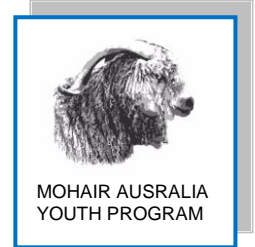


Fact Sheet 12 Understanding meat value –angora goats



There are several important reasons to assess live goats before they are sold for meat. These include to:

- select goats that closely match the specifications of the buyer
- estimate carcass attributes
- decide if goats need additional feeding before sale
- avoid being penalised for failing to meet buyer specifications
- determine the attributes of goats before looking for a buyer.

The four main methods of assessing live goats for market are:

- live weight measurement
- fat scoring of long ribs
- body condition scoring of short ribs
- estimating age by mouthing (dentition).

Other important descriptors of goats include sex and breed.

When selling goats for meat, producers need to learn the language of the meat buyers.

The official language for trading goats in Australia is the Aus-Meat language.

Aus-Meat has produced the *Handbook of Australian Sheep meat processing – the Aus-Meat language* at https://www.ausmeat.com.au/WebDocuments/Producer_HAP_Sheepmeat_Small.pdf.

Live weight measurement

Live weight is the most important aspect of a goat that determines meat yield. As goats grow, their carcass increases in weight and fat reserves also increase. These will be lost if goats lose weight.

Producers thinking of selling goats for meat must accurately assess the live weight of a goat before contacting any meat buyer.

Live weight is best determined by weighing the goat on electronic scales that are reliable and designed for sheep and goats. Crates with specially fitted gates and sides are sold for this purpose.

It is possible to estimate the live weight of smaller goats by holding the goat and using bathroom scales, or using a girth tape calibrated for goats.

Fasting goats and weight loss

For a grazing goat with a live weight of 32 kg, the gut contents (stomachs and intestines) comprise nearly 25% or one quarter of the live weight. If goats are removed from feed and water for 24 hours, they will lose between one and two kg of live weight, which is considered normal. However, if goats are kept off feed and water for longer periods, particularly during hot weather, they can lose more weight and the quality of the carcass may be affected.

Failure to meet live weight specifications

Some goat meat producers have delivered goats for slaughter that are outside live weight specification. Such behaviour can have dramatic consequences.

The delivery of out-of-specification goats causes a lot of trouble for the meat marketing business and staff. Often, the business can lose their market or will be refused permission to deliver a consignment that is too small or of very low quality. In past years, this has been a large problem for the goat industry.

Usually goats that are underweight will have no commercial value (NCV). In other words, the farmer will not get paid and may receive a bill for costs.

Sometimes overweight goats will have a commercial value, but this is usually at a lower price per kilogram.

It is absolutely essential that goats meet market specifications for live weight.

Fat scoring of long ribs

Fat scoring is used in livestock market reports as a method of estimating fat classes. The fat classes are decided in the meat works by measuring the tissue depth of the carcass at the GR site. This site is located at the second-last long rib (12th rib), 110mm from the midline (ridge of the spine).

Fat scores and fat classes both range from one to five and are explained in Table 1 and Table 2.

Table 1. *The relationship between goat fat classes and tissue depth at the GR site*

Fat class	Description	Tissue depth at GR site
1	Very lean	up to 3 mm
2	Lean	4–6 mm
3	Moderately lean	7–9 mm
4	Moderately fat	10–12 mm
5	Fat	over 12 mm

Table 2. *What fat scores feel like on a live goat*

Fat score	What you feel at the GR site
1	Ribs very easily felt. No tissue can be felt over ribs.
2	Ribs very easily felt. Slight amount of tissue over ribs.
3	Ribs easily felt. Some tissue over ribs.
4	Ribs can be felt. Lots of tissue present.
5	Ribs only felt with pressure. Tissue very prominent and may be fluid.

