Cattle & Sheep Enterprise Profitability in Scotland

2019 Edition

QMS

Table of contents

Executive Summary

THIS REPORT on enterprise profitability covers the 2018 calf and lamb crop year, a period which will be remembered for severe snowstorms in late February and March, particularly in eastern and southern Scotland. This was followed by an extended period of dry weather, which, while not as dramatic as it was in England, it did affect grass growth and livestock performance and lead to some significant increases in cereal, hay and straw prices. Input costs in general throughout 2018 were 6.3% higher than in 2017 with feed, fertiliser and energy costs all rising at a faster rate than the average. Store cattle values at the autumn 2018 sales were softer than in 2017, typically 1.5% per head lower for younger cattle and 2.5% lower for older cattle. Prices remained lower than year earlier levels through into 2019. Although store lamb prices were lower at early sales, they firmed through September and October and over the season were slightly higher than in 2017. Prime cattle prices were firm for the first half of 2018 but then slipped below year earlier levels from September through into 2019. Consequently, most finishers in this survey were selling into a falling market. Early sales of prime lambs from the 2018 lamb crop sold into a particularly firm market but, by peak sales period of late autumn into 2019, prices were similar to year earlier levels.

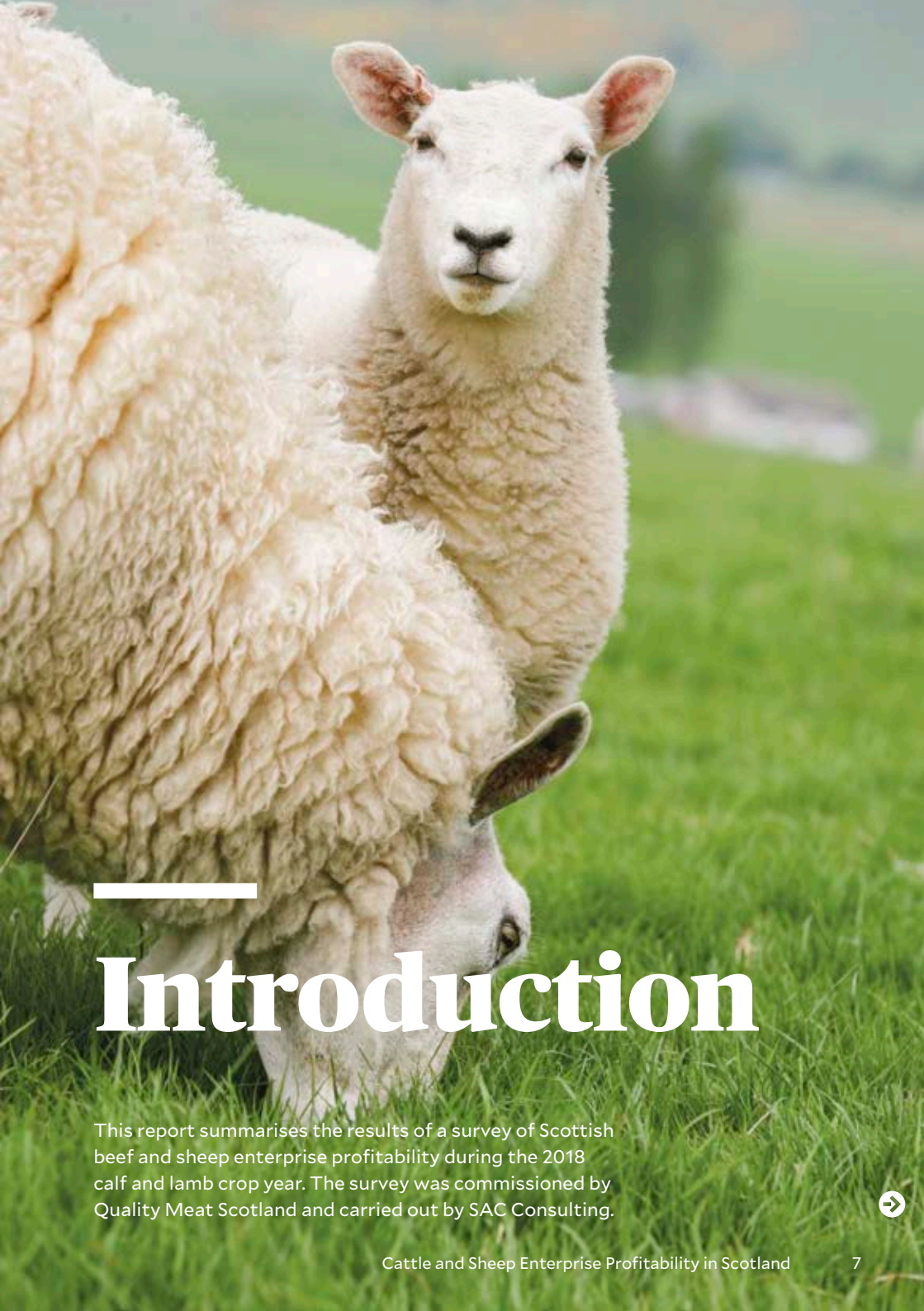
- The results show deterioration in margins among suckler herds they continue to illustrate the scale of the challenge of achieving a positive margin without Common Agricultural Policy (CAP) support. Thirty-six percent of suckler herds in the survey achieved a positive net margin, this is a decrease from the 44% last year.
- Margins among store finishers also reduced on the year with 38% of the businesses surveyed achieving a positive net margin, down from 43% of businesses last year.
- The proportion of hill ewe flocks making a positive net margin declined from 14% last year to 8% this year. Meanwhile, net profitability among upland flocks stood at 55% of enterprises surveyed achieving a positive net margin for their 2018 lamb crop, down from 56% last year and 68% from the 2016 lamb crop year. Lowground flocks saw the most significant decline in margin with only 38% of surveyed flocks achieving this objective compared to 80% achieving a positive net margin for the 2017 lamb crop. Store lamb finishers similarly saw a deterioration in net margins with 69% of those surveyed achieving a positive net margin compared with all those surveyed in 2017. Businesses reporting positive net margins still struggled to deliver a fair return for labour and capital.
- The survey results continue to show significant variation in levels of financial and technical performance within the industry. Most of this variation is associated with the level of physical performance characterised by the number of live animals reared to point of sale influencing the weight of animal sold per cow or ewe in the herd. Also affecting the variation in margins was the level of mortality among breeding stock and the level of replacements needed to maintain herd or flock size. Improved margins were associated with low breeding stock mortality and generally lower herd replacement rates. Having cull stock to sell to set against the cost of replacement stock

affects the cost of herd maintenance.

- Top-third producers are also characterised by strong cost control, particularly variable costs. With the exception of cattle finishers selling animals over 22 months of age all cattle and sheep groups show top-third producers to have lower variable costs per animal. Fixed costs though were harder to manage and most in the top-third ranked by gross margin did see higher fixed cost per animal.
- The Less Favoured Area (LFA) hill suckler herds surveyed had an average gross margin of £221 per cow, a decline on the year of £120 per cow. A decline in income because of lighter animals been sold at lower prices than last year combined with weather influenced increase to feed and forage costs were the major contributors to the decline in margins. However, some savings in fixed costs meant that the net margin of (-)£202 was £62 lower than last year. The top-third averaged £369 per cow gross margin, an improvement over the average of £148 per cow, and a net margin of £12 per cow. Nevertheless, of the fifteen producers surveyed only two achieved a positive net margin.
- The LFA upland suckler herds were split into two categories, one group selling at weaning and a second group selling yearling stores. Both groups saw net margins decline in comparison to last year; those selling weaned calves by £50 per cow and those selling yearlings by £140 per cow. Again, lower market returns and higher fed and forage costs were the major contributor to this decline. Those selling at weaning made an average gross margin of £371 per cow but were outperformed by their counterparts selling yearlings who achieved an average gross margin of £384 per cow. However, fixed costs were much higher among those selling older cattle and the net margin was £82 per head worse than those selling younger cattle. Forty-three percent of businesses selling calves at weaning achieved a positive net margin, down from 48% last year. In contrast, among those selling yearlings, 22% of the businesses achieved a positive net margin, once again an improvement on the 56% of businesses who achieved this target last year.
- Despite significant reductions in herd productivity, five fewer calves reared per 100 cows than a year ago, non-LFA suckler herds reported an average gross margin of £349 per cow, an increase of £10 per cow on the year. Strong control of fixed cost also meant that while remaining negative net margins were £97 per cow better than last years average but still below the levels of two years ago. Forty six percent of the businesses surveyed achieved a positive net margin.
- Rearer finisher businesses surveyed recorded an average gross margin of £502 per cow, a decline of £34 on the average from last year, with the top-third averaging £609. The average net margin fell to (-)£33 having on average been positive a year ago. Despite overall average net margins being negative the proportion of businesses with a positive net margin increased to 50% from 41% last year.
- Cereal-based cattle finishers surveyed, reported an average gross margin of £123 per beast and a net margin of £40, a decline of £82 on the year returning to the levels seen in 2016. Following market signals cattle were sold at lighter weights than last year, but revenue per animal matched last year. Margins were squeezed by higher feed and bedding costs. Those in the top-third achieved an £104 improvement in net margin over the average, despite having lower revenue from each animal sold. Improved margin came from lower store purchase cost and cheaper diets, there were also some economies in veterinary costs and fixed costs. Two-thirds of businesses in the survey reported a positive

net margin down from 88% last year.

- Forage-based finishers have been split into two groups, those selling cattle under 22 months of age and those selling cattle over 22 months of age. Those selling younger cattle achieved an average gross margin of £132 per beast and reported a net margin of (-)£86, an improvement of £47 on the year. Those selling older cattle achieved a gross margin of £182 per head and net margin of (-)£59, a decline of £7 per head on the year. Seventeen percent of those selling younger cattle achieved a positive net margin, down slightly on the year. Similarly 33% of those selling the older cattle achieved a positive net margin which was an improvement on the year.
- LFA hill sheep enterprises in the survey achieved, on average, a gross margin of £12 per ewe, half the level of a year ago. The top-third benefited from higher prolificacy and lamb weights resulting in a net output £18 per ewe higher than the average, and with variable costs £2 per ewe lower than the average this transferred into a gross margin £20 per ewe better than the average. The decline in margins meant that only two businesses in this group had a positive net margin.
- Fifty-five percent of upland ewe enterprises surveyed reported a positive net margin, down from 56% last year, with the average net margin of £0.35 per ewe this was a decline of 95% from last year's level. Although those in the top-third achieved a net margin of £17 per ewe, this was half the level of last year.
- Lowground breeding ewe businesses in the survey saw a decline in margins largely as the consequence of substantial reduction in ewe productivity but also higher feed and forage costs but also some increase in fixed costs. The net outcome was a reduction of 57% in the net margin although it did remain positive. However, the proportion of businesses achieving a positive margin halved on last year.
- Store lamb finishers saw a modest decline in sales revenue because of both higher mortality rates and lower sale weights than a year ago. There was also some increase in the cost base particularly the cost of feed and forage. In comparison to last year when all the store finishers surveyed achieved a positive net margin only 69% achieved this objective this year.
- For a fourth year, estimates have been made of the greenhouse gas emissions associated with the enterprises surveyed and reported on the basis of net liveweight produced or added during the surveyed year. The calculations were made using the SAC Consulting's resource efficiency calculator AgRE Calc. The results show over the four years that there has been some general reduction in average emissions per kg of output but the differences are too small and the range of emissions overlap from year to year to suggest the movement is definitive trend. The results also show the challenge of reporting against kg of output which can be badly affected by weather conditions and the level of inputs needed to maintain animal welfare during periods of weather challenge. Nevertheless, there remains a clear correlation between the best financial returns, the best technical efficiency and the lowest greenhouse gas emissions per unit of output. In the same way that this report summarises the opportunity that exists for the industry to improve financial margins, it also shows the scope to reduce emissions at the same time.



Introduction

This report summarises the results of a survey of Scottish beef and sheep enterprise profitability during the 2018 calf and lamb crop year. The survey was commissioned by Quality Meat Scotland and carried out by SAC Consulting.

THE SURVEY covers 69 breeding ewe enterprises farming 40,500 ewes and 110 suckler cattle enterprises farming 10,670 suckler cows, 13 enterprises finishing just under 8,500 store lambs and 50 cattle finishing enterprises selling 3,550 prime cattle. The survey provides a snapshot of the industry during 2018. This report compares, for each sector, the costs, revenues and margins achieved by the top-third of producers, the bottom-third and the sample average.

The concluding sector of the report provides some comparative analysis with the results from 2016 and 2017. However, it must be stressed that the comparisons are not identical samples of businesses.

Within the analysis of the survey, an enterprise's estimated fixed and variable costs can be found as well as their estimated gross and net margins. The gross margin is left after variable costs have been deducted from an enterprise's revenues. Then, once fixed costs have been subtracted from the gross margin, one is left with the enterprise's net margin, which rewards the farmer for their labour and capital investment. Fixed costs have been allocated to the livestock enterprises on a farm in direct proportion to their share of the total sales revenue of that business. Within mixed livestock farms, fixed costs have been allocated between cattle and sheep enterprises in relation to their proportion of Grazing Livestock Units. The reporting of bottom-third, average and top-third is based on ranking enterprises by gross margin per head of livestock.

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. The level of income required to provide a 5% return on an enterprise's working capital has also been estimated in addition to the opportunity cost of the land used.

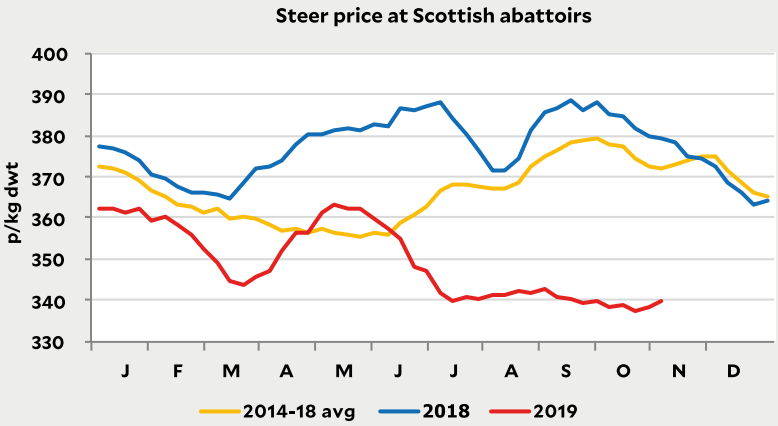
All area-based support payments have been excluded from this year's analysis of the returns derived from livestock enterprises since there is no obligation for livestock production to take place in order to receive area payments. However, the Scottish beef calf premium has been included since it is coupled to the level of production.

