![mla — Meat & Livestock Australia]

Live assessment yard book

Sheep and lamb

mla
MEAT & LIVESTOCK AUSTRALIA

Introduction

This booklet has been developed as part of the lamb and sheepmeat Supply Chain Management program to assist producers in the development of live sheep assessment skills. It is designed as a "hands-on" guide to assist with dressing percentage calculations.

To achieve maximum benefit from this booklet you should document your assessment of fat score and carcase weight in the tables provided. This assessment can then be compared to actual results achieved from your abattoir feedback sheet to determine accuracy.

If there is a large variance between assessment and actual results you should review your assessment technique for future consignments. Perfecting this skill will allow you to maximise your compliance to specifications when marketing sheep and lambs to a grid.

The same principles apply when assessing the fat score of ewes. Ideally, ewes should be a minimum of fat score 3 at joining and lambing. Monitoring the fat scores of ewes prior to joining and lambing will allow you to make better decisions in relation to balancing the nutritional requirements at these key times.

Fat scoring sheep and lambs

Manual fat scoring is a skill that is best learned by practice. Fat scores range from 1 (leanest) to 5 (fattest). Scores are based on actual soft tissue depth at the 'GR' site, which is 110mm from the midline over the 12th rib (see table and diagrams on the following pages).

To achieve a reliable score, have the sheep or lamb standing in a relaxed state, preferably in a race or liveweight scales. The animal will not be bruised if assessed in the correct manner by palpation with the fingertips and thumb. The scorer must work fingers through the wool to skin level before feeling for fat cover over the rib bones.

To assess fatness at the GR site place your thumb on the back line over the 12th rib. This will give you an early indication of tissue coverage. Holding your thumb on the back line place fingers down over what is the eye muscle to a position 110mm from the middle of the backbone on the 12th rib. The fat score is determined by making a comparison between the palpation description and the scores provided in the table on page 4.

Feel here on the long ribs
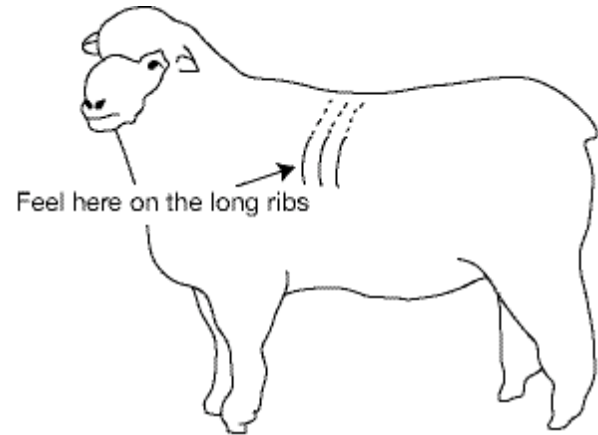
Note

At the same weight, ewe lambs are generally fatter than wether lambs.

In young lambs (suckers) on a steady plane of nutrition the fat distribution will be fairly even. In older lambs and sheep, fat distribution may not be as even.

Fat score table

Fat score					
	1	**2**	**3**	**4**	**5**
GR tissue depth in mm	0-5mm	6-10mm	11-15mm	16-20mm	More than 20mm
	Individual ribs felt very easily. Cannot feel any tissue over the ribs	Individual ribs easily felt but some tissue present	Individual ribs can still be felt but can feel tissue	Can just feel ribs and fluid movement of tissue	Ribs barely felt. Tissue movement very fluid