Figure 1. Diagram showing the GR site

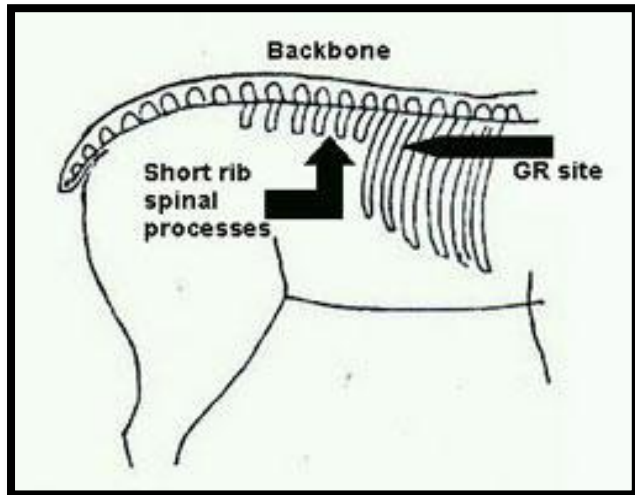


Figure 2. Side view of the position of the GR site on the 12th long rib and the short ribs



Figure 3 Top view of the GR site



Figure 4 Side top view



How to fat score

The tissue depth at the **GR site** includes muscle and fat. The **GR site** is regarded as a good reference point because it provides a reliable indication of the meat and fat content of the carcass and is easy to measure. The **GR** measurement is recorded in mm.

Use your hands to estimate the fat class into which the carcass will be assigned after the goat is slaughtered.

The animal must be standing on all four feet and relaxed. If it is tensed up or pushed into a corner, it is not possible to obtain an accurate score.

Use the pads of your fingers and thumb rather than the tips.

Feel the body over the 12th long rib where the **GR** measurement would be taken. Feel for the prominence of the rib and the amount of tissue over the ribs. The easier it is to feel the rib, the lower the fat score.

For animals with a dense or long fleece, you will need to part the fleece to feel the skin more easily.

Use **Figure 1** and **Table 2** to learn how to give a fat score. You will need to practice as often as possible. Where possible, check your fat scores with the actual **GR** measurement made on your goat carcasses.

Body condition scoring of short ribs

Some buyers of goats use body condition scoring, instead of fat scoring. Body condition scoring is another hands-on method of estimating. It gives a direct assessment of the amount of tissue that is present over one of the prime carcass sites.

Scientific studies have shown that this method is reliable in predicting carcass weight when used with the live weight of goats.

Generally, goats have less fat under their skin than sheep. It is therefore easier to gain a more reliable estimate of the body condition and carcass yield of goats using body condition scores than it is with sheep.

Body condition scores and live weight

There is an association between live weight and body condition scores in goats. As goats increase in weight, their body condition scores tend to increase and as goats lose weight, their body condition scores tend to decrease.

For cashmere, rangeland and angora goats, a body condition score equates to a live weight change of about 6 to 8 kg.

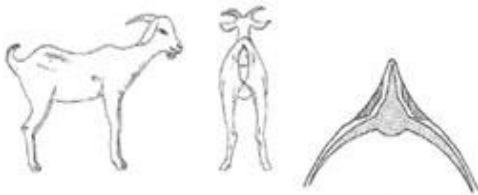
Table 3. *What body condition scores feels like on a live goat!*

Body condition score	What you feel at each site			What the score means for meat production
	Backbone	Spinal processes	Eye muscle	
1	Prominent and sharp.	Sharp ends. Fingers easily pass under ends.	Very thin and feels hollow.	Very lean. Poor meat yield. Should be fed more. Further weight loss may result in death.
2	Prominent but smooth.	Smooth and rounded. Fingers pass under ends.	Some tissue present. Feels flat.	Lean. Moderate meat yield for adults. Too low for prime kids.
3	Smooth and round over the top but still elevated.	Smooth. Need pressure to feel ends.	Full coverage to end of spinal processes. Feels rounded.	Medium. Ideal for prime kids. May be too fat for adult goats where a slightly lower score is often preferred.
4	Only detected with pressure.	Cannot be felt.	Well rounded.	Fat. Too much feed has been used. Fat has to be cut off meat when processed.

Figure 2.

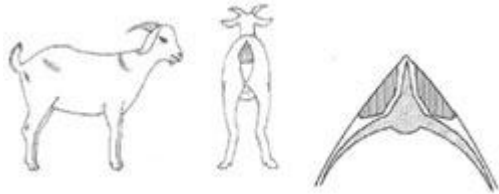
The relationship between **body condition scores**, appearance of goats and **the tissue reserves in the loin area of the short ribs**. To be read in conjunction with **Table 3 and Figure 1. (GR SITE)**

1. Very Lean



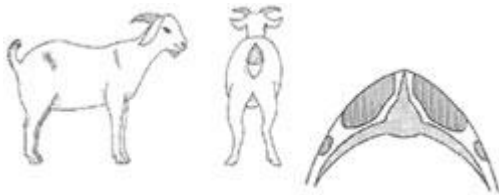
Body angular, narrow and slab sided, backbone raised and sharp, ends of short ribs sharp and easily felt.

