



Cattle and Sheep Enterprise Profitability In Scotland

Results for 2005



QMS
QUALITY MEAT SCOTLAND
representing the Scottish red meat industry

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EXECUTIVE SUMMARY

The results of the survey of the 2005 calf and lamb crop year continue to show significant variation in levels of financial and technical performance within the industry. Nevertheless, there are a number of common themes that characterise top performance:

- Variable costs among those with the best financial performance were, with the exception of cereal based beef finishers, lower per head and per kilogramme of animal produced.
- Fixed costs among the top tier of producers were generally lower per head and per kilogramme of animal produced.
- Top-third producers produced more saleable weight of livestock and also achieved better selling prices.
- With the exception of hill sheep enterprises, those in the top-third spent more on herd and flock maintenance than the average but did not necessarily replace more animals.
- There is a general tendency for top-third producers to make greater use of family and/or paid labour in the running of their enterprises.

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- LFA hill suckler herds have a gross margin ranging from (-) £99 to £213 per cow with the average being £105 per cow. Average fixed costs per cow were very similar to other types of suckler herd enterprises but because of lower sale weights, fixed costs per kilogramme of calf sold are generally higher than other types of suckler enterprises.
 - The LFA suckler herds were split into two categories: those that were extensive herds selling calves at weaning and those of extended rearing herds selling calves at around 10-12 months old. The top-third extensive herds had a gross margin of £218, 45% higher than the average. They produced 48 kg more liveweight per cow while spending 9% less on variable costs. They did however, spend more on herd maintenance and fixed costs. Top-third extended herds achieved a gross margin of £265 per cow, 63% better than the average.
 - Among non-LFA suckler herds those enterprises in the top third had a gross margin of £268 per cow, £110 better than the average. A significant contributory factor was an improvement of 12 kg of liveweight produced per cow through the production of heavier calves and rearing 4 more calves per 100 cows.
 - Cereal based cattle finishers in the top-third typically started with smaller store cattle and finished them over a longer period. Although they did not sell the heaviest prime cattle they did realise the highest selling price. Despite higher variable costs per cow the better returns from the market place result in a gross margin £72 higher than the average and a net margin £60 higher than the average.

- Top-third forage based cattle finishers similarly started with the smallest store cattle, kept them for the longest period and achieved the highest sale price per kilogramme. Lower variable and fixed costs per animal finished helped the top-third achieve a gross margin double the average and a net margin more than £100 per animal better than the average.
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- Successful LFA upland sheep breeding enterprises combined heavier lamb weights and greater productivity (13 more lambs per 100 ewes) to achieve lamb sales 17% higher than the average. However, they spent more on flock maintenance, variable and fixed costs than the average. Nevertheless, the higher technical performance resulted in a gross margin £10.53 and a net margin £9.23 per head improvement over the average. LFA hill sheep enterprises although returning lower gross and net margins per ewe than their upland counterparts similarly showed the benefits of higher technical efficiency with higher prolificacy and heavier lambs contributing significantly to the 64% improvement in gross margin per ewe from the average £18.18.
 - Store lamb producers achieved an average gross margin of £2.26 per lamb sold but at net margin level lost £2.58 per lamb. Top-third store finishers however did achieve a positive net margin of £1.78. This was achieved principally by selling heavier lambs at higher prices.
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- Taking account of both fixed and variable costs among the cattle enterprises surveyed, only 3% of all the various suckler enterprises made a positive net margin while 44% of finishing enterprises made a positive net margin.
- Among the sheep enterprises surveyed, 20% of ewe flocks made a positive net margin while 36% of store lamb finishers achieved this objective.

INTRODUCTION

This report summarises the results of a survey of Scottish beef and sheep enterprise costs during calendar year 2005 commissioned by QMS and carried out by Promar International and SAC.

The survey now covers 82 breeding ewe enterprises farming 49,000 ewes and 98 suckler cattle enterprises farming 9,000 suckler cows, 24 enterprises finishing almost 12,000 store lambs and 55 cattle finishing enterprises selling 2,800 prime cattle. Eight per cent of the suckler herds and 7% of the ewe flocks surveyed were farmed to organic standards. The survey provides a snapshot of the state of the industry during 2005 and this report compares for each sector the costs, revenues and margins achieved by the top third of producers, the bottom third and the Scottish average.

The concluding sector of the report provides some comparative analysis with the 2004 results however, it must be stressed that the comparisons are not of an identical sample of businesses.

The survey analysis includes estimates of the fixed costs borne by the enterprises being monitored in addition to the estimation of enterprise gross margins. Fixed costs were allocated to the livestock enterprises on the farms surveyed in relation to the proportion of sales derived from livestock within the whole farm and then allocated to the sheep and cattle enterprises on the basis of the proportion of Grazing Livestock Units made up of cattle and sheep. Subtracting fixed costs from the gross margin leaves the net margin of an enterprise to reward the farmer for his labour and personal capital invested in his business. The results, however, continue to be ranked on the basis of gross margin per animal.

This year the analysis has been extended to include estimates of the time committed to the enterprises by family labour for which no charge has been recorded in the estimate of net margins. Estimates have also been made of the income needed to provide a return of 5% on the working capital committed to, and the opportunity cost of the land used by, the enterprises.

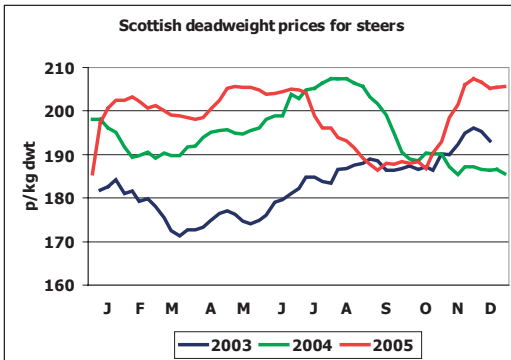
2005 was the first year of the Single Farm Payment scheme that, with the exception of the beef calf premium scheme, decoupled all support payments from livestock production. Consequently, the results for this year ***exclude all area based support payments*** from the returns derived from the livestock enterprise, as there is no requirement for the livestock production to take place for the area payments to be received. In the chapter drawing comparisons between 2004 and 2005, the 2004 results have been restated to exclude headage payments received in 2004.

The considerable range in land types and production systems found in Scotland inevitably mean that any survey of businesses cannot cover all options. However, by extending the number of businesses surveyed it is possible to identify a more comprehensive range of enterprise types and results are presented for:

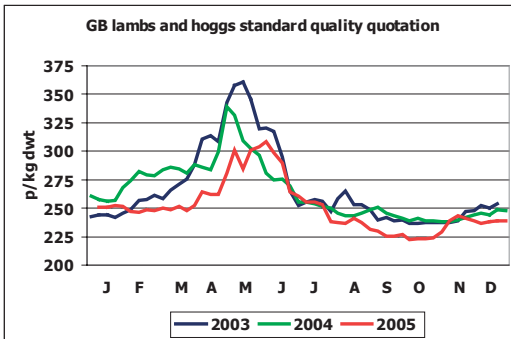
- LFA Hill herds selling calves at weaning;
- LFA Upland herds selling calves at weaning;
- LFA Upland herds selling forward stores;
- Non-LFA Herds;
- Rearer-finisher herds;

- Cereal based finishing enterprises finishing cattle under 20 months of age; and
- Forage based enterprises finishing cattle at over 20 months of age.
- Non-LFA breeding flocks;
- LFA upland flocks;
- LFA hill flocks using Blackface or Cheviot stock; and
- Store lamb finishers.

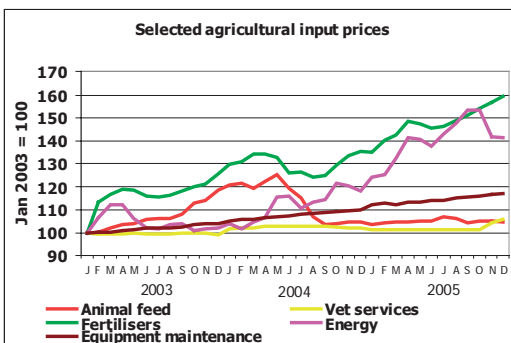
The results demonstrate the range in performance within Scotland and identify some



of the key contributors to the difference in performance between businesses. They also provide a base from which individual businesses can compare their own enterprise performance and begin to explore the strengths and weaknesses of that enterprise.



During 2005, beef producers benefited from better prices for finished cattle over the first half of the year before they fell sharply through July and August. Prices then stabilised at similar levels to 2003 before rising strongly from October through to Christmas, ending the year at a twelve month high.



Prime lamb prices during 2005 were lower than 2004 for most of the year. Only for a short period in late May and June did they rise higher than year earlier levels.

During 2005, input prices generally increased over the year. Oil based inputs, for example power and fertilisers, once again showed the biggest increase although the last quarter did see energy prices fall over 8% from an autumn peak. Animal

feed and veterinary services showed a much more modest price inflation during 2005.

The period reported on by this study covers the first year of the application of reforms to the CAP which has seen support payments consolidated into a single farm premium payment decoupled from the number of animals kept. The exception is one small beef calf premium payment paid to the producers of beef bred calves. However, there is little evidence of structural change having been made during the recording year. Of the breeding herds surveyed, 36% increased herd size and 45% of herds reduced in size between the beginning and end of the recording period and the net change across the sample was a decline of 0.5%. The largest decline, of 4%, occurred among hill suckler herds and the greatest increase 5.5% occurred among lowland suckler herds.

