The information in this booklet was compiled by Steve Powdrill and Katie Thorley, AHDB Beef & Lamb. The Better Returns Programme is grateful to all those who have commented and contributed to this publication.
English sheep farmers currently market around 8.5 million sheep a year, producing 175,000 tonnes of sheep meat for domestic consumption and export.

The way to maximise financial returns is to produce and sell the type of sheep buyers really want and are willing to pay the most money for.

It is far better to identify potential markets first and then produce animals to suit their specific requirements rather than producing a batch of lambs and then trying to find a customer.

The key is to sell lambs when they are ready. Do not wait for that ‘special’ date when, historically, the first draw was made. Improvements in breeding and grassland management have led to animals being ready earlier than in the past.

While there are many market specifications for lamb, including maximum and minimum weight bands, more than 80 per cent of meat buyers are looking for animals that classify as R3L.

While weight is obviously important, sending animals of the right conformation and fat score is just as vital. Frequent, careful handling of the lambs is essential to ensure each animal has reached its full potential and target specification.

The key issues producers face when marketing prime lambs are covered in this manual. Those that can embrace and act on all these areas will be rewarded with good returns.
Who are the customers?

The consumer
Market research shows that consumers want lean and tender meat which is safe to eat and from a trusted source. Above all, they are looking for a consistent product that gives them the same satisfying experience every time they buy, cook and eat it. Research shows that, while consumers perceive lamb as being tasty, they also believe it can be expensive and fatty. The industry must work hard to provide consumers with a product that meets their needs.

The retailer
Consumers buy their meat from a range of retail and foodservice outlets. Supermarkets now sell more than half the sheep meat sold in England. Each outlet knows exactly the type of meat it requires to satisfy its customers’ needs, based on detailed knowledge of their previous buying habits.

The meat processor
The sheep farmer’s direct customer is the lamb buyer, based either at a livestock market or at an abattoir.

Each buyer will have different specifications for the lambs they want in terms of weight, conformation and fat class. The prices offered by different abattoirs may vary for the same animals and will depend on the requirements of their customers further down the supply chain.

Abattoirs are looking for animals that:
- Are quick and easy to process
- Arrive at the right time, on the right day
- Are clean
- Hit the correct weight specification
- Meet the correct conformation and fat specification
Typical specifications

Each market has different requirements and sheep farmers should target those that are looking for the type of carcase they can produce consistently and at a profit.

Do not produce a batch of finished lambs and then try to find a market for them. It is far better to identify potential markets or customers first and then produce animals to suit their specific needs.

These typical specifications are subject to seasonal and regional variations. Most deadweight markets pay up to 21kg.

40% of prime lamb fails to meet ideal target market specifications

Table 1. Typical target requirements for different markets

<table>
<thead>
<tr>
<th>Main market</th>
<th>Carcase weight (kg)</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Conformation</td>
</tr>
<tr>
<td>Supermarket</td>
<td>16–21</td>
<td>E, U, R</td>
</tr>
<tr>
<td>Butchers</td>
<td>16–25</td>
<td>E, U, R</td>
</tr>
<tr>
<td>Exports</td>
<td>9–21</td>
<td>E, U, R</td>
</tr>
</tbody>
</table>

Warning! There is very limited demand for conformation P, and fat class 4H and 5. Animals of these classifications will be traded at discount prices.

The Red Tractor logo and AHDB Beef & Lamb Quality Standard Mark (QSM) are used to market assured lamb to consumers.

If the stock has been produced on a certified farm assured holding and passes through an assured supply chain, the product is eligible to carry the Red Tractor logo on the pack. All beef and lamb carrying the Quality Standard Mark and Red Tractor logo can be traced back to farms the livestock came from.

Consumers can be assured that the farmers and suppliers who produce beef and lamb for both schemes meet comprehensive standards covering hygiene, safety, environmental protection and animal welfare at every stage, from farm to fork.

Compliance with these strict standards is regularly checked by independent auditors.
The current system for classifying carcases in the UK and Europe uses the EUROP grid for conformation and a numerical assessment for fatness (classes 1–5).

