AHDB Beef & Lamb Better Returns Programme is grateful for all those who have commented and contributed to this publication, especially AHDB Market Intelligence Farm Economics department.

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This publication is available from our website at beefandlamb.ahdb.org.uk

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AHDB Beef & Lamb is a part of the Agriculture and Horticulture Development Board (AHDB).

You cannot manage what you do not measure!

Farmers are urged to produce animals that meet the needs of their market and sell them at the right time. However, getting the highest price in the market does not mean the most profit has been achieved, nor necessarily that the best use of resources has been made.

Farmers are rarely able to affect the market price for their produce but are able to manage their physical performance and financial inputs.

Running a profitable and sustainable business requires an understanding of what it costs to produce what is being sold. To achieve better returns it requires an understanding of the physical and financial performance of the business and by benchmarking, be able to identify areas to change. By understanding the business better, producers are more likely to gain from any changes they make.

Producers do not need to be financial experts but do need to know what key information to gather and how to interpret it.

Costs will not just include feed or stock but also labour, machinery and other overheads and how these are affected by physical performance. Knowing the costs will enable them to be managed, to optimise returns and improve profitability.

Clive Brown
AHDB Beef & Lamb
Head of Knowledge Exchange for AHDB Beef & Lamb
Assessing the business

Labour – how much paid labour is used on each enterprise?

Land – what are the rental costs for each enterprise?

Machinery – can these costs be divided between different farm enterprises?

Livestock – what are the purchase costs?

Farmhouse – what costs should be allocated?

Forage – what is the cost per tonne?

Buildings – are they earning their keep?

Feed – how much is being fed?

Sales – income from finished and breeding stock?

Sales – income from other farm enterprises?

Forage – is it really low cost?

How much family labour is being used?

Management – is all time spent on the business being accounted for?

Income

Outgoings
Capturing information

No farm business can run today without recording what is happening within each enterprise. Capturing data does not have to be difficult or complicated. Key information should be recorded about the stock and how much feed, medicines and bedding is used. From this, performance can be evaluated. Information can be recorded by using:

- Notebooks
- White and black boards in sheds/farm office
- Calendar/diary
- Invoices – purchase and sales
- Mobile phones/tablets
- AHDB tools – such as Flock/Herd Management Calendar
- Electronic Identification (EID)

Physical information

To start, physical information should be recorded to paint an accurate picture of the current business position. This data can then be used to benchmark key performance indicators (KPIs) for each enterprise. These allow informed choices to be made to improve the business.

Examples for cattle include:
- Number of cows put to bull
- Number of heifers put to bull
- Number of calves born alive
- Number of calves weaned
- Weight of calves and age at weighing (to calculate 200 day weight)
- Dates of start and finish of calving
- Number of cows and heifers calving in first three weeks
- Number of cows with 365 day or under calving interval

Examples for sheep include:
- Number of ewes put to ram
- Number of lambs scanned inside ewes
- Lamb birth weights (average)
- Lamb weaning weights
- Age at weaning
- Number of lambs reared
- Total liveweight of lambs reared

Recording this information will help with many on-farm management decisions, from genetic to feeding choices.
Financial information

Basic cost information can be gathered from purchase invoices and sales receipts, recording both quantity and cost of products.

If there are different types of enterprise, split the information between species, eg suckler cows and breeding ewes, or groups of animals.

Examples include:

• Sales achieved – record the gross price and any deductions from selling
• Feed bills – note quantities as well as prices
• Vet bills – on mixed farms, consider asking your vet to group beef and sheep work separately on an invoice
• Other costs – eg shearing, tags etc
• Machinery costs – purchases, repairs, contractors
• Property maintenance costs
• Electricity
• Fuel
• Water charges
• Rents
• Finance charges
Allocating costs

To be effective all costs need to be allocated to specific enterprises. These are split into variable and fixed costs.

Variable costs are directly related to the chosen enterprise and usually vary with livestock numbers. Fixed costs are related to general farm costs, with a proportion being attributed to each enterprise. These may not vary with livestock numbers.

Variable costs

**Concentrate feed** – include milk replacer, feed blocks, compound feeds, minerals and liquid feeds. Do not forget home-grown grain, which should be included at its potential sales value, not its growing costs.

**Forage** – include costs for growing hay and silage, including plastic sheets and additives, seed, fertiliser and sprays. Include costs for growing forage crops and the cost of feed straw – actual purchase cost or the sales value of home-grown straw.