With regard to breeding sheep enterprises there was less than 0.5% variation in ewe numbers within the surveyed businesses between the start and end of the recording period. Nevertheless, 53% of flocks reduced in size to some extent and 40% increased in size.

A glossary is included inside the back cover giving more details of the way in which income and costs have been grouped together and treated in this study.

CATTLE ENTERPRISES

Results from LFA Hill Suckler herds

The 14 herds in this category are those businesses where open unimproved hill land makes up more than three-quarters of the farm area resulting in low stocking densities and where more than half the calves are sold at weaning. The sample size is too small to allow detailed distinctions to be made between the average performance and the top and bottom third of businesses. The average herd size was 72 head in a range from 15 cows to 330 cows.

- Hill suckler herds achieved an average gross margin of £105 per cow with a range from (-)£99 to £212.95. Five herds were making no contribution to the fixed costs of the farm.
- Fixed costs averaged £332 per cow but again with a considerable variation from £168 to £550 per cow. This resulted in an average net margin of (-)£226 per cow and no businesses in the group made a positive margin.
- The weight of the calves sold averaged 310 kg with a range from 210 kg to 350 kg
- The number of calves reared ranged from 78 per 100 cows to 98 per 100 cows and averaged 93. Mortality averaged 4% within a range of no calf losses to 13% losses. However, in the case of both these extremes the herd was small, fewer than 20 cows.
- When compared to their extensive upland suckler herd counterparts, the much more lightly stocked hill herds were more dependent on purchased feeds and bedding and this was a major factor in them returning a gross margin per cow £45 per head lower.
- Although there was little difference in overall fixed costs per head between the hill herds and the extensive upland herds, the higher feed costs resulted in lower net margins among hill herds than extensive upland herds.

Financial performance measures

	Average £ per cow
Number in sample	14
Average herd size (head)	72
Calf output after valuation changes	311.86
Subsidies	29.67
Gross Output	341.53
less replacements	47.39
Net Output	294.14
Variable Costs	
Purchased concentrates	40.90
Home grown concentrates	3.25
Roughages purchased	23.79
Forage	58.79
<i>Total Feed and Forage</i>	<i>126.73</i>
Veterinary	23.91
Bedding	24.92
Other costs	13.11
Total variable costs	188.67
Gross Margin	105.47
Fixed costs	
Labour	85.03
Power and machinery	62.42
Property maintenance and rent	82.46
Depreciation	56.59
Finance	13.78
Administration	31.89
Total Fixed Costs	332.17
Net Margin	(-) 226.70
Annual herd maintenance cost	17
Pence per kg calf produced	
Variable cost	69
Pence per kg calf produced	
Fixed cost per	121
Pence per kg calf produced	
Unpaid family labour hours	8.6

Source: Promar International

Note - figures may not add to totals total due to rounding

Technical performance measures

	Average
Calves born alive per 100 cows	97
Calves reared per 100 cows	93
Daily liveweight gain (kg)	0.96
Weight - kg per calf sold	310
Weight produced kg per 100 cows	27400
Cow replacement rate per 100 cows	13
Purchased concentrates kg per cow	315
Home grown concentrates kg per cow	33
Nitrogen kg per ha	10
Stocking rate GLU/ha	0.22

Source: Promar International.

Results from LFA Suckler herds

In order to better reflect the production systems in use in Scotland the upland suckler herd sample has been reviewed and split into two sub groups, one group of a more extensive nature selling the majority of calves at weaning and a second group selling calves as forward stores referred to as extended rearing herds in this report.

Extensive herds

The 30 herds falling within this category farmed 2,910 cows and achieved an average gross margin of £150 per cow and a net margin of (-)£184 per cow with no businesses reporting a positive net margin.

- The top-third of businesses returned a gross margin of £218 per cow, £68 (31%) better than the average and £153 per cow better than the bottom-third.
- Top-third producers produced 48 kg more calf weight per cow than the average and 89 kg more than the bottom-third. This was achieved through a combination of:
 - higher calving percentages;
 - fewer calf losses;
 - better daily liveweight gains; and
 - production of heavier calves.
- Net expenditure on herd maintenance was highest among the top-third although their cow replacement rate was no different from the average.
- Expenditure on variable costs was also lowest per head among the top-third. They used 4% less concentrate than the average, but equally made greater use of home grown feeds resulting in little difference in concentrate feed usage between the average and the top-third. Although top-third farmers stocked their farms more heavily than the average and used more fertilisers they nevertheless spent less on overall forage production. Veterinary costs were slightly higher but savings were made in bedding and other livestock expenses.
- However, the advantage top-third producers had at gross margin level diminished at net margin level. Nevertheless, they achieved a £22 per cow smaller loss than the average of the group.
- Top-third producers carried higher paid labour costs than the average and also had a greater input of unpaid family labour committed to the enterprise. They also reported higher depreciation charges indicating a greater level of investment in machinery and equipment to support the farm.
- Bottom-third producers sold calves at the lowest weights, achieved the lowest calf rearing ratios and spent the least on herd maintenance.
- While bottom-third producers had 10% lower fixed costs per head, the lower physical performance result in the cost per kilogramme of calf produced being much higher than the average.

- Bottom-third producers also made the heaviest investment in feeding and veterinary services but did not show any benefit in herd technical performance.

Extended rearing herds

Twenty-two herds farming 2,000 cows were categorised as herds selling calves at an older age, around one-year old. These herds would previously have benefited from BSP payments on their male calves. As a result the weight of calves sold was 23% higher than those selling at weaning. As a consequence both variable and fixed costs per cow are higher than their counterparts selling calves at weaning. Nevertheless, on average the extended rearers achieved a gross margin per cow 8% higher than those selling at weaning at £162 per cow. However, the extra fixed costs carried by these herds resulted in an average net margin per cow of (-) £192 per cow, £8 (4%) worse than those selling calves at weaning, and no businesses reported a positive net margin. In contrast though, those herds in the top-third of the extended rearer group achieved an improvement of £120 per cow over top-third weaned calf producers. However, almost all of this difference is due to lower use of paid for labour and a doubling of the commitment from unpaid family labour.

- Top-third businesses returned a gross margin of £264 per cow, £102 (63%) better than the average and £196 better than the bottom-third producers.
- The difference in total variable costs per cow between the top-third and average was insignificant. The only significant difference in variable costs was the higher use of veterinary services by the top-third. The improvement in gross margin coming through improved output instead.
- Although top-third producers did achieve the highest calving rates and calf sale rates there was only one calf per hundred cows difference. The main contributor to higher output, and gross margin, was heavier calf weights and lower herd replacement rates. Nevertheless, although physical replacement rates were lower, there was not a commensurate difference in the cost of herd maintenance. Thus, the top-third had a 20% lower physical replacement rate but only a 7% lower cost.

Extensive upland suckler herds - financial performance measures

	Bottom Third	Average	Top Third
Number in sample	10	30	10
Average herd size (head)	76	97	103
	£ per cow		
Calf output after valuation changes	255.78	312.79	373.68
Subsidies	29.12	30.25	31.94
Gross Output	284.90	343.04	405.62
less net replacement cost	51.98	58.72	65.98
Net Output	232.92	284.32	339.64
Variable Costs			
Purchased concentrates	22.63	15.25	13.38
Home grown concentrates	2.64	11.18	13.85
Roughages purchased	12.63	11.64	14.01
Forage	65.48	47.84	34.61
<i>Total Feed and Forage</i>	<i>103.38</i>	<i>85.91</i>	<i>75.85</i>
Veterinary	30.03	26.51	28.97
Bedding	12.34	9.25	7.36
Other costs	22.29	12.52	9.35
Total variable costs	168.04	134.21	121.53
Gross Margin	64.88	150.11	218.11
Fixed costs			
Labour	83.10	95.07	110.81
Power and machinery	58.40	63.98	79.75
Property maintenance and rent	36.44	62.75	54.86
Depreciation	45.47	58.36	76.60
Finance	33.51	30.44	35.74
Administration	27.14	23.54	23.07
Total Fixed Costs	304.06	334.14	380.83
Net Margin	(-) 239.18	(-)184.03	(-) 162.72
Annual herd maintenance cost	24	22	21
Pence per kg calf produced			
Variable cost	76	51	39
Pence per kg calf produced			
Fixed cost per	138	128	123
Pence per kg calf produced			
Unpaid family labour hours	11.3	11.0	11.8

Source: Promar International. Totals may not add due to rounding

Extensive suckler herds - Technical performance measures

	Bottom Third	Average	Top Third
Calves born alive per 100 cows	84	93	95
Calves reared per 100 cows	79	89	92
Daily liveweight gain (kg)	0.96	1.07	1.22
Weight - kg per calf sold	285	299	329
Weight produced kg per 100 cows	22047	26100	30987
Cow replacement rate per 100 cows	17	16	16
Purchased concentrates kg per cow	334	163	110
Home grown concentrates kg per cow	40	175	216
Nitrogen kg per ha	40	44	52
Stocking rate GLU/ha	0.56	0.63	0.68

Source: Promar International.