Estimates of carbon efficiency have been made using SAC Consulting's AgRE Calc methodology.

The considerable range of land types and production systems found in Scotland inevitably mean that any survey of businesses cannot cover all options. However, results are presented for a comprehensive range of enterprise types, namely:

- 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;
- Forage-based enterprises finishing cattle at under 22 months of age;
- Forage-based enterprises finishing cattle at over 22 months of age;
- Non-LFA breeding flocks;
- LFA upland ewe flocks;
- LFA hill flocks using Blackface or Cheviot stock; and
- Store lamb finishers.

Both the range of performance and the key contributing factors to these differences in performance between businesses are demonstrated by the results of the survey. The results also provide individual businesses with a benchmark to gauge their own performance against, thereby allowing them to investigate the strengths and weaknesses of their enterprise compared with those of similar businesses.

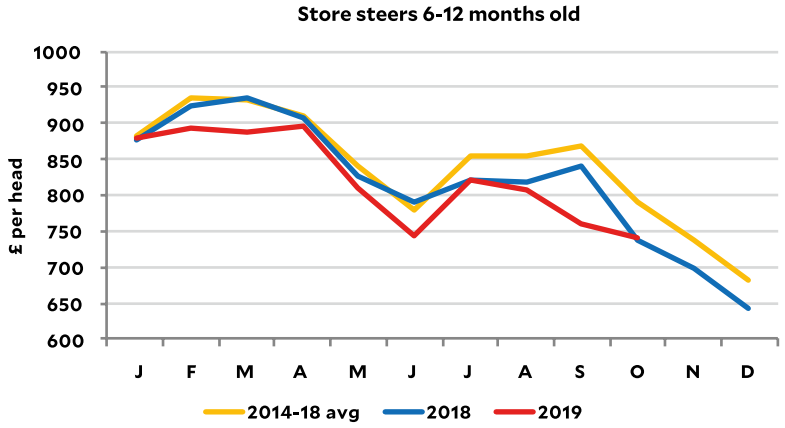


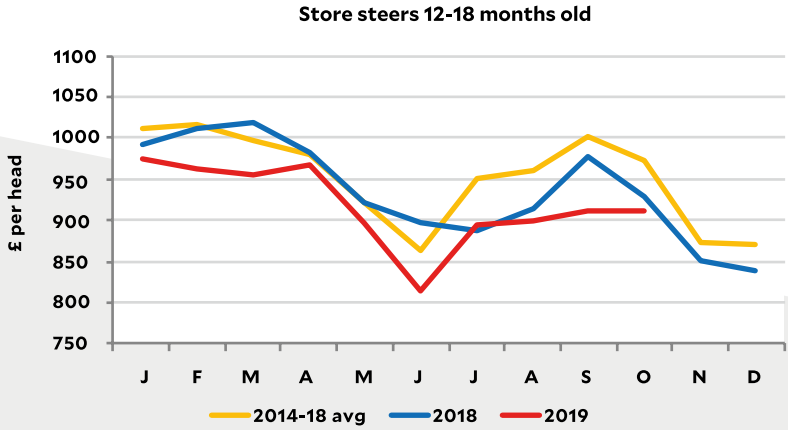
Cost price changes during 2018

THE AVERAGE steer price at Scottish abattoirs opened 2018 at 377p/kg dwt. This was around 3% above year earlier levels and 1% in front of the five-year average (2013-17). Having fallen seasonally through January and February, the market steadied in late February/early March at around 3% below its year-opening level. A three-and-a-half-month long upturn then followed, with the market reaching an annual peak of 389p/kg at the end of June – 6% above the spring low. After falling sharply in July, the market rebounded in August before stabilising in September at a similar level to the late-June peak. A traditional lift in supply as housing decisions were made then placed some downwards pressure on the market through October. The traditional pre-Christmas lift in prices then failed to materialise, with prices trending downwards to the year-end, signalling an over-supplied market. In the final week of the year, the average steer price stood at 365p/kg; down 12p on the first week of 2018 and 10p (2.6%) below the five-year average.

Prime cattle prices spent the opening five months of 2018 around 3% above year earlier levels. However, a less pronounced seasonal upturn saw this slow to 1-2% in June. Prices then fell behind year earlier levels in July when the market fell back, remaining behind 2018 for the most of the rest of the year. The gap peaked at -5% in August, before narrowing to minimal levels around the autumn peak in September and reversing slightly between mid-October and mid-November. Due to the lack of a festive uplift, the market then closed out the year at -2 to -3% in late November and through December.

At 377p/kg in 2018, the annual average steer price rose 2p (0.6%) above its 2017 level. Once a marginally higher average carcase weight has been factored, the annual average price paid by Scottish abattoirs for a steer carcase increased by £11 (0.8%) to £1,444.

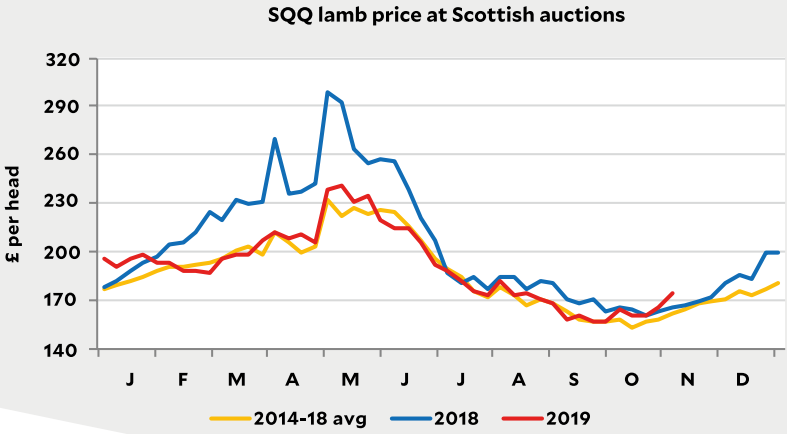




Store prices were firmer around their spring peak in 2018 than in the autumn. Younger steers had a particularly weak autumn season, barely lifting above their summer low point.

Store cattle marketing increased on 2017, with 1.2% more 6-12-month steers and 4.9% more 12-18-month steers being traded. This may have placed some downwards pressure on prices, with the former group averaging 1.4% below 2017 and the latter by 2.5% at a respective £853 and £954. Given the challenging spring weather, it is possible that lighter liveweights at sale could have also had some impact on per head prices.

Prime sheep producer prices opened 2018 6% above year earlier levels but at around their five-year average, at close to the 180p/kg lwt mark. Unlike the previous year, prices did take a seasonal upturn through the spring, with 2018 seeing an exceptionally high market price for hoggs. In spring 2017, prices had only averaged 3% higher in the first quarter of the year than in the final quarter of the previous calendar year, compared to an average uplift of 13% in the previous five marketing years. However, in 2018, this seasonal uplift exceeded 20%. Moving into April and prices firmed even further, peaking at 270p/kg, before steadying at



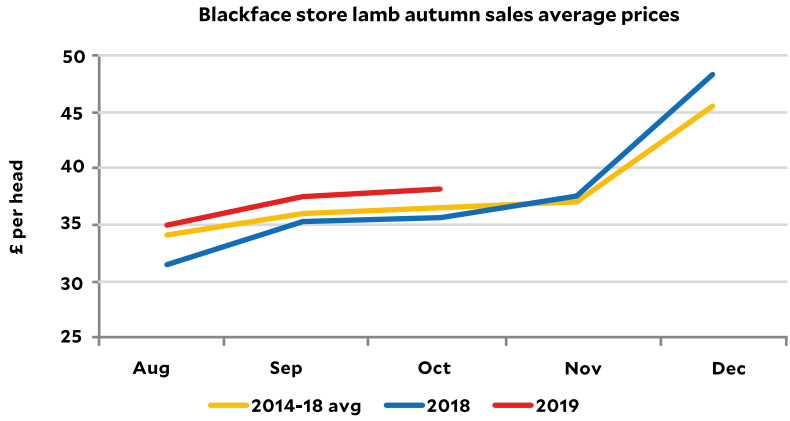
around 240p/kg for the reminder of the month.

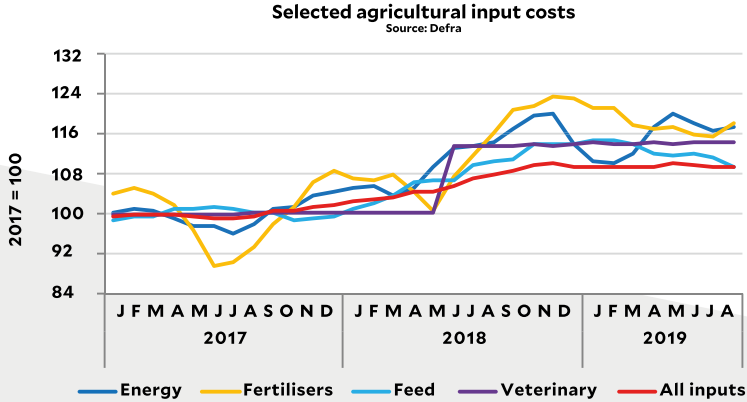
The momentum continued into the new season with a challenging spring leading to the slow arrival of lambs on the market. Tight supply saw prices spike to the £3 a kilo mark. Once Ramadan was over and new season supplies began to build there was the inevitable seasonal reduction in price in the second half of May and through June, before the market settled at around the 180p/kg mark through July and August. In August, peak demand ahead of Eid al-Adha saw a lift to around the 185p/kg mark. Once into September, prices cooled further, dropping below 170p/kg and they reached a seasonal low point of just above 160p/kg the second half of October. Once into November, demand began to firm seasonally, and prices reached 170p/kg by the end of the month. Peak demand two weeks out from Christmas saw the market lift to 185p/kg. After a brief dip, prices then firmed at Christmas and New Year, ending 2018 at almost £2/kg; 10% above where they had begun the year.

An exceptional spring saw prices run well above 2017 levels throughout the first third of 2018. A 6% year-on-year increase in early January became 20% in February, rising further to around 30% in March and even reached 40-50% at Easter. The new season peak was then around a third above 2017 levels. However, by the end of May this had eased to 5% and then prices dipped behind year earlier levels in late June and continued to run lower in July and August. Through the peak autumn selling period, the market then hovered at a similar level to 2017, before moving 5-10% in front in December, reflecting a stronger festive trade.

The annual average price for a Standard Quality Quotation (SQQ) lamb (weighing 25.5 to 45.5kg lwt) at Scottish auctions rose by 10.7% to 197.5p/kg in 2018 – a seven-year high.

After a sluggish start to the season, store lamb prices ran ahead of 2017 levels from September onwards. Some of the early sales may have been impacted by the legacy of the challenging spring, with growth rates potentially slower than usual, pressuring per head prices. However, as the season





progressed it is likely that the reduced lamb crop, the better summer grazing and buyer confidence after a strong spring selling period for finished lambs may have underpinned the trade. Sixty-one percent of sales took place between mid-August and the end of September, up from just under 60% in 2017.

Prices paid for Blackface stores averaged 8.1% above 2017 at £37, while Cheviots rose 4% to £47, Suffolks were 6% dearer at £58 and Texels up 4% at £57. Across all sales, prices were 6.6% above 2017 levels on a 9.1% lower volume.

The UK Agricultural Price Index rose for a second year in 2018. An increase of 6.3% saw it reach a five-year high. Much of this uplift came between March and October, with costs dipping back slightly in late 2018. Feed costs rose by an average of 8% over 2017, with grain prices rising for the first three quarters of the year, reflecting challenging growing weather in the Northern Hemisphere and higher demand for feed. Fertiliser and energy costs (+12%) reflected movements in the global oil market, pushing them higher through the middle of the year before cooling in the final quarter. The sterling exchange rate against the US dollar also factored. Meanwhile, the cost of fixed assets such as machinery, buildings and transport equipment rose at a below average pace.

2019 prospects

SINCE THE survey data was collected in the spring of 2019, there have been a number of developments in the marketplace. The beef market has been in a very challenging place, with farmgate prices running 10-12% below year earlier levels between June and October, with prices stabilising over this period, failing to take a seasonal upswing. A small lift in carcase weights has struggled to offset the declines in price per kilo. On the supply side, slaughter numbers have been similar to 2018 but there has been an earlier marketing pattern, reflecting less extreme weather conditions. In an unusual development, slaughter numbers reached a year-to-date peak in later September, before slipping back again in October. Coupled with earlier marketing, a fall in calf registrations in the spring of 2018 does point to the likelihood of supplies tightening in the final quarter.

Store cattle prices have followed their traditional pattern again in 2019. However, prices have generally been subdued relative to last year, except for short periods, averaging around 3% lower than in 2018. Selling prices for younger steers have been under particular pressure in the peak autumn selling period while prices for yearlings have trended slightly higher. Fewer store cattle have been traded than last year, further lowering revenue from calf sales. However, the store market has fallen to a lesser extent than the finished market.

On the sheep side, while prices for hoggs failed to match the highs of the previous spring, and trended downwards until mid-March, there was still a strong seasonal upswing around the peak selling period around Easter, supporting the margins of store lamb finishers. Moving into the 2019/20 lamb crop year, prices ran above their five-year average despite a lift in early seasonal supply due to a better lambing and grazing conditions. An earlier Ramadan also ensured that the balance between supply and demand favoured the producer. Between June and September, prices generally followed closely in line with their five-year average, holding them 5% below 2018 levels, with marketings and slaughter continuing to exceed year earlier levels. There was one week in early August where strong demand for Eid al-Adha boosted prices before the market returned to its seasonal trend. Moving into October, prices have shown some signs of recovery, despite a rise in the value of sterling as the risk of a no deal Brexit has dissipated.

Input costs have largely stabilised since their strong increase through the middle of 2018. However, this does mean they will have averaged above 2018 levels, due to the lower base to compare against for most of the year. Energy costs have differed to the average, lifting in the spring before steadying. On the feed side, prices have drifted lower, reflecting a downwards trending grain trade on improved global production prospects. Meanwhile, soya-meal prices have been held down by the continuing trade disruption between the US and China, plus the reduced import demand from China due to a collapse in pig production caused by a severe outbreak of African Swine Fever.

