Planned Carcase Production
for the
Scottish Sheep Industry

Foreword

This booklet has been designed to try and help lamb producers and finishers, know what demands the market place makes on the industry in order to maximise the return to the producer for each animal entering the food chain.

In Europe producers are paid on the Europ grid system and it is essential that everyone understands this relatively simple concept.

The EUROP Grid is a European means of combining Conformation, the shape of the animal, with the Fat class. Fat trimmed off a carcase by the processor is waste which incurs disposal costs as well as being a potential threat to consumer acceptability. Processors prefer lambs that have good conformation that is to say they are well fleshed throughout the carcase.

In general terms Scottish producers do produce lambs that meet buyers' requirements, but there are still approximately one third of all lambs produced falling outside the core preferences of the major lamb processors.

This booklet in combination with the various QMS lamb grading Workshops is designed to enable producers to gain the necessary market knowledge to maximise returns from the processing industry.

Are You On Target?

	1	2	3L	3H	4L	4H	5
E							
U							
R							
O							
P							

Market Requirements

Main market outlets for Scottish Lamb

Carcase Weight (Kg)	Carcase Grade(s)	Market
6 - 15 Kg	a little cover	Italy
8 – 15Kg	EUROP 2 / 3L	Spain, Portugal
15 – 18 Kg	U & R 2/3L	France - South
18 – 22 Kg	E & U 2/3L	Belgium
17 – 21 Kg	U & R 2/3L	France – North West
16 – 21.5 Kg	U & R 2/3L	UK Supermarket
20 – 24 Kg	U & R 3L/3H	UK Butcher

Research is showing that more lamb will be sold boned out (more shoulders and legs, and more mince) in the future rather than in traditional carcase format.

What is Carcase Classification?

At the simplest level, Classification is a predictor of saleable meat yield. The lower the fat class the higher the saleable meat yield.

Fat Class Increasing fatness ⟶

Conformation Class Improving conformation ⟶

	1	2	3L	3H	4L	4H	5
E							
U							
R							
O							
P							

The shaded area represents the grades of stock preferred by the major processors in Scotland. The darker area shows the core classifications that all buyers identified as meeting their requirements.

However, each processor may have a different balance of clients and the lighter area shows other categories of stock that are required by some processors in Scotland.
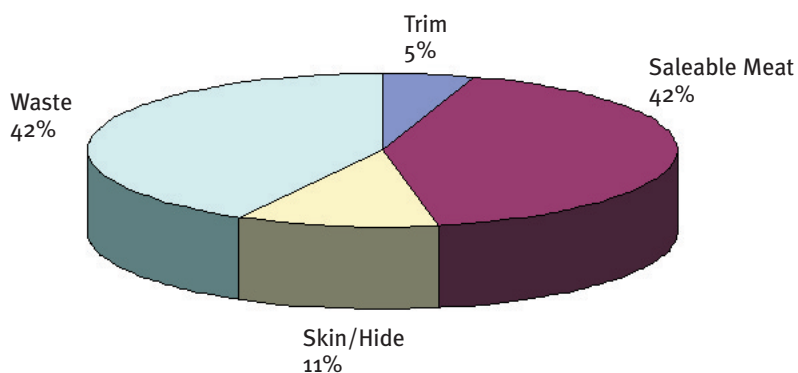
How Classification is used by Processors

Lamb classification along with weight helps processors value carcases and comply with the numerous buyers specifications. The amount of saleable meat from a carcase decreases with the increase in fat level.

Fat	1	2	3L	3H	4L	4H
Saleable Meat Yield (%)	94.9	92.9	91.5	90.6	89.6	88.6

Different sheep breeds have different lean to bone ratios so at the same class of fatness meat yield will differ between breeds.

Lamb Carcase Breakdown

When a lamb carcase is processed less than half is saleable meat.

Trim 5%

Saleable Meat 42%

Waste 42%

Skin/Hide 11%

Conformation

The conformation class is determined by a visual appraisal of shape, taking into account carcase blockiness and fullness of the legs. No adjustment is made for the influence of fatness on overall shape.

There are five main classes: E, U, R, O, P.

E

Fatness

The fat class is determined by a visual appraisal of external fat development.

There are five main classes ranging from 1 (very lean) to 5 (very fat). Classes 3 and 4 are sub-divided into L (leaner) and H (fatter).

Refer to page 9 for cross sectional detail of these fat classes.

1

2

3L

U	R	O	P

3H	4L	4H	5

Assessing fatness

Handling live lambs to assess fatness is an acquired skill which can be gained by regular practice. There are two important handling points on the live lamb which provide reliable guides to the fat class of its carcase: the tail root or dock, and the loin.

In addition to these two handling points, assessment of fat cover over the last three ribs, just off the eye muscle, can further contribute to the accurate assessment of fatness as defined by the MLC Sheep Carcase Classification grid. Handling in this way provides a reliable assessment of fatness provided wool thickness is allowed for, but excessive pressure can lead to bruising. This leads to devaluation of the carcase, so careful handling is important.

