



STOCKTAKE REPORT 2016

This document includes costings
for English cattle and sheep
enterprises in the year
ending 31 March 2016



Stocktake.

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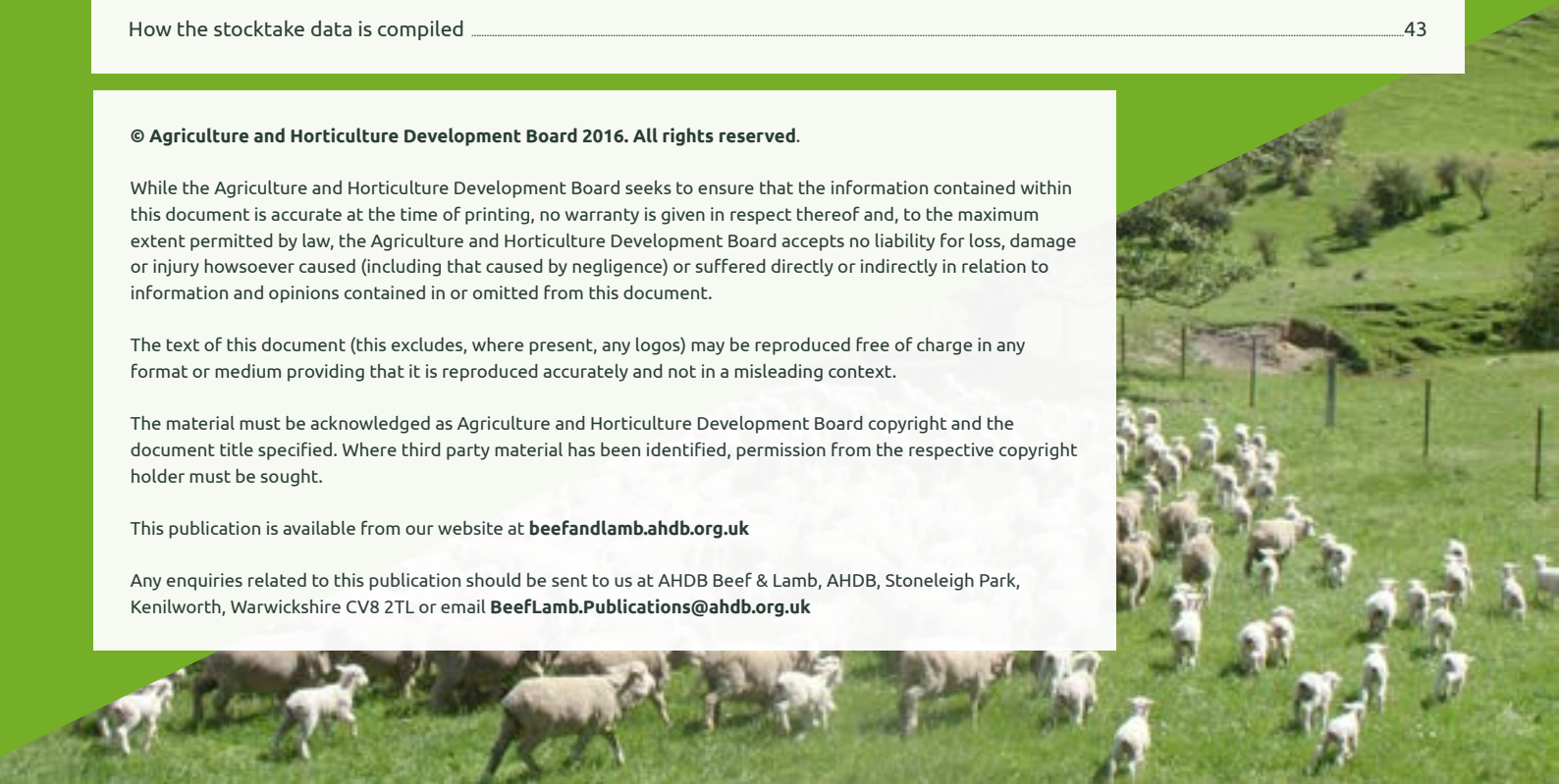
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WELCOME

Welcome to the Stocktake Report 2016, a reference document for the English beef and sheep meat industry against which producers can benchmark their own performance and enterprise costs.

The data contained within this report is from a wide range of farms and enterprises with production years ending in the period between April 2015 and March 2016. This report analyses the economic margins for beef and sheep farm enterprises only, rather than looking at whole farm businesses. There are a number of other income streams that make farms sustainable when beef and sheep enterprises are producing negative margins, including area-based payments, Environmental Stewardship and diversification, including off-farm income. These income streams are excluded from the margins contained in this report.

While global factors have an effect on prices, producers are able to influence many factors that affect the bottom line, notably physical performance and costs. Managing costs while optimising output helps businesses cope with periods of volatility.

This report includes international comparisons showing typical English farms compared with typical farms in other beef and lamb-producing countries. The countries chosen tend to be UK competitors in the global market.



Susannah Bolton
Knowledge Exchange Director

GLOSSARY OF ABBREVIATIONS

DLWG	–	Daily Liveweight Gain
DM	–	Dry matter
Dwt	–	Deadweight
Ha	–	Hectare
Kg	–	Kilogrammes

FW	–	Fresh weight
LU	–	Livestock Unit
Lwt	–	Liveweight
SDA	–	Severely Disadvantaged Area

COST AND PRICE CHANGES DURING 2015

Chart 1: GB deadweight steer price

Cattle prices at the start of 2015 trended below both the two previous years, falling to a low point in May. Prices then rose in July before falling back slightly, remaining relatively stable through to November. There followed a continued decrease from December through to March 2016. This price period reflects the beef enterprises selling finished cattle in this Stocktake report.

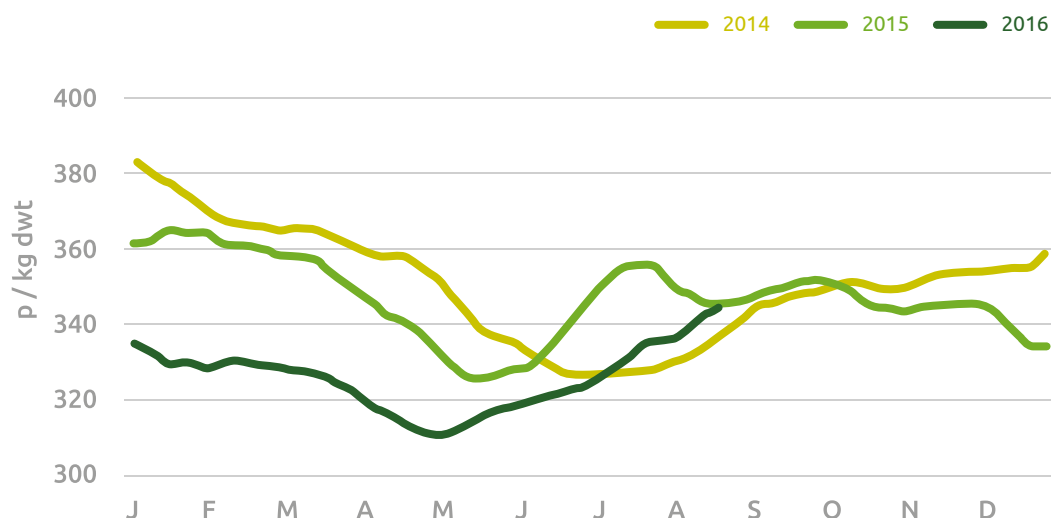


Chart 2: Continental cross yearling steers

In contrast to finished beef prices, 2015 store prices were particularly firm, above both 2013 and 2014 prices, only dropping significantly from mid-November due to finished cattle specification changes. At the beginning of 2016, continental stores were trending below 2015 levels and at a similar level to 2014. Beef enterprises selling yearling spring-born weaned calves in this report will have benefited from the strengths in this market.

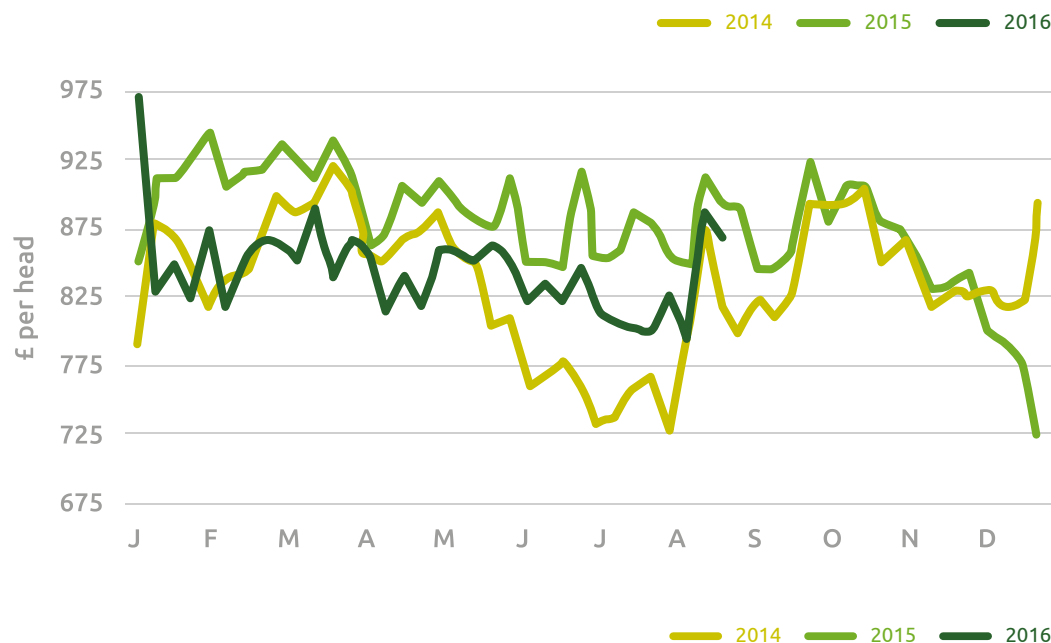


Chart 3: GB deadweight lamb price SQQ

In 2015, the deadweight lamb prices failed to follow the seasonal trend of a spring price rise and were significantly lower than in 2014. From mid-June, prices continued to drop and remained below 2014 levels. The beginning of 2016 saw deadweight lamb prices similar to 2015, with little seasonal variation.

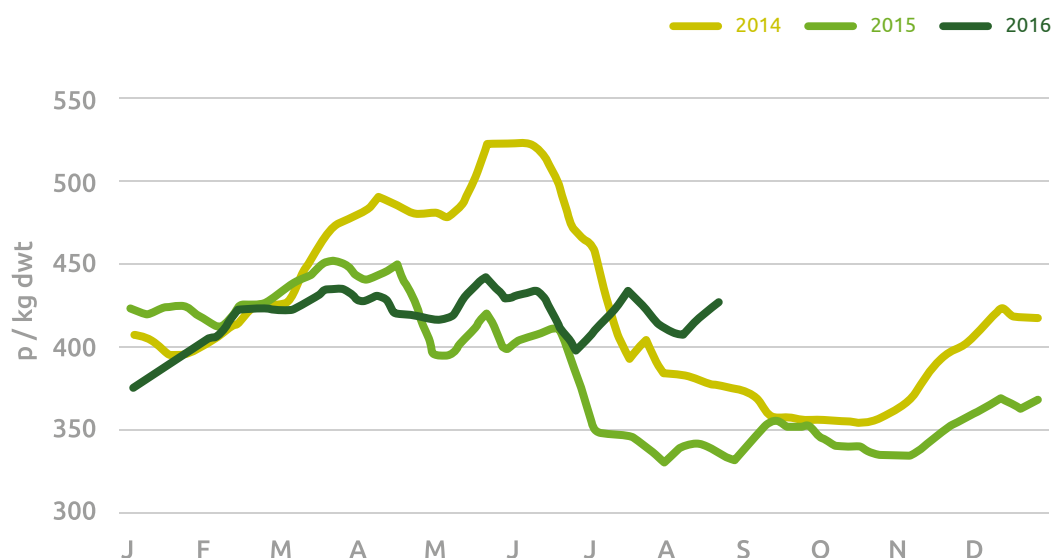


Chart 4: GB store lamb price

Early season 2015 store lamb prices were, on average, below year-earlier levels, dropping in October. Although store lamb prices then trended upwards, they remained below 2014. The lamb finishing enterprises in this report will have purchased or valued lambs on hand in this market.