As is always the case, profitability will have been linked to the timing of sales and input purchases. For cattle finishers, the general weakness in prices is likely to have seen revenues decline relative to 2018 throughout the year, with those selling a higher proportion of their cattle in the spring likely to have seen revenues hold up better than those with a marketing profile balanced

towards the second half. In addition, store cattle prices have fallen to a lesser degree than finished prices, squeezing margins. It is likely that for many finishers, feed costs will have remained elevated with falling raw material prices from 2019 being reflected in the cost of feed rations at a lag. However, better grazing conditions may have lowered the requirements for bought-in feed. Meanwhile, for a second year, producers selling store calves are likely to have done better in the spring than during the autumn period.

For sheep producers, those selling prime lambs before October are likely to have found it difficult to match the prices achieved in 2018; though lambing rates were generally higher. However, given the day-to-day volatility in prime lamb auction prices, the choice of sales day can be crucial. If lambs were sold on a day when the market price fell suddenly as processors had already secured adequate volumes, then returns may have suffered significantly compared to last year. In contrast to the prime market, store lamb values have generally exceeded 2018 levels this autumn. In both prime and store markets, sales volumes have been higher, underpinning total revenue from sheep sales. For both cattle and sheep producers, the lagged pass through of lower raw material prices by manufacturers and suppliers of inputs may have yet to materialise; though input requirements are likely to have been lower due to the less extreme weather.

Other factors to consider will be mortality rates and productivity of breeding herds and flocks. As noted previously, better winter and spring weather is likely to have supported financial performance through reduced mortality and increased calving and lambing ratios.

Structural changes in 2018

AMONG THE suckler herds surveyed, 33% increased cow numbers by more than 5% while a further 18% reduced cow numbers by more than 5%. Overall the number of cows farmed by those in the survey increased by 1.7% in contrast to a national decline of 2.1% reported in the Scottish agricultural census of December 2017.

With regard to breeding sheep enterprises, the total number of ewes farmed by those in the survey decreased by 1.7%, in contrast to a 2% decrease reported in the national flock in the December 2018 Scottish agricultural census. Twenty-two percent of flocks increased in size by more than 5% while 32% of surveyed businesses reduced flocks by more than 5%.

Greenhouse Gas Emissions

THE SCOTTISH Government has detailed its position on climate change through the Climate Change (Emissions Reduction Target) (Scotland) Act 2019 which amends the Climate Change (Scotland) Act 2019 and sets a target of achieving "net zero emissions" for the country by 2045. All sectors of industry and the wider community are expected to strive to reduce their emissions. However, agriculture and livestock production are recognised as key contributors to Greenhouse Gas (GHG) emissions in Scotland. In its third report on the progress of its plan, published in February 2018, the Scottish Government sets a target of a further 9% reduction in emissions from agriculture between 2018 and 2032.

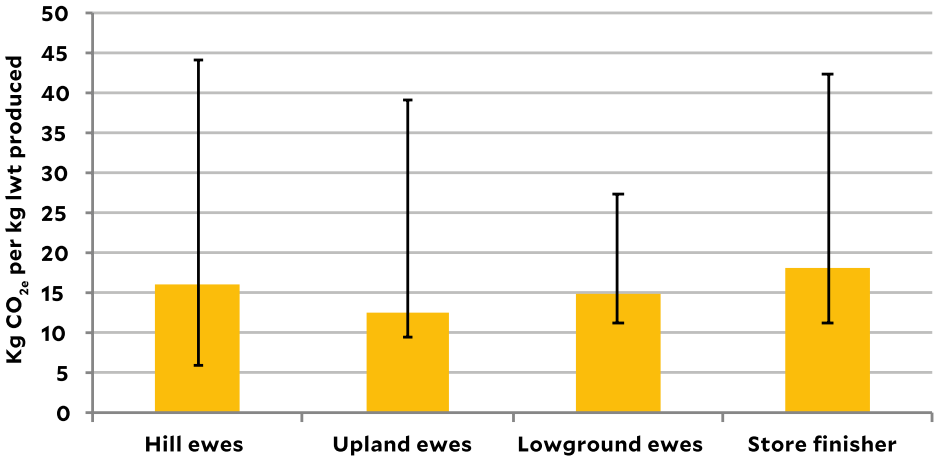
To help scope the scale of variation in emissions from Scottish livestock enterprises and identify drivers to improve emissions efficiency, the scope of the enterprise profitability survey has been extended to include estimations of GHG emissions associated with the output, or production, of these enterprises. SAC Consulting's AgRE Calc has been used to estimate the type, source and extent of the GHG emissions produced from the cattle and sheep production systems surveyed.

The three main GHGs produced from a farm are carbon dioxide (CO_2), methane (CH_4) and nitrous oxide (N_2O) and their sources include:

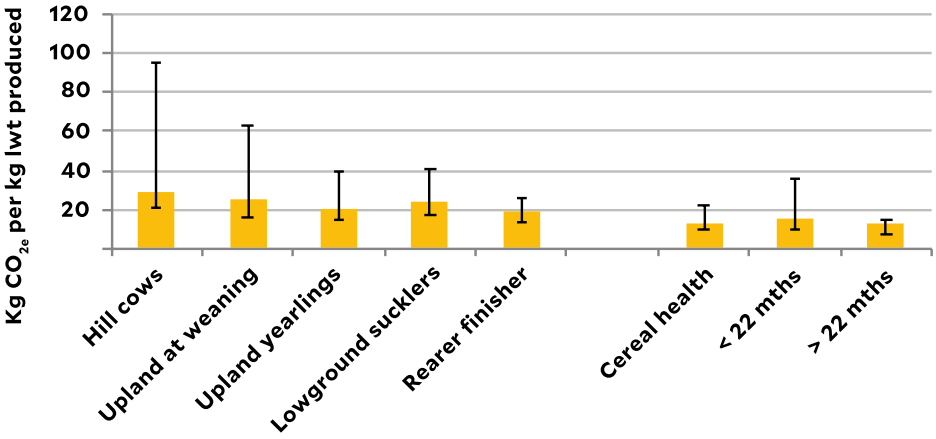
- **Carbon dioxide (CO_2)** – burning fossil fuels such as coal, oil and diesel, disposal of waste and is embedded in inputs like feed, bedding, fertiliser and lime.
- **Methane (CH_4)** – a natural by-product during ruminant digestion and from the management of organic manures.
- **Nitrous oxide (N_2O)** released during the application of inorganic and organic fertilisers, from urine deposition by grazing animals and from crop residues.

The calculations do not take account of

Weighted average emissions by sheep enterprise type and range in individual enterprise emissions



Weighted average emissions by cattle enterprise type and range in individual enterprise emissions



carbon sequestered in the production of grass or by the trees and hedges on these holdings.

The emissions are expressed as carbon dioxide equivalents (CO_2e) based on their relative global warming potential over a 100-year period with nitrous oxide being the most significant at 298 times the impact of CO_2 and methane 25 times the impact of CO_2. The emissions have been reported as an intensity i.e. emissions per unit of output. The results highlight the wide diversity of emissions within and between enterprise types and the correlation between emissions and financial performance. They also illustrate the opportunities that exist to control GHG while maintaining or improving financial sustainability.

Comparison of greenhouse gas emissions

COMPARING AND contrasting carbon emissions allows some general observations to be made, namely that lower emissions tend to be associated with higher margins. This should not be a surprise as the drivers for improved margin are also the drivers for improved emissions namely the productivity of the system and the technical efficiency of that system.

Equally, carbon emissions and enterprise profitability are also influenced by the physical environment in which the enterprise takes place. The levels of rainfall, sunshine hours and temperature can not only influence animal productivity and performance but can result in considerable seasonal change in input use, for example fertilisers and animal feeds, and the need for fuel and electricity for extended field work and/or housing periods and feed preparation and delivery.

The results this year show the impact of climate on herd and flock performance with emissions intensity generally rising as output was compromised by both the winter weather of early 2018 and the prolonged dry period through summer 2018.

The tables below summarise the results for the 2015 to 2018 calf and lamb crop years. They show the considerable variation within enterprise types, between enterprise types and between years that would be expected from a biological production system. However, they also show the reduction in emissions intensity that are achieved by those businesses who also achieve the highest margins. Across all the enterprises surveyed the average reduction in emissions intensity between the top-third of economic returns and the average was over 10%, although some enterprise types were lower than this. This reflects the capacity for economic sustainability and environmental sustainability goes hand in hand and a long way toward the targets set for agriculture by the Scottish Government.

Suckler herds ranked by gross margin per cow

	Bottom third		Average		Top third	
	Kg output per cow	Co_2e /kg output	Kg output per cow	Co_2e /kg output	Kg output per cow	Co_2e /kg output
Hill suckler herds						
2015	222	35.4	270	29.2	324	26.8
2016	263	29.7	278	25.6	293	23.0
2017	198	40.3	258	26.4	330	21.0
2018	199	39.6	237	29.9	266	24.2
Upland herds selling at weaning						
2015	258	24.2	266	26.1	282	25.6
2016	258	24.6	279	23.6	312	21.5
2017	249	29.7	269	27.1	313	28.3
2018	249	35.0	277	25.1	296	22.9
Upland herds selling yearlings						
2015	334	21.8	347	21.7	374	20.7
2016	310	21.1	343	19.4	362	19.6
2017	344	20.9	345	20.2	345	18.9
2018	330	23.4	336	20.4	355	19.5
Lowground suckler herds						
2015	266	26.8	286	23.8	305	19.1
2016	268	30.8	288	30.1	326	33.6
2017	243	28.7	278	27.6	286	26.3
2018	258	21.0	277	23.4	291	26.0
Rearer finisher herds						
2015	475	17.3	489	17.8	515	17.6
2016	402	19.3	473	18.1	570	16.7
2017	358	22.0	439	20.6	537	16.3
2018	477	20.3	536	18.4	619	16.5

Breeding ewe flocks ranked by gross margin per ewe

	Bottom third		Average		Top third	
	Kg output per ewe	CO_2e /kg output	Kg output per ewe	CO_2e /kg output	Kg output per ewe	CO_2e/kg output
			Hill flocks			
2015	24.4	23.3	33.3	17.4	40.5	15.2
2016	25.6	20.1	31.9	16.6	36.9	15.7
2017	27.9	22.2	33.5	17.3	44.6	14.0
2018	22.4	31.5	28.6	19.9	33.6	15.1
			Upland flocks			
2015	57.3	13.7	60.4	12.7	65.1	11.5
2016	54.9	13.7	59.6	12.9	64.7	12.8
2017	45.7	14.4	57.6	12.9	62.7	12.8
2018	49.0	12.7	53.9	13.0	55.6	13.7
			Non LFA lowground flocks			
2015			67.9	12.9		
2016			71.0	9.9		
2017			69.6	11.4		
2018			65.1	10.9		

Cattle finishing ranked by gross margin per animal sold

	Bottom third		Average		Top third	
	Kg output per ewe	CO_2e /kg output	Kg output per ewe	CO_2e /kg output	Kg output per ewe	CO_2e /kg output
			Cereal-based finishing			
2015	290	12.6	313	11.4	333	10.8
2016	283	14.3	315	12.7	345	10.1
2017	292	20.3	334	15.8	367	10.4
2018	278	13.5	304	12.5	319	11.6
			Forage-based finishing under 22 months			
2015	276	14.1	295	12.9	309	12.3
2016	290	15.5	304	13.6	365	11.1
2017	285	14.3	272	14.3	304	14.0
2018	233	15.4	231	15.2	190	16.2
			Forage-based finishing over 22 months			
2015	255	14.6	289	13.0	309	11.4
2016	230	14.3	264	13.8	316	11.9
2017	252	13.9	270	13.2	363	10.1
2018	248	14.4	301	12.3	338	10.9

Cattle Enterprises

Results from LFA hill suckler herds

THE 16 herds in this category are those enterprises 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. Herd size ranged from 20 to 75 cows with an average size of 40 head.

- Hill suckler herds achieved an average gross margin of £221 per cow. The top third achieved an average gross margin of £369, 66% better than the average while the bottom-third reported negative gross margins. Herd size among the top-third was higher than the average and significantly higher than the bottom-third.
- Fixed costs averaged £424 per cow, but with a considerable variation from £254 to £652 per cow. This resulted in an average net margin of (-)£202 per cow while the top-third achieved a net margin of £13. Two enterprises in the survey achieved a positive net margin.
- The top-third reared three more calves per 100 cows than the average and sold them at higher weights. The value of the calf output among the top-third was 10% higher than the average, purely a reflection of higher productivity as selling price per kg was the same as the average. This gap widened to 33% with the bottom-third as bottom-third producers reared nine fewer calves than the top-third and sold them at the lowest weights.
- Top-third producers had lower cow replacement rates than the average and lower cow mortality and consequently lower herd maintenance costs. They were also less affected by the weather in 2018 as they used less purchased feed but did spend more on forage, vet costs were also higher than the average.
- In contrast the bottom-third were badly affected by the weather conditions spending heavily on feed and purchased roughages, spending 68% more than the average on these two items, they also spent heavily on veterinary products and services. Unfortunately, despite this heavy expenditure on animal health and welfare the productivity of the herd was constrained.
- Top-third producers had good control over fixed costs spending £67 less per cow than the average on these items. Only finance charges and contractor expenditure were higher than the average.