GR site location on carcase
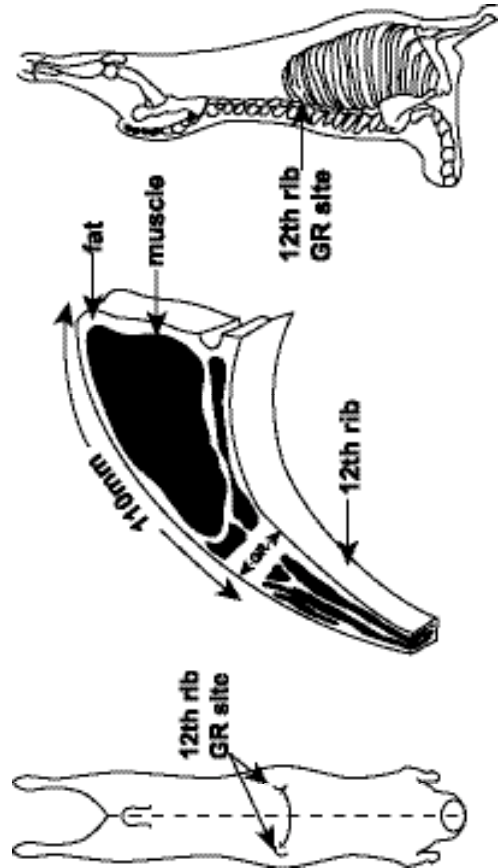
Dressing percentage guidelines

The following guidelines are for weaned second-cross Lambs (eg Border Leicester Merino x Dorset) that are 2-3 hours off feed with a wool length of 50mm (2").

Other sheep will have a higher or lower dressing percentage depending on the following factors.

Factors affecting dressing percentage

- Skin weight
  - length of wool
  - wet/dry
- Fatness
- Breed
- Time off feed and water prior to weighing
- Seasonal feed conditions
- Sex
- Carcase definition

1. Skin weight adjustment

- A 75mm (3") skin, just too wet to shear, holds 0.2-0.5kg of water. Make no adjustment for dry lambs.

2. Dressing percentages *

Fat score	Lambs		Sheep	
	Unweaned	Weaned	Wethers	Ewes
1	43%	41%	39%	38%
2	45%	43%	41%	40%
3	47%	45%	43%	42%
4	49%	47%	45%	44%
5	51%	49%	47%	46%

* These are a guide only, there will be seasonal and locality variations.

3. Breed

- Border Leicester/Merino and Merino lambs will generally dress 1.5% to 3.5% less than 2nd cross lambs.

4. Time off feed

0-3 hrs	0
4-5 hrs	+ 1%
6-8 hrs	+ 2%
9-12 hrs	+ 2-3%
13-24 hrs	+ 3.5-4.5%

(Add to the relevant dressing percentage figures above)

5. Seasonal variation

Fluctuation of up to ± 3% can occur because of season, for example, in late spring when pastures can be long and rank, dressing percentages are likely to be lower as gut fill will take longer to empty out. Alternatively, feeds that are high in moisture (such as pastures in mid winter) will result in higher dressing percentages, as they will not be retained as gut fill.

6. Carcase definition

• The AUS-MEAT standard carcase trim is defined by the removal of the thick skirts, kidneys, kidney knob, channel, udder and cod fat.

• Weight is measured hot - Hot Standard Carcase Weight (HSCW).

• For a non-standard trim (kidney/kidney knobs etc retained) add up to 4% to the dressed weight.

• Chilled cold carcase weights are around 3% less than hot weights.

• For domestic mutton add 3% for non-standard carcase trim.