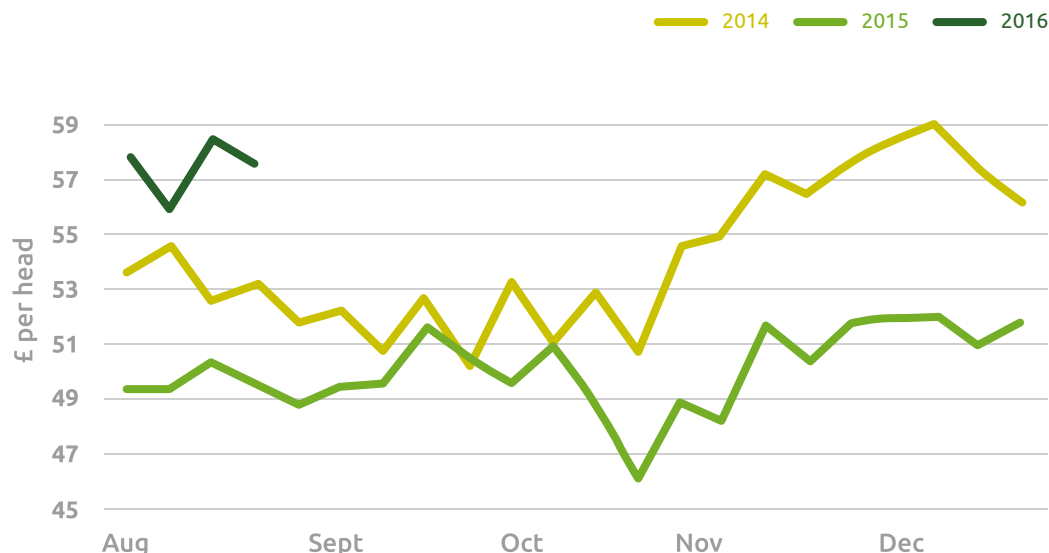
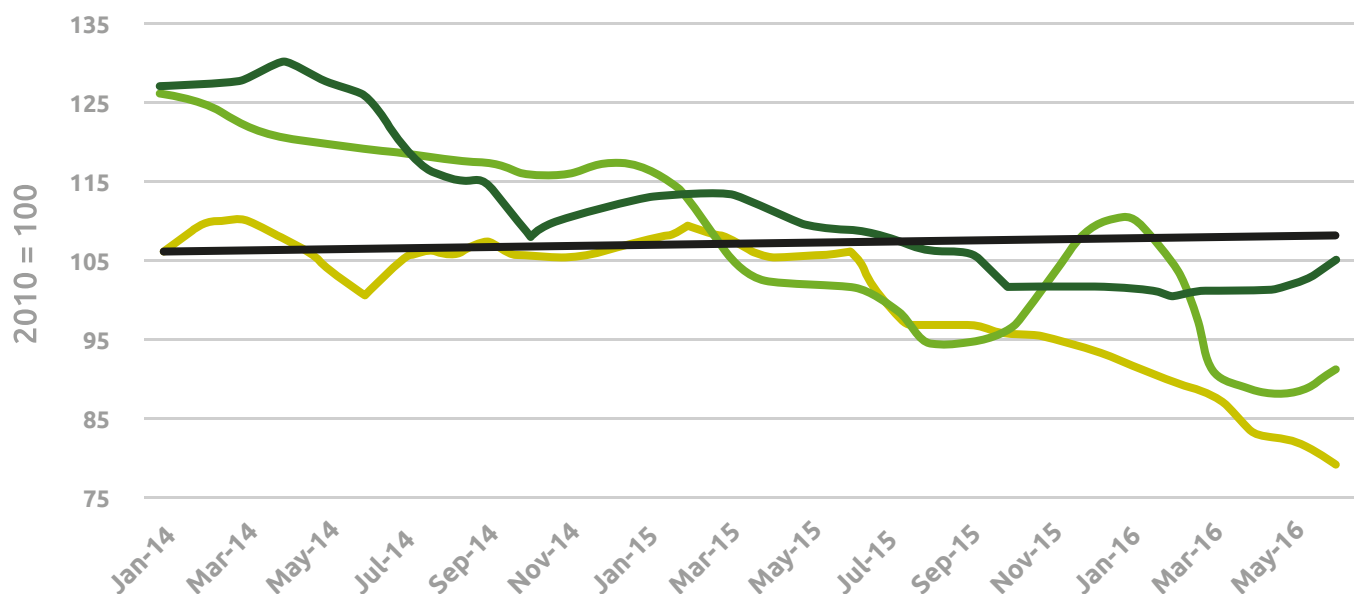


Chart 5: Agricultural input costs (index)

Fertilisers Energy Feed Veterinary



Enterprises in this report will have been affected by different input cost trends. Breeding sheep and suckler herds fed during the winter months of 2014/15 continued to benefit from lower feed prices, due to abundant global crop yields and lower prices. Continued lower feed prices will have benefited beef and lamb finishing enterprises which were finishing animals in 2015/16.

Fertilisers applied in the spring of 2015 were relatively stable compared to the previous year, benefiting any conserved forage for 2015/16 winter feeding. They then fell significantly to benefit the forage available for 2016. Energy costs in this chart are a combination of fuel and electricity. Overall energy costs followed a downward trend throughout 2014 and the majority of 2015.

SUCKLER HERDS

Suckler herd data is obtained from a range of farms with production years ending in the period April 2015 to March 2016. The top and bottom thirds are identified based on the full investment net margin. This means that all other financial and physical performance figures are for the farms in these datasets and are not the top and bottom third for each individual trait.

NON-SEVERELY DISADVANTAGED AREA (NON-SDA) SUCKLER HERDS

Suckler cow enterprises kept on any land defined as non-SDA by Defra. The grass areas can range from short and long-term leys to permanent pasture and the output from the suckler herd is a calf at weaning.

- Top third producers, on average, achieved a positive net margin on a full investment net margin basis
- On average, the cash-only net margin is positive and the full investment net margin negative, but improved compared to the last three years
- Top third producers have higher numbers of calves born alive, shorter calving periods, lower cow mortality and a lower percentage of empty cows/heifers
- Top third producers fed less concentrates and forage to cows on a dry matter basis and used more calf creep than the bottom third
- Top third producers achieved higher daily liveweight gains, meaning their calves were more than 20kg heavier at weaning than bottom third producers
- Top third producers had a lower replacement cost, with the majority having a two-year first-calving policy
- Top third producers used less labour per cow

SEVERELY DISADVANTAGED AREA (SDA) SUCKLER HERDS

- Top third producers achieved a positive net margin on a full investment net margin basis compared to the bottom third who, on average, achieved a negative net margin
- On average, margins improved by £120 per cow to bull compared to the previous year
- Top third producers had lower cow mortality, fewer empty cows, lower replacement costs and the majority have a two-year first-calving policy
- Top third producers used fewer concentrates with higher reliance on forage, resulting in costs per cow lower than the bottom third
- Top third producers achieved more calves born alive and weaned per cow to bull than the bottom third, resulting in higher gross output per cow
- While top third producers had similar total variable costs to the bottom third, higher gross output together with lower fixed costs resulted in a positive full investment net margin

SPRING AND AUTUMN CALVING HERDS

These herds are suckler cow enterprises kept on land defined as non-SDA or SDA by Defra and which calve specifically in the spring or the autumn. The autumn-born calves in this sample are older and, therefore, heavier at weaning than the spring-born calves.

- Spring and autumn calving herds both produced negative full investment net margins on average, although margins have become less negative with top third producers achieving a positive margin this year
- On average, spring and autumn calving herds continue to produce a positive margin on a cash-only net margin basis
- Care should be taken making a direct comparison between spring and autumn calving as the autumn-born calves are weaned at an older age and, therefore, a higher weight and value
- The dataset for the autumn-born calving herds is relatively small and all the top third producers have a policy of first calving their cows at two years old
- When to calve must always be a decision for the individual farm

COMBINED BREEDING/BEEF FINISHING AND COMBINED BREEDING/BEEF STORES

These enterprises are a combination of the suckler cow herd and the related beef enterprise/s on the same farm. The suckler herds may be kept on land classified as non-SDA or SDA. For those defined as combined breeding/beef finishing, the majority of calves are sold finished. For those defined as combined breeding/beef stores, the majority of calves are sold as stores.

INTERNATIONAL COMPARISONS

These international comparisons are provided from the agri benchmark international comparison network. There are 25 country members of the cow-calf (suckler) group with 60 “typical” farms. Comparisons are based on an internationally standardised method of establishing and analysing typical virtual farms that represent production systems and their profitability in each country. The results are shown in US Dollars (USD) as an international comparison base. For more information visit www.agribenchmark.org

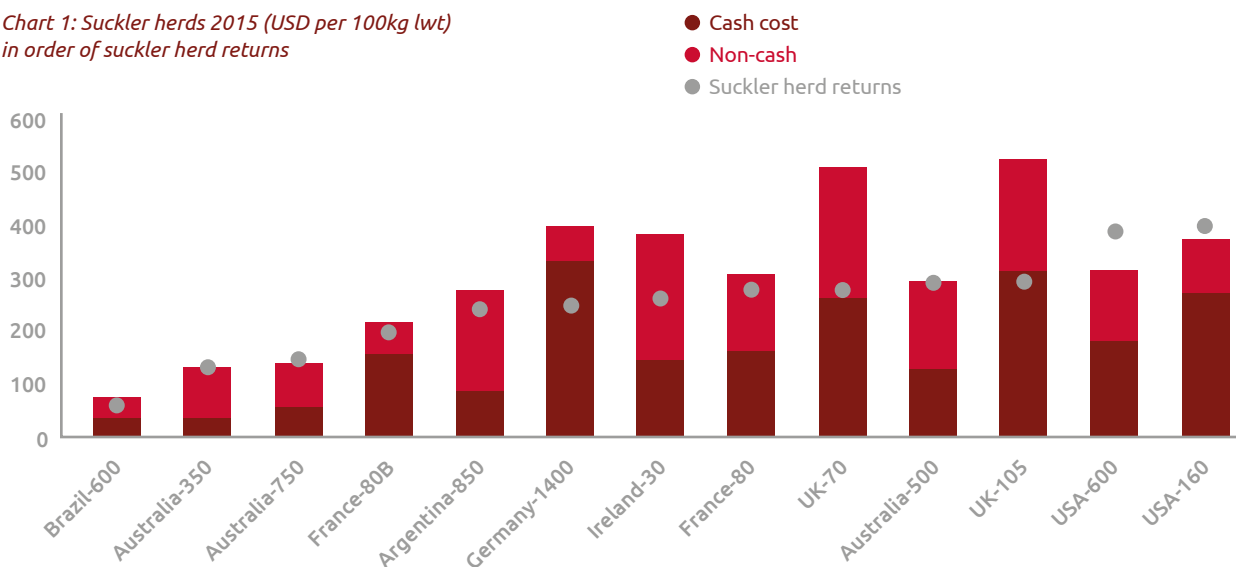
The UK trades and competes in a global market and is, therefore, affected by exchange rates as well as any competitive cost of production. The countries in the chart have been chosen to represent the UK's main competitors and exporting environment for commercial beef. The numbers with each country indicate the amount of cows put to the bull each year. Some Australian herds have typically reduced their livestock numbers since 2014 due to drought. When viewing an electronic copy, if you hover over the name on the bottom axis of the chart there is more information about each typical farm.