Extended rearing Upland Suckler herds - Financial performance measures

	Bottom third	Average	Top third
Number in sample	7	22	7
Average herd size (head)	73	91	62
	£ per cow		
Calf output after valuation changes	369.23	400.32	497.35
Subsidies	22.69	30.01	27.13
Gross Output	391.92	430.33	524.48
less net replacement cost	72.54	58.61	54.33
Net Output	319.38	371.72	470.15
Variable Costs			
Purchased concentrates	80.10	44.55	23.05
Home grown concentrates	6.17	11.29	22.35
Roughages purchased	14.97	18.36	26.57
Forage	60.53	53.78	51.27
<i>Total Feed and Forage</i>	<i>161.78</i>	<i>127.97</i>	<i>123.24</i>
Veterinary	23.41	36.66	45.37
Bedding	22.35	24.66	19.75
Other costs	43.42	19.91	16.80
Total variable costs	250.97	209.21	205.16
Gross Margin	68.41	162.51	264.99
Fixed costs			
Labour	84.12	91.12	36.68
Power and machinery	62.94	53.55	63.76
Property maintenance and rent	87.04	84.76	50.74
Depreciation	46.33	58.35	67.05
Finance	36.57	34.61	39.51
Administration	36.37	32.99	38.94
Total Fixed Costs	353.37	355.38	306.68
Net Margin	(-) 284.96	(-) 192.87	(-) 41.69
Annual herd maintenance cost	23	18	15
Pence per kg calf produced			
Variable cost	78	59	55
Pence per kg calf produced			
Fixed cost per	110	108	83
Pence per kg calf produced			
Unpaid family labour hours	18.5	12.2	23.3
Source: Promar International			
Note - figures may not add to totals total due to rounding			

Extended rearing Upland Suckler herds - Technical performance measures

	Bottom third	Average	Top Third
Calves born alive per 100 cows	89	91	92
Calves reared per 100 cows	85	88	89
Daily liveweight gain (kg)	1.09	1.11	1.66
Weight - kg per calf sold	381	370	407
Weight produced kg per 100 cows	32100	32803	37100
Cow replacement rate per 100 cows	19	16	13
Purchased concentrates kg per cow	617	385	305
Home grown concentrates kg per cow	83	150	286
Nitrogen kg per ha	34	45	35
Stocking rate GLU/ha	0.35	0.44	0.42

Source: Promar International

Results from Non- LFA Suckler herds

Eighteen non-LFA suckler enterprises farming 936 cows were surveyed. They achieved an average gross margin of £158 per cow within a range from £20 per cow to £350. The average net margin was (-) £177 and only one business in this group reported a positive net margin.

- Top-third producers achieved a gross margin £111 (70%) per cow better than the average. However, these businesses recorded fixed costs £79 per cow higher than the average. Thus, at the net margin level the advantage among the top-third had been eroded to £33 per cow.
- Improved margin was aided by better physical performance including:
 - higher calf rearing rates;
 - higher sale weights;
 - lower cow replacement rates, but not lowest replacement cost; and
 - lower concentrate feed use
- As with the extensive upland suckler herds top-third producers in this group also carried the highest level of paid for labour and the highest level of unpaid family labour. They also carried higher finance and administration costs.
- Bottom-third producers are characterised by low physical performance and high feed and veterinary costs.

Financial performance measures

	Bottom third	Average	Top third
Number in sample	6	18	6
Average herd size (head)	64	52	59
	£ per cow		
Calf output after valuation changes	281.44	331.11	416.60
Subsidies	28.86	33.14	35.64
Gross Output	310.30	364.25	452.24
less net replacement cost	42.69	52.58	53.86
Net Output	267.61	311.67	398.38
Variable Costs			
Purchased concentrates	34.64	18.59	8.29
Home grown concentrates	17.33	10.42	12.03
Roughages purchased	19.19	13.88	12.44
Forage	41.36	45.01	29.36
<i>Total Feed and Forage</i>	<i>112.53</i>	<i>87.90</i>	<i>62.12</i>
Veterinary	33.80	26.46	26.35
Bedding	22.93	25.90	32.95
Other costs	24.43	13.55	8.05
Total variable costs	193.69	153.81	129.47
Gross Margin	73.92	157.86	268.91
Fixed costs			
Labour	87.69	79.98	112.28
Power and machinery	74.47	81.56	83.03
Property maintenance and rent	52.17	45.33	52.72
Depreciation	74.26	57.65	55.59
Finance	30.83	31.73	40.13
Administration	32.29	38.26	69.91
Total Fixed Costs	351.71	334.51	413.66
Net Margin	(-) 277.79	(-) 176.65	(-) 144.75
Annual herd maintenance cost	16	18	17
Pence per kg calf produced			
Variable cost	75	52	42
Pence per kg calf produced			
Fixed cost per	136	112	133
Pence per kg calf produced			
Unpaid family labour hours	14.3	15.5	19.3

Source: Promar International

Note - figures may not add to totals total due to rounding

Technical performance measures

	Bottom third	Average	Top third
Calves born alive per 100 cows	81	92	98
Calves reared per 100 cows	79	89	93
Daily liveweight gain (kg)	1.2	1.08	1.0
Weight - kg per calf sold	302	311	332
Weight produced kg per 100 cows	25898	29638	30876
Cow replacement rate per 100 cows	18	18	16
Purchased concentrates kg per cow	774	311	90
Home grown concentrates kg per cow	184	115	150
Nitrogen kg per ha	95	76	71
Stocking rate GLU/ha	0.87	0.79	0.83

Source: Promar International

Results from rearer finisher enterprises

In the case of these fourteen businesses farming 2,210 cows, the margins reported relate to the costs and income for a twelve-month period to the end of April 2006.

The sample size is too small to draw robust conclusions over the difference in performance between the businesses. Nevertheless, considerable variation in margins was recorded. The businesses surveyed produced an average gross margin per cow of £265, within a range from £165 to £345 per cow, and a net margin of (-)£111. Only one business reported a positive net margin.

- The liveweight of cattle sold ranged from 435 kg to 655 kg but there was no correlation between the weight of cattle sold and gross margin.
- The prices received for cattle varied from 194 p/kg dwt to 244 p/kg dwt. again however, there was little correlation between selling price and gross margin.

Financial performance measures

	Average £ per cow
Number in sample	14
Average herd size (head)	158
Calf output after valuation changes	597.79
Subsidies	26.72
Gross Output	624.51
less replacements	55.18
Net Output	569.39
Variable Costs	
Purchased concentrates	48.42
Home grown concentrates	74.97
Roughages purchased	29.07
Forage	50.62
<i>Total Feed and Forage</i>	<i>203.08</i>
Veterinary	35.30
Bedding	39.46
Other costs	25.82
Total variable costs	303.66
Gross Margin	265.67
Fixed costs	
Labour	138.23
Power and machinery	68.07
Property maintenance and rent	56.03
Depreciation	64.69
Finance	22.06
Administration	28.14
Total Fixed Costs	377.22
Net Margin	(-) 111.55
Annual herd maintenance cost	11
Pence per kg calf sold	
Annual variable cost	59
Pence per kg calf sold	
Annual fixed cost per	73
Pence per kg calf sold	
Unpaid family labour hours	12.6

Source: Promar International

Note - figures may not add to totals total due to rounding

Technical performance measures

	Average
Calves born alive per 100 cows	91
Calves reared per 100 cows	87
Daily liveweight gain (kg)	1.15
Weight - kg per calf sold	592
Weight sold kg per 100 cows	51450
Cow replacement rate per 100 cows	15
Purchased concentrates kg per cow	475
Home grown concentrates kg per cow	962
Nitrogen kg per ha	60
Stocking rate GLU/ha	0.67
Selling price p/kg dwt	208

Source: Promar International.

Cattle Finishing

Results from cereal based cattle finishing enterprises

Twenty-three cereal based cattle finishing enterprises were surveyed. They sold in excess of 1,400 cattle and achieved an average gross margin of £86 per animal within a range from (-)£16 per head to £195 per head. The average net margin among those surveyed was £2 per head within a range from (-) £109 to £79 per head. Fifteen of the enterprises surveyed reported a positive net margin

- Businesses in the top-third of the 23 enterprises surveyed started with the lightest stores and kept them for the longest period. They did not however, sell the heaviest cattle but they did achieve the best selling price.
- The longer finishing period resulted in higher variable costs among the top-third producers. In particular they used more concentrate feed and bedding than the average. They also made less use of veterinary services while achieving the lowest mortality rates. Low mortality rates also contributed to the cost of store cattle purchases per kilogramme of prime animal sold being lower than the average.
- Top-third producers carried the highest level of fixed costs per animal and per kilogramme of animal sold, with notably higher paid labour and machinery costs. However, they did have lower requirement for unpaid family labour.
- Bottom-third producers finished their cattle over the shortest period and carried the lowest level of fixed costs per animal and per kilogramme produced. However, heavy use of concentrate feeds, increased bedding costs and other livestock expenses resulted in variable costs per animal sold 25% higher than the average.
- Although those in the bottom third achieved the highest daily liveweight gains, they also faced higher mortality rates than the average and consequently the cost of buying store cattle per kilogramme of prime cattle sold was higher than the average.