**Veterinary** – this includes veterinary services, medicines and wormers.

**Bedding** – include the purchased cost of all bedding – straw or shavings. Home-grown straw should be included at its potential sales value.

**Miscellaneous** – includes items such as tags, sundry equipment, assurance schemes, breed society fees and specific enterprise costs where contractors are used, such as shearing and cattle foot trimming.

Fixed costs

In general, these costs are split and allocated on the basis of time spent on an enterprise or actual enterprise cost.

**Paid labour** – full and part-time, casual and self-employed. Take account of direct payments as well as PAYE, National Insurance, pension contributions and any other benefits, such as vehicle allowances.

**Unpaid labour** – do not forget family labour, which is easily overlooked. Include the equivalent cost of employing a person to do a similar job.

**Power and machinery** – include all machinery repairs, tools and electricity, plus vehicle road tax, MOT and machinery insurance costs.

**Contractor charges** – major contractor costs, eg silage making. Some specific enterprise tasks, such as shearing and scanning, are usually allocated to variable costs.

**Administration** – includes secretarial costs, professional fees, eg accountancy and general farm insurance.

**Property charges** – including council tax, including that paid on behalf of employees. Include the costs of repairs and maintenance, as well as water and rent on buildings and property.

**Land resource costs** – rented land charges.

**Machinery depreciation** – change in value over the past 12 months.

**Property depreciation** – include any buildings and fixed equipment if built in the past 10 years.
Calculating the margin

Income on most farms comes from a range of sales and it is important to separate these out between enterprises. Income and costs can then be allocated accurately to each enterprise.

Once all the numbers have been gathered and allocated to the correct enterprise and cost category, it is helpful to present the data in a way that can be compared with industry standards. Table 1 is a template for this. It is important to show data in the most useful way for comparison with industry benchmarks, whether that be per kg of output, per hectare or per head of livestock.

Table 1: Template for working out the margins for an enterprise

<table>
<thead>
<tr>
<th>Calculated data</th>
<th>Example data</th>
<th>My suckler cows</th>
<th>My breeding sheep</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A Outputs</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 Store animal sales</td>
<td>£8,068</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Finished animal sales</td>
<td>£12,104</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Cull sales</td>
<td>£1,775</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Purchases</td>
<td>£4,800</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>A Total outputs (1+2+3-4)</strong></td>
<td>£17,147</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>B Variable costs</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Concentrates</td>
<td>£1,610</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 Forage</td>
<td>£1,648</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 Veterinary</td>
<td>£1,318</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 Bedding</td>
<td>£465</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9 Other livestock costs (miscellaneous)</td>
<td>£1,076</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>B Total Variable costs (5+6+7+8+9)</strong></td>
<td>£6,117</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Gross margin (A-B)</strong></td>
<td>£11,030</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>C Fixed costs</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 Paid labour</td>
<td>£3,800</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11 Value of family unpaid labour</td>
<td>£2,500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 Power and machinery costs</td>
<td>£1,164</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13 Contractor charges</td>
<td>£800</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14 Administration</td>
<td>£950</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15 Property charges</td>
<td>£690</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16 Land rent</td>
<td>£2,656</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17 Depreciation – machinery and property</td>
<td>£1,254</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>C Total fixed costs (10+11+12+13+14+15+16+17)</strong></td>
<td>£13,814</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Net margin (A-B-C)</strong></td>
<td>-£2,784</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Assessing physical performance

Using key performance indicators (KPIs) is a good way to assess physical performance of the flock or herd against industry benchmark standards. It will also highlight weaker areas of the business to focus on.

Suckler herd KPIs

• Calves born alive per 100 cows and heifers put to the bull

\[
\text{Number of calves born alive} \times 100 \quad \frac{(\text{Number of cows put to the bull} + \text{number of heifers put to the bull})}{(\text{Number of cows put to the bull} + \text{number of heifers put to the bull})}
\]

• Calves weaned per 100 cows and heifers put to the bull

\[
\text{Number of calves weaned} \times 100 \quad \frac{(\text{Number of cows put to the bull} + \text{number of heifers put to the bull})}{(\text{Number of cows put to the bull} + \text{number of heifers put to the bull})}
\]

• Calving period – first to last calf (weeks)

Date of last calving – date of first calving

Tip: If there is more than one calving block, eg in spring and autumn, where the bull has been removed, record each block separately.