The chart is shown in ascending order of total suckler herd returns (weaned calves, cull cows) because, globally, farmers tend to have little control over their market price.

Farmers worldwide have to manage their businesses by optimising output and managing costs within the price framework available to them. The majority of farms are sustainable in the short-term as their returns cover their cash-costs and often enable them to cope with any volatility. Many farms indicate unsustainability in the long-term as the suckler herd returns are not covering their total investment; that is providing sufficient income to cover their non-cash fixed costs of family labour, return on owner-occupied land and depreciation

Suckler herd returns do not include any CAP payments received by European countries.

*Chart 1: Suckler herds 2015 (USD per 100kg lwt)
in order of suckler herd returns*





SUCKLER HERDS

INTERNATIONAL COMPARISONS

Suckler herds 2015 information:

Germany-1400

Mecklenburg-Vorpommern, Germany. Limited Company 2500 ha farm; 50% arable (40% owned). Employed labour equivalent to 22 FT units. 1400 Charolais, Limousin, Angus cows. 96 calves weaned per 100 cows to bull. Finishing most of the weaned calves and selling some as stores.

France-80

Limousin, France. 95ha family farm (10% owned). Family labour equivalent to 1 FT unit. 80 Limousin cows. 90 calves weaned per 100 cows to bull. Finishing weaned calves not required as replacements. Grows own feed.

France-80B

Pays de la Loire, France. 85ha family farm (20% owned). Family labour equivalent to 1 FT unit. 80 Charolais cows. 90 calves weaned per 100 cows to bull. Finishing weaned calves not required as replacements. The farm also has cash crops and grows own feed.

UK-70

South West, England (lowland farm). 200ha family farm (50% owned). Labour 1 FT family unit and 1 FT employee. 70 Continental cross cows (25% dairy genetics). 87 calves weaned per 100 cows to bull. Finishing weaned calves not required as replacements. The farm also has a sheep flock.

UK-105

Yorkshire, England (upland farm). 214ha family farm (15% owned). Family labour 1.25 FT units. 100 Limousin cross cows. 87 calves weaned per 100 cows to bull. Selling weaned calves not required as replacements as stores. The farm also has a sheep flock.

Brazil-600

Acre, Brazil. Rented family farm. 600 Nelore cows. 81 calves weaned per 100 cows to bull. Finishing weaned calves not required as replacements.

Ireland-30

West Ireland. 22ha owned family farm. Part-time family labour. 30 Charolais and continental cross cows. 89 calves weaned per 100 cows to bull. Selling weaned calves as stores.

Australia-350

Victorian Western Districts, Australia. Rented family farm. Family labour equating to 1 FT unit. 350 Angus cows. 89 calves weaned per 100 cows to bull. Finishing the weaned male calves.

USA-160A

Kansas, USA. 1185ha family farm; 45% arable (50% owned). No employed labour. 160 crossbred cows. 92 calves weaned per 100 cows to bull. Selling weaned calves not required as replacements as stores. The farm also has cash crops.

Australia-500

NSW, Australia. 1600ha family farm (15% owned). 2 family members equating to 1 FT unit. 500 Charolais cross Angus cows. 90 calves weaned per 100 cows to bull. Finishing the surplus weaned calves.

USA-600

Montana, USA. 600 British native cross continental (Composite) cows. 90 calves weaned per 100 cows to bull. Selling some breeding heifers and the surplus weaned calves as stores. The farm also has a lease hunting enterprise.

Australia-750

Queensland, Australia. Rented family farm. 2 family members and 1 employee. 750 Bos indicus cows. 75 calves weaned per 100 cows to bull. Finishing the weaned male calves.

Argentina-850

Cañuelas, Argentina. Family farm (15% owned), owner managed with 4 employees. 850 Angus cows. 92 calves weaned per 100 cows to bull. Weaned heifer calves not required as replacements sold as stores and the male weaners finished on farm.



NON-SDA SUCKLER HERDS

Non-SDA suckler herds	Bottom third	Average	Top third	My figures
Number of herds in sample	31	95	31	
Average herd size (cows to bull)	64	88	91	

Financial performance (£ per cow to bull)	Bottom third	Average	Top third	My figures
Calf output	517.80	537.98	591.06	
Other income	3.91	5.02	8.81	
Gross output	521.71	542.99	599.87	
Replacement costs	99.54	62.21	23.58	
Output less replacement costs	422.17	480.78	576.29	

Variable costs	Bottom third	Average	Top third	My figures
Purchased feed including minerals	35.44	26.36	27.73	
Home-grown feed	7.74	10.16	12.45	
Purchased forage	5.15	4.54	5.17	
Home-grown forage (excludes contract)	44.71	39.21	36.50	
Total feed and forage	93.04	80.27	81.85	
Vet and medicine	38.70	34.96	37.25	
Bedding	42.81	28.45	25.13	
Other livestock expenses	25.51	21.63	19.56	
Total variable costs	200.07	165.31	163.79	

Gross margin	222.10	315.47	412.50	
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Fixed costs	Bottom third	Average	Top third	My figures
Labour - paid	75.88	61.25	28.80	
Machinery repairs and spares	32.87	23.02	24.57	
Contracting	55.56	40.02	34.38	
Electricity	3.60	2.15	1.83	
Fuel	37.49	23.90	19.50	
Property maintenance and water	28.69	20.25	15.82	
Land rent (actual)	53.78	50.46	50.84	
Overheads	25.43	19.29	18.91	
Cash-only fixed costs	313.30	240.35	194.64	
Cash-only cost of production	612.91	467.87	382.01	
Cash-only net margin	-91.20	75.12	217.86	

Depreciation	127.07	74.30	50.27	
Finance costs (imputed)	37.07	33.62	32.24	
Labour - unpaid (imputed)	102.41	61.29	55.91	
Land rent (imputed)	87.75	61.68	52.92	
Non-cash fixed costs	354.31	230.88	191.34	
Full investment fixed costs	667.61	471.23	385.98	
Full investment cost of production	967.22	698.75	573.34	
Full investment net margin	-445.51	-155.76	26.53	

Physical performance	Bottom third	Average	Top third	My figures
Cow to bull ratio	30	33	33	
Age at first calving				
Herds 2 year policy (%)	29	46	55	
Herds 2.5 year policy (%)	52	39	32	
Herds more than 2.5 year policy (%)	19	15	13	
Percentage of cows/heifers scanned in calf (%)	93	91	93	
Calves born alive per 100 cows/heifers to bull	88	88	90	
Calves born dead per 100 cows/heifers to bull	3	3	3	
Calves died from birth to weaning per 100 cows/heifers to bull	4	3	3	
Calves weaned per 100 cows/heifers to bull*	87	85	86	
Calf losses from birth to weaning (% of born alive)	4	4	3	
Calving period (first to last calf - weeks)	16.0	15.2	14.6	
Cows and heifers calving in first 3 weeks (%)	32.0	35.1	39.3	
Empty cows/heifers (%)	9.0	9.7	7.3	
Cow mortality (%)	1.5	1.6	1.3	
Herd replacement rate (%)	14.6	16.7	16.4	

Average age at weaning (days)	238	234	235	
Average weight at weaning (kg per head)	296	306	322	
Daily liveweight gain to weaning (kg per day)	1.1	1.1	1.2	
Weaned calf weight produced per forage hectare (kg at 200 days)	204	292	353	

Return per calf (£ per head)	608	636	690	
Calf price (£ per kg lwt)	2.07	2.09	2.15	
Weaned calves sold at weaning (%)	22	9	12	
Weaned calves retained at weaning (%)	78	91	88	

Total FW cow concentrate use (kg per cow)	168	135	102	
Total DM cow concentrate use (kg per cow)	119	84	80	
Average concentrate cost (£ per tonne)	175	139	155	
Total FW forage (kg per cow)	4240	3660	3627	
Total DM forage (kg per cow)	1655	1390	1251	
Creep feed fed (kg per calf weaned)	46	57	79	

Number of grazing weeks	32	32	32	
Stocking rate (LU per ha)	1.1	1.5	1.7	
Inorganic nitrogen use (kg per ha)	35	35	34	

Number of grazing weeks	32	32	32	
Stocking rate (LU per ha)	1.1	1.5	1.7	
Inorganic nitrogen use (kg per ha)	35	35	34	

Labour use - paid hours per cow	32	32	32	
Labour use - unpaid hours per cow	10.5	6.1	5.6	

*includes calves purchased to put on cows.

SUCKLER HERDS

SDA SUCKLER HERDS

SDA suckler herds	Bottom third	Average	Top third	My figures
Number of herds in sample	8	26	8	
Average herd size (cows to bull)	65	80	80	

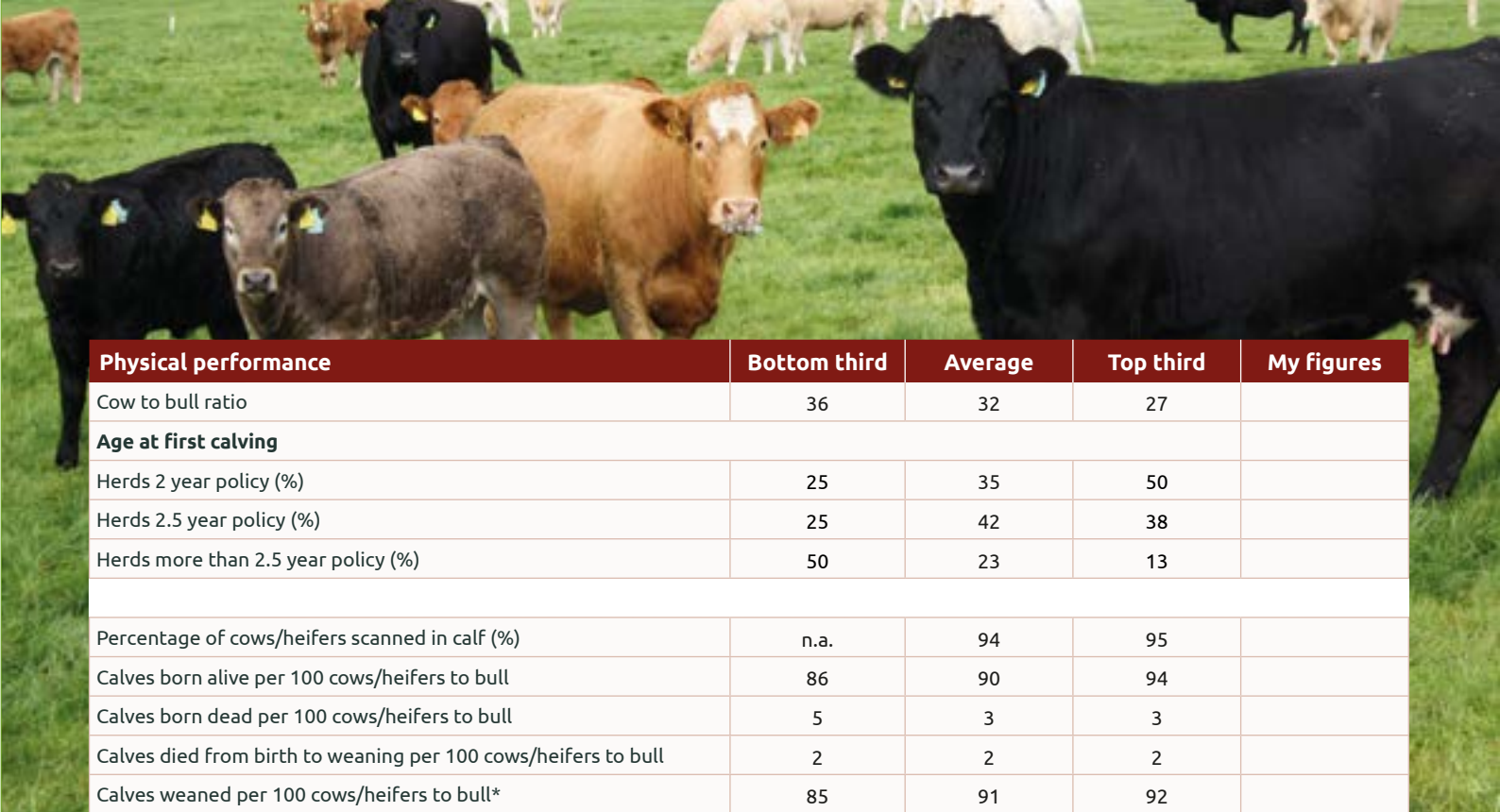
Financial performance (£ per cow to bull)	Bottom third	Average	Top third	My figures
Calf output	510.23	641.02	703.95	
Other income	0.00	0.00	0.00	
Gross output	510.23	641.02	703.95	
Replacement costs	39.48	38.28	20.00	
Output less replacement costs	470.75	602.74	683.95	