LFA hill suckler herds - Financial performance measures

	Bottom third	Average	Top third
Number in sample	5	16	5
Average herd size (head)	26	40	44
		£ per cow	
Calf output after valuation changes	444.45	545.21	611.13
Subsidies	93.26	105.29	107.81
Gross Output	**537.71**	**650.50**	**718.94**
Less replacements	65.23	64.20	60.76
Net Output	**472.48**	**586.30**	**658.18**
Variable costs			
Purchased concentrates	209.40	104.41	63.66
Home-grown concentrates	0	0	0
Roughages purchased	126.78	95.77	57.33
Forage	56.32	60.56	67.11
Total feed and forage	392.50	260.74	188.10
Veterinary	67.99	39.46	43.34
Bedding	14.09	20.24	16.18
Other costs	32.11	44.42	41.30
Total variable costs	**506.69**	**364.86**	**288.92**
Gross Margin	**(-)34.21**	**221.44**	**369.26**
Fixed costs			
Labour	92.99	65.91	53.37
Contractors	10.98	12.67	19.60
Power and machinery	95.90	81.17	76.87
Property maintenance and rent	106.93	92.56	83.62
Depreciation	117.13	110.08	84.84
Finance	17.74	12.09	13.17
Administration	88.56	48.38	24.96
Total fixed costs	**530.23**	**423.86**	**356.43**
Net Margin	**(-)564.44**	**(-)202.42**	**12.83**
Annual herd maintenance cost Pence per kg calf produced	33	27	23
Variable cost Pence per kg calf produced	254	154	108
Fixed cost Pence per kg calf produced	283	179	134
Unpaid family labour hours	8hr 20min	17hr 55min	17hrs

Totals may not add due to rounding

LFA hill suckler herds - Technical performance measures

	Bottom third	Average	Top third
Cows per bull	15	22	27
Calves born dead or alive per 100 cows	88	95	96
Calves born dead per 100 cows	2	3	1
Calves died before weaning per 100 cows	2	2	2
Calves reared per 100 cows	84	90	93
Daily liveweight gain (kg)	0.83	0.89	1.00
Weight – kg per calf sold	234	265	287
Weight produced kg per cow	199	237	266
Cow replacement rate per 100 cows	13.3	11.7	9.6
Cow mortality %	2.5	2.9	2.3
Purchased concentrates kg per cow	780	418	252
Home-grown concentrates kg per cow	0	0	0
Stocking rate cow/ha	0.09	0.13	0.17
CO_2e kg/net lwt kg produced	39.6	29.9	24.2

Results from LFA suckler herds

THE UPLAND suckler herd sample has been split into two sub-groups to give a better reflection of the production systems in use in Scotland. One group includes farms of a more extensive nature that sell the majority of calves at weaning, while the other group has farms that sell calves as forward stores at around one-year-old. Although the main calving period was noted, the sample size of autumn calving herds was insufficient to allow separate analysis of the different cost structures between spring and autumn calving.

Extensive upland herds selling calves at weaning

THE 30 herds in this category farmed 3,150 cows, an average herdsize of 105 cows within a range from 22 to 290 cows and reported an average gross margin of £371 per cow and a net margin of (-)£24 per cow. The top third of enterprises returned a gross margin of £451 per cow, £80 (22%) better than the average and £154 per cow better than the bottom-third. Top-third producers reported a net margin of £37, £61 per head better than the average. Forty-three percent of businesses reported a positive net margin from 48% last year.

- Top-third producers produced 19kg more calf weight per cow than the average and 47kg more than the bottom-third. Although they reared the same number of calves per 100 cows to the average, they sold them 20kg heavier and realised a higher per kg sale price.
- Higher physical production resulted in income 8% higher than the average. Lower cow mortality but the same herd replacement rate as the average meant that the top-third had slightly lower herd maintenance charges resulting in a net output £67, 10% higher than the average.
- Variable costs were 5% lower among the top-third than the average largely through lower veterinary bedding and sundry expenses.

- Fixed costs per cow among the top-third were higher than the average but because of the higher physical output the fixed costs per kg of output were 2p/kg lower than the average.

Upland herds selling calves at around one-year-old

TWENTY-SEVEN HERDS farming an average of 130 cows each were categorised as herds selling calves at an older age of about 12 months. This older age at sale resulted in the average weight of calves sold being 387kg, some 25% higher than those sold at weaning. As a consequence, not surprisingly, variable costs per cow were higher among this group than those of their counterparts selling calves at weaning, by 41%. However, when considered against the weight of animal sold rather than per cow, the variable costs among this group were 13% higher per kg of calf reared.

Higher production per cow among those selling yearlings, not surprisingly, resulted in a gross output 19% higher than those selling weaned calves and the extra variable costs associated with keeping the calves longer were recouped from the marketplace. The average gross margin among this group was consequently some 4% better than for those selling weaned calves.

Fixed costs, however, were 24% higher among this group compared to those selling younger cattle. All fixed costs were higher per cow with the exception of contractor charges which were the same. As a result, the £14 per cow improvement in gross margin was eroded to a point where the net margin among those selling yearling stores was £80 per cow worse than those selling weaned calves.

Twenty-two percent of this group achieved a positive net margin, down from 56%.

- Top-third businesses selling yearlings returned a gross margin of £496 per cow, £112 (29%) better than the average and more than double that of the bottom-third producers. They achieved this better financial return through improved herd productivity rearing one more calf per 100 cows than the average and four more than the bottom-third. They sold these calves at a slightly higher weight than the average leaving the production per cow 6% higher than the average.
- Top-third producers had lower cow mortality rates and lower replacement rates. They also delivered higher output while keeping variable costs per cow 14% below the average.
- Top-third producers had a higher fixed cost burden than the average, largely as a result of higher labour and contracting charges as well as higher finance costs.
- Upland herds selling yearling cattle achieved a net margin of (-)£106 per cow which reduced to (-)£6 per cow among the top-third.

Extensive upland suckler herds selling weaned calves – Financial performance measures

	Bottom third	Average	Top third
Number in sample	10	30	10
Average herd size (head)	91	105	134
		£ per cow	
Calf output after valuation changes	612.28	642.47	696.80
Subsidies	85.09	89.60	93.56
Gross Output	**697.37**	**732.07**	**790.35**
Less net replacement cost	106.89	77.33	69.12
Net Output	**590.48**	**654.74**	**721.23**
Variable costs			
Purchased concentrates	20.97	31.34	19.66
Home-grown concentrates	13.24	16.41	20.31
Roughages purchased	26.98	37.62	32.19
Forage	72.42	80.50	93.47
Total feed and forage	133.61	165.87	165.63
Veterinary	57.48	43.44	36.41
Bedding	58.18	46.95	44.04
Other costs	44.25	27.35	23.94
Total variable costs	**293.52**	**283.61**	**270.02**
Gross Margin	**296.96**	**371.13**	**451.21**
Fixed costs			
Labour	53.99	57.37	82.81
Contractors	56.45	42.25	25.93
Power and machinery	92.07	88.37	86.02
Property maintenance and rent	82.47	72.50	85.36
Depreciation	65.07	83.16	80.22
Finance	17.21	28.93	34.96
Administration	27.47	22.66	18.56
Total fixed costs	**394.73**	**395.24**	**413.86**
Net Margin	**(-)97.77**	**(-)24.11**	**37.35**
Annual herd maintenance cost Pence per kg calf sold	37	25	21
Variable cost Pence per kg calf produced	102	91	82
Fixed cost Pence per kg calf produced	137	127	125
Unpaid family labour hours	**8 hr 15 min**	**7 hrs 55 min**	**7 hrs**

Totals may not add due to rounding

Extensive upland suckler herds selling weaned calves – Technical performance measures

	Bottom third	Average	Top third
Cows per bull	26	29	30
Calves born dead or alive per 100 cows	93	96	96
Calves born dead per 100 cows	3	3	2
Calves died per 100 cows	3	3	4
Calves reared per 100 cows	87	90	90
Daily liveweight gain (kg)	1.1	1.1	1.13
Weight – kg per calf sold	287	310	330
Weight produced kg per cows	249	277	296
Cow replacement rate per 100 cows	12.2	11.3	11.6
Cow mortality %	1.7	2.1	1.6
Purchased concentrates kg per cow	98	139	99
Home-grown concentrates kg per cow	107	115	135
Stocking rate cows/ha	1.17	1.12	1.02
CO_2e kg/net lwt kg produced	35.0	25.1	22.9

Upland suckler herds selling yearling calves - Financial performance measures

	Bottom third	Average	Top third
Number in sample	9	27	9
Average herd size (head)	74	130	156
		£ per cow	
Calf output after valuation changes	706.84	777.99	840.35
Subsidies	85.90	85.91	86.15
Gross Output	**792.74**	**863.90**	**926.50**
Less net replacement cost	87.29	80.96	87.63
Net Output	**705.45**	**782.94**	**838.87**
Variable costs			
Purchased concentrates	101.83	75.39	70.12
Home-grown concentrates	52.81	38.46	33.10
Roughages purchased	73.48	51.71	45.68
Forage	115.93	95.42	81.30
Total feed and forage	344.05	260.98	230.20
Veterinary	39.69	49.18	53.04
Bedding	53.16	47.41	26.60
Other costs	55.65	40.76	32.54
Total variable costs	**492.55**	**398.33**	**342.38**
Gross Margin	**212.90**	**384.61**	**496.49**
Fixed costs			
Labour	73.14	89.26	92.91
Contractors	44.51	42.43	49.16
Power and machinery	153.53	102.76	91.33
Property maintenance and rent	83.90	89.07	88.24
Depreciation	116.98	104.58	98.34
Finance	40.47	31.73	46.71
Administration	41.45	31.42	35.49
Total fixed costs	**553.98**	**491.25**	**502.19**
Net Margin	**(-)341.08**	**(-)106.64**	**(-)5.70**
Annual herd maintenance cost Pence per kg calf sold	22	21	22
Variable cost Pence per kg calf produced	126	103	85
Fixed cost Pence per kg calf produced	141	127	125
Unpaid family labour hours	**18hrs 15min**	**11hrs 5min**	**7hr 20min**

Totals may not add due to rounding

Upland suckler herds selling yearling calves - Technical performance measures

	Bottom third	Average	Top third
Cows per bull	22	24	30
Calves born dead or alive per 100 cows	92	93	94
Calves born dead per 100 cows	4	3	3
Calves died per 100 cows	4	3	3
Calves reared per 100 cows	84	87	88
Daily liveweight gain (kg)	1.13	1.05	1.04
Weight – kg per calf sold	392	387	403
Weight produced kg per cow	330	336	355
Cow replacement rate per 100 cows	17.0	16.75	16.2
Cow mortality %	4	2.1	1.6
Purchased concentrates kg per cow	502	378	333
Home-grown concentrates kg per cow	377	282	241
Stocking rate cows/ha	0.74	0.92	1.00
CO_2e kg/net lwt kg produced	23.4	20.4	19.5

Results from non-LFA lowground suckler herds

FIFTEEN NON-LFA suckler enterprises farming 1,125 cows were surveyed. They achieved an average gross margin of £350 per cow and an average net margin of (-)£16 in a range from (-)£294 to +£237. Seven businesses reported a positive net margin per cow.

- Top-third producers achieved an average gross margin of £455 per cow, £105 (30%) better than the overall average. Fixed costs per cow among the top third were £23 per cow higher than the average and thus the improvement in financial performance narrowed to £81 at net margin level.
- Physical performance of the herds in the top-third were very similar to the average in respect of calves born dead or alive but top-third performers achieved lower mortality rates resulting in more calves reared per 100 cows which were sold at heavier weights. Top-third performers also had lower mortality among cows and lower herd replacement rates leading to lower herd maintenance costs.
- Fixed costs per cow among the top-third higher than the average with higher paid labour and property costs. Another key element of cost control was low finance costs.
- In contrast those businesses in the bottom-third were constrained by lower herd performance, four fewer calves reared per 100 cows, lower sale weights, highest herd mortality and the highest feed and forage costs. They also had the heaviest use of purchased feeds offset slightly by lower forage costs. This group had the lowest paid labour but heaviest contractor charges, they also committed the most unpaid personal time to the enterprise. Machinery and depreciation charges were also higher than average.

Non LFA lowground suckler herds - Financial performance measures

	Bottom third	Average	Top third
Number in sample	5	15	5
Average herd size (head)	71	75	97
		£ per cow	
Calf output after valuation changes	547.09	612.30	664.85
Subsidies	83.10	85.76	86.57
Gross Output	**630.19**	**698.06**	**751.42**
Less net replacement cost	97.47	82.19	76.81
Net Output	**532.72**	**615.87**	**674.61**
Variable costs			
Purchased concentrates	33.10	31.55	19.68
Home-grown concentrates	2.46	7.65	9.10
Roughages purchased	37.40	43.61	35.71
Forage	97.14	72.28	64.72
Total feed and forage	170.17	155.09	129.21
Veterinary	50.15	41.97	41.65
Bedding	64.61	52.24	35.13
Other costs	22.15	16.84	13.58
Total variable costs	**307.02**	**266.14**	**219.57**
Gross Margin	**225.70**	**349.73**	**455.04**
Fixed costs			
Labour	36.12	50.95	81.14
Contractors	37.07	24.82	26.88
Power and machinery	96.03	85.19	80.98
Property maintenance and rent	85.04	79.78	92.53
Depreciation	93.29	74.24	67.67
Finance	38.74	21.30	13.69
Administration	28.28	29.84	26.68
Total fixed costs	**414.57**	**366.12**	**389.57**
Net Margin	**(-)188.87**	**(-)16.39**	**65.47**
Annual herd maintenance cost Pence per kg calf sold	32	26	23
Variable cost Pence per kg calf produced	101	84	67
Fixed cost Pence per kg calf produced	137	115	119
Unpaid family labour hours	**12hrs 55min**	**10hrs 50min**	**9hrs 5min**

Totals may not add due to rounding

Non LFA lowground suckler herds - Technical performance measures

	Bottom third	Average	Top third
Cows per bull	25	22	21
Calves born dead or alive per 100 cows	91	91	91
Calves born dead per 100 cows	3	2	1
Calves died per 100 cows	3	2	1
Calves reared per 100 cows	85	87	89
Daily liveweight gain (kg)	1.03	1.11	1.24
Weight – kg per calf sold	303	317	327
Weight produced kg per cow	257	277	291
Cow replacement rate per 100 cows	17.9	12.0	5.5
Cow mortality %	3.3	1.8	0.8
Purchased concentrates kg per cow	207	199	135
Home-grown concentrates kg per cow	14	57	70
Stocking rate GLU/ha	1.62	1.48	1.29
CO_2e kg/net lwt kg produced	21.0	23.4	26.0

Results from rearer finisher enterprises

IN THE case of these 22 enterprises farming 2,266 cows, the reported margins relate to the costs and income for a 12-month period to the end of April 2019.

The businesses surveyed produced an average gross margin per cow of £502, within a range from £265 to £721 per cow, and an average net margin of (-)£33 per cow. Eleven (50%) enterprises reported a positive net margin.

- The top-third producers ranked by gross margin per cow achieved a net output £100 higher than the average largely through the production of 15% more saleable output per cow through selling heavier cattle but at lower sale prices per kg lwt than the average. Net output was also impacted by lower mortality rates which contributed to lower herd maintenance charges among the top-third.
- Variable costs were slightly lower among the top-third through lower feed and forage costs although veterinary, bedding and sundry livestock costs were higher.
- Fixed costs among the top-third were £43 (8%) per cow higher than the average due to higher labour, machinery maintenance, finance and depreciation charges.
- Those businesses in the bottom-third had the highest variable cost base but the lowest fixed cost base. Higher mortality rates and herd replacement rates contributed to higher herd maintenance charges. This group also had the highest calf mortality rates and reared two calves less than the average while having the highest feed and forage costs.