• Percentage of cows and heifers calving in first three weeks (%)

\[
\text{Number of cows and heifers calved in first three weeks} \times 100 \quad \frac{(\text{Number of cows put to the bull} + \text{number of heifers put to the bull})}{(\text{Number of cows put to the bull} + \text{number of heifers put to the bull})}
\]

• Average 200 day calf weight

\[
\frac{(\text{Average daily liveweight gain to weaning} \times 200) + 40}{\text{Number of calves weaned}}
\]

Calf birth weight is estimated at 40kg. Alternatively the closest weight to 200 days of age can be used instead of the weaning weight to calculate the liveweight gain.

Tip: When calves are weaned, their age can be calculated from their calving records, either individually or as a group. The weight at this age can then be calculated to a standard 200 days.
Sheep flock KPIs

- **Scanning percentage per ewe scanned (%)**
  \[
  \frac{\text{Number of lambs scanned in the ewes}}{\text{Number of ewes put to the ram}} \times 100
  \]

- **Average daily liveweight gain to weaning (kg per day)**
  \[
  \frac{\text{Average lamb weaning weight} - 4^*}{\text{Average age at weaning}^{**}}
  \]
  *Birth weight of 4kg used where actual weights are not available
  **Use actual age or the average age calculated from ten days from start of lambing

- **Lambs reared per 100 ewes to ram**
  \[
  \frac{\text{Overall total of lambs reared}}{\text{Number of ewes put to the ram}} \times 100
  \]

- **Lamb losses from scanning to rearing (% of lambs scanned)**
  \[
  \frac{(\text{Number of lambs scanned in the ewes} - \text{overall total of lambs reared})}{\text{Number of lambs scanned in the ewes}} \times 100
  \]

- **Weight of lambs reared per ewe to ram (kg)**
  \[
  \frac{\text{Total liveweight of lambs reared}}{\text{Number of ewes put to the ram}}
  \]

**Tip:** For any lambs where only the deadweight is known, convert this to a liveweight. The average killing out percentage is 47%. Therefore 19.5kg deadweight would be 41.5kg liveweight (19.5 / 0.47).

There are online KPI calculator tools on the AHDB Beef & Lamb website: beefandlamb.ahdb.org.uk

**Compare your physical performance**
After calculating your KPIs you can compare your performance year to year, or with industry performance in Stocktake or with AHDB Beef & Lamb targets.
Taking costings further

Producing regular costings gives the opportunity to plan and budget as well as allowing for the production and monitoring of a cash flow. It will also help identify the impact of any changes on the business, help make choices about inputs and aid purchasing decisions, such as when to buy.

Other benefits include evaluating market choices, such as selling live or deadweight.

Helpful tools

AHDB Beef & Lamb has developed several tools to help farmers assess their farm business and compare their performance to others in the industry.

Read the Stocktake Report

Simply compare the farm costs against actual industry figures, using the latest Stocktake Report. These annual figures are the industry standard by which English beef and lamb producers can benchmark their performance and examine areas where there is scope for improvement.

Access the report online at beefandlamb.ahdb.org.uk or email farmbench@ahdb.org.uk or call 024 7647 8834.

Consider Farmbench

A simple performance comparison tool to gross margin level, found on the AHDB Beef & Lamb website.

This also includes a What-If planning tool, which shows the effect of any changes.

Compare with Farmbench

Why not benchmark with Farmbench? Have all the farm’s information analysed with the help of a Regional Benchmarking Officer and compare performance against a national database, on an anonymous basis. If you have other enterprises such as cereals, oilseeds and potatoes you can benchmark these too if you want to.

More information available at farmbench.ahdb.org.uk or email farmbench@ahdb.org.uk

Other ways to be involved

Join the AHDB Beef & Lamb Better Returns Programme (BRP) – to receive technical updates on all aspects of beef and sheep production.

Come along to AHDB farm visits, discussion groups, demonstration farms and other on-farm meetings, as they are good ways of assessing the farm’s performance against others.
Other BRP publications available

Joint Beef and Sheep BRP
Manual 1 – Improving pasture for Better Returns
Manual 2 – Assessing the business for Better Returns
Manual 3 – Improving soils for Better Returns
Manual 4 – Managing clover for Better Returns
Manual 5 – Making grass silage for Better Returns
Manual 6 – Using brassicas for Better Returns
Manual 7 – Managing nutrients for Better Returns
Manual 8 – Planning grazing strategies for Better Returns
Manual 9 – Minimising carcase losses for Better Returns
Manual 10 – Growing and feeding maize silage 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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