Combining scores for conformation and fat determines the market most suited for each type of carcase. Aim for most animals to fall within the green shaded area, where there is greatest demand and highest prices.

**Lamb carcase classification**

![Image of lamb carcase with EUROP grid]

**Market signals**
- Little or no demand
  - Discount prices
  - Poorest returns
- Medium demand
  - Average prices
  - Moderate returns
- High demand
  - Premium prices
  - Best returns

**Conformation class**
Conformation is determined by a visual appraisal of shape, taking into account carcase profile and fullness of legs. No adjustment is made for the influence of fat on overall shape.
Fat is determined by visual assessment of external fat cover. There are five main classes. Classes 3 and 4 are subdivided into L (leaner) and H (fatter).

<table>
<thead>
<tr>
<th>3L</th>
<th>3H</th>
<th>4L</th>
<th>4H</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Image of class 3L fatness" /></td>
<td><img src="image" alt="Image of class 3H fatness" /></td>
<td><img src="image" alt="Image of class 4L fatness" /></td>
<td><img src="image" alt="Image of class 4H fatness" /></td>
<td><img src="image" alt="Image of class 5 fatness" /></td>
</tr>
</tbody>
</table>

Increasing fatness
Marketing decisions

Liveweight or deadweight?
Around 49 per cent of finished lambs in Great Britain are sold through livestock markets, while the other 51 per cent are sold on a deadweight basis. Some producers prefer the competitive nature of selling live animals through an auction ring. There are advantages and disadvantages to both and some prefer selling through a marketing group that can offer independent advice on the best outlets.

Exports
Export markets for English lamb have increased over the past few years, within Europe and beyond, including countries in Southeast Asia and the Far East.

In 2016, about 33 per cent of the lamb produced in the UK was exported, including processed products. Demand varies from country to country in terms of carcase selection (conformation, fat class and weight), choice of cuts and Halal slaughter.

Extra care has to be taken when targeting export markets, as adverse currency fluctuations outside the farmer’s control can quickly erode any potential financial advantages over selling into domestic markets.

Sales of premium lamb from England to European foodservice are increasing fast and English product now features on the menus of some of the best restaurants in Italy, Spain, Portugal, Cyprus, Belgium, the Netherlands, Switzerland, the Czech Republic, Denmark and further afield.

Plan ahead
As prices fluctuate depending on the season, it is important to plan ahead. Target an ideal time for selling, based on expected feed, labour availability and market prices, then work backwards to decide the best time to lamb.

Regular handling and weighing, flock monitoring and good feed management will bring lambs forward to the standard that will suit buyers’ needs more precisely.

Do not keep lambs any longer than is necessary, as each day they stay on the farm costs money but may not yield any greater financial return. Latest evidence suggests it costs four times as much energy to put on fat than lean meat.

Figure 3. Lamb exports (fresh/frozen) by percentage share (2016)
Source: IHS Maritime & Trade – Global Trade

BRP Deadweight Price Calculator
Compare the prices offered by two abattoirs with the BRP Deadweight Price Calculator, taking into account different dressing specifications, abattoir charges and transport deductions. Answer a simple series of questions and the converter does the rest. Visit beefandlamb.ahdb.org.uk
Present clean animals
Lambs in a dirty condition will not be accepted for slaughter due to strict food safety and hygiene regulations. Research has shown that the dirtier the fleeces, the greater the potential for carcase contamination and the higher the potential risk to human health. Wet fleeces can also increase the risk because bacteria may be transferred more readily.

Ensure sheep are clean before sending to a market or an abattoir.

Does weight pay?
Feed lambs to reach the desired weights for the target market and no more. Driving for heavier weights is counter-productive as lambs weighing more than 21kg will usually attract a penalty when sold liveweight or deadweight. The carcases can become overfat, which consumers do not like. Taking sheep to higher weights is also inefficient as feed costs increase per kilogram produced. They may also be eating feed that other lighter lambs may need to reach their ideal finishing weight.

Better Returns from healthy lambs
Underlying health issues affect lamb growth rates and influence returns, as it takes longer for animals to finish.