Variable costs	Bottom third	Average	Top third	My figures
Purchased feed including minerals	17.95	31.11	15.39	
Home-grown feed	8.32	5.41	0.00	
Purchased forage	20.59	9.42	6.15	
Home-grown forage (excludes contract)	34.82	42.32	38.07	
Total feed and forage	81.68	88.27	59.61	
Vet and medicine	35.16	34.20	20.84	
Bedding	10.76	28.51	32.70	
Other livestock expenses	10.49	14.28	17.18	
Total variable costs	138.10	165.26	130.33	

Gross margin	332.66	437.48	553.62	
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Fixed costs	Bottom third	Average	Top third	My figures
Labour - paid	13.09	44.09	43.13	
Machinery repairs and spares	32.20	25.78	24.27	
Contracting	28.64	31.79	26.86	
Electricity	1.75	2.25	2.71	
Fuel	27.34	24.29	21.68	
Property maintenance and water	10.27	13.71	9.55	
Land rent (actual)	84.51	61.86	42.68	
Overheads	19.53	22.62	21.61	
Cash-only fixed costs	217.31	226.38	192.48	
Cash-only cost of production	394.89	429.92	342.81	
Cash-only net margin	115.34	211.09	361.14	

Depreciation	99.63	72.21	68.79	
Finance costs (imputed)	36.30	33.62	32.91	
Labour - unpaid (imputed)	103.85	66.12	66.14	
Land rent (imputed)	43.53	36.33	58.94	
Non-cash fixed costs	283.31	208.27	226.78	
Full investment fixed costs	500.63	434.66	419.26	
Full investment cost of production	678.20	638.19	569.59	
Full investment net margin	-167.97	2.82	134.36	



Physical performance	Bottom third	Average	Top third	My figures
Cow to bull ratio	36	32	27	
Age at first calving				
Herds 2 year policy (%)	25	35	50	
Herds 2.5 year policy (%)	25	42	38	
Herds more than 2.5 year policy (%)	50	23	13	
Percentage of cows/heifers scanned in calf (%)	n.a.	94	95	
Calves born alive per 100 cows/heifers to bull	86	90	94	
Calves born dead per 100 cows/heifers to bull	5	3	3	
Calves died from birth to weaning per 100 cows/heifers to bull	2	2	2	
Calves weaned per 100 cows/heifers to bull*	85	91	92	
Calf losses from birth to weaning (% of born alive)	2	2	2	
Calving period (first to last calf - weeks)	12.4	14.1	17.0	
Cows and heifers calving in first 3 weeks (%)	30.9	32.1	29.9	
Empty cows/heifers (%)	10.6	7.8	5.5	
Cow mortality (%)	2.9	2.3	0.8	
Herd replacement rate (%)	12.3	14.2	13.7	

Average age at weaning (days)	236	239	249	
Average weight at weaning (kg per head)	286	301	310	
Daily liveweight gain to weaning (kg per day)	1.1	1.1	1.1	
Weaned calf weight produced per forage hectare (kg at 200 days)	203	235	217	

Return per calf (£ per head)	602	715	767	
Calf price (£ per kg lwt)	2.08	2.36	2.47	
Weaned calves sold at weaning (%)	14	18	15	
Weaned calves retained at weaning (%)	86	82	85	

Total FW cow concentrate use (kg per cow)	85	77	49	
Total DM cow concentrate use (kg per cow)	73	57	42	
Average concentrate cost (£ per tonne)	202	181	229	
Total FW forage (kg per cow)	4100	5508	5254	
Total DM forage (kg per cow)	1270	1648	1554	
Creep feed fed (kg per calf weaned)	6	81	4	

Number of grazing weeks	34	32	33	
Stocking rate (LU per ha)	1.0	1.1	1.0	
Inorganic nitrogen use (kg per ha)	33	37	22	

Labour use - paid hours per cow	1.5	4.4	4.7	
Labour use - unpaid hours per cow	10.3	6.7	6.8	

*includes calves purchased to put on cows.

SPRING AND AUTUMN CALVING SUCKLER HERDS

Spring and autumn calving suckler herds	Spring calving average	Autumn calving average	My figures
Number of herds in sample	68	13	
Average herd size (cows to bull)	90	67	

Financial performance (£ per cow to bull)	Spring calving average	Autumn calving average	My figures
Calf output	535.91	589.74	
Other income	4.67	0.00	
Gross output	540.59	589.74	
Replacement costs	55.64	48.20	
Output less replacement costs	484.95	541.54	

Variable costs	Spring calving average	Autumn calving average	My figures
Purchased feed including minerals	25.30	22.64	
Home-grown feed	11.07	3.51	
Purchased forage	5.12	11.28	
Home-grown forage (excludes contract)	36.70	44.60	
Total feed and forage	78.19	82.03	
Vet and medicine	34.13	26.42	
Bedding	26.46	25.25	
Other livestock expenses	18.46	25.10	
Total variable costs	157.24	158.80	

Gross margin	327.71	382.74	
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Fixed costs	Spring calving average	Autumn calving average	My figures
Labour - paid	70.81	30.74	
Machinery repairs and spares	22.63	21.92	
Contracting	37.00	38.14	
Electricity	2.69	1.34	
Fuel	22.21	19.40	
Property maintenance and water	18.81	15.29	
Land rent (actual)	53.16	54.31	
Overheads	18.68	18.93	
Cash-only fixed costs	246.00	200.08	
Cash-only cost of production	458.88	407.08	
Cash-only net margin	81.70	182.66	

Depreciation	63.49	72.84	
Finance costs (imputed)	32.27	30.52	
Labour - unpaid (imputed)	45.37	59.27	
Land rent (imputed)	55.33	37.74	
Non-cash fixed costs	196.46	200.37	
Full investment fixed costs	442.47	400.45	
Full investment cost of production	655.35	607.45	
Full investment net margin	-114.76	-17.71	



Physical performance	Spring calving average	Autumn calving average	My figures
Cow to bull ratio	32	36	
Age at first calving			
Herds 2 year policy (%)	53	54	
Herds 2.5 year policy (%)	28	31	
Herds more than 2.5 year policy (%)	19	15	
Percentage of cows/heifers scanned in calf (%)	91	90	
Calves born alive per 100 cows/heifers to bull	88	89	
Calves born dead per 100 cows/heifers to bull	3	4	
Calves died from birth to weaning per 100 cows/heifers to bull	3	1	
Calves weaned per 100 cows/heifers to bull*	85	87	
Calf losses from birth to weaning (% of born alive)	4	1	
Calving period (first to last calf - weeks)	15.3	11.9	
Cows and heifers calving in first 3 weeks (%)	36.6	33.2	
Empty cows/heifers (%)	10.4	9.1	
Cow mortality (%)	1.8	2.2	
Herd replacement rate (%)	17.1	14.2	
Average age at weaning (days)	224	280	
Average weight at weaning (kg per head)	300	346	
Daily liveweight gain to weaning (kg per day)	1.2	1.1	
Weaned calf weight produced per forage hectare (kg at 200 days)	289	328	
Return per calf (£ per head)	636	674	
Calf price (£ per kg lwt)	2.12	1.94	
Weaned calves sold at weaning (%)	6	9	
Weaned calves retained at weaning (%)	94	91	
Total FW cow concentrate use (kg per cow)	136	113	
Total DM cow concentrate use (kg per cow)	75	74	
Average concentrate cost (£ per tonne)	126	142	
Total FW forage (kg per cow)	3382	5217	
Total DM forage (kg per cow)	1338	1543	
Creep feed fed (kg per calf weaned)	60	40	
Number of grazing weeks	33	34	
Stocking rate (LU per ha)	1.4	1.7	
Inorganic nitrogen use (kg per ha)	30	50	
Labour use - paid hours per cow	6.2	3.0	
Labour use - unpaid hours per cow	4.7	5.8	

*includes calves purchased to put on cows.

SUCKLER HERDS

COMBINED BREEDING HERD/BEEF

Combined breeding herd/beef	Combined breeding/beef finishing	Combined breeding/beef stores	My figures
Number of herds in sample	29	17	
Average herd size (cows to bull)	90	74	