Rearer finisher herds - Financial performance measures

	Bottom third	Average	Top third
Number in sample	7	22	7
Average herd size (head)	91	103	111
		£ per cow	
Calf output after valuation changes	990.31	1102.59	1197.51
Subsidies	85.01	88.47	89.67
Gross Output	**1075.32**	**1191.06**	**1287.18**
Less net replacement cost	85.88	79.36	76.01
Net Output	**989.44**	**1111.70**	**1211.17**
Variable costs			
Purchased concentrates	193.25	174.52	161.10
Home-grown concentrates	49.78	73.30	69.97
Roughages purchased	77.42	68.41	66.74
Forage	116.56	96.31	91.50
Total feed and forage	437.01	412.54	389.31
Veterinary	49.36	56.09	60.19
Bedding	91.84	92.14	101.78
Other costs	40.35	48.56	50.49
Total variable costs	**618.56**	**609.33**	**601.77**
Gross Margin	**370.88**	**502.37**	**609.40**
Fixed costs			
Labour	64.72	88.66	100.94
Contractors	66.88	48.46	29.16
Power and machinery	120.36	122.37	146.74
Property maintenance and rent	122.07	106.13	96.02
Depreciation	98.60	98.34	118.59
Finance	18.61	30.15	48.04
Administration	35.04	41.70	39.03
Total fixed costs	**526.28**	**535.81**	**578.52**
Net Margin	**(-)155.40**	**(-)33.44**	**30.08**
Annual herd maintenance cost Pence per kg calf sold	15	13	12
Variable cost Pence per kg calf sold	105	98	93
Fixed cost Pence per kg calf sold	90	86	89
Unpaid family labour hours	**12hr 30min**	**10hr 40min**	**10hr 5min**

Totals may not add due to rounding

Rearer finisher herds - Technical performance measures

	Bottom third	Average	Top third
Cows per bull	25	26	25
Calves born dead or alive per 100 cows	94	95	96
Calves born dead per 100 cows	4	3	3
Calves died per 100 cows	3	3	2
Calves reared per 100 cows	87	89	91
Daily liveweight gain (kg)	0.78	0.93	0.87
Weight – kg per calf sold finished	586	613	646
Weight reared kg per cow per year	477	536	619
Cow replacement rate per 100 cows	14.0	11.0	11.0
Cow mortality %	3.7	2.4	1.6
Purchased concentrates kg per cow	1020	950	919
Home-grown concentrates kg per cow	361	514	475
Stocking rate cows/ha	1.1	1.0	0.9
Selling price p/kg dwt finished	352	354	348
Selling price p/kg lwt store	0	230	0
CO_2e kg/net lwt kg produced	20.3	18.4	16.5

Cattle finishing: Results from cereal-based cattle finishing enterprises

FIFTEEN CEREAL-BASED cattle finishing enterprises were surveyed. They sold 870 cattle and achieved an average gross margin of £123 per animal. The average net margin among those surveyed was positive at £40 per head and ranged from (-)£121 to £267 per head. Ten businesses (75%) reported a positive net margin.

- Enterprises in the top-third of those surveyed had a net output £18 per animal better than the average and £64 better than the bottom-third. They sold the heaviest cattle although within the market optimum of around 380-400 kg. They achieved the best growth rates but started with the lightest weight cattle and fed them for the shortest period and finished the highest proportion of young bulls. They used the least amount of home-grown and purchased concentrates. Output was also helped by having the lowest mortality during the finishing period.
- Those in the top-third achieved higher output while keeping variable costs £68 per head lower than the average largely through lower feed and forage costs. They also carried the lowest fixed costs but the biggest expenditure of paid labour and power and machinery. Nevertheless, they achieved a net margin £105 per head better than the average.
- Those in the bottom-third had the longest finishing period and greater dependence on heifer finishing and carried the highest concentrate use and highest mortality rates. Despite benefiting from strong young bull prices, influenced by selling the lightest weight young bulls, and close to average heifer prices the extra variable costs squeezed gross margins to £62 lower than the average. These herds also carried a slightly higher fixed cost base.

Cereal-based cattle finishing enterprises - Financial performance measures

	Bottom third	Average	Top third
Number in sample	5	15	5
Average herd size (head)	73	58	43
		£ per head	
Stock sales	**1254.65**	**1316.60**	**1275.41**
Less stock purchases	712.55	728.55	669.10
Net Output	**542.10**	**588.05**	**606.31**
Variable Costs			
Purchased concentrates	207.74	239.08	213.60
Home-grown concentrates	107.38	78.17	47.76
Other feeds	21.04	24.89	28.50
Forage	7.29	4.78	3.93
Total feed and forage	343.45	346.92	293.79
Veterinary	21.14	20.71	10.88
Bedding	73.35	54.97	43.52
Other costs	42.36	42.11	47.89
Total variable costs	**480.30**	**464.71**	**396.06**
Gross Margin	**61.80**	**123.34**	**210.25**
Fixed costs			
Labour	15.17	19.15	24.41
Contractors	10.62	7.82	3.95
Power and machinery	17.12	16.75	17.76
Property maintenance and rent	22.97	15.83	2.62
Depreciation	12.24	13.18	12.07
Finance	1.41	3.59	1.96
Administration	7.91	7.12	2.69
Total fixed costs	**87.43**	**83.44**	**65.44**
Net Margin	**(-)25.63**	**39.90**	**144.81**
Stores purchased Pence per kg lwt sold	121	117	110
Variable cost Pence per kg lwt sold	82	75	63
Fixed cost Pence per kg lwt sold	15	13	11
Unpaid family labour hours	**1hr 50min**	**1hr 40min**	**1hr 15min**

Totals may not add due to rounding

Cereal-based cattle finishing enterprises - Technical performance measures

	Bottom third	Average	Top third
Feeding period (days)	224	219	214
Start weight (kg lwt)	311	319	308
Finish weight (kg lwt)	589	623	627
Daily liveweight gain (kg)	1.2	1.4	1.5
Mortality (%)	1.9	1	0
Purchased concentrates kg/head	1237	1299	1042
Home-grown concentrates kg/head	757	523	341
Purchase price (p per kg lwt)	**224**	**224**	**216**
Sale price sold dwt (p /kg dwt)	**367**	**361**	**351**
Sales			
Steers % of sales	0	3	0
Liveweight at sale	0	610	0
Steer selling price p/kg dwt	0	362	0
Heifers % of sales	37	19	16
Liveweight at sale	557	563	585
Heifer selling price p/kg dwt	375	376	373
Young bulls % of sales	63	78	84
Liveweight at sale	608	638	634
Young bull selling price p/kg dwt	362	358	347
CO_2e kg/net lwt kg produced	13.5	12.5	11.6

Results from forage-based cattle finishing enterprises

THE FORAGE-BASED finishers surveyed have been split into two groups based on the age at which the majority of the cattle have been sold. The average age at which Scottish prime cattle are slaughtered remains around 22-months of age. This has been taken as the age for splitting the businesses surveyed. Thus, the two groups are those selling finished cattle under 22-months of age and those selling finished cattle at over 22-months of age.

The first group, selling younger cattle, comprises 17 businesses finishing an average of 84 cattle and the second group, selling older cattle, comprises 18 businesses but with an average size of 69 cattle.

- Those selling younger cattle reported a gross margin of £132 per animal sold falling to a net margin of (-)£86 per animal sold; three (17%) of the businesses in this group achieved a positive net margin. Their counterparts selling older cattle reported a gross margin of £183 per head and a net margin of (-)£59, six business in this group achieved a positive net margin.
- Those selling younger cattle finished them around 19 weeks quicker than those selling older cattle, but those older cattle were 35kg heavier at sale.
- Those in the top-third of performers showed an improvement in net margin of £98 per animal among those selling younger cattle, pushing top-third producers to a positive net margin, and £73 per animal among those selling older cattle where the top-third also produced a positive net margin.
- Among those selling younger cattle those in the top-third sold the lightest cattle and, because of penalties imposed on heavy carcases, achieved the best-selling price per kg. They also had the shortest finishing period and lower mortality than the average. The top-third also had lower variable costs most noticeably feed and forage costs but also lower veterinary costs.
- Among those selling older cattle, those in the top-third were characterised by low mortality over the finishing period. They sold the heaviest cattle but were not badly affected by the penalties introduced during the year for heavy carcases. They did however carry the highest variable and fixed costs, so their better margins were driven by careful buying of store cattle to put into the system.

Forage-based cattle finishing under 22 months - Financial performance measures

	Bottom third	Average	Top third
Number in sample	6	17	6
Average herd size (head)	49	84	96
		£ per head	
Stock sales	**1258.35**	**1207.46**	**1201.83**
Less stock purchases	867.10	805.67	766.02
Net Output	**391.25**	**401.79**	**435.81**
Variable costs			
Purchased concentrates	118.88	72.90	41.57
Home-grown concentrates	116.28	67.50	61.71
Other feeds	18.84	14.54	11.24
Forage	36.27	40.03	24.05
Total feed and forage	290.27	194.97	138.57
Veterinary	19.52	12.62	7.66
Bedding	24.67	29.21	29.40
Other costs	34.97	32.83	27.64
Total variable costs	**369.42**	**269.63**	**203.27**
Gross Margin	**21.83**	**132.16**	**232.54**
Fixed costs			
Labour	29.09	46.92	62.05
Contractors	3.99	13.23	11.57
Power and machinery	38.85	45.20	42.95
Property maintenance and rent	45.46	39.05	34.49
Depreciation	28.49	48.42	58.31
Finance	11.32	11.18	2.14
Administration	16.29	14.55	9.70
Total fixed costs	**173.49**	**218.55**	**221.21**
Net Margin	**(-)151.66**	**(-)86.39**	**11.33**
Stores purchased Pence per kg lwt sold	143	134	133
Variable cost Pence per kg lwt sold	61	45	35
Fixed cost Pence per kg lwt sold	29	45	39
Unpaid family labour hours	**4hr 10min**	**4hr**	**5hr**

Totals may not add due to rounding

Forage-based cattle finishing under 22 months - Technical performance measures

	Bottom third	Average	Top third
Feeding period (days)	228	275	307
Start weight (kg lwt)	371	367	383
Finish weight (kg lwt)	604	598	573
Daily liveweight gain (kg)	1.02	0.80	0.6
Mortality (%)	0.7	1	0.7
Purchased concentrates kg/head	532	377	178
Home-grown concentrates kg/head	758	474	436
Purchase price (p per kg lwt)	**232**	**217**	**198**
Sale price sold dwt (p /kg dwt)	**359**	**352**	**361**
Sales			
Steers % of sales	67	34	22
Liveweight at sale	611	653	649
Steer selling price p/kg dwt	370	356	370
Heifers % of sales	33	66	78
Liveweight at sale	589	566	552
Heifer selling price p/kg dwt	336	350	358
Young bulls % of sales	0	0	0
Liveweight at sale	0	0	0
Young bull selling price p/kg dwt	0	0	0
CO_2e kg/net lwt kg produced	15.4	15.2	16.2

Forage-based cattle finishing over 22 months - Financial performance measures

	Bottom third	Average	Top third
Number in sample	6	18	6
Average herd size (head)	75	69	67
		£ per head	
Stock sales	**1264.31**	**1306.19**	**1417.41**
Less stock purchases	833.40	755.81	745.39
Net Output	**430.91**	**550.38**	**672.02**
Variable costs			
Purchased concentrates	113.11	136.19	190.40
Home-grown concentrates	62.81	58.51	44.93
Other feeds	25.27	25.73	28.27
Forage	50.27	40.92	28.00
Total feed and forage	251.46	261.35	291.60
Veterinary	20.25	17.70	15.51
Bedding	40.97	50.67	59.35
Other costs	40.52	37.86	36.18
Total variable costs	**353.20**	**367.58**	**402.64**
Gross Margin	**77.71**	**182.80**	**269.38**
Fixed costs			
Labour	43.55	31.53	20.87
Contractors	22.18	18.13	16.41
Power and machinery	44.26	56.39	65.48
Property maintenance and rent	51.05	46.43	43.95
Depreciation	35.85	44.89	49.57
Finance	10.31	22.40	32.91
Administration	17.49	22.57	27.04
Total fixed costs	**224.70**	**242.34**	**256.23**
Net Margin	**(-)146.99**	**(-)59.54**	**13.15**
Stores purchased Pence per kg lwt sold	138	119	111
Variable cost Pence per kg lwt sold	58	58	59
Fixed cost Pence per kg lwt sold	37	38	38
Unpaid family labour hours	**3hr 30min**	**5hr 10min**	**5hr 35min**

Totals may not add due to rounding

Forage-based cattle finishing over 22 months – Technical performance measures

	Bottom third	Average	Top third
Feeding period (days)	379	410	393
Start weight (kg lwt)	356	332	335
Finish weight (kg lwt)	604	633	673
Daily liveweight gain (kg)	0.65	0.73	0.86
Mortality (%)	1.5	1.1	1.0
Purchased concentrates kg/head	504	696	1017
Home-grown concentrates kg/head	409	380	280
Purchase price (p per kg lwt)	**230**	**225**	**221**
Sale price sold dwt (p /kg dwt)	**361**	**356**	**363**
Sales			
Steers % of sales	45	42	58
Liveweight at sale	659	679	702
Steer selling price p/kg dwt	359	358	362
Heifers % of sales	55	49	42
Liveweight at sale	559	599	631
Heifer selling price p/kg dwt	362	354	366
Young bulls % of sales	0	0	0
Liveweight at sale	0	0	0
Young bull selling price p/kg dwt	0	0	0
CO_2e kg/net lwt kg produced	14.4	12.3	10.9

Sheep Enterprises

Results from LFA hill ewe flocks

THIS GROUP of enterprises comprises purebred Blackface and Cheviot flocks farmed on some of the most disadvantaged land in Scotland. The sample covered 25 such flocks farming over 16,400 ewes. These flocks are characterised by low lambing percentages, averaging 89% lambs reared within a range of 53% to 134%. The average gross margin achieved across this group was £124 per ewe, while the average net margin was (-)£26 per ewe within a range of (-)£57 to £16 per ewe. Two producers (8%) within this group made a small positive net margin.