Dressing percentage calculation

Weigh sheep or lamb _____ kg

1. Adjust for skin weight _____

2. Fat score and apply percentage from table

3. Adjust for breed

4. Adjust for time off feed

_____ X _____ = _____

5 Adjust for season _____

6 Adjust for non-standard carcase _____
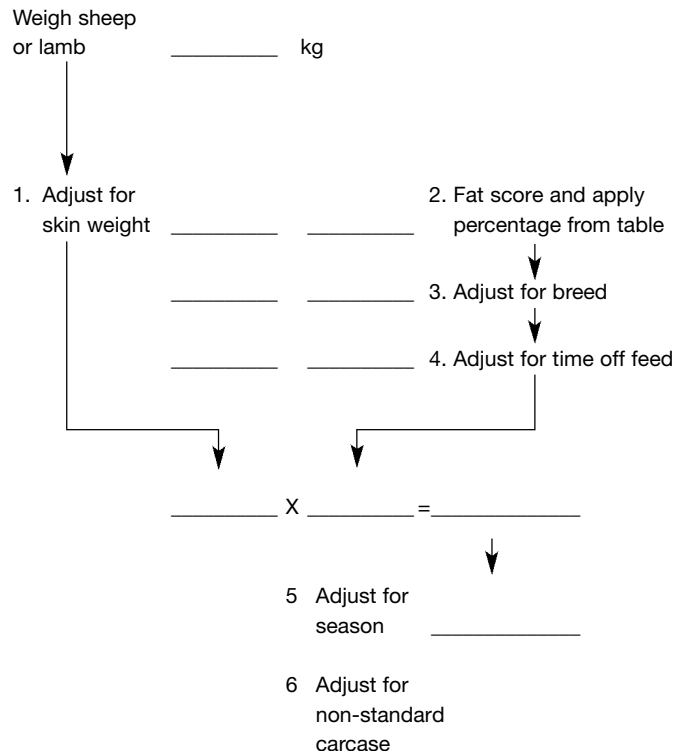
Skins

Skins are a valuable product for the industry, contributing up to 30% of the return from sheep and lambs.

How to improve skin value:

• Avoid sires with black points

• Vaccinate behind the ear

• Avoid grass seed and burr contamination

• Bung-hole crutch only

• Control fly strike and lice

• Adopt an effective worm control program

• Only apply spray markers to the head or nose

• Do not sell sheep directly off shears

• Many processors have a maximum of 40mm length on shorn skins to reduce carcase contamination

A 'bung-hole' crutch on slaughter lambs minimises contamination of the carcase and skin.
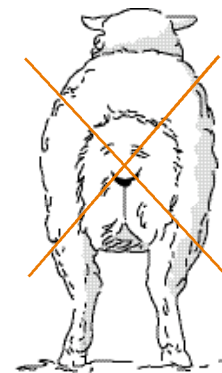
A full crutch on slaughter lambs is unnecessary, reducing the value of the skin.

Best practice and quality assurance guidelines for lamb and sheep

Breeding	– use only high performance LAMBPLAN rams.
	– select polled sires.
Marking/ Vaccinating	– mark lambs between three and six weeks of age.
Vaccinating	– vaccinate behind the ear.
Nutrition	– graze lambs on mixed pastures and try to maintain growth rates of 200 g/h/d from birth to sale.
Monitoring	– weigh and fat score lambs on a regular basis to ensure that target specifications will be met by the desired date.
Supplementary feeding	– do not feed more than 20% lupin grain in finishing diets.
Mustering	– avoid moving stock too fast, or during temperature extremes.
	– muzzle all dogs.
Curfew	– sheep and lambs should be held for a minimum of 12 hours without access to food and water prior to transportation. Specific requirements may be longer, check with your agent/ processor.
Crutching	– bung-hole crutch all lambs at least four days prior to sale.
Marketing	– weigh and fat score lambs prior to delivering to abattoir to ensure lambs hit specifications. Review feedback to measure performance.

Individual assessment check sheet

Date:

No.	Liveweight (kg)	Carcase weight (kg) Estimated	Actual	Fat score 1 - 5 Estimated	Actual	Comment

Note: This sheet is suitable for practice or training purposes when assessing live sheep.

Individual assessment check sheet

Date:

No.	Liveweight (kg)	Carcase weight (kg) Estimated	Carcase weight (kg) Actual	Fat score 1 - 5 Estimated	Fat score 1 - 5 Actual	Comment

Note: This sheet is suitable for practice or training purposes when assessing live sheep.

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No.	Liveweight (kg)	Carcase weight (kg) Estimated	Carcase weight (kg) Actual	Fat score 1 - 5 Estimated	Fat score 1 - 5 Actual	Comment

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Individual assessment check sheet

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No.	Liveweight (kg)	Carcase weight (kg) Estimated	Actual	Fat score 1 - 5 Estimated	Actual	Comment

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Individual assessment check sheet

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Individual assessment check sheet

Date:

No.	Liveweight (kg)	Carcase weight (kg) Estimated	Actual	Fat score 1 - 5 Estimated	Actual	Comment

Note: This sheet is suitable for practice or training purposes when assessing live sheep.

Consignment summary sheet

Date:

Fat score*	1	2	3	4	5
Weight classes					
18 16.1-18 kg					
20 18.1-20 kg					
22 20.1-22 kg					
24 22.1-24 kg					
26 24.1-26 kg					
28 26.1 kg +					

* Calculate the number of sheep for each fat score and weight class by scoring in batches of five using the gatepost method eg IIII. This will allow you to determine the number of lambs you can market within a set specification.