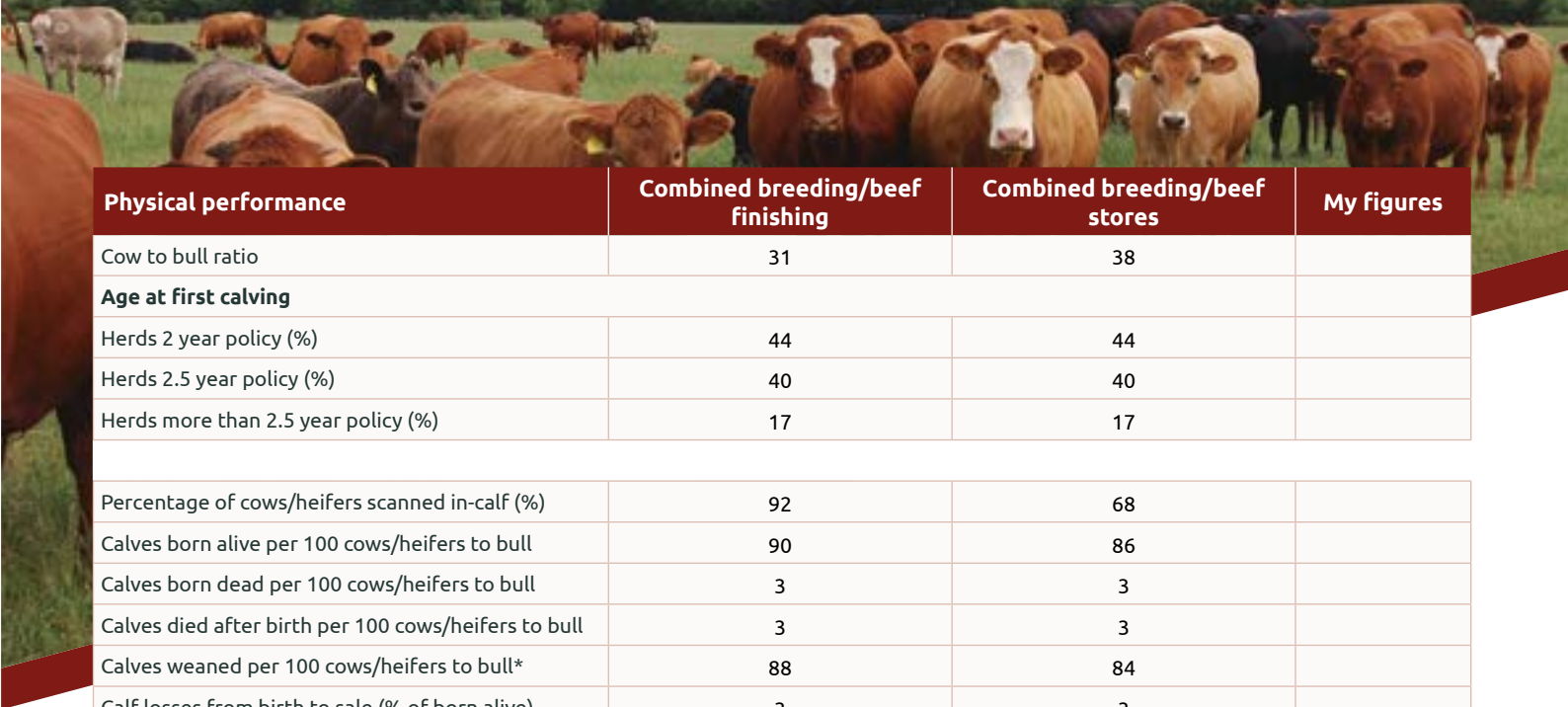
Financial performance (£ per cow to bull)	Combined breeding/beef finishing	Combined breeding/beef stores	My figures
Calf output	1076.45	713.43	
Other income	17.96	1.11	
Gross output	1094.41	714.54	
Replacement costs	49.35	80.53	
Output less replacement costs	1045.06	634.01	

Variable costs	Combined breeding/beef finishing	Combined breeding/beef stores	My figures
Purchased feed including minerals	117.00	80.59	
Home-grown feed	76.98	5.92	
Purchased forage	12.10	10.24	
Home-grown forage (excludes contract)	65.15	42.51	
Total feed and forage	271.24	139.26	
Vet and medicine	51.92	37.18	
Bedding	65.32	51.56	
Other livestock expenses	40.12	38.90	
Total variable costs	428.60	266.90	

Gross margin	616.46	367.11	
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Fixed costs	Combined breeding/beef finishing	Combined breeding/beef stores	My figures
Labour - paid	123.62	63.84	
Machinery repairs and spares	35.70	49.98	
Contracting	67.77	42.04	
Electricity	4.21	2.68	
Fuel	40.04	33.42	
Property maintenance and water	43.64	24.32	
Land rent (actual)	85.12	107.59	
Overheads	51.50	36.48	
Cash-only fixed costs	451.59	360.35	
Cash-only cost of production	929.54	707.78	
Cash-only net margin	164.87	6.76	

Depreciation	133.00	126.67	
Finance costs (imputed)	64.56	55.35	
Labour - unpaid (imputed)	94.91	122.40	
Land rent (imputed)	75.48	50.63	
Non-cash fixed costs	367.94	355.05	
Full investment fixed costs	819.53	715.40	
Full investment cost of production	1297.48	1062.83	
Full investment net margin	-203.07	-348.29	



Physical performance	Combined breeding/beef finishing	Combined breeding/beef stores	My figures
Cow to bull ratio	31	38	
Age at first calving			
Herds 2 year policy (%)	44	44	
Herds 2.5 year policy (%)	40	40	
Herds more than 2.5 year policy (%)	17	17	
Percentage of cows/heifers scanned in-calf (%)	92	68	
Calves born alive per 100 cows/heifers to bull	90	86	
Calves born dead per 100 cows/heifers to bull	3	3	
Calves died after birth per 100 cows/heifers to bull	3	3	
Calves weaned per 100 cows/heifers to bull*	88	84	
Calf losses from birth to sale (% of born alive)	3	3	
Calving period (first to last calf - weeks)	15.6	11.2	
Cows and heifers calving in first 3 weeks (%)	33.3	36.2	
Empty cows/heifers (%)	8.5	11.2	
Cow mortality (%)	1.7	1.9	
Herd replacement rate (%)	15.0	16.7	

Average age at weaning (days)	234	233	
Average age at sale (days)	576	497	
Average weight at weaning (kg per head)	315	293	
Average liveweight at sale (kg per head)	595	447	
Average carcase weight (kg)	334	190	
Daily liveweight gain birth to sale (kg per day)	1.0	0.9	

Calf return per head finished (£)	1255	509	
Calf return per head store (£)	970	853	
Liveweight sale price all animals (£ per kg lwt)	2.07	1.93	
Liveweight sale price: finished cattle (£ per kg lwt)	2.06	1.43	
Deadweight sale price: finished cattle (£ per kg dwt)	3.79	2.68	
Calves sold finished (%)	90	1	
Calves sold store (%)	10	99	

Total FW cow concentrate use (kg per cow)	152	31	
Average concentrate cost (£ per tonne)	153	219	
Total FW forage (kg per cow)	3001	3432	
Total DM forage (kg per cow)	1223	1608	
Total FW calf concentrate use (kg per calf)	1107	371	
Total FW forage (kg per calf)	4222	2664	
Total DM forage (kg per calf)	1334	1053	

Inorganic nitrogen use (kg per ha)	58	19	
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Labour use - paid hours per cow	10.5	6.0	
Labour use - unpaid hours per cow	9.4	12.2	

*includes calves purchased to put on cows.

BEEF ENTERPRISES

Beef enterprise data is obtained from a range of farms with production years ending in the period April 2015 to March 2016. Where applicable, the top and bottom farms are identified based on the full investment net margin. This means that all other financial and physical performance figures are for the farms in these datasets and are not the top and bottom sample for each individual trait.

Beef finishing enterprises have been sub-divided based on the average age of animals at sale.

BEEF FINISHING

These beef enterprises have sold the majority of animals as finished. The animals may have been transferred from a suckler herd and/or purchased as calves or stores at various ages. The age (up to 16 months, 16 to 24 months, over 24 months) relates to the average age of the animals when they are sold as finished.

- Top half producers in all beef finishing systems achieved positive cash-only net margins
- In general, top half producers in all beef finishing systems had lower total variable costs than bottom half producers
- In beef systems finishing cattle over 16 months of age, bottom half producers purchase older animals at a higher cost than top half producers
- In beef systems finishing cattle up to 16 months of age, top half producers achieved higher daily liveweight gains with a higher reliance on forage rather than concentrates, resulting in lower feed costs
- On average, beef producers finishing cattle achieved a negative net margin on a full investment net margin basis

BEEF STORES

These beef enterprises sell the majority of animals as stores. They are primarily suckler calves kept at weaning for further rearing to sell to other farms for finishing.

- Top third beef store enterprises recorded a positive full investment net margin.
- Full investment net margins improved across all store producers compared to last year
- Compared to bottom third, top third producers purchased lighter animals at a lower price per kg, had higher growth rates over a longer feeding period and sold animals at a higher weight and higher price per head, although a lower price per kg
- Top third producers used less concentrates on a DM basis and used more home-grown forage. They had lower fixed costs and less labour input even though they kept the animals for longer
- Top third producers had higher stocking rates with a longer grazing period



BEEF ENTERPRISES

INTERNATIONAL COMPARISONS

These international comparisons are provided from the agri benchmark international comparison network. There are 30 country members of the beef finishing group with 75 "typical" farms. Comparisons are based on an internationally standardised method of establishing and analysing typical virtual farms that represent production systems and their profitability in each country. The results are shown in US Dollars (USD) as an international comparison base. For more information visit www.agribenchmark.org

The UK trades and competes in a global market and is therefore affected by exchange rates as well as any competitive cost of production. The countries in the chart have been chosen to represent the UK's main competitors and exporting environment for commercial beef. The numbers with each country indicate the amount of animals finished in a year. Some Australian farms have typically reduced numbers due to drought compared to 2014. When viewing an electronic copy, if you hover over the name on the bottom axis of the chart there is more information about each typical farm.

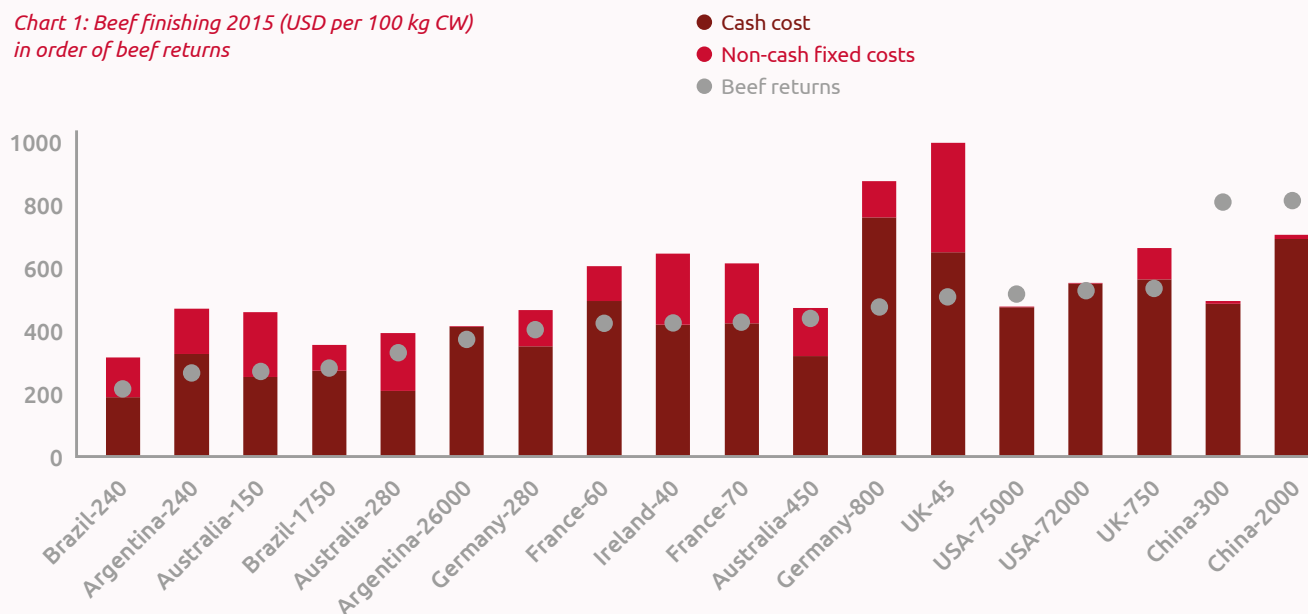
The chart is shown in ascending order of total beef enterprise returns because globally farmers tend to have little control over their market price.

Farmers worldwide have to manage their businesses by optimising output and managing costs within the price framework available to them.

The majority of farms shown in the chart are only just covering their cash costs. During times of high feed prices, those purchasing cattle for yard finishing or feedlots often cope by not purchasing stock. Most of these farms indicate unsustainability in the long-term as the beef returns are not covering their total investment; that is providing sufficient income to cover their non-cash fixed costs of family labour, return on owner-occupied land and depreciation.

Beef returns do not include any CAP payments received by European countries.