Worms
Worms are a major threat to the performance and health of lambs so controlling them is vital. Anthelmintics currently provide good control in most areas, but anthelmintic resistance is growing across England.

Use risk assessment strategies and tools such as faecal egg counts before treating and follow good drenching practices.

For more information, see Sheep BRP Manual 8 Worm control in sheep for Better Returns.

Liver fluke
Liver fluke (*Fasciola hepatica*) not only affects the live animal, it also damages the end product. At certain times of year, up to 50 per cent of livers can be condemned in abattoirs due to liver fluke damage and these cannot be sold for human consumption. This, ultimately, has a knock-on effect to the whole supply chain.
**Maximising financial returns**

**Handle with care**

Sensitive handling is vital for animal welfare and avoids bruising damage that shows up after slaughter.

Sheep bruise easily, particularly young lambs. Bruising and abscesses lead to wasteful trimming and even partial condemnation of the carcase. This in turn reduces saleability and the amount paid to the producer.

Avoid potential losses by:

- Not handling sheep by grabbing wool which can cause bruising
- Not allowing sheep to trample over each other in races during handling or selection
- Not overcrowding sheep in vehicles and by using internal partitions to restrict movement while travelling
- Not leaving any sharp objects in races, trailers or gates, etc
- Using clean injection needles and correct injection techniques to avoid infection
- Choosing injection sites with care. Producers should inject animals in the neck and avoid the leg

**Sorting lambs does pay**

Better Returns come from presenting even lots of lambs that are matched to specific market needs, in terms of weight, conformation and fat. Mixed lots, where not all lambs meet a buyer’s requirements, will not achieve the best potential prices for all the lambs offered for sale. BRP trials at markets showed sorting lambs into groups of equal merit can attract a price premium of over £3 per lamb. Treat lambs as individuals as they are growing, but place them into even lots to sell them.
Understanding how each abattoir works

Different processing plants operate different payment systems. When comparing deadweight prices, it is important to understand the pricing basis and be aware of any potential weight or out-of-specification penalties, as it will vary.

Example pricing grid for an abattoir, with premiums and penalties shown in pence per kg.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>3H</th>
<th>4L</th>
<th>4H</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>E</td>
<td>B</td>
<td>+15</td>
<td>+15</td>
<td>B</td>
<td>-25</td>
<td>-45</td>
<td>-80</td>
</tr>
<tr>
<td>U</td>
<td>B</td>
<td>+8</td>
<td>+8</td>
<td>B</td>
<td>-25</td>
<td>-45</td>
<td>-80</td>
</tr>
<tr>
<td>R</td>
<td>-5</td>
<td>B</td>
<td>B</td>
<td>-5</td>
<td>-25</td>
<td>-45</td>
<td>-80</td>
</tr>
<tr>
<td>O</td>
<td>-20</td>
<td>-5</td>
<td>-5</td>
<td>-15</td>
<td>-30</td>
<td>-55</td>
<td>-80</td>
</tr>
<tr>
<td>P</td>
<td>-70/-100</td>
<td>-70/-100</td>
<td>-70/-100</td>
<td>-70/-100</td>
<td>-70/-100</td>
<td>-70/-100</td>
<td></td>
</tr>
</tbody>
</table>

B = Base price

Beware!

All abattoirs have an upper and lower weight limit. Any falling out of the weight range will usually attract a penalty. Sometimes, this can be severe so check before sale.

Video Image Analysis (VIA)

VIA is an automated alternative to the manual classification practised in most abattoirs currently.

- Interpretation of video images by computer programme
- Systems require approval by EU
- Already used in some parts of New Zealand
- Used in Republic of Ireland on beef cattle from 2004
- Has potential to measure meat yield

Hot weight rebates

Hot weight rebates are used to establish ‘cold’ carcase weight, ie the abattoir weight. They are applied to carcases weighed ‘hot’ within one hour of slaughter and are the basis on which producers are paid.

