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AGRICULTURE

Assessment skills for goat meat marketing

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This Agriculture Note describes the purpose and methods of live animal assessment of goats destined for the meat market. This note also discusses the language used in trading goats for meat.

Purpose of assessment

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

1. To select goats which closely match the specifications of the buyer;
2. To estimate carcass attributes;
3. To decide if goats need additional feeding before sale;
4. To avoid being penalised for failing to meet buyer specifications; and
5. To determine the attributes of goats before looking for a buyer. When selling goats for meat, producers must learn the language of the meat buyers.

Language of meat buyers

The official language for trading goats in Australia is the Aus-Meat language. The Aus-Meat Goatmeat language is used by purchasers of live goats, carcasses and other goat meat products.

Aus-Meat defines the standard carcass and how goat meat

should be described for trading. Aus-Meat Language booklets should be obtained prior to selling goats for meat.

Telephone; 1800 621 903 Email; ausmeat@ausmeat.com.au

Internet; <http://www.ausmeat.com.au> Aus-Meat books may also be available from the Victorian

Farmers Federation Goat Section or the Goat Industry Council of Australia.

Methods of live animal assessment

There are four main methods of assessing goats for market. These are:

1. live weight measurement;
2. fat scoring of long ribs;
3. body condition scoring of short ribs;

4. estimating age by mouthing.

Other important descriptors of goats include sex and breed.

1. 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. Fat reserves also increase as goats grow and 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 goats on scales designed for sheep and goats. Crates with specially fitted gates and sides are sold for this purpose. Modern electronic scales are reliable.

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

Fasting goats and weight loss

For a grazing goat with a live weight of 32 kg, the gut contents (stomachs and the intestines) comprise nearly 25% or one quarter of the live weight. If goats are removed from feed and water for 24 hours they commonly lose 1 to 2 kg of live weight. This is 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 could 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 their staff. Often they 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 under weight will have no commercial value. In other words, the farmer will not get paid and may receive a bill for costs.

Sometimes over weight goats will have a commercial value but usually at a lower price per kg.

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

2. Fat scoring the long ribs

Fat scoring is used in live stock market reports as a method of estimating Fat Classes. Fat scores and fat classes range from 1 to 5 and are explained in Table 1.

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 to 6 mm
3	Moderately lean	7 to 9 mm
4	Moderately fat	10 to 12 mm
5	Fat	over 12 mm

The Aus-Meat language uses Fat Classes. Fat Classes are decided in the meat works by measuring the tissue depth of the carcass at the GR site. The GR site is on the second last long rib (12th rib) as a site 110 mm from the midline (ridge of the spine). See Figure 1.

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

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

The tissue depth at the GR site includes muscle and fat. The GR site is regarded as a good reference point as it:

- provides a reliable indication of the meat and fat content of the carcass
- is easy to measure. The GR measurement is recorded in mm. The idea with fat scoring is to use your hands to estimate

the fat class into which the carcass will be assigned after the goat is slaughtered.

How to fat score

- The animal must be standing on all feet and "relaxed", not tensed up or pushed into a corner. It is not possible to properly score if an animal is crouching or jumping over other animals.
- Use the "balls" 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 is the fat score. e) For animals with a dense fleece, you will need to part the fleece to feel the skin more easily. See Figure 1 and Table 2 to learn how to give a fat score. You will need to practice as often as possible. Check your fat scores with the actual GR measurement made on the carcasses from your goats.

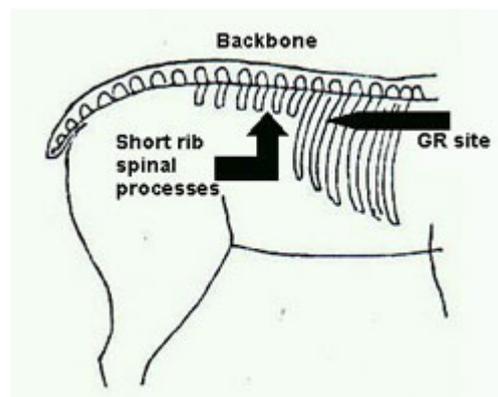


Figure 1. The position of the GR site on the 12th long rib and the short ribs

3. Body condition scoring of short ribs

Some buyers of goats use body condition scoring instead of fat scoring. Body condition scoring is also a "hands on" method of estimating. Body condition scores give a direct assessment of the amount of tissue present over one of the prime carcass sites.

Scientific studies have shown that body condition scoring to be 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.

How to body condition score

- The animal must be standing on all feet and "relaxed", not tensed up or pushed into a corner. It is not possible to score if an animal is crouching or jumping over other animals.
- Use the "balls" of your fingers and thumb rather than the tips.
- Feel the body along the backbone just behind the last long rib in the loin area. Feel for the prominence of the spine, its sharpness and the amount of flesh on each side of the spine (see Figures 1 and 2).
- Now span the loin with your hand with fingers and thumb extended. Feel the ends of the spinal processes and press the fingers gently under the ends to assess the amount of flesh present (see Figures 1 and 2).