*Chart 1: Beef finishing 2015 (USD per 100 kg CW)
in order of beef returns*





BEEF ENTERPRISES

INTERNATIONAL COMPARISONS

Beef finishing information:

Germany-280

Westphalia, Germany. Family farm (50% owned). Family labour 1.5 FT units. 280 purchased Fleckvieh dairy bulls at 45 days of age. Finished on maize silage and concentrates. DLWG 1.2, finished at 720 kgs at 525 days of age. Farm also has cash crops.

France-60

Pays de la Loire, France. 85ha family farm (20% owned) with 1 labour unit. 32 bulls, 11 cows, 14 heifers Charolais from own suckler herd. Finished on maize and grass silage, hay, plus grains and soya bean. DLWG 1.54, calves finished at 720 kgs at 505 days of age. Farm also has cash crops.

Germany-800

Mecklenburg-Vorpommern, Germany. Limited Company 2500ha farm; 50% arable (40% owned). Employed labour equivalent to 22 FT units. 671 bulls and 132 heifers Charolais, Limousin, Angus calves from own suckler herd. Finished on maize and grass silage plus home-grown grain. DLWG 1.2, finished at 600 kgs at 526 days of age.

France-70

Limousin, France. 95ha family farm (10% owned) with no employed labour. 35 bulls, 20 heifers, 14 cows Limousin from own suckler herd. Bulls finished on maize silage and grain; females finished on pasture, silage and grains. DLWG 1.26, calves finished at 600 kg at 464 days of age.

UK-45

South West, England. 200ha family farm (50% owned). Labour 1 family member and 1 employee. 31 steers, 15 heifers Continental cross from own suckler herd. Finished on grass silage and concentrates. DLWG 0.79, finished at 792 kgs at 692 days of age. Farm also has a sheep flock.

Brazil-240

Acre, Brazil. Rented family farm. 240 Nelore calves from own suckler herd. Finished on pasture. DLWG 0.35, finished at 480 kgs at 1095 days of age.

UK-750

Oxfordshire, England. 170ha family farm (40% owned). Labour 1 family unit and 1 employee. 367 steers, 367 heifers purchased Continental cross stores mainly from dairy background. Finished on maize and grass silage, by-products and. DLWG 0.976, finished at 630 kgs at 750 days of age. Farm also has cash crops.

Brazil-1750

Mato Grosso, Brazil. Family farm (50% owned). Family labour 0.5 unit, 4 FT employees. 1,750 steers purchased Nelore suckler calves. Finished on pasture. DLWG 0.47, finished at 520 kgs at 973 days of age.

Ireland-40

Leinster, Ireland. 42 steers purchased Charolais cross suckler calves. Finished on pasture, grass silage and concentrates. DLWG 0.595, finished at 666 kgs at 738 days of age.

China-300

Yuncheng county, Heze, China. Owned family farm with cash crops grown on rented (government) land. Total labour 5 family units plus 10 employees. 300 bulls purchased Simmental cross Yellow cattle suckler calves. Finished on maize silage and wheat straw. DLWG 1.25, finished at 420 kgs at 330 days of age.

USA-7200

Kansas, USA. Family owned farm with 8 employed labour units. 7,200 steers purchased British and Continental weaners. Finished in a feedlot on alfalfa hay, grains and soyabean meal. DLWG 1.44, finished at 578 kgs at 456 days of age.

China-2000

Tang Shan City, He Bei Province, China. Owned family farm. Family labour equivalent to 2 labour units plus paid labour equivalent to 13 units. 2,000 purchased Chinese Black and White dairy bulls. Bought as 180 day old animals. Finished in feedlot on maize silage, straw, corn and meal. DLWG 1.1, finished at 400 kgs at 360 days of age.

USA-75000

Kansas, USA. 395ha Corporate farm with 52 employed labour units. 42,000 steers, 33,000 heifers purchased beef and some dairy breed stores from suckler and dairy farms. Finished in a feedlot on alfalfa hay, distillers grains and corn. DLWG 1.6 to 1.7, finished at 608 to 615 kgs at 472 to 500 days of age.

Australia-150

Victorian Western Districts, Australia. Rented family farm. Family labour equating to 1 unit. 149 Angus steers from own suckler herd. Finished on pasture, hay and oaten grain. DLWG 0.4, finished at 380 to 495 kgs at 547 to 912 days.

Argentinian-380

Canuelas, Argentina. Family farm (15% owned). Owner managed with 4 employees. 390 Angus steers from own suckler herd. Finished on pasture. DLWG 0.46 to 0.49, finished at 330 to 450 kgs at 560 to 760 days of age.

Australia-280

Queensland, Australia. Rented family farm. Family labour equating to 1 unit plus 1 employee. 280 Bos indicus steers from own suckler herd. Finished on pasture, minerals and supplements. DLWG 0.33, finished at 600 kgs at 1200 days of age.

Argentina-26000

Buenos Aires Province, Argentina. Owned farm run by paid labour, 25 FT employees including a manager. 14,250 steers, 5,700 bulls, 6,000 heifers purchased Angus and cross suckler calves. Finished in feedlot on purchased feed (by-products and grains). DLWG 1.4, finished at 330 to 500 kgs at 347 to 687 days of age.

Australia-450

NSW, Australia. 1600ha family farm (15% owned). 2 family members. 450 steer and heifer Angus calves from own suckler herd. Finished on pasture, hay and sorghum. DLWG 0.9, finished at 450 to 475 kgs at 420 days of age.

BEEF STORES

Beef stores	Bottom third	Average	Top third	My figures
Number of herds in sample	15	45	15	
Average head of output	33	53	67	

Financial performance (£ per head output)	Bottom third	Average	Top third	My figures
Cattle output	900.47	927.85	987.27	
Other income	3.55	3.28	5.99	
Gross output	904.02	931.13	993.26	
Purchase costs	666.98	593.67	558.60	
Output less purchase costs	237.04	337.46	434.66	

Variable costs	Bottom third	Average	Top third	My figures
Purchased feed including minerals	107.30	66.35	50.65	
Home-grown feed	15.78	11.53	8.17	
Purchased forage	1.61	9.69	19.91	
Home-grown forage (excludes contract)	13.38	18.51	19.25	
Total feed and forage	138.06	106.07	97.98	
Vet and medicine	12.12	9.88	9.94	
Bedding	22.60	29.14	34.53	
Other livestock expenses	26.89	22.02	24.47	
Total variable costs	199.66	167.11	166.92	

Gross margin	37.38	170.35	267.74	
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Fixed costs	Bottom third	Average	Top third	My figures
Labour - paid	15.93	21.38	24.53	
Machinery repairs and spares	24.44	14.02	9.01	
Contracting	12.77	12.73	13.04	
Electricity	3.31	1.78	1.53	
Fuel	22.60	14.10	11.23	
Property maintenance and water	11.50	14.22	11.21	
Land rent (actual)	20.87	24.03	19.85	
Overheads	47.03	33.07	23.86	
Cash-only fixed costs	158.44	135.34	114.27	
Cash-only cost of production	1025.08	896.12	839.78	
Cash-only net margin	-121.06	35.01	153.47	

Depreciation	84.48	49.95	44.04	
Finance costs (imputed)	22.53	18.91	20.32	
Labour - unpaid (imputed)	54.76	35.38	27.29	
Land rent (imputed)	16.40	18.13	19.85	
Non-cash fixed costs	178.17	122.36	111.50	
Full investment fixed costs	336.61	257.70	225.77	
Full investment cost of production (inc purchase costs)	1203.25	1018.48	951.28	
Full investment net margin	-299.23	-87.35	41.97	



Physical performance	Bottom third	Average	Top third	My figures
Mortality %	0.6	0.3	0.2	
Average age at start (days)	229	220	210	
Average age at sale (days)	462	465	500	
Feeding period (days)	233	245	289	
Average liveweight at start (kg)	299	287	278	
Average liveweight at sale (kg)	438	477	505	
Daily liveweight gain (kg per day)	0.6	0.8	0.8	

Purchase value per head (£)	664	592	558	
Return per head finished (£)	894	1098	1132	
Return per head store (£)	901	914	979	

Purchase price (£ per kg lwt)	2.24	2.08	2.04	
Liveweight sale price all animals (£ per kg lwt)	2.07	1.97	1.97	

Finished (%)	3	8	5	
Store (%)	97	92	95	
Output heifers (%)	38	47	46	
Output steers (%)	40	44	54	
Output bulls (%)	22	9	0	

Total FW concentrate use (kg per head)	642	593	703	
Total DM concentrate use (kg per head)	555	365	313	
Average concentrate cost (£ per tonne)	185	153	126	
Total FW forage (kg per head)	2954	2787	3062	
Total DM forage (kg per head)	826	875	850	

Number of full grazing weeks	10	16	24	
Stocking rate (LU per ha)	1.3	1.3	1.6	
Inorganic nitrogen use (kg per ha)	59	52	63	

Labour use - paid hours per head	1.7	2.0	2.2	
Labour use - unpaid hours per head	6.0	3.6	2.7	

BEEF FINISHING (UP TO 16 MONTHS OF AGE)

Beef finishing (up to 16 months of age)	Bottom Half	Average	Top Half	My figures
Number of herds in sample	9	19	10	
Average head of output	48	56	63	

Financial performance (£ per head output)	Bottom Half	Average	Top Half	My figures
Cattle output	1151.47	1171.00	1184.21	
Other income	30.19	16.89	7.90	
Gross output	1181.67	1187.90	1192.11	
Purchase costs	676.05	691.05	701.20	
Output less purchase costs	505.62	496.84	490.91	

Variable costs	Bottom Half	Average	Top Half	My figures
Purchased feed including minerals	200.63	189.03	181.19	
Home-grown feed	182.13	85.41	20.01	
Purchased forage	0.00	1.91	3.21	
Home-grown forage (excludes contract)	15.92	14.03	12.76	
Total feed and forage	398.67	290.39	217.17	
Vet and medicine	18.57	17.47	16.72	
Bedding	51.58	38.45	29.57	
Other livestock expenses	42.93	37.64	34.06	
Total variable costs	511.76	383.94	297.51	

Gross margin	-6.14	112.91	193.40	
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Fixed costs	Bottom Half	Average	Top Half	My figures
Labour - paid	61.04	56.00	52.59	
Machinery repairs and spares	11.38	8.84	7.12	
Contracting	9.70	7.94	6.76	
Electricity	2.53	1.91	1.49	
Fuel	16.33	12.48	9.88	
Property maintenance and water	20.54	19.22	18.33	
Land rent (actual)	4.30	4.29	3.98	
Overheads	28.43	29.65	30.47	
Cash-only fixed costs	154.24	140.33	130.62	
Cash-only cost of production	1342.05	1215.32	1129.33	
Cash-only net margin	-160.38	-27.42	62.78	

Depreciation	40.48	45.59	49.04	
Finance costs (imputed)	20.43	18.42	17.07	
Labour - unpaid (imputed)	32.99	19.98	11.19	
Land rent (imputed)	7.64	5.93	5.07	
Non-cash fixed costs	101.53	89.92	82.38	
Full investment fixed costs	255.78	230.25	213.00	
Full investment cost of production (inc purchase costs)	1443.58	1305.25	1211.71	
Full investment net margin	-261.91	-117.35	-19.60	



Physical performance	Bottom Half	Average	Top Half	My figures
Mortality %	1.8	1.8	1.8	
Average age at start (days)	223	228	232	
Average age at sale (days)	440	436	432	
Feeding period (days)	217	207	200	
Average liveweight at start (kg)	334	329	327	
Average liveweight at sale (kg)	614	624	631	
Daily liveweight gain (kg per day)	1.3	1.5	1.6	
Average carcase weight (kg)	337	358	374	