Table 2. Examples of different hot weight rebates used to establish ‘cold’ carcase weights

<table>
<thead>
<tr>
<th>Scales calibrated to 0.2kg</th>
<th>Scales calibrated to 0.5kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hot weight (kg)</td>
<td>Rebate (kg)</td>
</tr>
<tr>
<td>25.4 and under</td>
<td>0.5</td>
</tr>
<tr>
<td>25.6 and over</td>
<td>1.0</td>
</tr>
</tbody>
</table>
**Maximising financial returns**

**Dressing specification**
There are two specifications agreed by the industry:

1. **MLC Standard Conditions** (fleece, head, fore and hind feet, genitalia, contents of abdominal and thoracic cavities removed. Kidney Knob and Channel Fat (KKCF), diaphragm and tail left on)

2. **Tail removed** (as above but with the tail removed which equates to an average loss of 0.2kg)

Dressing practices vary between abattoirs. Any dressing specification that falls outside of the two industry agreed specifications is recorded as Company Spec and you should seek its definition from that company. One Company Spec being adopted is excluding KKCF. This equates to an average reduction of 0.5kg on final carcase weight.

Trimming neck and belly flaps also affects carcase weight and can be part of a Company Spec.

Table 3 shows the impact different dressing specifications can have on carcase weight. Company Spec 1 would result in a 0.7kg deduction and Company Spec 2 would result in a 1.1kg deduction from final carcase weight, which is higher than if an industry standard dressing specification was practised by either of these companies.

It is important to compare dressing specs and price when deciding where to market deadweight as it will impact weight and your returns.

**Table 3. Dressing spec impact on weight**

<table>
<thead>
<tr>
<th>Company Spec 1</th>
<th>Company Spec 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ex KKCF 0.5kg</td>
<td>Ex KKCF 0.5kg</td>
</tr>
<tr>
<td>Ex tail 0.2kg</td>
<td>Ex tail 0.2kg</td>
</tr>
<tr>
<td></td>
<td>Ex neck flesh 0.2kg</td>
</tr>
<tr>
<td></td>
<td>Ex breast/flaps 0.2kg</td>
</tr>
<tr>
<td><strong>Total 0.7kg</strong></td>
<td><strong>Total 1.1kg</strong></td>
</tr>
</tbody>
</table>
Killing out percentage
Killing out percentage (KO%) is carcase weight as a percentage of liveweight.

Factors affecting KO% include:
- Breed and genetic performance of the sire and dam
- Stomach content at live weighing – an empty stomach gives a higher KO%
- Seasonal variation – spring lambs tend to have a higher KO% than hoggets
- Milk-fed lambs have a higher KO% than weaned lambs
- Fatter lambs have a higher KO% than lean lambs
- Fleece length and type – heavier fleeces result in lower KO%
- Weather – dry lambs have higher KO%
- Lambs with long tails, testicles or horns have lower KO%

Meat yield
Meat yield is the total percentage of saleable meat from a carcase. Carcases with better conformation yield a greater amount of saleable meat.

Fat level has the greatest influence – the fatter the carcase, the less meat is available for the processor to sell.

Table 4. The percentage of saleable meat from carcases of different fat class

<table>
<thead>
<tr>
<th>Fat class</th>
<th>% of saleable meat</th>
<th>% fat trim</th>
<th>% bone and waste</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>94.87</td>
<td>3.91</td>
<td>1.22</td>
</tr>
<tr>
<td>2</td>
<td>92.95</td>
<td>5.92</td>
<td>1.12</td>
</tr>
<tr>
<td>3L</td>
<td>91.52</td>
<td>7.44</td>
<td>1.04</td>
</tr>
<tr>
<td>3H</td>
<td>90.56</td>
<td>8.46</td>
<td>0.98</td>
</tr>
<tr>
<td>4L</td>
<td>89.61</td>
<td>9.47</td>
<td>0.92</td>
</tr>
<tr>
<td>4H</td>
<td>88.65</td>
<td>10.49</td>
<td>0.86</td>
</tr>
<tr>
<td>5</td>
<td>87.22</td>
<td>12.02</td>
<td>0.77</td>
</tr>
</tbody>
</table>

U3L and R4H wastage comparison
Lamb A has a higher retail value than Lamb B. Lamb B has also incurred additional costs in feed on the farm and processing time at the abattoir.