Consignment summary sheet

Date:

Fat score* Weight classes	1	2	3	4	5
18 16.1-18 kg					
20 18.1-20 kg					
22 20.1-22 kg					
24 22.1-24 kg					
26 24.1-26 kg					
28 26.1 kg +					

* Calculate the number of sheep for each fat score and weight class by scoring in batches of five using the gatepost method eg ĦĦ. This will allow you to determine the number of lambs you can market within a set specification.

Comparison summary sheet

Date:
Dressing % for consignment =   **Comments:**

Fat score* Weight classes	Less than 2		2-3		4-5	
	Estimated	Actual (from feedback sheet)	Estimated	Actual (from feedback sheet)	Estimated	Actual (from feedback sheet)
18 16.1-18 kg						
20 18.1-20 kg						
22 20.1-22 kg						
24 22.1-24 kg						
26 24.1-26 kg						
28 26.1 kg +						

Use this sheet to determine your accuracy by comparing how many lambs hit weight and fat specifications on the abattoir feedback sheet against estimates from your consignment summary sheet.

Comparison summary sheet

Date:

Dressing % for consignment =

Comments:

Fat score* Weight classes	Less than 2 Estimated	Less than 2 Actual (from feedback sheet)	2-3 Estimated	2-3 Actual (from feedback sheet)	4-5 Estimated	4-5 Actual (from feedback sheet)
18 16.1-18 kg						
20 18.1-20 kg						
22 20.1-22 kg						
24 22.1-24 kg						
26 24.1-26 kg						
28 26.1 kg +						

Use this sheet to determine your accuracy by comparing how many lambs hit weight and fat specifications on the abattoir feedback sheet against estimates from your consignment summary sheet.

Contacts

For further information relating to live animal assessment skills contact your local state department lamb industry development officer.

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Liveweight to hot standard carcase weight conversion