Financial performance measures

	Bottom Third	Average	Top Third
Number in sample	8	23	8
Average herd size (head)	44	62	43
	£ per head		
Stock Sales	637.27	633.63	678.55
less Stock Purchases	412.60	389.32	350.12
Net Output	224.67	244.31	328.43
Variable Costs			
Purchased concentrates	105.43	75.08	58.22
Home grown concentrates	28.11	25.39	41.49
Other Feeds	5.17	6.98	17.63
Forage	3.39	7.77	9.74
<i>Total Feed and Forage</i>	<i>142.11</i>	<i>115.22</i>	<i>127.08</i>
Veterinary	11.10	12.27	9.91
Bedding	20.25	12.38	15.40
Other Costs	23.78	18.14	18.10
Total Variable Costs	197.24	158.01	170.49
Gross Margin	27.43	86.30	157.94
Fixed costs			
Labour	15.28	25.22	34.73
Power and machinery	8.66	14.64	18.26
Property maintenance and rent	8.46	14.63	10.45
Depreciation	8.19	13.94	17.74
Finance	8.79	4.44	3.57
Administration	7.15	11.37	11.44
Total Fixed Costs	56.53	84.25	96.19
Net Margin	(-) 29.10	2.05	61.75
Stores purchased – pence per kg lwt sold	70	65	59
Variable cost Pence per kg lwt sold	35	25	29
Fixed cost per Pence per kg lwt sold	10	13	16
Unpaid family labour hours	2.6	4.3	2.6

Source: Promar International. Totals may not add due to rounding

Technical performance measures

	Bottom Third	Average	Top Third
Feeding Period (days)	176	208	231
Start Wt (kg lwt)	352	334	298
Finish Wt (kg lwt)	590	602	595
Daily LWT Gain (kg)	1.35	1.29	1.29
Mortality (%)	2	1	0.5
Purchased concentrates kg/head	1039	846	760
Home grown concentrates kg/head	275	320	496
Purchase Price (£ per kg lwt)	1.17	1.20	1.17
Sale price sold dwt (£ /kg dwt)	2.03	2.03	2.08
Source: Promar International.			

Results from forage based cattle finishing enterprises

Thirty-two businesses finishing almost 1,400 prime cattle on forage based systems produced an average gross margin of £109 per head within a range from (-)£44 to £282 per head. In comparison to cereal based finishers the gross margin per head was £23 better among forage finishers. However a finishing period 133 days longer than among cereal finishers resulted in forage based finishers carrying higher fixed costs and the average net margin, of (-)£93.84 is almost £100 per head worse than that achieved by cereal based finishers. Only 7, (22%), of the forage based finishers in the survey reported a positive net margin.

- Businesses in the top third of the 32 forage based finishing enterprises bought the smallest cattle and fed them for the longest period. Whilst the final sale weight was little different from the average, the selling price was almost 6% better than the average and the net output £80 better than the average.
- Concentrate usage per animal was little different between the top-third and the average, but greater use of homegrown cereals resulted in some savings in overall feed costs among the top-third producers. Top-third producers also spent less on bedding and other livestock costs to result in total variable costs £23 per head lower than the average.
- Top-third producers carried lower fixed costs per animal than the average producer as a result of lower property costs and finance charges. However, they spent more on paid labour than the average but used 10% less unpaid family labour.
- Like their cereal finisher counterparts, bottom third forage based finisher enterprises carried lower fixed costs per animal than the average. They made particular savings in paid labour and did not offset them with unpaid family labour.
- Bottom-third producers received the lowest price for their finished stock. While they paid less per kilogramme liveweight for their store cattle because they bought heavier cattle than the average and sold lighter cattle than the average, the cost of cattle entering the system per kilogramme of prime beef sold was higher than the average.
- Greater reliance on purchased concentrates resulted in bottom-third producers spending more than the average on feed. They also spent more per animal on veterinary services, bedding and other livestock costs resulting in variable cost per kilogramme of prime beef produced 28% higher than the average.

Financial performance measures

	Bottom Third	Average	Top Third
Number in sample	11	32	11
Average herd size (head)	40	43	39
	£ per head		
Stock Sales	627.72	684.20	717.82
less Stock Purchases	394.21	399.52	354.08
Net Output	233.51	284.68	363.74
Variable Costs			
Purchased concentrates	98.73	48.70	17.50
Home grown concentrates	0	30.50	53.36
Other Feeds	11.08	7.68	6.59
Forage	23.25	25.62	25.93
<i>Total Feed and Forage</i>	<i>133.06</i>	<i>112.50</i>	<i>103.38</i>
Veterinary	11.28	10.79	11.65
Bedding	39.62	30.07	21.02
Other Costs	30.03	22.03	16.52
Total Variable Costs	213.99	175.39	152.57
Gross Margin	19.52	109.29	211.17
Fixed costs			
Labour	42.46	60.01	69.57
Power and machinery	29.57	38.03	38.14
Property maintenance and rent	39.89	34.01	21.42
Depreciation	23.35	32.36	31.18
Finance	12.80	22.78	11.84
Administration	15.59	15.94	16.96
Total Fixed Costs	163.66	203.13	189.11
Net Margin	(-) 144.14	(-) 93.84	22.06
Stores purchased – pence per kg lwt sold	68	67	60
Variable cost Pence per kg lwt sold	37	29	26
Fixed cost per Pence per kg lwt sold	28	34	32
Unpaid family labour hours	4.9	5.7	5.2

Source: Promar International. Totals may not add due to rounding

Technical performance measures

	Bottom Third	Average	Top Third
Feeding Period (days)	265	341	404
Start Wt (kg lwt)	360	331	280
Finish Wt (kg lwt)	579	594	592
Daily LWT Gain (kg)	0.83	0.77	0.77
Mortality (%)	0.5	0.3	0.5
Purchased concentrates kg/head	845	429	202
Home grown concentrates kg/head	0	383	612
Purchase Price (£ per kg lwt)	1.09	1.20	1.21
Sale price sold dwt (£ /kg dwt)	1.96	2.10	2.22

Source: Promar International.

Carcase quality in 2005

A sample of over 76,000 carcasses graded in Scotland by the MLC Commercial Services' classifiers during 2005 showed the following results. 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 has a different balance of clients and the lighter area shows other categories of stock that are required by some processors in Scotland. Some processors will also accept steers and heifers with an O+ conformation, with a 3, 4L, and occasionally a 4H fat cover, although outlets for these classes of cattle are limited. The clear area shows those categories of stock that Scottish processors do not like and which are heavily penalised in the market place. The variation in requirements reinforces the importance of good communication between producers and buyers and the scope for targeting stock to different buyers.

Proportion of carcasses falling within carcase classifications in 2005

Steers

	1	2	3	4L	4H	5L	5H
E	-	-	-	-	-	-	-
U	-	0.5	3.1	10.2	6.8	0.3	-
R	-	0.9	8.6	32.1	18.9	0.9	0.1
O	-	0.6	5.4	8.4	2.3	0.1	-
P	-	0.1	0.3	0.2	-	-	-

Heifers

	1	2	3	4L	4H	5L	5H
E	-	-	-	-	-	-	-
U	-	0.2	1.2	5.4	4.9	0.2	-
R	-	0.5	5.9	33.9	28.8	2.0	0.2
O	-	0.3	2.2	8.2	5.4	0.2	-
P	-	-	-	-	-	-	-

Young Bulls

	1	2	3	4L	4H	5L	5H
E	-	0.2	0.5	0.3	0.1	-	-
U	0.1	1.8	11.0	14.4	4.5	-	-
R	0.2	2.0	11.1	14.1	3.8	-	-
O	0.4	5.4	18.8	8.0	1.0	-	-
P	0.4	1.0	0.7	0.1	-	-	-

Comparison with 2004

Scottish producers are generally very good at selecting cattle to meet their buyers' needs. Nearly 80% of the steers and heifers and almost 60% of young bulls in the grading survey meet the requirements of Scottish buyers.

	2004	2005
	Proportion of carcasses graded E, U, R 3 and 4	
Steers	75.9	79.7
Heifers	78.0	80.1
Young Bulls	55.1	59.8

This represents an improvement year on year of 3.8 percentage points for steers, which had seen a drop in the 2004 sample. Heifers and young bulls have seen a continued improvement in the proportion meeting the target grades, improving by 2.1 percentage points and 4.7 percentage points respectively.

Within the target specification producers will find higher prices offered for better grades of cattle. For example, during 2005 the average price paid for –U3 steers was 1.4 p/kg dwt better than that paid for R4L steers and the average difference for the first nine months of 2006 has been 2.0 p/kg dwt. Similarly –U3 heifer prices were on average 4.3 p/kg dwt higher than R4L heifers during 2004. Achieving an improvement in carcase classification from O+4H to R4L resulted in a price improvement of typically 6.2 p/kg dwt for heifers and 5.6 p/kg dwt for steers during 2005. During the first nine months of 2006 the same improvement from O+4H to R4L has generated a premium of 7.4 p/kg dwt and 7.0 p/kg dwt for heifers and steers respectively. Estimates of an average carcase weight for a steer in Scotland during 2005 was 363 kg and a heifer was 304 kg. The price differences highlighted above therefore lead to the following premia or penalties during 2005 over an R4L carcase:

	Increase in value for –U 3 over R4L	Decrease in value for O+4H over R4L
	£ per head	
Steer	5	20
Heifer	13	19

SHEEP ENTERPRISES

Results from LFA Upland Breeding Flocks

LFA upland breeding flocks are identified as running crossbred flocks. Thirty-eight such flocks were recorded in this survey that collectively farmed almost 23,000 ewes. These businesses achieved an average gross margin of £35.77 per ewe within a range from £12.25 to £56.00. The average net margin was (-)£3.92 in a range (-)£38.86 to £33.74.