- Producers in the top-third benefit from better technical performance. The improvement in gross margin per ewe of £20 over the average is largely due to:
  - A higher number of lambs reared – 15 more lambs per ewe than average;
  - Benefited from lower mortality of both lambs and ewes;
  - Lambs were sold at a slightly heavier weight resulting in 17% more lamb produced per ewe.
  - With little difference in retentions for flock maintenance, the higher lambing percentage left those in the top-third with a greater number of lambs for sale, a higher proportion of which (9% compared to 4%) were sold as prime lamb although these returned slightly less per head than the average, store and breeding lamb values were higher than the average. Overall top-third achieved £16 per ewe more income which combined with lower flock maintenance charges to deliver a £17 improvement in net output over the average.
- Top-third producers had slightly lower variable cost, saving on purchased feed and forage compared with the average although they did carry higher vet costs by spending slightly more than the average on forage production. They did however have higher fixed costs per ewe particularly due to higher paid labour, machinery and depreciation.
- Bottom-third producers achieved a gross margin £20 lower than the average a consequence of much higher purchased feed costs but also because of the much lower output per ewe because of the impact of the early spring weather which resulted in heavy ewe losses and lower productivity; 73 lambs reared per 100 ewes compared to the average of 89. On average lambs were sold at lighter weights and production per ewe was 17% lower than the average. Although fixed costs were lower than the average the net margin among the bottom-third of (-)£41 per ewe £15 per ewe worse than the average. However, it must be recognised that 60% of the flocks in the bottom-third were flocks in the North West Highlands and Islands region where climate and topography have a severe impact on ewe performance and the ability of producers to sell prime lambs.

LFA hill ewe flocks - Financial performance measures

	Bottom third	Average	Top third
Number in sample	8	25	8
Flock size	742	656	580
		£ per ewe	
Lamb sales	**31.97**	**47.50**	**62.84**
Wool	1.54	1.81	2.25
Gross Output	**33.51**	**49.31**	**65.09**
Less replacement costs	14.37	12.85	11.33
Net output	**19.14**	**36.46**	**53.76**
Variable costs			
Purchased concentrates	9.26	8.10	5.28
Home-grown concentrates	0	0.04	0.11
Other feeds	2.34	2.34	1.20
Forage	1.81	1.49	1.44
Total feed and forage	13.41	11.97	8.03
Veterinary	5.76	5.63	7.39
Bedding	0.17	0.08	0.08
Other costs	7.53	6.45	5.97
Total variable costs	**26.87**	**24.13**	**21.47**
Gross margin	**(-)7.73**	**12.33**	**32.29**
Fixed costs			
Labour	6.42	11.81	16.71
Contractors	4.41	2.87	2.27
Power and machinery	4.83	6.51	7.98
Property maintenance and rent	6.92	8.51	7.72
Depreciation	6.70	5.88	6.96
Finance	0.42	0.58	0.64
Administration	3.59	2.21	1.48
Total fixed costs	**33.31**	**38.48**	**43.76**
Net Margin	**(-)41.03**	**(-)26.15**	**(-)11.47**
Flock replacements – Pence per kg lamb produced	47	40	35
Variable cost – Pence per kg lamb produced	87	75	66
Fixed cost – Pence per kg lamb produced	108	121	135
Unpaid family labour hours	**1hr 15min**	**1hr**	**1hr 20min**

Totals may not add due to rounding

LFA hill ewe flocks - Technical performance

	Bottom third	Average	Top third
Ewes per ram	38	35	46
Ewe mortality %	14.0	8.8	5.9
Ewe replacement rate %	29.6	26.8	26.6
Lambs born dead or alive per 100 ewes	87	105	119
Lamb mortality (inc. born dead) per 100 ewes	14	16	15
Lambs reared per 100 ewes	73	89	104
Average weight of lambs kg	30.7	32.0	32.4
Weight of lamb produced per ewe kg	22.4	28.6	33.6
Purchased concentrates kg/ewe	38	31	17
Home-grown concentrates kg/ewe	0	0	1
Lambs sold finished per 100 ewes	1	4	9
Value per lamb £/head	55.03	64.33	62.57
Lambs sold/transferred store per 100 ewes	38	49	52
Value per lamb £/head	38.78	43.37	44.39
Lambs sold/transferred for breeding per 100 ewes	34	36	43
Value per lamb £/head	49.32	65.27	79.43
CO_2e kg/net lwt kg produced	31.5	19.9	15.1

Results from LFA upland ewe flocks

LFA UPLAND breeding flocks are identified as LFA farms running crossbred flocks. Thirty-one such flocks were recorded in this survey which collectively farmed some 17,000 ewes. These enterprises achieved an average gross margin of £49 per ewe and an average net margin of £0.35 per ewe. Seventeen of the businesses surveyed (55%) returned a positive net margin within a range (-)£41 to £28 per ewe.

- Producers in the top-third produced a gross margin of £64 per ewe, 30% better than the average and double the bottom-third.
- The improvement in gross margin between the average and the top-third was due to both higher net output (+£6 per ewe) and reduced variable costs (£9 per ewe less). Higher output was achieved through improved flock performance including:
  - Six more lambs were reared per 100 ewes than the average;
  - Although lamb weights were 0.5kg lower than the average, more lambs reared resulted in 3% more liveweight being produced per ewe than the average.

  Lower variable costs were primarily the result of lower use of purchase feeds and lower forage costs, but the group also paid lower veterinary charges.
- In contrast, bottom-third producers delivered:
  - Ten fewer lambs reared per 100 ewes than the average;
  - 9% less liveweight of lamb produced per ewe than the average.
- Fixed costs among the top-third were the lowest among the surveyed enterprises due to lower contractor charges and lower property costs but higher power machinery and depreciation costs.
- Those in the bottom-third carried higher variable costs per ewe than the average, although with almost all of the increase due to higher spending on feed and forage. The bottom-third also carried much higher fixed costs than the average particularly in respect of labour and property costs.

LFA upland ewe flocks - Financial performance measures

	Bottom third	Average	Top third
Number in sample	10	31	10
Flock size	557	567	582
		£ per ewe	
Lamb sales	**95.80**	**102.63**	**107.22**
Wool	2.32	2.25	1.94
Gross Output	**98.12**	**104.88**	**109.16**
Less replacement costs	14.74	14.42	12.82
Net output	**83.38**	**90.46**	**96.34**
Variable costs			
Purchased concentrates	19.40	13.11	9.02
Home-grown concentrates	0.43	0.37	0.43
Other feeds	7.66	4.35	2.84
Forage	5.96	5.84	3.99
Total feed and forage	33.45	23.67	16.28
Veterinary	8.06	8.34	7.29
Bedding	1.79	1.25	0.22
Other costs	9.19	8.10	8.83
Total variable costs	**52.49**	**41.36**	**32.62**
Gross margin	**30.89**	**49.10**	**63.72**
Fixed costs			
Labour	16.70	9.68	9.68
Contractors	5.25	5.49	3.72
Power and machinery	8.77	9.19	10.17
Property maintenance and rent	13.44	9.79	7.13
Depreciation	6.16	9.35	12.17
Finance	1.45	1.72	1.19
Administration	3.82	3.53	2.19
Total fixed costs	**55.59**	**48.75**	**46.25**
Net Margin	**(-)24.70**	**0.35**	**17.47**
Flock replacements – Pence per kg lamb produced	39	37	34
Variable cost – Pence per kg lamb produced	139	107	86
Fixed cost – Pence per kg lamb produced	147	127	122
Unpaid family labour hours	**1hr 5min**	**1hr 20min**	**1hr 5min**

Totals may not add due to rounding

LFA upland ewe flocks - Technical performance

	Bottom third	Average	Top third
Ewes per ram	33	30	23
Ewe mortality %	6.9	6.4	4.6
Ewe replacement rate %	31.3	28.3	26.2
Lambs born dead or alive per 100 ewes	146	157	165
Lamb mortality (inc. born dead) per 100 ewes	16	17	19
Lambs reared per 100 ewes	130	140	146
Average weight of lambs kg	37.7	38.5	38.0
Weight of lamb produced per ewe kg	49.0	53.9	55.6
Purchased concentrates kg/ewe	70	50	35
Home-grown concentrates kg/ewe	2	3	3
Lambs sold finished per 100 ewes	96	80	64
Value per lamb £/head	77.47	77.79	76.84
Lambs sold/transferred store per 100 ewes	19	26	18
Value per lamb £/head	47.66	56.30	52.86
Lambs sold/transferred for breeding per 100 ewes	15	32	64
Value per lamb £/head	71.81	75.76	75.53
CO_2e kg/net lwt kg produced	12.7	13.0	13.7

Results from lowground breeding flocks

THE 13 businesses in the survey farmed some 6,600 ewes. Five of the flocks in this group achieved a positive net margin, with the average being £18 per ewe within a range from (-)£78 to £47 per ewe.

The number of enterprises surveyed did not allow comparisons to be made between high and low financial margins. Nevertheless, by ranking enterprises on the basis of gross margin per lamb some trends do emerge including:

- Better financial returns tend to be associated with high physical performance, lower barren ewe rates and lower lamb mortality leading to those with higher gross margins tending to have the highest lamb weaning rates. They also sold the highest proportion of their lambs finished and benefited from the best prices per lamb sold.
- Better financial returns tend to be associated with lower feed and veterinary costs. Although concentrate feed use tended to be higher than the average among the better gross margins, feed use was highest among those with the lowest margins.
- Better financial returns tend to be associated with higher fixed costs per ewe particularly contract charges and property cost, but insufficient to offset the benefits of higher physical performance.

Lowground ewe flocks - Financial performance measures

	Average
Number in sample	13
Flock size	515
	£ per ewe
Lamb sales	**137.05**
Wool	2.25
Gross Output	**139.29**
Less replacement costs	14.28
Net output	**125.02**
Variable costs	
Purchased concentrates	17.57
Home-grown concentrates	3.29
Other feeds	4.35
Forage	8.38
Total feed and forage	33.58
Veterinary	9.41
Bedding	1.29
Other costs	9.78
Total variable costs	**54.05**
Gross margin	**70.97**
Fixed costs	
Labour	7.47
Contractors	7.99
Power and machinery	10.85
Property maintenance and rent	13.57
Depreciation	8.33
Finance	1.88
Administration	2.49
Total fixed costs	**52.58**
Net Margin	**18.39**
Flock replacements – Pence per kg lamb produced	34
Variable cost – Pence per kg lamb produced	127
Fixed cost – Pence per kg lamb produced	123
Unpaid family labour hours	**1hr 20min**

Totals may not add due to rounding

Lowground ewe flocks - Technical performance

	Average
Ewes per ram	28
Ewe mortality %	6.1
Ewes replacement rate %	26.6
Lambs born dead or alive per 100 ewes	177
Lamb mortality (inc. born dead) per 100 ewes	24
Lambs reared per 100 ewes	153
Average weight of lambs kg	42.6
Weight of lamb produced per ewe kg	65.1
Purchased concentrates kg/ewe	77
Home-grown concentrates kg/ewe	25
Lambs sold finished per 100 ewes	127
Value per lamb £/head	92.30
Lambs sold/transferred store per 100 ewes	8
Value per lamb £/head	65.41
Lambs sold/transferred for breeding per 100 ewes	18
Value per lamb £/head	82.71
CO_2e kg/net lwt kg produced	10.9

Results from store lamb finishing enterprises

THIRTEEN STORE lamb finishing businesses, selling just under 7,500 lambs achieved an average gross margin of £12 per lamb. Net margins averaged £5 per lamb in a range from (-)£10 to £32 per lamb. Seventy percent of these enterprises achieved a positive net margin.

The number of enterprises surveyed did not allow comparisons to be made between high and low financial margins. Nevertheless, by ranking enterprises on the basis of gross margin per lamb some themes begin to emerge.

- Top-performers this year tended to start with the smallest lamb, keep them for the longest feeding period and sold them at 39.5 kg lwt, around 0.5kg slightly lighter than the average and 4.5kg lighter than those with below average gross margins. The top-performers sold them to best advantage as they achieved the highest return per kg for these lambs. They also had the lowest lamb mortality rates.
- Despite having a longer keep period, top-performers tended to have lower feed and forage costs, but longer keep did come with some additional veterinary costs and a slightly higher than average fixed costs.

Store lamb finishing - Financial performance measures

	Average
Number in sample	13
Flock size	652
	£ per lamb
Lamb sales	**75.94**
Less purchases	50.73
Net output	**25.21**
Variable costs	
Purchased concentrates	4.98
Home-grown concentrates	0.05
Other feeds	0.32
Forage	2.28
Total feed and forage	*7.63*
Veterinary	1.42
Bedding	0
Other costs	**4.23**
Total variable costs	**13.28**
Gross margin	**11.93**
Fixed costs	
Labour	0.93
Contractors	0.37
Power and machinery	1.49
Property maintenance and rent	1.58
Depreciation	1.72
Finance	0.34
Administration	0.80
Total fixed costs	**7.23**
Net Margin	**4.70**
Lambs purchased – Pence per kg lwt lamb sold	132
Variable cost – Pence per kg lwt lamb sold	34
Fixed cost – Pence per kg lwt lamb sold	19
Unpaid family labour hours	**10min**

Totals may not add due to rounding

Store lamb finishing - Technical performance

	Average
Weight of lamb purchased kg	30.4
Liveweight of lamb sold	38.5
Carcase weight of lamb sold	18.0
Sale price p/kg dwt	428
Daily liveweight gain	0.05
Finishing period – days	165
Mortality %	4.6
Purchased concentrates kg/lamb	19.4
Home-grown concentrates kg/lamb	0.4
CO_2e kg/net lwt kg produced	15.2

The Effect of Quality on Prices

The quality of the stock presented to the market and its value to processors through product size, improved meat yield, or less carcase trimming, will be reflected in market prices.

Beef

IN RECENT years the price of R4L steers has been rising relative to -U3 grading steers and 2018 saw a continuation of this trend. Having risen marginally in front of -U3 grades in 2017, the gap widened to a weekly average of 2p in 2018. Although -U3 heifers continued to hold a premium over R4L grade heifers, this gap narrowed further in 2018, easing to 4p. The rise in R grade relative to -U grades in recent years is likely to reflect pricing penalties for carcases exceeding target weight ranges, given that a -U grade carcase is more likely to exceed the target than an R4L carcase.

An improvement in carcase quality from O+4H to R4L was worth 14.4p/kg dwt to producers for steers and 13.1p/kg dwt for heifers during 2018. The steer differential has held relatively stable in recent years while the differential for heifers has been falling by around a penny per year.

