clover or medic burr. The presence of paddock feed early in a drought makes it easier to get the sheep accustomed to the drought rations before they have to be fed close to full rations.

The other consideration is ground cover and the need to protect the soil, the nutrients and the vegetation. As bare ground increases (see Chapter 5) areas of bare ground start to join, creating opportunities for washing and dust blowing. The critical level of cover will vary depending on the soil type and the slope.

## Crop stubbles

In many part of southern Australia, crop stubbles are an important part of the feed supply for the sheep flock over summer. The nutritive value of stubbles varies considerably and is primarily related to the amount of residual grain left after harvest. Stubbles will vary within the paddock considerably as they include grain, weeds, leaf, chaff and stem. Sheep will eat the most digestible feed first and leave the least digestible (the stem) until last. Weight loss will occur accordingly.

The following table provides the range of nutritive values of commonly available stubble plant material (excluding grain) and grain alone.

**Table 5 – Nutritive values of common available stubble plant material**

Material	Crude protein %	Metabolisable energy (MJ/kg DM)
Cereal straw*	2-4	5-7
Pea straw*	4-7	4-7
Bean straw*	4-7	5-7
Canola straw*	4	6
Barley / Wheat	8-14	11-13
Peas / Beans	20-27	11-13
Lupins	28-36	12-14

\* FeedTest®, DPI Hamilton

As the table shows, most of the straws are below energy and protein levels that will maintain stock.

Accurate feed budgeting is difficult in cereal stubbles but is relatively simple in crops with large grain size such as lupins, peas and beans. This is done by measuring the amount of grain in the stubble by randomly throwing a quadrat of known size and collecting and weighing the seed to determine kilogram of grain per hectare.

If you assume that sheep will eat 0.5-1.0 kg grain a day (they can eat 2.5 - 3.5 per cent of body weight) then you can estimate how long before sheep will start to lose weight. Stubble grazing trials in North-West Victoria in 2001 produced growth rates in lambs of between 180 and 220 grams per day on pea and bean stubbles. Lentil stubbles were more variable with growth rates ranging from 140 to over 200 grams per day. Cereal stubbles over a 6-week period resulted in an average growth of 90 grams per day.

However when grain is no longer available, weight changes have been reported from minus 176 grams per head per day to gains of 65 grams per head per day (when summer rains produced growth of green feed).

In a separate cereal grazing trial in the Horsham district, wethers on weed free wheat stubble lost 4 kg over a 12-week period. In the same trial, the addition of molasses and urea blocks resulted in a live weight loss of 1.5 kg where as the addition of 100 grams of lupins per head per day gave a 0.5 kg gain over the same period.

Lupin and legume stubbles provide a higher value grain and stubble. Lupin stubbles can be toxic to sheep when infected with a fungus, which causes lupinosis.

**These pages have been taken from the Department of Primary Industries, Victoria Drought Feeding and Management of Sheep. Full publication available at: <http://www.dpi.vic.gov.au/agriculture/beef-and-sheep/sheep/handling-and-management/sheep-drought-dec-2007>**