- e. Finally feel the eye muscle by feeling the thickness and coverage of flesh between the backbone and the spinal processes. The more flesh present the higher the score.
- f. For animals with a dense fleece, you will need to part the fleece to feel the skin more easily. See Figures 1 and 2 and Table 3 to learn how to give a body condition score.

You will need to practise as often as possible.

Reliability of scores

The reliability of your body condition scoring improves with practice. Practice scoring whenever you can handle stock. Practice body condition scoring at shows and meat markets. Try and relate the scores to the prices received.

Skilled assessors can assign body condition scores that are intermediate between the main scores.

For example, scores can be assigned such as:

- backward store (2-) which equates to a score of 1.7;
- forward store (2+) which equates to a score of 2.3;
- and so on for scores 2.7, 3.3, 3.7.

Over a period of years a goat may experience an increase and a decrease in its body condition score. Within a mob of goats, it is usual to observe a range in body condition scores.

Body condition scores and live weight

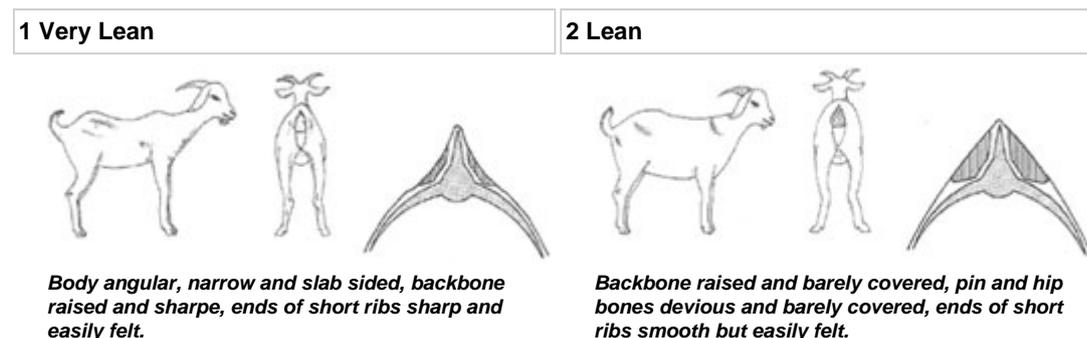
There is an association between live weight and body condition scores in goats. As goats increase in live weight, their body condition scores tend to increase and as goats lose live weight their body condition scores tend to decrease.

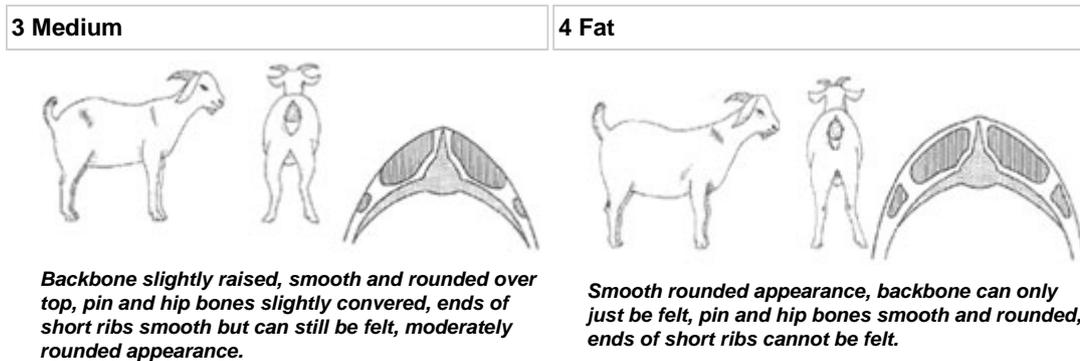
For cashmere rangeland types and Angora goats a body condition score equates to a live weight change of about 6 to 8 kg.

Table 3. What body condition scores feel 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. Redrawn and modified from Mitchell (1986).





4. Estimating age by mouthing Further reading

The age of goats is determined by dentition. This means that the number of adult teeth that have erupted in the lower jaw of a goat is used to describe age. If the exact age of goats is known then use it.

Table 4. The determination of age by dentition

Dentition (number of teeth erupted)	Age (months)
0 permanent incisors	0 up to 15
1st 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

Animal assessment and carcass and meat yield

Details on the relationships between live weight and body condition scoring with carcass development and meat yield are provided in the Agriculture Note on Meat and offal yields of goats.

Conclusion

The marketing of goats that meet the specifications of the meat buyers is essential for goat meat producers.

Goat meat producers are strongly advised to improve their skills in live weight assessment, fat scoring and body condition scoring.

By applying your skills in assessing goats before marketing them, you will learn more about how to produce goats that meet market specifications.

Improving your assessment skills will let you talk the language of meat buyers.

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