LIVEWEIGHT	37%	38%	39%	40%	41%	42%	43%	44%	45%	46%	47%	48%	49%	50%	51%	52%	53%	54%
34.0	12.6	12.9	13.3	13.6	13.9	14.3	14.6	15.0	15.3	15.6	16.0	16.3	16.7	17.0	17.3	17.7	18.0	18.4
35.0	13.0	13.3	13.7	14.0	14.4	14.7	15.0	15.4	15.8	16.1	16.5	16.8	17.2	17.5	17.9	18.2	18.6	18.9
36.0	13.3	13.7	14.0	14.4	14.8	15.1	15.5	15.8	16.2	16.6	16.9	17.3	17.6	18.0	18.4	18.7	19.1	19.4
37.0	13.7	14.1	14.4	14.8	15.2	15.5	15.9	16.3	16.7	17.0	17.4	17.8	18.1	18.5	18.9	19.2	19.6	20.0
38.0	14.1	14.4	14.8	15.2	15.6	16.0	16.3	16.7	17.1	17.5	17.9	18.2	18.6	19.0	19.4	19.8	20.1	20.5
39.0	14.4	14.8	15.2	15.6	16.0	16.4	16.8	17.2	17.6	17.9	18.3	18.7	19.1	19.5	19.9	20.3	20.7	21.1
40.0	14.8	15.2	15.6	16.0	16.4	16.8	17.2	17.6	18.0	18.4	18.8	19.2	19.6	20.0	20.4	20.8	21.2	21.6
41.0	15.2	15.6	16.0	16.4	16.8	17.2	17.6	18.0	18.5	18.9	19.3	19.7	20.1	20.5	20.9	21.3	21.7	22.1
42.0	15.5	16.0	16.4	16.8	17.2	17.6	18.1	18.5	18.9	19.3	19.7	20.2	20.6	21.0	21.4	21.8	22.3	22.7
43.0	15.9	16.3	16.8	17.2	17.6	18.1	18.5	18.9	19.4	19.8	20.2	20.6	21.1	21.5	21.9	22.4	22.8	23.2
44.0	16.3	16.7	17.2	17.6	18.0	18.5	18.9	19.4	19.8	20.2	20.7	21.1	21.6	22.0	22.4	22.9	23.3	23.8
45.0	16.7	17.1	17.6	18.0	18.5	18.9	19.4	19.8	20.3	20.7	21.2	21.6	22.1	22.5	23.0	23.4	23.9	24.3
46.0	17.0	17.5	17.9	18.4	18.9	19.3	19.8	20.2	20.7	21.2	21.6	22.1	22.5	23.0	23.5	23.9	24.4	24.8
47.0	17.4	17.9	18.3	18.8	19.3	19.7	20.2	20.7	21.2	21.6	22.1	22.6	23.0	23.5	24.0	24.4	24.9	25.4
48.0	17.8	18.2	18.7	19.2	19.7	20.2	20.6	21.1	21.6	22.1	22.6	23.0	23.5	24.0	24.5	25.0	25.4	25.9
49.0	18.1	18.6	19.1	19.6	20.1	20.6	21.1	21.6	22.1	22.5	23.0	23.5	24.0	24.5	25.0	25.5	26.0	26.5
50.0	18.5	19.0	19.5	20.0	20.5	21.0	21.5	22.0	22.5	23.0	23.5	24.0	24.5	25.0	25.5	26.0	26.5	27.0
51.0	18.9	19.4	19.9	20.4	20.9	21.4	21.9	22.4	23.0	23.5	24.0	24.5	25.0	25.5	26.0	26.5	27.0	27.5
52.0	19.2	19.8	20.3	20.8	21.3	21.8	22.4	22.9	23.4	23.9	24.4	25.0	25.5	26.0	26.5	27.0	27.6	28.1
53.0	19.6	20.1	20.7	21.2	21.7	22.3	22.8	23.3	23.9	24.4	24.9	25.4	26.0	26.5	27.0	27.6	28.1	28.6
54.0	20.0	20.5	21.1	21.6	22.1	22.7	23.2	23.8	24.3	24.8	25.4	25.9	26.5	27.0	27.5	28.1	28.6	29.2
55.0	20.4	20.9	21.5	22.0	22.6	23.1	23.7	24.2	24.8	25.3	25.9	26.4	27.0	27.5	28.1	28.6	29.2	29.7
56.0	20.7	21.3	21.8	22.4	23.0	23.5	24.1	24.6	25.2	25.8	26.3	26.9	27.4	28.0	28.6	29.1	29.7	30.2
57.0	21.1	21.7	22.2	22.8	23.4	23.9	24.5	25.1	25.7	26.2	26.8	27.4	27.9	28.5	29.1	29.6	30.2	30.8
58.0	21.5	22.0	22.6	23.2	23.8	24.4	24.9	25.5	26.1	26.7	27.3	27.8	28.4	29.0	29.6	30.2	30.7	31.3
59.0	21.8	22.4	23.0	23.6	24.2	24.8	25.4	26.0	26.6	27.1	27.7	28.3	28.9	29.5	30.1	30.7	31.3	31.9
60.0	22.2	22.8	23.4	24.0	24.6	25.2	25.8	26.4	27.0	27.6	28.2	28.8	29.4	30.0	30.6	31.2	31.8	32.4
61.0	22.6	23.2	23.8	24.4	25.0	25.6	26.2	26.8	27.5	28.1	28.7	29.3	29.9	30.5	31.1	31.7	32.3	32.9
62.0	22.9	23.6	24.2	24.8	25.4	26.0	26.7	27.3	27.9	28.5	29.1	29.8	30.4	31.0	31.6	32.2	32.9	33.5
63.0	23.3	23.9	24.6	25.2	25.8	26.5	27.1	27.7	28.4	29.0	29.6	30.2	30.9	31.5	32.1	32.8	33.4	34.0
64.0	23.7	24.3	25.0	25.6	26.2	26.9	27.5	28.2	28.8	29.4	30.1	30.7	31.4	32.0	32.6	33.3	33.9	34.6
65.0	24.1	24.7	25.4	26.0	26.7	27.3	28.0	28.6	29.3	29.9	30.6	31.2	31.9	32.5	33.2	33.8	34.5	35.1