Table 5. Comparison of waste from two different lamb carcases

<table>
<thead>
<tr>
<th></th>
<th>Lamb A U3L kg/whole lamb</th>
<th>Lamb B R4H kg/whole lamb</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total carcase weight</td>
<td>19.00</td>
<td>19.00</td>
</tr>
<tr>
<td>Leg</td>
<td>4.76</td>
<td>4.40</td>
</tr>
<tr>
<td>Shoulder</td>
<td>4.14</td>
<td>3.56</td>
</tr>
<tr>
<td>Chops</td>
<td>2.86</td>
<td>2.86</td>
</tr>
<tr>
<td>Chump</td>
<td>1.44</td>
<td>1.02</td>
</tr>
<tr>
<td>Neck</td>
<td>2.06</td>
<td>2.40</td>
</tr>
<tr>
<td>Total meat</td>
<td>15.24</td>
<td>14.24</td>
</tr>
<tr>
<td>Trim and fat</td>
<td>3.76</td>
<td>4.76</td>
</tr>
</tbody>
</table>
**Selecting lambs to market**

Weight and visual appraisal are general guides to an animal’s readiness for market but, to ensure accurate selection, handling the live animal is essential.

**Key handling points**

There are five key points that give the best indication of conformation and fat class.

To assess conformation, feel the animal at the shoulder and loin.

To assess fat level, feel the animal at the dock, loin, ribs, shoulder and breast.

**Assessing conformation**

**Shoulder**

- **E** Spinous processes undetectable, flesh creating a very convex profile, very broad shoulder area
- **U** Spinous processes just detectable, flesh beginning to create a convex profile
- **R** Spinous processes less prominent with flesh creating a straight profile under the hand
- **O** Spinous processes still prominent, less concave with some evidence of flesh beginning to fill the hand
- **P** Very prominent spinous processes evident. Very concave profile to the centre of the hand

**Loin**

For more information about lamb selection, see the AHDB Beef & Lamb BRP Virtual Selection Programme, which shows how real and virtual animals look at different points in the classification grid. Available at beefandlamb.ahdb.org.uk
Assessing fatness

**Dock**
1. Individual bones very easy to detect
2. Individual bones easy to detect with light pressure
3. Moderate pressure to detect individual bones
4. Firm pressure to detect individual bones
5. Individual bones cannot be detected

**Loin**
1. Very easy to feel between processes which are very prominent
2. Prominent spinous and transverse processes felt easily
3. Tips of processes rounded. Individual bones felt as corrugations with light pressure
4. Spinous processes felt with moderate pressure. Transverse processes felt with firm pressure
5. Individual processes cannot be felt

**Rib**
1. Individual ribs feel very bare, prominent and easy to detect
2. Individual ribs show slight cover but still easy to detect
3. Individual ribs have softer feel, with fat cover becoming more evident in between and over ribs, which are now less easy to detect
4. Individual ribs are only detectable with firm pressure
5. Individual ribs are undetectable, soft, rolling, spongy feel
Sheep BRP Manuals

Manual 1  Marketing prime lamb for Better Returns
Manual 2  Buying a recorded ram to generate Better Returns
Manual 4  Managing ewes for Better Returns
Manual 5  Growing and finishing lambs for Better Returns
Manual 6  Target easier management for Better Returns
Manual 7  Reducing lameness for Better Returns
Manual 8  Worm control in sheep for Better Returns
Manual 9  Improving ewe breeding for Better Returns
Manual 10  Controlling external parasites for Better Returns
Manual 11  Target ewe fertility for Better Returns
Manual 12  Improving ewe nutrition for Better Returns
Manual 13  Improving sheep handling for Better Returns
Manual 14  Reducing lamb losses for Better Returns

See the AHDB Beef & Lamb website beefandlamb.ahdb.org.uk for the full list of Better Returns Programme publications for beef and sheep producers.

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