- Producers in the top-third produced a gross margin £10.53 (29%) better than the average and £24.63 better than the bottom third.
- All the improvement in gross margin was the result of better returns from the lamb crop as variable costs were little changed between the average and the top-third.
- Improved returns from the lamb crop are a consequence of better flock performance. Top-third businesses achieved;
 - 12 more lambs sold per 100 ewes than the average;
 - marginally higher prime lamb carcase weight and the highest proportion of prime lambs sold; resulting in
 - liveweight of lamb produced per ewe being 7kg (12%) higher than the average.
- In contrast bottom-third producers achieved;
 - the same number of lambs reared per 100 ewes as the average but;
 - the lowest proportion of prime lambs sold and lower store and breeding lamb weights than the average; resulting in
 - the liveweight of lamb sold per ewe being 4.6kg (8%) lower than the average.
- Total variable costs were little different between the top-third and the average although, top-third producers spent slightly more on veterinary services and slightly less on feed and forage.
- Paid labour costs were 30% higher than the average among top-third producers although they used slightly less unpaid family labour than the average. However, savings in most other fixed cost elements result in the overall fixed cost among top-third producers being 3% higher than the average.

Financial performance measures

	Bottom Third	Average	Top Third
Number in Sample	13	38	13
Flock size	403	606	702
£ per ewe			
Lamb sales	55.66	64.14	75.06
Wool	1.47	1.69	1.83
Gross Output	57.13	65.83	76.89
less replacement costs	12.29	10.24	10.68
Net output	44.84	55.59	66.21
Variable costs			
Purchased concentrates	7.26	5.54	5.62
Home grown concentrates	0	0.34	0.17
Other feeds	2.47	0.76	0.18
Forage	4.84	4.19	4.08
<i>Total feed and forage</i>	<i>14.57</i>	<i>10.83</i>	<i>10.05</i>
Bedding	0.46	0.36	0.28
Veterinary	4.97	4.87	5.46
Other costs	3.47	3.76	4.12
Total variable costs	23.17	19.82	19.91
Gross margin	21.67	35.77	46.30
Fixed costs			
Labour	6.92	10.29	13.00
Power and machinery	7.69	7.11	6.54
Property maintenance and rent	8.62	8.65	9.69
Depreciation	7.19	6.78	5.27
Finance	3.27	3.17	2.87
Administration	4.80	3.69	3.61
Total fixed costs	38.50	39.69	40.99
Net Margin	(-) 16.83	(-) 3.92	5.31
Flock replacements - £ per kg lamb produced	0.24	0.18	0.17
Variable cost - £ per kg lamb produced	0.45	0.35	0.31
Fixed cost - £ per kg lamb produced	0.73	0.70	0.64
Unpaid family labour – hours per year per ewe	2.1	1.4	1.1

Source: Promar International. Totals may not add due to rounding

Technical performance

	Bottom Third	Average	Top Third
Ewes per ram	35	38	34
Ewe replacement rate %	24	20	21
Lambs born %	147	148	160
Lamb mortality %	5	6	5
Lambs reared %	142	142	155
Av. Weight of lambs kg	36.75	39.7	41.05
Weight of lamb produced per 100 ewes kg	5187	5652	6367
Purchased concentrates kg/ewe	59	41	44
Home grown concentrates kg/ewe	0	5	3
Lambs sold finished per 100 ewes	39 @ 20.1 kg dwt	89 @ 19.6 kg dwt	111 @ 19.7 dwt
Lambs sold/transferred store per 100 ewes	72 @ 32.8 kg lwt	27 @ 33.3 kg lwt	11 @ 32.5 kg lwt
Lambs sold/transferred for breeding per 100 ewes	30 @ 38.2 kg lwt	26 @ 39.9 kg lwt	32 @ 41.6 kg lwt

Source: Promar International.

Results from LFA Hill Breeding Flocks

This group of enterprises comprises purebred Blackface and Cheviot flocks farmed on some of the most disadvantaged land of Scotland. The sample covered 33 such flocks farming 21,950 ewes. These flocks have a lambing percentage much lower than the LFA Upland flocks averaging 107% lambs reared compared to 142% among upland flocks and much lower gross margins averaging £18.18 per ewe compared to £35.77.

These hill farms reported an average net margin of (-)£17.96 and only one of these businesses achieved a positive net margin

- Producers in the top-third benefit from higher technical performance. The improvement of £11.69 in gross margin per ewe is largely due to:
 - a higher number of lambs reared, 9 more lambs per 100 ewes than the average;
 - lower lamb mortality; and
 - heavier lamb sale weights resulting in 4.9 kg more lamb sold per ewe.
- Higher technical performance did not come at any extra variable cost. Indeed top-third producers used less concentrate feeding and spent less on forage production. They also had lower flock maintenance costs than the average.
- Top-third producers carried higher fixed costs than the average, particularly with regard to paid labour and property costs. However, because of the higher lamb sale weights, the total cost of production per kilogramme of lamb produced was considerably lower than the average.
- Although bottom-third producers had lower cost structures, both variable and fixed costs per ewe were lower than the average, lower physical performance and high flock maintenance charges impacted badly on overall financial performance.

Financial performance measures

	Bottom Third	Average	Top Third
Number in Sample	11	33	11
Flock size	583	665	761
£ per ewe			
Lamb sales	28.73	38.50	46.76
Wool	1.18	1.29	1.32
Gross Output	29.91	39.79	48.08
less replacement costs	12.49	9.15	7.48
Net output	17.42	30.64	40.60
Variable costs			
Purchased concentrates	2.94	3.00	1.83
Home grown concentrates	0	0	0
Other feeds	2.14	2.04	1.71
Forage	1.51	2.03	1.82
<i>Total feed and forage</i>	<i>6.59</i>	<i>7.07</i>	<i>5.36</i>
Bedding	0.14	0.15	0.19
Veterinary	3.30	3.44	3.34
Other costs	1.58	1.80	1.84
Total variable costs	11.61	12.46	10.73
Gross margin	5.81	18.18	29.87
Fixed costs			
Labour	7.91	10.02	11.64
Power and machinery	7.02	5.52	3.92
Property maintenance and rent	6.39	8.03	11.22
Depreciation	6.14	5.76	5.08
Finance	2.54	3.03	2.03
Administration	3.38	3.78	3.99
Total fixed costs	33.66	36.14	37.88
Net Margin	(-) 27.85	(-) 17.96	(-) 8.01
Flock replacements - £ per kg lamb produced	0.46	0.26	0.22
Variable cost - £ per kg lamb produced	0.42	0.39	0.27
Fixed cost - £ per kg lamb produced	1.23	1.04	0.95
Unpaid family labour – minutes per year per ewe	1.8	1.4	0.8

Source: Promar International. Totals may not add due to rounding

Technical performance

	Bottom Third	Average	Top Third
Ewes per ram	31	36	38
Ewes sold %	22	20	21
Lambs born %	98	111	119
Lamb mortality %	4	4	3
Lambs reared %	94	107	116
Av. Weight of lambs kg	29.4	32.9	34.3
Weight of lamb produced per 100 ewes kg	2736	3477	3970
Purchased concentrates kg/ewe	20	21	14
Home grown concentrates kg/ewe	0	0	0
Lambs sold finished per 100 ewes	2 @ 17.8 kg dwt	10 @ 18.4 kg dwt	21 @ 18.2 dwt
Lambs sold/transferred store per 100 ewes	59 @ 28.9 kg lwt	63 @ 31.3 kg lwt	55 @ 31.5 kg lwt
Lambs sold/transferred for breeding per 100 ewes	33 @ 30.0 kg lwt	34 @ 34.5 kg lwt	40 @ 35.7 kg lwt

Source: Promar International.

Results from Lowground Breeding Flocks

Eleven non-LFA lowground breeding flocks farming 3,850 ewes were surveyed which means that detailed distinctions between average performance and the top and bottom performance should be treated with caution. Nevertheless, the range in financial and technical performance is considerable.

- The lowground breeding flock surveyed reported an average gross margin of £32.02 within a range of £9 to £51 per ewe.
- The average net margin within the group was (-)£9.09 per ewe within a range from (-)£32 to £26 per ewe. Four of the businesses reported a positive net margin.
- On average these flocks reared 147 lambs per 100 ewes within a range from 88 to 183 lambs reared per 100 ewes. They produced an average of 56.5 kg of lamb per ewe. This was broadly the same level of physical performance as the average upland flock. However, the cost structure was not as favourable among lowground producers who incurred, on average, greater variable and fixed costs than the average upland flock.