Moving into 2019, the steer price differentials have barely changed relative to the same period of 2018 while for heifers, the premia have continued to narrow slightly.

In 2018, the most common grade for steer carcases at price reporting Scottish abattoirs continued to be the R4L, rising to 27.5% from 26.7% in 2017. However, the R3 grade slipped by 1.9 percentage points to account for 15.7% of carcases, with the -U4L rising 1.4 points to take a 13.9% share. 94.6% of carcases were in the grades eligible for the Scotch Beef PGI brand, up from 94.1% in 2017.

For heifers, the R4L grade rose by one percentage point to take a 31.4% share, and the -U4L rose by 0.8 points to 11.9%. By contrast, the R4H dipped slightly to 14.7% from 15.0%, and the R3 share was 1.5 points lower at 11.4%. 97.4% of heifer carcases were in the Scotch Beef carcase eligibility range, up from 97.3% in 2017 [1].

For young bulls, the most common grade in 2018 was -U3, up 1.7 percentage points to 21.8%, while R3 grades accounted for 15.6% of carcases, down from 16.4% in 2017.

	Average -U3 premium over R4L (p/kg)			Average R4L premium over O+4H (p/kg)		
	2016	2017	2018	2016	2017	2018
Steer	0.2	-0.4	-2.1	14.8	15.1	14.4
Heifer	7.4	5.8	3.9	15.9	14.8	13.1

[1] *2, 3, 4L, 4H or 5L for fatness and E, U, R or O+ for conformation*

Lamb

AS IS the case for beef, there is also a financial reward from the marketplace where a lamb carcase meets an improved conformation and fat level. Both the U2 to R3L and R3L to O3H premia widened in 2018, with the latter reaching a four-year high. The more significant premium between an R3L and an O3H grade than between U2 and R3L grade carcases is likely to reflect that an O3H grade is outwith the target range.

During the first 10 months of 2019, there has been a marginal 0.2p fall in U2 premium over an R3L grade compared to the same period of 2018. The difference between an R3L lamb carcase and an O3H has narrowed more significantly, down 4.1p relative to a year earlier.

These figures are average variations across Great Britain at price reporting abattoirs for Standard Quality Quotation (SQQ) lambs, but individual processors will have different requirements, and hence different pricing structures, which may have led to deviation from these levels. Therefore, a good relationship between producer and buyer which involves regular dialogue and feedback is very important.

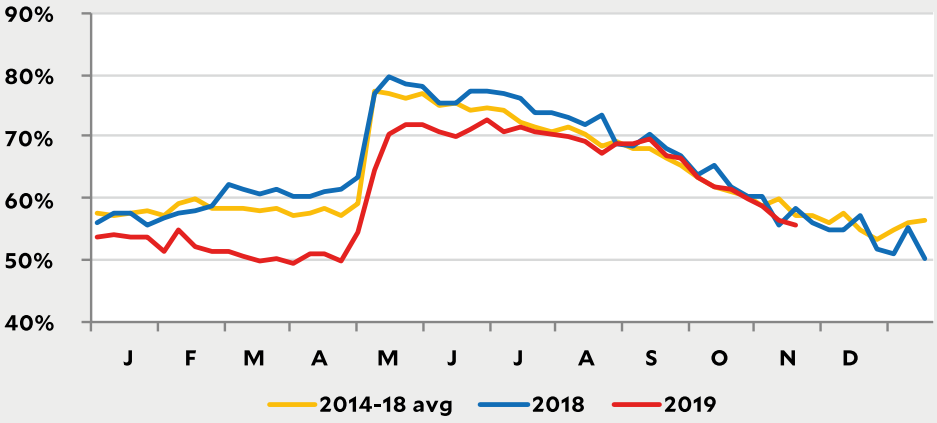
	Average U2 premium over R3L (p/kg)			Average R3L premium over O3H (p/kg)		
	2016	2017	2018	2016	2017	2018
Lambs	11.2	10.4	11.5	13.5	15.0	17.1

In addition to its seasonal supply profile, lamb has a seasonal variation in quality. As the new season began in 2018, 77% of SQQ lambs at GB price reporting abattoirs achieved at least an R3L grading. This returned quality to around its five-year average after two weaker years. Carcase quality then maintained a gap over 2017 until December when it slipped behind year earlier levels. This reversal continued into early 2019 and was maintained throughout the selling period for hoggs, with the gap widening to an average of 10.5 percentage points in March and April.

The decline seen in the latter part of 2018/19 continued into the 2019/20 season; though to a lesser degree. From mid-May to the end of June, the year-on-year decline averaged around six percentage points, easing to four points in July. Between August and October, quality has been much closer to autumn 2018 levels, averaging around half a point lower.

One thing noticeable in the data each year is a fall in carcase quality in the week of peak demand before Eid al-Adha. In 2019 this was the first full processing week in August and the proportion of O grade carcases rose to 12% of the total compared to 8% in the previous week.

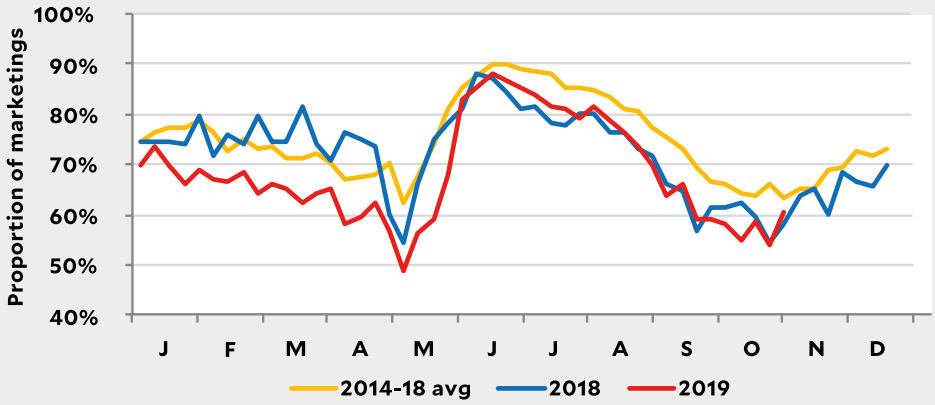
Proportion of SQQ prime sheep grading R3L or better at price reporting GB abattoirs



In recent years, the proportion of lambs sold at Scottish auctions weighing within the SQQ range of 25.5-45.5kg lwt has trended downwards. There was a significant rise of lambs weighing outside the SQQ range in 2018, and this has continued in 2019. In 2018 it may have been a surprise that lambs were generally sold at heavier weights than in 2017, given the challenging spring and dry summer. In 2019, more favourable grazing conditions may have supported growth rates, meaning that an earlier marketing pattern has not prevented weights from rising further.

During the hogg selling period of early 2019, the proportion within the weight range averaged 10 percentage points lower than in 2018. This gap narrowed to six points in the early weeks of the 2019/20 season, before reversing in June and July to a two percentage point reduction relative to 2018. After week-to-week volatility in August, the proportion within the SQQ weight range has fallen behind 2018 by an average of four points in September and October.

Proportion of prime sheep classes SQQ (25.5-45.5kg lwt) at Scottish auctions



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 an enterprise. A negative net margin indicates that there is no return for the labour and investment committed to an enterprise.

In this chapter, estimates are made of how much should be set against an enterprise 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 investment in land and buildings can be considered to be the rental value of the land used by an enterprise. This analysis draws rental values from the Scottish Government's December 2018 Scottish Agricultural Survey[2]. This rental value gives a measure of the opportunity cost of the land used by beef and sheep enterprises.

The value of unpaid labour is estimated using the proportion of a man-year committed to the enterprise and an average value for an hour of work. Time committed by the average farmer is drawn from the survey data, with one man-year defined as 2,200 hours of annual work[3]. One hour of labour has been valued at £15.40; an increase of 2% on the year.

Cattle enterprises	Unpaid labour	Return on working capital[4]	Rent of land and buildings
		p/kg liveweight sold	
Hill suckler herds	116	27	55
Upland suckler herds selling calves at weaning	44	20	17
Upland suckler herds selling yearlings	51	24	17
Lowground suckler herds	60	29	31
Rearer finisher herds	31	16	22
Cereal-based store finishing	4	5	2
Forage-based store finishing <22 months old	10	7	4
Forage-based store finishing >22 months old	12	9	10

Sheep enterprises	Unpaid labour	Return on working capital[5]	Rent of land and buildings
		p/kg liveweight sold	
Hill flocks	54	17	50
Upland flocks	38	12	12
Lowground non-LFA flocks	32	11	16
Store lamb finishers	6	4	3

2 "December 2018 Scottish Agricultural Survey" Scottish Statistical Publication March 2019
3 47 hour average week, assuming five weeks of leave
4 Return required to give a 5% return on working capital
5 Return required to give a 5% return on working capital

Total cost of producing a kilogramme of beef or sheep meat

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 meat. However, before doing this all enterprises need to be brought to a common standard. Thus, 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 bring all businesses whether owner-occupied or tenant to a common standard of cost of production and ability to deliver a return on working capital and unpaid family labour.

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. On the basis of these assumptions', only store lamb finishers delivered an adequate return on working capital and unpaid family labour. Hill sheep and hill suckler herds were the furthest from meeting this objective.

	Non-cash estimates						Total Cost	Selling price
	Repl cost	Var cost	Fixed cost	Labour	Working capital	Rental value		
	Pence per kg liveweight sold							
Sheep enterprises								
Store lambs	132	34	14	6	1	3	190	202
Hill ewe	40	75	92	54	17	50	328	166
Upland ewe	37	107	105	38	12	12	311	188
Lowland	34	127	99	32	11	16	319	211
Cattle enterprises								
Hill suckler	27	154	122	116	27	55	501	230
Upland selling at weaning	25	91	90	44	20	17	287	231
Upland selling yearlings	21	103	8	51	24	17	296	231
Non LFA suckler	26	84	79	60	29	31	309	221
Rearer finisher	13	98	61	31	16	22	241	205
Forage finisher <22 month	134	45	37	10	7	4	237	201
Forage finisher >22 month	119	58	27	12	9	10	235	206
Cereal finisher	117	75	10	4	5	2	213	209

Labour based on £15.40 per hour and 2,200 hours per man year (£33,880 employment cost per year). Rental values based on values published in Scottish Government's December 2018 Scottish Agricultural Survey
Working Capital charged at 5%. Fixed cost adjusted for rent and finance paid.

Comparisons with 2016 and 2017

The following tables summarise and compare the results from the 2018 calf and lamb crop with those of 2016 and 2017. Analysis is based on a comparison of the average from each of the three years surveyed and does not compare an identical sample.

Cattle enterprises

Suckler herds

- Lowground suckler herds saw an improvement in margins despite lower herd productivity and lower revenue from calf sales. Calves were sold at lower weights leading to reduced revenue while herd maintenance costs increased. The challenges of the 2019 climate contributed to significant reduction in calf weaning rates. However, reduced livestock numbers contributed to fixed and variable costs being much reduced and this cost control delivered the improved margin.

- Both groups of upland herds recorded a significant reduction in margins with both groups reporting average net margins to be negative. Calf weights were up slightly among those selling weaned calves and unchanged among those selling yearlings, but reduced sale prices contributed to reduced revenues. Feed and forage costs were much increased accounting for the majority of the increase in variable costs although bedding costs also increased particularly for those selling weaned calves. Fixed costs increased in both groups pushing net margins down.

Cattle finishing

- Rearer finisher margins fell back into negative territory. Sale prices and revenues were little changed on the year but the challenges of weather through the year led to significant increases in feed and forage costs. Bedding costs also increased significantly. Fixed costs edged ahead leading to sizeable reductions in margins.

- Store cattle finishers saw mixed results. Cereal finishers and longer keep grass finishers saw a tightening in margins although intensive cereal finishers did maintain positive margins. Shorter keep forage-based systems did see an improvement in margin although they remained negative. In line with market signals to reduce carcase weights, the cereal finishers and those selling younger forage fed cattle reduced carcase weights while those selling older cattle were slower to react. Prime stock selling prices came under pressure during the year, although those cereal finishers with a dependence on young bull finishing did see an increase in prices. Consequently, the mixture of weights and sale prices combined reduced revenue although some was offset by lower buying in prices.

- Both cereal finishers and longer keep grass finishers saw significant increase in feed and forage costs. Shorter keep grass finishers saw increased forage costs but reduced concentrate costs partially associated with selling cattle at lower weights and keeping them for a shorter period. There was also some increase in bedding costs among the groups selling younger cattle.

Sheep enterprises

LFA sheep

- Hill sheep flocks reported much reduced productivity having on average 13 fewer lambs per 100 ewes to sell with fewer sold finished because of climate challenges. Flock maintenance costs also increased. As a result, net output fell significantly (25% decline). Variable costs increased on the year with miscellaneous direct costs increasing the most but increased concentrate and roughage costs were also significant. The increase in variable costs were offset by reduced fixed costs. Consequently, the reduction in output were the reason why overall net margins became increasingly negative.

- Upland flocks also saw lower productivity but were not as hard it as the hill flocks. The number of lambs reared per 100 ewes were the lowest for three years but only four lambs per 100 ewes lower than last year. Nevertheless, fewer were sold finished and those that were sold finished were sold at lower carcase weights and lamb revenue per ewe dipped. Flock maintenance costs also increased. Like the hill flocks, variable costs increased substantially. Increase in concentrate and roughage expenditure contributed significantly to increased variable costs although there were also increases to veterinary and sundry livestock expenditure. Fixed costs edged higher.

Lowground sheep

- Earlier, lambing lowground flocks saw considerable reduction in lamb reared percentages; rearing eight fewer lambs per 100 ewes than in 2017. Carcase weights were slightly lower but revenue per lamb was not materially different. The decline in output then was due to lower productivity and an increase in flock maintenance costs. Feed costs were considerably higher and fixed costs also increased. While net margin remained positive it was less than half of last year.

Lamb finishing

- Store lamb producers saw net margins significantly reduced although they did, on average, remain positive. Lambs took longer to finish, at lower weights, while mortality was also higher. Purchased feed and forage costs increased significantly while fixed costs were broadly unchanged. Lower revenue and higher feed costs explain most of the decline in margins; a big improvement in margins driven by strong prime hogg prices in early 2018.