Purchase value per head (£)	667	681	691	
Return per head finished (£)	1151	1194	1227	
Return per head store (£)	n.a	917	917	

Purchase price (£ per kg lwt)	1.98	2.04	2.09	
Liveweight sale price all animals (£ per kg lwt)	1.88	1.88	1.88	
Liveweight sale price: finished cattle (£ per kg lwt)	1.88	1.86	1.84	
Deadweight sale price : finished cattle (£ per kg dwt)	3.43	3.35	3.28	

Finished (%)	100	92	86	
Store (%)	0	8	14	
Output heifers (%)	27	20	16	
Output steers (%)	10	5	2	
Output bulls (%)	62	74	82	

Total FW concentrate use (kg per head)	2770	1919	1344	
Total DM concentrate use (kg per head)	2035	1432	1025	
Average concentrate cost (£ per tonne)	151	152	153	
Total FW forage (kg per head)	938	1770	2333	
Total DM forage (kg per head)	289	524	684	

Number of full grazing weeks	6	4	2	
Stocking rate (LU per ha)	3.7	4.0	4.2	
Inorganic nitrogen use (kg per ha)	112	111	110	

Labour use - paid hours per head	6.3	4.7	3.6	
Labour use - unpaid hours per head	3.1	1.8	0.9	

BEEF FINISHING (16 TO 24 MONTHS OF AGE)

Beef finishing (16 to 24 months of age)	Bottom Half	Average	Top Half	My figures
Number of herds in sample	24	49	25	
Average head of output	63	77	91	

Financial performance (£ per head output)	Bottom Half	Average	Top Half	My figures
Cattle output	1166.06	1190.23	1206.49	
Other income	17.10	16.94	16.97	
Gross output	1183.17	1207.17	1223.46	
Purchase costs	628.01	535.60	477.20	
Output less purchase costs	555.16	671.57	746.26	

Variable costs	Bottom Half	Average	Top Half	My figures
Purchased feed including minerals	147.77	119.94	101.08	
Home-grown feed	89.97	60.60	43.51	
Purchased forage	9.65	9.31	8.98	
Home-grown forage (excludes contract)	35.85	42.98	47.85	
Total feed and forage	283.23	232.84	201.41	
Vet and medicine	18.66	15.62	13.48	
Bedding	40.82	36.51	33.57	
Other livestock expenses	37.47	32.75	29.74	
Total variable costs	380.18	317.71	278.20	

Gross margin	174.98	353.85	468.05	
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Fixed costs	Bottom Half	Average	Top Half	My figures
Labour - paid	49.58	46.81	44.50	
Machinery repairs and spares	21.84	23.63	24.68	
Contracting	24.91	47.83	63.05	
Electricity	3.07	3.03	3.10	
Fuel	26.55	25.34	24.67	
Property maintenance and water	20.49	23.89	26.21	
Land rent (actual)	33.89	31.02	30.74	
Overheads	44.29	37.90	33.60	
Cash-only fixed costs	224.62	239.45	250.56	
Cash-only cost of production	1232.80	1092.77	1005.96	
Cash-only net margin	-49.64	114.40	217.50	

Depreciation	89.91	69.35	56.78	
Finance costs (imputed)	27.98	30.35	32.02	
Labour - unpaid (imputed)	57.26	54.48	53.58	
Land rent (imputed)	36.72	27.51	22.26	
Non-cash fixed costs	211.87	181.69	164.64	
Full investment fixed costs	436.49	421.14	415.20	
Full investment cost of production (inc purchase costs)	1444.67	1274.46	1170.60	
Full investment net margin	-261.51	-67.29	52.86	



Physical performance	Bottom Half	Average	Top Half	My figures
Mortality %	1.0	1.6	2.1	
Average age at start (days)	218	188	169	
Average age at sale (days)	610	607	603	
Feeding period (days)	392	419	434	
Average liveweight at start (kg)	267	234	214	
Average liveweight at sale (kg)	603	607	609	
Daily liveweight gain (kg per day)	0.9	0.9	0.9	
Average carcase weight (kg)	331	331	330	

Purchase value per head (£)	621	527	468	
Return per head finished (£)	1182	1198	1209	
Return per head store (£)	865	961	1108	

Purchase price (£ per kg lwt)	2.61	2.47	2.37	
Liveweight sale price all animals (£ per kg lwt)	1.94	1.97	1.99	
Liveweight sale price: finished cattle (£ per kg lwt)	1.95	1.97	1.98	
Deadweight sale price : finished cattle (£ per kg dwt)	3.58	3.63	3.66	

Finished (%)	95	97	98	
Store (%)	5	3	2	
Output heifers (%)	35	34	34	
Output steers (%)	52	55	56	
Output bulls (%)	13	11	10	

Total FW concentrate use (kg per head)	1692	1301	1058	
Total DM concentrate use (kg per head)	1129	928	810	
Average concentrate cost (£ per tonne)	146	145	143	
Total FW forage (kg per head)	5474	5060	5034	
Total DM forage (kg per head)	1812	1576	1508	

Number of full grazing weeks	19	19	18	
Stocking rate (LU per ha)	1.5	1.9	2.2	
Inorganic nitrogen use (kg per ha)	61	65	67	

Labour use - paid hours per head	4.8	4.7	4.5	
Labour use - unpaid hours per head	5.8	5.6	5.6	

BEEF FINISHING (24 MONTHS AND OVER)

Beef finishing (24 months and over)	Bottom Half	Average	Top Half	My figures
Number of herds in sample	11	22	11	
Average head of output	59	235	410	

Financial performance (£ per head output)	Bottom Half	Average	Top Half	My figures
Cattle output	1177.83	1064.60	1048.19	
Other income	3.37	0.43	0.00	
Gross output	1181.20	1065.02	1048.19	
Purchase costs	565.10	577.69	579.52	
Output less purchase costs	616.10	487.33	468.68	

Variable costs	Bottom Half	Average	Top Half	My figures
Purchased feed including minerals	54.37	137.29	149.30	
Home-grown feed	28.23	13.02	10.82	
Purchased forage	3.35	22.55	25.34	
Home-grown forage (excludes contract)	100.99	15.99	3.68	
Total feed and forage	186.93	188.85	189.13	
Vet and medicine	14.73	5.68	4.37	
Bedding	37.30	15.89	12.79	
Other livestock expenses	34.19	46.11	47.84	
Total variable costs	273.16	256.54	254.13	

Gross margin	342.94	230.79	214.55	
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Fixed costs	Bottom Half	Average	Top Half	My figures
Labour - paid	80.96	57.90	54.56	
Machinery repairs and spares	23.29	22.10	21.93	
Contracting	31.22	10.31	7.28	
Electricity	2.12	3.35	3.53	
Fuel	25.31	24.86	24.80	
Property maintenance and water	33.57	7.55	3.78	
Land rent (actual)	42.63	7.75	3.37	
Overheads	63.43	23.87	18.14	
Cash-only fixed costs	302.53	157.70	137.38	
Cash-only cost of production	1140.79	991.92	971.03	
Cash-only net margin	40.41	73.10	77.17	

Depreciation	120.94	50.43	40.22	
Finance costs (imputed)	34.16	21.31	19.45	
Labour - unpaid (imputed)	66.31	19.63	12.87	
Land rent (imputed)	94.89	20.96	9.58	
Non-cash fixed costs	316.30	112.33	82.12	
Full Investment fixed costs	618.83	270.03	219.50	
Full Investment cost of production (inc purchase costs)	1457.09	1104.26	1053.15	
Full Investment net margin	-275.89	-39.23	-4.95	



Physical performance	Bottom Half	Average	Top Half	My figures
Mortality %	1.7	1.9	2.0	
Average age at start (days)	277	528	564	
Average age at sale (days)	778	787	788	
Feeding period (days)	501	259	224	
Average liveweight at start (kg)	270	383	399	
Average liveweight at sale (kg)	612	636	640	
Daily liveweight gain (kg per day)	0.7	1.1	1.2	
Average carcase weight (kg)	331	342	344	

Purchase value per head (£)	557	567	568	
Return per head finished (£)	1164	1060	1046	
Return per head store (£)	1352	1449	1750	

Purchase price (£ per kg lwt)	2.44	1.58	1.46	
Liveweight sale price all animals (£ per kg lwt)	1.92	1.68	1.65	
Liveweight sale price: finished cattle (£ per kg lwt)	1.89	1.67	1.64	
Deadweight sale price : finished cattle (£ per kg dwt)	3.52	3.11	3.06	

Finished (%)	93	99	100	
Store (%)	7	1	0	
Output heifers (%)	41	34	33	
Output steers (%)	59	66	67	
Output bulls (%)	0	0	0	

Total FW concentrate use (kg per head)	794	2699	2975	
Total DM concentrate use (kg per head)	462	1535	1690	
Average concentrate cost (£ per tonne)	151	81	78	
Total FW forage (kg per head)	3855	2004	1736	
Total DM forage (Kg per head)	1151	743	684	

Number of full grazing weeks	35	32	28	
Stocking rate (LU per ha)	1.1	1.1	1.2	
Inorganic nitrogen use (kg per ha)	25	21	16	

Labour use - paid hours per head	8.2	4.6	4.1	
Labour use - unpaid hours per head	7.1	1.9	1.1	

SHEEP ENTERPRISES

Sheep data is obtained from a range of farms with production years ending in the period April 2015 to March 2016. The top and bottom thirds are identified based on the full investment net margin. This means that all other financial and physical performance figures are for the farms in these datasets and are not the top and bottom third for each individual trait.

NON-SEVERELY DISADVANTAGED AREA (NON-SDA) BREEDING FLOCKS

Sheep flocks kept on any land defined as non-SDA by Defra. The grass areas can range from short and long-term leys to permanent pasture. The output from the flock is lambs sold finished, for breeding or as stores.

- Top third producers achieved positive full investment net margins, despite rearing fewer lambs per 100 ewes
- Top third producers had significantly lower labour input than bottom third
- On average, producers' full investment cost of production declined by £11 per ewe compared to the previous year
- Top third producers used significantly less concentrates, forage and inorganic nitrogen and had a longer grazing period
- Top third achieved slightly higher gross output per ewe with higher replacement costs
- Top third producers had significantly lower variable costs, particularly feed, and significantly lower cash and non-cash fixed costs.

SEVERELY DISADVANTAGED AREA (SDA) BREEDING FLOCKS

Sheep flocks kept on land classified as SDA by Defra. The output from the sheep flock is lambs sold finished, for breeding or as stores.

- On average, gross output declined by almost £10 per ewe compared to the previous year, largely due to declines in finished lamb prices
- Most producers achieved a positive margin on a cash-only basis with top third producers achieving positive full investment net margins
- Top third producers both produced and reared more lambs per ewe than both the bottom third and overall average
- Top third had lower ewe mortality and fewer empty ewes
- Savings in non-cash fixed costs partially offset some of the decline in returns
- Bottom third producers' physical performance improved significantly, relative to the average compared to last year
- Bottom third's full investment net margin improved by £14 per ewe compared to last year, but they are still losing on average £40 per ewe and had a heavier reliance on concentrate and creep feed

NON-SDA FEBRUARY/MARCH LAMBING FLOCKS

Sheep flocks kept on land defined as non-SDA by Defra where the majority of sheep lamb in February and/or March. The flocks tend to be housed prior to lambing.

- Top third producers achieved positive full investment net margins, although, on average, full investment margins were lower than last year
- On average, producers achieved positive cash-only net margins
- Top third producers achieved a better margin due to significantly lower variable and fixed costs with lower lambing and rearing percentages

NON-SDA APRIL/MAY LAMBING FLOCKS

Sheep flocks kept on land defined as non-SDA by Defra where the majority of sheep lamb in April and/or May.