Financial performance measures

	Average
Number in Sample	11
Flock size	350
	£ per ewe
Lamb sales	61.22
Wool	1.52
Gross Output	62.74
Less replacement costs	9.16
Net output	53.58
Variable costs	
Purchased concentrates	5.43
Home grown concentrates	0.60
Other feeds	1.77
Forage	5.58
<i>Total feed and forage</i>	<i>13.38</i>
Bedding	0.22
Veterinary	5.14
Other costs	2.82
Total variable costs	21.56
Gross margin	32.02
Fixed costs	
Labour	14.40
Power and machinery	7.72
Property maintenance and rent	4.67
Depreciation	6.13
Finance	5.11
Administration	3.06
Total fixed costs	41.11
Net Margin	(-) 9.09
Flock replacements - £ per kg lamb produced	0.16
Variable cost - £ per kg lamb produced	0.38
Fixed cost - £ per kg lamb produced	0.73
Unpaid family labour – minutes per year per ewe	2.1
Source: Promar International. Totals may not add due to rounding	

Technical performance

	Average
Ewes per ram	32
Ewes sold %	15
Lambs born %	153
Lamb mortality %	6
Lambs reared %	147
Av. Weight of lambs kg	38
Weight of lamb produced per 100 ewes kg	5633
Purchased concentrates kg/ewe	43
Home grown concentrates kg/ewe	7
Lambs sold finished per 100 ewes	64 @ 19.6 kg dwt
Lambs sold/transferred store per 100 ewes	77 @ 34.1kg lwt
Lambs sold/transferred for breeding per 100 ewes	6 @ 48.2 kg lwt

Source: Promar International.

Results from Store Lamb finishing enterprises

Twenty-four store lamb finishing enterprises selling some 12,000 lambs achieved an average gross margin of £2.26 per lamb within a range from (-)£6.10 to £12.40 per lamb. The average net margin was (-)£2.58 and only nine of those enterprises surveyed achieved a positive net margin.

- Top-third finishers are characterised by businesses that bought the smallest lambs, achieved the best daily liveweight gains and the lowest levels of mortality. Although not selling the heaviest lambs, they did obtain the best selling price and consequently achieved an output after allowing for store lamb purchases £2.66 (29%) better than the average.
- Top-third finishers had the lower variable costs. Through feeding lambs for a shorter period, but also through feeding 5% less concentrate feed per day of finishing, top-third producers spent £1 per head less on feed than the average. They also had lower forage costs but did spend more on veterinary services and other livestock costs.
- Top-third finishers also had firm control on fixed costs spending a further £1 less than the average. A significant contributor to this saving was reduced expenditure on paid for labour.
- Bottom-third finishers had the shortest finishing period, the highest mortality rates and lowest carcase weights leading to the lowest output. However, they also carried the highest variable and fixed costs. Indeed this sub group reported a negative gross margin, thus the enterprise was unable to make any contribution to the fixed costs of the business.

Financial performance measures

	Bottom Third	Average	Top Third
Number in Sample	8	24	8
Flock size	450	496	527
	£ per lamb		
Lamb sales	39.99	41.72	44.18
Less purchases	31.72	32.46	32.26
Net output	8.27	9.26	11.92
Variable costs			
Purchased concentrates	3.63	2.25	1.24
Home grown concentrates	0.14	0.04	0
Other feeds	0.03	0.03	0.03
Forage	1.68	0.95	0.65
<i>Total feed and forage</i>	<i>5.48</i>	<i>3.27</i>	<i>1.92</i>
Bedding	0	0	0
Veterinary	1.79	1.69	1.88
Other costs	2.47	2.04	2.45
Total variable costs	9.73	7.00	6.25
Gross margin	(-) 1.46	2.26	5.67
Fixed costs			
Labour	1.91	1.46	0.93
Power and machinery	0.79	0.66	0.58
Property maintenance and rent	1.11	1.14	1.07
Depreciation	0.80	0.65	0.51
Finance	0.40	0.40	0.42
Administration	0.63	0.53	0.38
Total fixed costs	5.64	4.84	3.89
Net Margin	(-) 7.10	(-) 2.58	1.78
Lambs purchased - £ per kg lwt lamb sold	0.84	0.83	0.80
Variable cost - £ per kg lwt lamb sold	0.26	0.18	0.16
Fixed cost - £ per kg lwt lamb sold	0.15	0.12	0.10
Unpaid family labour – minutes per year per ewe	0.1	0.25	0.25

Source: Promar International. Totals may not add due to rounding

Technical performance

	Bottom Third	Average	Top Third
Weight of lamb purchased kg	31.2	31.3	29.9
Liveweight of lamb sold	37.9	39.0	40.3
Carcase weight of lamb sold	17.9	18.4	18.9
Sale price p/kg dwt	226	229	232
Daily liveweight gain	0.08	0.07	0.10
Finishing period – days	84	114	106
Mortality %	1.6	1.3	1.1
Purchased concentrates kg/lamb	27	21	18
Home grown concentrates kg/lamb	2	1	0

Source: Promar International.

Carcase quality in 2005

A sample of carcasses graded in Scotland by the MLC Commercial Services' classifiers during 2005 showed the following results. 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 has a different balance of clients and the lighter area shows other categories of stock that are required by some processors in Scotland.

Proportion of carcasses falling within carcase classifications in 2005

All Carcasses

	1	2	3L	3H	4L	4H	5
E	-	0.1	0.8	0.2	-	-	-
U	-	0.6	7.7	5.9	2.2	0.7	0.1
R	0.1	4.3	36.5	24.9	5.5	1.7	0.4
O	0.1	2.1	4.0	1.4	0.4	-	-
P	-	-	-	-	-	-	-

New Season Lambs

	1	2	3L	3H	4L	4H	5
E	-	0.1	0.9	0.3	0.1	-	-
U	-	0.4	7.6	5.1	1.6	0.4	0.1
R	-	4.0	39.9	27.7	5.0	1.4	0.5
O	-	1.5	2.5	0.8	0.1	-	-
P	-	-	-	-	-	-	-

Old Season Lambs

	1	2	3L	3H	4L	4H	5
E	-	-	0.7	0.1	-	0.1	-
U	-	0.8	7.9	6.8	2.9	1.0	-
R	0.1	4.7	32.5	21.5	6.1	2.0	-
O	0.1	2.9	5.8	2.2	0.7	0.1	-
P	-	-	-	-	-	-	-

In general terms Scottish producers do produce lambs that meet buyers requirements. Over 60% of all carcasses reach the market place at a desired grade. Indeed the range of required grades is more diverse than in the cattle market due to the different tastes that are represented by the consumer.

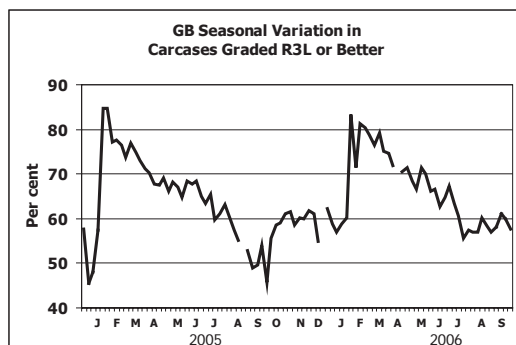
Improving conformation and fat level brings benefits in the market place, even within the preferred specifications for Scottish plants. During 2005, the average increase in price paid in Great Britain for U2 carcasses over R3L was 9.9 p/kg dwt although the average for the first nine months of 2006 was lower at 5.7 p/kg dwt. The GB average premium for R3L over O3H lambs during 2005 was 12.3 p/kg dwt and has remained at this level over the first nine months of 2006. For a typical Scottish lamb carcass this variation in price amounts to a premium of around £2.01 for a U2 carcass over an R3L carcass and reduction of around £2.48 for an O3H carcass compared to an R3L carcass. Notwithstanding these GB average variations individual processors will have different requirements and have different price schedules that may create bigger differences than the average. To maximise returns it is important to have good feedback and dialogue between producers and buyers.

Comparison with 2004

The proportion of lamb carcasses meeting the preferred specification of buyers decreased during 2005. However, this is based on a much smaller sample and may not represent the entire flock demographic. Producers of old season lambs, sold between January and May, have improved the proportion of carcasses falling within buyers preferred specification by 4.7 percentage points, whereas new season producers have seen a dip in the proportion of lambs hitting the target grades of 8 percentage points.

	2004	2005
	Proportion of carcasses Falling within buyers preferred specification	
All carcasses	63.2	60.2
New season	68.8	60.8
Old season	54.7	59.4

The chart illustrates how lamb quality varies through the season but also shows a further improvement in the quality of old season lambs in 2006 compared to 2005.



ESTIMATION OF NON CASH COST IN PRODUCING CATTLE AND SHEEP

The enterprise costings produced in this survey indicate the reward for the unpaid labour of those working with the herds and flocks and the reward for investing capital in the enterprise. The extent to which the net margin is negative is an indication that there is no return for labour and investment committed to the enterprise.

In this chapter, estimates are made of how much charge should be set against the enterprises if unpaid labour were to be charged for and if a return of 5% was required from the investment in livestock and running costs, but not buildings and land. The reward for the investment in land and buildings could be considered to be the rental value of the land used by the enterprise. In this analysis, rental values have been drawn from estimates derived from the Scottish Executive publication *"Farm incomes in Scotland 2004/2005"*. This rental value includes an element of return due to single farm premium payments and should, consequently, be treated with caution.