2. Lean



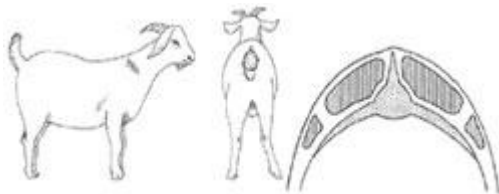
Backbone raised and barely covered pin and hip bones devious and barely covered, ends of short ribs smooth but easily felt.

3. Medium



Backbone slightly raised, smooth and rounded over top, pin and hip bones slightly covered, ends of short ribs smooth but can still be felt, moderately rounded appearance.

4. Fat



Smooth rounded appearance, backbone can only just be felt, pin and hip bones smooth and rounded, ends of short ribs cannot be felt.

Estimating age by mousing

The age of a goat is determined by dentition, which means the number of teeth that have erupted in the lower jaw of the goat is used to describe age.

If the exact age of the goat is known, then this estimation isn't required.

Figure 5. The development of goat teeth

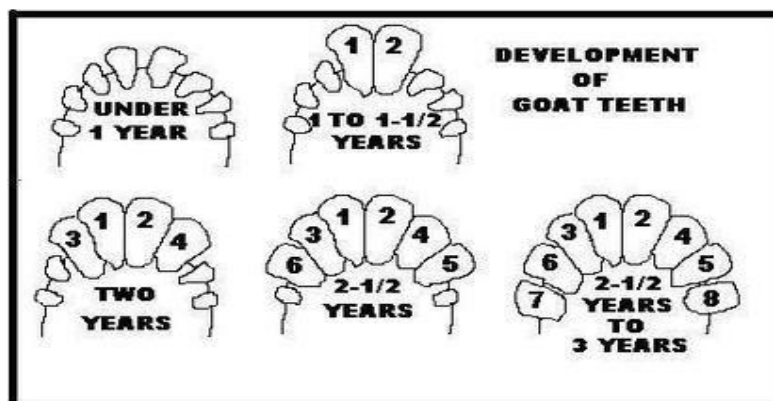


Table 4. Age determined by the number of teeth

Dentition (number of teeth erupted)	Age (months)
0 permanent incisors	0 up to 15
1 st permanent mandibular molar	3 to 5
2 permanent incisors	13 to 21
4 permanent incisors	18 to 24
6 permanent incisors	22 to 32
8 permanent incisors	27 or more

Resource: Bruce McGregor, Attwood, *Understanding meat values of goats*

Understanding meat dressing percentage

Goats are typically sold on a liveweight (LWT) or carcass weight (CWT) basis.

Dressing percentage is used to describe the relationship between the liveweight and carcass weight.

$$\text{Dressing \%} = \text{CWT} \div \text{LWT} \times 100$$

Dressing percentage is important in meeting over-the-hooks specifications of the meat buyers. The higher the fat score, the more waste there is.

Dressing percentage varies throughout the goat's life, but a good guide is an overall figure of 43%. Meat and Livestock Australia have produced a fact sheet explaining dressing percentage in greater detail at <https://www.mla.com.au/globalassets/mla-corporate/extensions-training-and-tools/documents/fs03-understanding-dressing-percentage-final.pdf>.

Further learning

More information about the meat and offal yields of goats can be found on the Victorian Department of Agriculture website at https://apo.org.au/sites/default/files/resource-files/2007-01/apo-nid57100_0.htm

Young Judges:

Competitors can display skills that can be taking into consideration by the over judges of the following:

Practical Assessment: How to feel over pin bones, GR site, spiny process to do a visual assessment of the meat qualities

Oral Presentation: National Young Judges Finalist, if confident, can speak about how an animals' confirmation can relate to the body condition and profitability to the producer, of meat qualities of the animals in the judging competition.

Not a requirement for State Young Judges Finalist to speak about meat qualities in their oral presentation

Activities:

Locate a chart for Primal meat cuts for Goat meat - Internet search

Meat and livestock Australia – MLA : website <https://www.mla.com.au/>

Research goat meat export figures and where does Australian goat meat exported to?

Acknowledgement: Bruce McGregor Dept. Agriculture Victoria

L Carter Sept 2020