Perfecting these lamb selection skills can be profitable. Live handling, followed by a visit to examine the carcases in the abattoir, is a good way to gain experience and perfect the technique. Regular use of carcase classification provides a sound basis for monitoring selection decisions.

Key skills

☐ Setting target weights for slaughter

☐ Handling lambs to assess fatness

Dock

Dock

Handle the tail root to feel the fat covering the individual bones of the tail. As lambs become fatter, it is more difficult to detect individual bones.
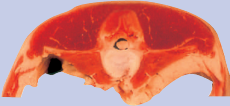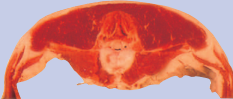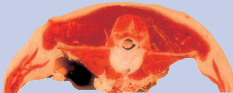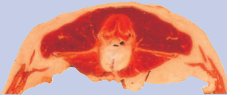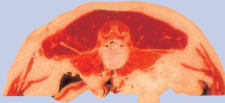

Loin

Place the hand over the spinous and transverse processes (vertebrae or spine) at the loin to assess their prominence: the less prominent, the fatter the lamb.

Loin

Handling lambs to assess fatness

Loin	Fat class		Dock
Very easy to feel between processes which are very prominent.	1		Individual bones very easy to detect.
Prominent spinous and transverse processes. Felt easily.	2		Individual bones easy to detect with light pressure.
Tips of processes rounded Individual bones felt as corrugations with light pressure.	3		Light pressure to detect individual bones.
Spinous processes felt with moderate pressure. Transverse with firm pressure.	4L		Firm pressure to detect individual bones.
Individual processes cannot be detected.	5		Individual bones cannot be detected.

Clean Presentation of stock for slaughter

The production of safe meat is jeopardised if animals are delivered to abattoirs in a dirty / wet condition. Dirty Fleeces can contaminate carcases during dressing in the abattoir with potential food poisoning organisms.

Checklist:
- Ensure that lambs are dry for the 24hours prior to slaughter
- Consideration should be given to housing animals prior to sending direct for slaughter to reduce the incidence of fleeces becoming soiled during transportation
- Consider the clipping / dagging of the animal's coats in those areas pre-disposed to contamination. – ie leg and belly area.

How genetics can affect performance

Proven Genetics have a role to play in producing a lamb with a saleable carcase rather than relying on eye alone. Two examples of projects that demonstrate this are: The Blackface Sire Reference scheme and the SAC led High-Low Project.

The Blackface Sire Reference Scheme:

This scheme has been on going over the past 10 years. It was originally set up by a small group of Scottish Blackface breeders to try and identify the individual animals that were the best performers within a particular environment and to increase the numbers of their progeny. The scheme is based on Estimated Breeding Values (EBV's) and in particular the maternal traits that a superior genetic sire can transfer to its progeny. This in turn has proven to produce a heavier lamb along with better carcase classification. The end result is a lamb that is worth more in the market place.

For further information: www.bfelite.co.uk.

The High - Low Project:

This project is based on 4 years of study of the Lean Growth Index of 3 terminal sire breeds - Suffolk, Texel and Charollais which were mated with Mules. The lambs produced from the rams selected for the High Lean Growth Index (finished to 3L fat score and 19Kg carcase) produced lambs with: 2.5% faster growth rate; 0.54Kg heavier a carcase - with more muscle and less fat and with no difference in carcase condition score.

The end result was 0.47Kg more saleable meat yield with no difference in tenderness. The calculated benefit to the producer was an additional £1.43 per lamb from sire selection alone.

For further information : info@qmscotland.co.uk

Feeding for performance

Feeding also plays an important role in the finish on a lamb. Lambs finished in the earlier part of the season are generally grass fed however, for lambs finished later in the season both weather and tooth loss can compound the problem of sufficient finish in outdoor stock. Lambs finished after Christmas can be very profitable but this is dependant on the health and nutrition management to maximise the carcase value of the different breeds of lamb. Being able to identify the different nutritional requirements for the varying genetic make up is key to marketing a high proportion of lambs in the correct weight and conformation range for the chosen outlet.

For feeding purposes lambs can be grouped into 4 main groups:

- Large frame, slow to finish
- Small frame, easy fleshed
- Large frame, extremely hard to finish
- Small frame, hard to finish

The ratio of energy to protein should be varied depending on which of the above groups are being fed. Fibre and other nutrients such as trace elements are also essential ingredients as a number of intensively fed lambs in an indoor situation can succumb to Urinary Calculi and acidosis problems.

Professional nutritional help should be sought where finishers have problems.

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Checklist

- Select breeding stock carefully
- Consider purchasing recorded rams
- Plan target slaughter weights to hit target market
- Weigh lambs regularly
- Handle stock carefully to assess fat levels
- Clean presentation of stock at abattoir or primestock sale
- Periodically visit the abattoir to gauge how your lambs are performing – especially at the start of your selling period
- Compare your grading results with the Scottish specification grid shown on inside front cover

Working with the Scottish red meat industry

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