Estimates of the value of unpaid labour are based on farmers in the survey estimating the proportion of a man year committed to the enterprise, a man year is considered to be 2200 worked hours per year. The value of this labour is drawn from a survey conducted by QMS, EBLEX and HCC during 2006 which revealed that the average worth of unpaid family labour, based on comparable wages in other industry sectors for the skills required of family labour, was £11.18 per hour.

Cattle enterprises

	Unpaid labour	Return on working capital ¹	Rent of land and buildings
	p/kg liveweight sold		
Hill Suckler herds	35	14	14
Upland suckler herds selling calves at weaning	47	17	24
Upland Suckler herds selling yearlings	41	14	28
Lowground Suckler herds	58	15	31
Rearer Finisher herds	27	12	12
Cereal based store finishing	8	5	1
Forage based store finishing	11	5	8

1. Return required to give a 5% return on working capital

Sheep enterprises

	Unpaid labour	Return on working capital ¹	Rent of land and buildings
	p/kg liveweight sold		
Hill flocks	45	19	41
Upland flocks	28	19	3
Lowground Non-LFA flocks	43	12	12
Store lamb finishers	13	5	1

1. Return required to give a 5% return on working capital

Total cost of producing a kilogramme of beef or sheep

Adding together the value of non-cash costs and the running costs of an enterprise provides an indication of the total cost of producing a kilogramme of beef or sheep. However, before doing this all enterprises need to be brought to a common standard. Thus, paid finance charges and rents paid have been excluded from the fixed costs of the enterprises surveyed in making the following estimate. They have been replaced by the imputed value for return on working capital and rental value for the land used for the livestock enterprise.

The table below summarises the cost of production for a kilogramme, liveweight, of beef or sheepmeat produced by the average performer among the enterprises covered by the survey.

	repl cost	var cost	fixed cost	non cash estimates			Total	Selling price
				labour	working capital	rental value		
Pence per kg liveweight sold								
Sheep enterprises								
Store lambs	84	26	13	13	5	1	142	107
Hill ewe	26	39	82	40	19	41	252	111
Upland ewe	18	35	86	28	19	3	204	114
Lowland	16	38	61	43	12	12	182	109
Cattle enterprises								
Hill suckler	17	69	101	35	14	14	250	100
Upland selling at weaning	22	51	103	47	17	24	264	116
Upland selling yearlings	19	59	80	41	14	28	241	112
Non LFA suckler	18	52	96	58	15	31	270	120
Rearer finisher	11	59	65	27	12	12	186	122
Forage finisher	67	29	28	11	5	8	148	116
Cereal finisher	65	25	11	8	5	1	115	112

Labour based on £11.18 per hour and 2200 hours per man year
Rental values based on values used in SEERAD Farm Incomes Survey
Working Capital charged at 5%

COMPARISONS WITH 2004

The tables below summarise the results from the 2005 calf and lamb crop categorised in the same way as the 2004 survey and compares them with last year's results on the basis of gross margins. The analysis is based on a comparison of the average from each of the two years surveyed and is not a comparison of an identical sample. The 2004 results have been adjusted to exclude support payments making them more comparable with the 2005 results.

Cattle enterprises

Suckler herds

- Reduced store cattle prices and lower calf weights contributed to reduced output among hill suckler herds in comparison to last year. Although replacement costs were lower than last year, higher expenditure on feedstuffs and veterinary services increased variable costs considerably and led to a reduction in the average gross margin of £39.16 (27%). Fixed costs were not significantly different between the two years.
- Among upland suckler herds, calf sale weights generally improved although selling prices fell slightly. Among those herds selling calves at weaning variable cost movement was insignificant between the two years and higher calf rearing percentages lead to an improvement in gross margin per cow of 20%. Those herds selling store cattle at around one year old also saw a small improvement of 2% in gross margin per cow. Among both groupings of upland suckler herds fixed costs increased substantially in comparison to last year and consequently net margins deteriorated by 33% and 17% respectively.
- Average calf sale weights among lowground suckler herds increased over the year but lower sale prices resulted in per head calf returns being lower than in 2004. With the exception of veterinary expenses, all variable costs increased during the year. The overall result was a marginal decline in gross margin per cow. Fixed costs also increased over the year such that between the two samples the average net margin fell by almost £50 per head.
- Rearer/finishing units received better prices for finished stock but saw sale weights slip slightly. Although reduced sums were spent on feed and forage, higher veterinary costs and miscellaneous expense increased variable costs per cow by 3%. Savings in fixed costs compared to the previous years survey resulted in net margins improving by 50% but remaining negative.

Cattle finishing

- Cereal based enterprises in the 2005 sample showed a much improved return. Lower feed costs, lower purchase prices for store cattle and improved selling prices for prime cattle combined to see gross margins 29% higher than the 2004 sample. Further savings in fixed costs resulted in a positive net margin being recorded by the average cereal based finisher in 2005.

- Gross margins from the longer keep forage based enterprises also showed an improvement over last year's average. Again, lower store cattle price, lower feed cost and better selling prices combined to produce an improvement of 43% in gross margin per animal. However, among these longer keep animals fixed costs increased substantially and resulted in a deterioration in net margin per animal of almost £20 per head.

Sheep enterprises

LFA sheep

- LFA hill sheep enterprises saw improved physical performance sufficient to outweigh lower market prices and result in improved output compared to last years sample. Variable costs per ewe fell slightly as some savings were made in veterinary and other livestock expenses and this allowed gross margins to improve by 18%. However, increased fixed costs more than offset this improvement and net margins per ewe fell £2.43.
- LFA upland flocks achieved very similar average physical performance to last year and consequently lower market prices resulted in slightly lower output per ewe. Variable costs showed a small increase mainly in veterinary and other miscellaneous expenses and gross margin per ewe consequently slipped £1.77 (5%). A small increase in fixed costs further reduced net margins.

Lowground sheep

- Lowground flocks reported improved physical performance, but the balance of sales between prime and store lamb moved in favour of store lambs and as these sell at lower prices the output of lowground flocks in the 2005 survey fell in comparison to 2004. However, by selling store lambs rather than prime lambs this group achieved significant savings in feed cost per ewe and this had a considerable impact on reducing overall variable costs per ewe. Unfortunately the reduction in market returns was greater than the variable cost savings and gross margin per ewe fell £4 per head in comparison to last year's average. Increases in fixed cost increased the shortfall in financial return at net margin level.

Lamb finishing

- The 2005 sample showed a small improvement in output, with store lamb purchase price decline being sufficient to offset the decline in prime lamb market return. However, increased cost across the board from feeding through veterinary services to fixed costs, resulted in a considerable deterioration in net margin from a position of positive return from the 2004 average to negative return for the 2005 average.

Suckler herds

	Hill suckler herds		Lowland suckler herds	
	Average		Average	
	2004	2005	2004	2005
Number in sample	7	14	15	18
Average herd size (head)	55	72	60	52
	£ per cow			
Calf output including beef calf premium	363.33	341.53	349.14	364.25
less replacements	81.49	47.39	49.45	52.58
Net Output	281.84	294.14	299.69	311.67
Variable Costs				
Total concentrates	36.31	44.15	26.16	29.01
Other Feeds	10.58	23.79	12.67	13.88
Forage	47.45	58.79	37.28	45.01
<i>Total Feed and Forage</i>	<i>94.34</i>	<i>126.73</i>	<i>76.12</i>	<i>87.90</i>
Veterinary	19.19	23.91	29.20	26.46
Bedding	15.63	24.92	22.54	25.90
Other costs	8.05	13.11	12.06	13.55
Total variable costs	137.21	188.67	139.93	153.81
Gross Margin	144.63	105.47	159.76	157.86
Fixed costs	333.28	332.17	286.62	334.51
Net Margin	(-) 188.65	(-) 226.70	(-) 126.86	(-) 176.65
	Hill herds		Lowland herds	
	Average		Average	
	2004	2005	2004	2005
Physical performance				
Calves born alive per 100	94	97	90	92
Calves died per 100	4	4	2	3
Calves reared per 100	90	93	88	89
Daily liveweight gain (kg)	1.11	0.96	0.98	1.08
Return per Calf (£ per head)	406.79	353.40	368.54	366.39
Calf price - £ per kg lwt	1.17	1.14	1.22	1.17
Weight per calf (kg)	348	310	301	311