Suckler herds

	Hill suckler herds			Lowland suckler herds		
	2016	2017	2018	2016	2017	2018
Number in sample	15	15	16	16	16	15
Avg. herd size (head)	48	59	40	79	75	75
			£ Per Cow			
Calf output including beef calf premium	**739.51**	**723.08**	**650.50**	**747.02**	**727.49**	**698.06**
Less replacements	66.69	69.35	64.20	73.69	72.71	82.19
Net Output	**672.83**	**653.73**	**586.30**	**673.33**	**654.78**	**615.87**
Variable Costs						
Total concentrates	104.78	92.93	104.41	23.09	63.12	39.20
Other feeds	66.71	63.27	95.77	49.65	32.50	35.71
Forage	68.55	53.07	60.56	74.26	94.30	72.28
Total feed and forage	240.04	209.27	260.74	147.00	189.92	155.09
Veterinary	43.02	36.97	39.46	44.21	53.88	41.97
Bedding	32.68	22.07	20.24	30.60	44.18	52.24
Other costs	38.69	44.50	44.42	38.23	28.43	16.84
Total variable costs	**354.42**	**312.81**	**364.86**	**260.04**	**316.41**	**266.13**
Gross Margin	**318.40**	**340.92**	**221.44**	**413.29**	**338.37**	**349.73**
Fixed costs	**418.35**	**480.31**	**423.86**	**410.34**	**451.57**	**366.12**
Net Margin	**(-)99.94**	**(-)139.39**	**(-)202.42**	**2.95**	**(-)113.20**	**(-)16.39**

	Hill herds			Lowland herds		
	2016	2017	2018	2016	2017	2018
Physical performance						
Calves born dead or alive per 100	95	95	95	94	96	91
Calves reared per 100	90	91	90	88	92	87
Daily liveweight gain (kg)	0.88	0.90	0.89	1.11	1.13	1.11
Return per calf (£ per head)	714	704	609	755	705	701
Calf price (£ per kg lwt.)	2.32	2.43	2.30	2.31	2.29	2.21
Weight per calf (kg)	307	290	265	326	308	317

	Upland suckler herds Selling weaned calves			Upland suckler herds Selling yearling calves		
	2016	2017	2018	2016	2017	2018
Number in sample	30	31	30	25	27	27
Avg. herd size (head)	115	104	105	104	110	130
			£ Per Cow			
Calf output including beef calf premium	**747.92**	**743.32**	**732.07**	**872.26**	**919.89**	**863.90**
Less replacements	75.06	79.47	77.33	76.56	78.26	80.96
Net Output	**672.86**	**663.85**	**654.74**	**795.71**	**841.63**	**782.94**
Variable Costs						
Total concentrates	44.12	43.10	47.75	96.89	101.36	113.85
Other feeds	44.78	30.45	37.62	27.07	29.33	51.71
Forage	77.09	76.72	80.50	93.10	93.00	95.42
Total feed and forage	166.00	150.28	165.87	217.06	223.69	260.98
Veterinary	40.24	42.78	43.44	52.04	51.04	49.18
Bedding	29.66	34.28	46.95	40.20	47.35	47.41
Other costs	24.78	36.76	27.35	33.70	36.73	40.76
Total variable costs	**260.68**	**264.09**	**283.61**	**343.01**	**358.81**	**398.33**
Gross Margin	**412.18**	**399.76**	**371.13**	**452.70**	**482.82**	**384.61**
Fixed costs	**409.27**	**373.49**	**395.24**	**480.35**	**447.08**	**491.25**
Net Margin	**2.91**	**26.27**	**(-)24.11**	**(-)27.65**	**35.74**	**(-)106.64**

	Upland herds Early weaning			Upland herds Late weaning		
	2016	2017	2018	2016	2017	2018
Physical performance						
Calves born dead or alive per 100	96	96	96	94	94	93
Calves reared per 100	90	91	90	87	89	87
Daily liveweight gain (kg)	1.11	1.15	1.10	0.97	0.98	1.05
Return per calf (£ per head)	743	723	716	917	940	894
Calf price (£ per kg lwt.)	2.38	2.42	2.31	2.32	2.41	2.31
Weight per calf (kg)	312	299	310	394	390	387

	Rearer/Finishers		
	2016	2017	2018
Number in sample	20	22	22
Avg. herd size (head)	109	102	103
		£ per cow	
Calf output including beef calf premium	**1106.18**	**1146.35**	**1191.06**
Less replacements	74.92	87.89	79.36
Net Output	**1031.26**	**1058.46**	**1111.70**
Variable Costs			
Total concentrates	175.85	187.45	247.82
Other feeds	52.76	43.85	68.41
Forage	99.34	99.63	96.31
Total feed and forage	327.94	330.93	412.54
Veterinary	50.33	46.91	56.09
Bedding	51.79	79.69	92.14
Other costs	46.69	64.70	48.56
Total variable costs	**476.76**	**522.23**	**609.33**
Gross Margin	**554.50**	**536.23**	**502.37**
Fixed costs	**555.07**	**526.04**	**535.81**
Net Margin	**(-)0.57**	**10.19**	**(-)33.44**

	Rearer/Finishers		
	2016	2017	2018
Physical performance			
Calves born dead or alive per 100	93	94	95
Calves reared per 100	87	88	89
Daily liveweight gain (kg)	0.89	0.97	0.93
Return per calf (£ per head)	1237	1298	1280
Sale price (pence per kg dwt.)	343	360	355
Weight per calf (kg)	622	622	613

Businesses finishing cattle under cereal-based systems

	Cereal-based		
	2016	2017	2018
	£ per head		
Number in sample	15	17	15
Stock sales	**1280.75**	**1336.87**	**1316.60**
Less stock purchases	766.79	718.03	728.55
Net Output	**513.97**	**618.84**	**588.05**
Variable costs			
Concentrates	251.82	252.60	317.25
Other feeds	24.70	19.16	24.89
Forage	8.61	14.22	4.78
Total feed and forage	285.13	285.98	346.92
Veterinary	16.88	18.80	20.71
Bedding	36.41	47.87	54.97
Other costs	29.81	38.95	42.11
Total variable costs	**368.22**	**391.60**	**464.71**
Gross Margin	**145.74**	**227.24**	**123.34**
Fixed costs	**105.57**	**104.40**	**83.44**
Net Margin	**40.17**	**122.84**	**39.90**
Physical performance			
Feeding period (days)	232	250	219
Start wt (kg lwt)	324	303	319
Average carcase weight (kg dwt)	370	382	361
Daily LWT gain (kg)	1.4	1.3	1.4
Mortality (%)	0.8	1.5	1.0
Sale price (£ per kg dwt)	3.46	3.49	3.61
Purchase price (£ per kg lwt)	2.34	2.34	2.24
Gross margin per day (£ per day of feeding period)	0.63	0.91	0.56

Businesses finishing cattle under forage-based systems

	Forage-based <22 month at slaughter			Forage-based >22 month at slaughter		
	2016	2017	2018	2016	2017	2018
	£ Per head					
Number in sample	18	18	17	17	18	18
Stock sales	**1222.49**	**1280.78**	**1207.46**	**1285.47**	**1312.68**	**1306.19**
Less stock purchases	777.25	822.73	805.67	838.51	827.37	755.81
Net Output	**445.24**	**458.05**	**401.79**	**446.96**	**484.71**	**550.38**
Variable costs						
Concentrates	148.70	200.18	140.40	141.23	141.33	194.70
Other feeds	15.20	15.35	14.54	17.11	16.51	25.73
Forage	31.46	32.18	40.03	46.01	44.23	40.92
Total feed and forage	195.37	247.71	194.97	203.94	202.07	261.35
Veterinary	17.74	15.13	12.62	11.38	17.19	17.70
Bedding	31.93	31.84	29.21	33.87	30.71	50.67
Other costs	33.76	43.76	32.83	42.48	40.44	37.86
Total variable costs	**278.80**	**338.44**	**269.63**	**291.68**	**290.41**	**367.58**
Gross Margin	**166.44**	**119.61**	**132.16**	**155.28**	**194.30**	**182.80**
Fixed costs	**240.64**	**253.05**	**218.55**	**260.02**	**246.74**	**242.34**
Net Margin	**(-)74.20**	**(-)133.44**	**(-)86.39**	**(-)104.75**	**(-)52.44**	**(-)59.54**
Physical performance						
Feeding period (days)	307	287	275	408	423	410
Start Wt (kg lwt)	338	357	367	365	354	332
Average carcase weight (kg dwt)	372	365	347	365	362	367
Daily LWT gain (kg)	0.99	0.95	0.80	0.65	0.64	0.73
Mortality (%)	0.5	0.7	1.0	0.4	0.9	1.1
Sale price (£ per kg dwt)	332	354	352	352	362	356
Purchase price (£ per kg lwt)	229	229	217	229	231	225
Gross Margin per day (£ per day of feeding period)	0.54	0.42	0.48	0.38	0.44	0.46

Results from LFA sheep flocks

	LFA Upland Sheep Flocks			LFA Hill Sheep Flocks		
	2016	2017	2018	2016	2017	2018
	£ Per ewe					
Number in sample	34	32	31	22	22	25
Lamb sales	**104.54**	**105.55**	**102.63**	**49.34**	**56.04**	**47.50**
Wool	2.86	2.51	2.25	1.92	1.50	1.81
Gross Output	**107.41**	**108.06**	**104.88**	**51.25**	**57.54**	**49.31**
Less replacement costs	13.59	14.26	14.42	10.08	11.22	12.85
Net Output	**93.82**	**93.80**	**90.46**	**41.17**	**46.32**	**36.46**
Variable costs						
Concentrates	12.07	12.73	13.48	4.53	7.17	8.14
Forage cost	5.50	6.32	5.84	1.60	2.83	1.49
Roughages	3.31	2.76	4.35	2.43	1.80	2.34
Total feed and forage	20.88	21.81	23.67	8.56	11.80	11.97
Bedding	1.19	1.75	1.25	0.14	0.20	0.08
Veterinary	9.03	7.77	8.34	4.57	5.71	5.63
Other costs	7.77	7.53	8.10	4.96	4.96	6.45
Total variable costs	**38.87**	**38.86**	**41.36**	**18.23**	**22.67**	**24.12**
Gross Margin	**54.94**	**54.94**	**49.10**	**22.94**	**23.65**	**12.33**
Fixed costs	**50.41**	**47.26**	**48.75**	**40.47**	**42.72**	**38.48**
Net Margin	**4.53**	**7.68**	**0.35**	**(-)17.53**	**(-)19.07**	**(-)26.15**

	LFA Upland Sheep Flocks			LFA Hill Sheep Flocks		
Physical performance						
Average no. of ewes	496	500	567	626	587	656
Lambs born/ 100 ewes	165	161	157	115	118	105
Lambs died/ 100 ewes	20	17	17	17	16	16
Lambs reared/ 100 ewes	145	144	140	98	102	89
Lambs sold/retained:						
Slaughter %	70	65	57	6	11	4
Stores %	16	21	20	58	52	49
Breeding %	14	13	23	36	37	36
Return per lamb sold finished (£)	73.24	77.07	77.79	61.45	67.35	64.33
Carcase weight lambs sold finished (kg)	20.0	19.7	19.5	16.8	17.3	16.7
Return per lamb sold store (£)	58.38	56.49	56.30	43.91	44.45	43.37

Results from Lowground sheep flocks

	2016	2017	2018
		£ Per ewe	
Number in sample	13	15	13
Lamb sales	**136.18**	**145.88**	**137.05**
Wool	3.00	2.86	2.25
Gross Output	**139.18**	**148.74**	**139.30**
Less replacement costs	13.52	13.76	14.28
Net Output	**125.66**	**134.98**	**125.02**
Variable costs			
Concentrates	19.47	17.57	20.85
Forage cost	5.76	5.95	8.38
Roughages	2.16	2.10	4.35
Total feed and forage	27.39	25.62	33.58
Bedding	0.47	0.81	1.29
Veterinary	9.57	9.54	9.40
Other costs	11.46	9.44	9.78
Total variable costs	**48.89**	**45.41**	**54.05**
Gross Margin	**76.77**	**89.57**	**70.97**
Fixed costs	**50.36**	**47.94**	**52.58**
Net Margin	**26.40**	**41.63**	**18.39**

Physical performance			
Average no. of ewes	567	424	515
Lambs born/ 100 ewes	185	179	177
Lambs died/ 100 ewes	18	18	24
Lambs reared/ 100 ewes	167	161	153
Lambs sold/retained:			
Slaughter %	91	84	83
Stores %	2	6	5
Breeding %	7	10	12
Return per lamb sold finished (£)	80.96	92.55	92.30
Carcase weight lambs sold finished (kg)	20.0	20.7	20.6
Return per lamb sold store (£)	66.07	63.40	65.41

Store lamb finishing

	2016	2017	2018
		£ Per lamb	
Number in sample	13	15	13
Lamb sales	**67.76**	**79.97**	**75.94**
Less store lamb purchase costs	48.66	48.69	50.73
Output	**19.10**	**31.29**	**25.21**
Concentrates	3.02	3.94	5.03
Other feed	0.50	0.43	0.32
Forage	2.59	1.77	2.28
Total feed and forage	6.12	6.14	7.63
Bedding	0.02	0.01	0
Veterinary	1.45	1.61	1.42
Other costs	3.71	4.07	4.23
Total variable costs	**11.30**	**11.83**	**13.28**
Gross Margin	**7.80**	**19.46**	**11.93**
Fixed costs	**6.42**	**7.37**	**7.23**
Net Margin	**1.38**	**12.09**	**4.70**
Physical performance			
Feeding period (days)	156	144	165
Liveweight at start (kg)	29.4	28.7	30.4
Liveweight at finish (kg)	39.4	39.2	38.5
Mortality (%)	3.4	2.3	4.6
Concentrates (kg)	17	18	19
Average carcase weight (kg dwt)	18.5	18.4	18.0

Glossary

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:
Costs which vary directly with the size of production of the enterprise and which can be easily allocated to an enterprise.

Gross margin:
The surplus income left over after deducting variable costs from output. It is the contribution of the enterprise towards covering the farmer's fixed costs and overheads, rewarding the owner of the business for their work and capital investment.

Fixed costs:
Costs reflecting the overall running of the business but 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 and casual wages.

Contract:
All contract labour and contractor services.

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

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

Depreciation:
Machinery and property depreciation charges.

Finance:
Bank and loan interest and charges.

Administration:
Insurance; professional fees; miscellaneous expenses.

Net margin:
The surplus income left after deducting all costs from the output. It is the contribution the enterprise makes to cover the cost of unpaid family labour and to reward the owner for their investment in the enterprise.

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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