Source: Promar International

	Upland suckler herds		Upland suckler herds	
	Extensive		Extended	
	Average		Average	
	2004	2005	2004	2005
Number in sample	29	30	30	22
Average herd size (head)	116	97	80	91
	£ per cow			
Calf output incl. Beef calf premium	313.36	343.15	382.49	430.33
less replacements	55.58	58.72	46.09	58.61
Net Output	257.78	284.32	336.40	371.72
Variable Costs				
Total concentrates	19.96	26.43	43.02	55.84
Other Feeds	10.54	11.64	21.43	18.36
Forage	38.88	47.84	43.63	53.78
<i>Total Feed and Forage</i>	<i>79.39</i>	<i>85.91</i>	<i>108.09</i>	<i>127.97</i>
Veterinary	24.79	26.51	35.56	36.66
Bedding	8.52	9.25	21.12	24.66
Other costs	20.89	12.52	11.77	19.91
Total variable costs	133.61	134.21	176.51	209.21
Gross Margin	124.17	150.11	159.88	162.51
Fixed costs	262.72	334.14	325.00	355.38
Net Margin	(-) 138.55	(-) 184.03	(-) 165.12	(-) 192.87
	Upland herds		Upland herds	
	Extensive		Extended	
	Average		Average	
	2004	2005	2004	2005
Physical performance				
Calves born alive per 100	92	93	93	91
Calves died per 100	5	4	4	3
Calves reared per 100	87	89	89	88
Daily liveweight gain (kg)	0.98	1.07	1.20	1.11
Return per Calf (£ per head)	313	313	382	400
Calf price - £ per kg lwt	1.09	1.05	1.09	1.08
Weight per calf (kg)	286	299	351	370

Source: Promar International

	Rearer/Finishers	
	Average	
	2004	2005
Number in sample	12	14
Average herd size (head)	133	158
	£ per cow	
Calf output incl. Beef calf premium	559.90	624.51
less replacements	57.69	55.18
Net Output	502.21	569.39
Variable Costs		
Total concentrates	142.16	123.39
Other Feeds	26.24	29.07
Forage	43.86	50.62
<i>Total Feed and Forage</i>	<i>212.27</i>	<i>203.08</i>
Veterinary	22.18	35.30
Bedding	43.22	39.46
Other costs	16.77	25.82
Total variable costs	294.44	303.66
Gross Margin	207.77	265.67
Fixed costs	421.72	377.22
Net Margin	(-) 213.95	(-) 111.55
	Rearer/Finishers	
	Average	
	2004	2005
Physical performance		
Calves born alive per 100	90	91
Calves died per 100	8	4
Calves reared per 100	88	87
Daily liveweight gain (kg)	1.02	1.15
Return per Calf (£ per head)	677	677
Sale price - p per kg dwt	202	208
Weight per calf (kg)	610	592

Source: Promar International

Businesses finishing cattle under cereal based and forage based systems

	Cereal based		Forage based	
	2004	2005	2004	2005
	£ per head			
Number in sample	31	23	25	32
Stock Sales	621.17	633.63	611.03	684.20
less Stock Purchases	357.25	389.32	355.71	399.52
Net Output	263.92	244.31	255.31	284.68
Variable Costs				
Concentrates	133.60	100.47	90.63	79.20
Other Feeds	8.75	6.98	11.44	7.68
Forage	7.84	7.77	23.89	25.62
<i>Total Feed and Forage</i>	<i>150.20</i>	<i>115.22</i>	<i>125.97</i>	<i>112.50</i>
Veterinary	8.99	12.27	12.63	10.79
Bedding	13.78	12.38	20.29	30.07
Other Costs	18.61	18.14	20.38	22.03
Total Variable Costs	191.59	158.01	179.27	175.39
Gross Margin	72.32	86.30	76.04	109.29
Fixed Costs	101.38	84.25	150.10	203.13
Net Margin	(-) 29.06	2.05	(-) 74.06	(-) 93.84
Physical performance				
Feeding Period (days)	232	208	319	341
Start Wt (kg lwt)	299	334	294	331
Finish Wt (kg lwt)	591	602	573	594
Av Carcase Wt (kg dwt)	325	331	315	327
Daily LWT Gain (kg)	1.3	1.3	0.9	0.8
Mortality (%)	0.3	1.0	0.5	0.3
Sale price (£/kg dwt)	2.00	2.03	1.98	2.10
Purchase Price (£ per kg lwt)	1.25	1.20	1.22	1.20
Gross Margin per day (£ per day of feeding period)	0.83	0.41	0.60	0.32

Source: Promar International

Results from LFA Sheep Flocks

	LFA Upland Sheep Flocks		LFA Hill Sheep Flocks	
	2004	2005	2004	2005
	£ per ewe			
Number in Sample	33	38	34	33
Lamb sales	65.31	64.14	36.08	38.50
Wool	1.49	1.69	1.22	1.29
Gross Output	66.80	65.83	37.30	39.79
less replacement costs	10.89	10.24	8.59	9.15
Net Output	55.91	55.59	28.70	30.64
Variable costs				
Concentrates	5.41	5.88	3.31	3.00
Forage net cost	3.58	4.19	1.92	2.03
Roughages	1.46	0.76	1.41	2.04
<i>Total feed and forage</i>	<i>10.45</i>	<i>10.83</i>	<i>6.64</i>	<i>7.07</i>
Bedding	0.32	0.36	0.06	0.15
Veterinary	4.12	4.87	4.32	3.44
Other costs	3.49	3.76	2.31	1.80
Total variable costs	18.37	19.82	13.32	12.46
Gross margin	37.54	35.77	15.39	18.18
Fixed costs	38.81	39.69	30.92	36.14
Net Margin	(-) 1.27	(-) 3.92	(-) 15.53	(-) 17.96
Physical performance	LFA Upland Sheep Flocks		LFA Hill Sheep Flocks	
Average no ewes	545	606	692	665
Lambs born per 100 ewes	148	148	104	111
Lambs died per 100 ewes	5	6	4	4
Lambs reared per 100 ewes	143	142	100	107
Lambs sold/retained:				
Slaughter %	61	63	10	9
Stores %	25	19	59	59
Breeding %	14	18	31	32
Return per lamb sold finished (£)	45.83	45.48	41.58	39.84
Carcase weight lambs sold finished (kg)	19.5	19.6	18.4	18.4
Return per lamb sold store (£)	38.27	35.98	32.13	31.28

Source: Promar International

Results from Lowground Sheep Flocks

	2004	2005
	£ per ewe	
Number in Sample	13	11
Lamb sales	68.14	61.22
Wool	1.46	1.52
Gross Output	69.60	62.74
less replacement costs	6.96	9.16
Net Output	62.64	53.58
Variable costs		
Concentrates	9.45	6.03
Forage net cost	6.25	5.58
Roughages	0.63	1.77
<i>Total feed and forage</i>	<i>16.33</i>	<i>13.38</i>
Bedding	0.57	0.22
Veterinary	5.40	5.14
Other costs	4.32	2.82
Total variable costs	26.62	21.56
Gross margin	36.02	32.02
Fixed Costs	39.59	41.01
Net Margin	(-) 3.57	(-) 9.09
Physical performance		
Average no ewes	452	350
Lambs born per 100 ewes	142	153
Lambs died per 100 ewes	3	6
Lambs reared per 100 ewes	139	147
Lambs sold/retained:		
Slaughter %	68	44
Stores %	27	52
Breeding %	4	4
Return per lamb sold finished (£)	£48.75	£47.60
Carcase weight lambs sold finished (kg)	19.8	19.6
Return per lamb sold store (£)	£37.50	£35.60

Source: Promar International

Store lamb finishing

	2004	2005
	£ per lamb	
Number in sample	24	24
Lamb sales	43.56	41.72
less store lamb purchase costs	34.46	32.46
Output	9.10	9.26
Concentrates	1.31	2.29
Other feed	0.52	0.03
Forage	0.71	0.95
<i>Total feed and forage</i>	<i>2.54</i>	<i>3.27</i>
Bedding	0.11	0
Veterinary	1.32	1.69
Other costs	1.19	2.04
Total variable costs	5.16	7.00
Gross margin	3.93	2.26
Fixed costs	2.73	4.84
Net Margin	1.20	(-) 2.58
Physical performance		
Feeding period (days)	92	114
Liveweight at start (kg)	28.0	31.3
Liveweight at finish (kg)	40.2	39.0
Mortality (%)	1.6	1.3
Concentrates (kg)	13	22
Average carcase weight (kg dwt)	18.9	18.4

Source: Promar International

GLOSSARY

Output: Income to the enterprise after deducting the cost of maintaining the breeding flock or purchasing store livestock and after valuation changes.

Variable costs: Those costs which vary directly with the size of the enterprise and which can be easily allocated to an enterprise.

Gross Margin: The difference between the variable costs and the output. It is the contribution of the enterprise to the farmers' fixed costs, or overheads, and to reward the owner for his work and capital invested in the business.

Fixed costs: Costs which reflect the overall running of the business and which cannot be easily allocated to an enterprise because in many cases they are shared costs. In this analysis they have been broken down into the following categories:

Labour costs: All paid labour including regular wages, contract labour and casual wages.

Power and machinery: machinery repairs, fuel, electricity, hire charges, tax and insurance.

Property maintenance and rent: Farm and property repairs, water charges and council taxes, rent, grazing lets.

Depreciation: Machinery and property depreciation charges.

Finance: Bank and loan interest and charges.

Administration: Insurance, professional fees, miscellaneous expenses.

Working capital: The sum of money tied up in productive livestock and the average capital needed to finance the annual costs of running the business. The latter estimated to be half of the total variable and fixed costs for the year.



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The Rural Centre,
Ingliston, Newbridge, EH28 8NZ
Tel: 0131 472 4040 Fax: 0131 472 4038
E-mail: info@qmscotland.co.uk
www.qmscotland.co.uk