- On average, producers just achieved a positive full investment net margin
- Top third producers achieved positive full investment net margins, while bottom third producers failed to achieve a positive net margin even on a cash-only basis
- Top third producers effectively managed cash-only fixed costs
- Top third producers had significantly lower feed and forage costs compared to bottom third

LAMB FINISHING

Lambs that have been retained and/or purchased, usually in the autumn, for further rearing to finish. Lambs may be grazed on grass or forage crops and kept at home or away-grazed.

- On average, producers achieved positive full investment net margins, but there was a significant difference between bottom third and top third producers
- Bottom third failed to achieve a positive cash-only net margin
- Despite a similar feeding period as the average, the top third fed less concentrates and achieved heavier carcase weights, but spent more on home-grown forage
- Top third producers had lower fixed costs in all areas, particularly in labour and land rent



SHEEP ENTERPRISES

INTERNATIONAL COMPARISONS

These international comparisons are provided from the agri benchmark international comparison network. There are 15 country members of the breeding sheep group with 35 “typical” farms. Comparisons are based on an internationally standardised method of establishing and analysing typical virtual farms that represent production systems and their profitability in each country. The results are shown in US Dollars (USD) as an international comparison base. *For more information visit www.agribenchmark.org*

The UK trades and competes in a global market and is therefore affected by exchange rates as well as any competitive cost of production. The countries in the chart have been chosen to represent the UK’s main competitors and exporting environment for commercial lamb. The numbers with each country indicate the amount of ewes put to the ram each year. When viewing an electronic copy, if you hover over the name on the bottom axis of the chart there is more information about each typical farm.

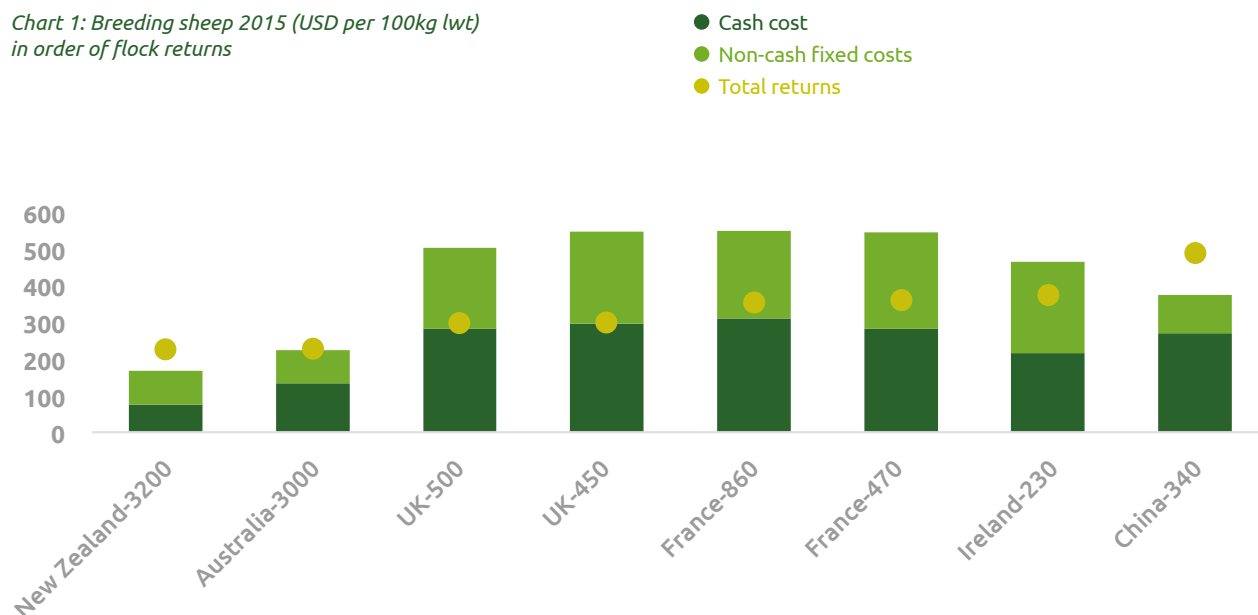
The chart is shown in ascending order of total sheep returns (lamb sales, cull sales and wool) because globally farmers tend to have little control over their market price.

Farmers worldwide have to manage their businesses by optimising output and managing costs within the price framework available to them.

The farms shown in the chart are covering their cash costs and are sustainable in the short-term. However, many of these farms indicate unsustainability in the long-term as the breeding sheep returns are not covering their total investment; that is providing sufficient income to cover their non-cash fixed costs of family labour, return on owner-occupied land and depreciation.

Sheep returns do not include any CAP payments received by European countries.

Chart 1: Breeding sheep 2015 (USD per 100kg lwt)
in order of flock returns





SHEEP ENTERPRISES

INTERNATIONAL COMPARISONS

Sheep finishing information:

France-470

Pays de la Loire, France. Vendéen and Rouge de l'Ouest ewes and rams. 148 lambs weaned per 100 ewes; 40kgs at 90 days. Farm also has cash crops.

UK-500

North East, England (upland farm). Swaledale ewes and rams. 137 lambs weaned per 100 ewes; 30 kgs at 150 days. Farm also has suckler cows and finishes the weaned calves.

France-860

Poitou-Charentes, France. Crossbred ewes with Charolais, Vendéen and Texel rams. 112 lambs weaned per 100 ewes; 39 kgs at 90 days. Farm also has cash crops.

China-340

Inner Mongolia, China. Mongolia ewes and rams. 91 lambs weaned per 100 ewes; 20kgs at 90 days.

Ireland-230

West Ireland. Belclare cross ewes with Charolais and Suffolk rams. 143 lambs weaned per 100 ewes; 36 kgs at 100 days. Farm also has suckler cows.

Australia-3000

Western Victoria, Australia. CoopworthX ewes with Dorset rams. 140 lambs weaned per 100 ewes; 30kgs at 112 days.

UK-450

South West, England (lowland farm). Lleyen ewes with Texel and Charolais rams. 160 lambs weaned per 100 ewes; 40 kgs at 120 days. Farm also has suckler cows and finishes the weaned calves.

New Zealand-3200

East Coast North Island, New Zealand. Romney ewes and rams. 111 lambs weaned per 100 ewes; 35kgs at 106 days. Farm also has a beef finishing enterprise.



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NON-SDA BREEDING FLOCKS

Non-SDA breeding flocks	Bottom third	Average	Top third	My figures
Number of flocks in sample	29	89	29	
Average flock size	373	688	986	

Financial performance (£ per ewe to ram)	Bottom third	Average	Top third	My figures
Lamb output	89.44	90.62	91.39	
Other income	2.43	3.08	3.68	
Gross output	91.87	93.70	95.07	
Replacement costs	7.81	9.18	9.53	
Output less replacement costs	84.06	84.52	85.55	

Variable costs	Bottom third	Average	Top third	My figures
Purchased feed including minerals	15.83	8.08	3.69	
Home-grown feed	0.41	0.39	0.31	
Purchased forage	0.93	0.35	0.11	
Home-grown forage (excludes contract)	8.70	4.88	3.46	
Total feed and forage	25.87	13.70	7.56	
Vet and medicine	10.19	7.14	5.05	
Bedding	1.69	0.75	0.38	
Other livestock expenses	8.65	8.00	8.20	
Total variable costs	46.40	29.59	21.20	

Gross margin	37.66	54.93	64.35	
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Fixed costs	Bottom third	Average	Top third	My figures
Labour - paid	18.29	10.62	8.35	
Machinery repairs and spares	2.79	2.18	1.71	
Contracting	4.14	2.66	2.12	
Electricity	0.29	0.24	0.14	
Fuel	3.77	2.73	2.31	
Property maintenance and water	2.32	1.56	0.90	
Land rent (actual)	10.86	7.37	6.08	
Overheads	5.81	3.88	2.97	
Cash-only fixed costs	48.27	31.24	24.56	
Cash-only cost of production	102.47	70.01	55.29	
Cash-only net margin	-10.60	23.69	39.79	

Depreciation	9.47	6.11	4.77	
Finance costs (imputed)	1.78	1.38	1.14	
Labour - unpaid (imputed)	17.03	12.78	9.08	
Land rent (imputed)	13.82	9.77	7.43	
Non-cash fixed costs	42.11	30.04	22.42	
Full investment fixed costs	90.38	61.27	46.99	
Full investment cost of production	144.58	100.04	77.71	
Full investment net margin	-52.71	-6.34	17.36	



Physical performance	Bottom third	Average	Top third	My figures
Ewe to ram ratio	41	46	51	
Scanning percentage per ewe scanned (%)	167	170	167	
Lambs born alive per 100 ewes to ram	154	151	148	
Lambs born dead per 100 ewes to ram	7	9	9	
Lambs died in first 48 hours per 100 ewes to ram	9	8	7	
Lambs died after 48 hours per 100 ewes to ram	6	5	5	
Lambs weaned per 100 ewes to ram	141	139	136	
Lambs reared per 100 ewes to ram	141	139	136	
Lamb losses from birth to rearing (% of born alive)	9	8	8	
Empty ewes (%)	5.4	6.0	7.2	
Ewe mortality (%)	4.0	3.3	3.3	
Flock replacement rate (%)	23.1	22.9	23.9	

Average age at weaning (days)	111	116	118	
Average weight at weaning (kg)	34.5	32.7	31.0	
Average liveweight per reared lamb (all lambs) (kg per lamb)	38.9	38.1	37.1	
Average liveweight (kg lwt per lamb sold finished)	42.3	41.9	41.5	
Average carcase weight (kg dwt per lamb sold finished)	19.6	19.4	19.2	
Average store weight (kg lwt per lamb sold store)	32.7	32.7	31.1	
Average age at sale (days)	150	161	169	
Daily liveweight gain to sale (kg per day)	0.25	0.23	0.21	
Lamb weight produced per forage hectare (kg)	339	400	393	

Return per lamb sold finished (£)	69.99	69.13	71.09	
Return per lamb sold store (£)	49.91	50.35	49.46	

Reared lambs sold finished (%)	50	40	31	
Reared lambs sold store (%)	10	10	7	
Reared lambs sold breeding (%)	3	5	6	
Reared lambs valued at end (%)	37	46	56	

Total FW ewe concentrate use (kg per ewe)	42	34	26	
Total DM ewe concentrate use (kg per ewe)	36	25	15	
Average ewe concentrate cost (£ per tonne)	217	179	132	
Total FW forage (kg per ewe)	430	235	179	
Total DM forage (kg per ewe)	106	60	47	
Creep feed per lamb reared (kg per lamb)	16	6	2	

Number of full grazing weeks	45	46	48	
Stocking rate (LU per ha)	0.7	0.9	0.9	
Inorganic nitrogen use (kg per ha)	45	28	20	

Labour use - paid hours per ewe	2.1	1.1	0.8	
Labour use - unpaid hours per ewe	1.7	1.4	1.1	

SDA BREEDING FLOCKS

SDA breeding flocks	Bottom third	Average	Top third	My figures
Number of flocks in sample	10	30	10	
Average flock size	591	814	1091	

Financial performance (£ per ewe to ram)	Bottom third	Average	Top third	My figures
Lamb output	90.72	88.94	99.43	
Other income	1.97	2.45	2.68	
Gross output	92.70	91.39	102.11	
Replacement costs	17.35	14.72	13.94	
Output less replacement costs	75.34	76.68	88.16	

Variable costs	Bottom third	Average	Top third	My figures
Purchased feed including minerals	13.23	9.09	8.55	
Home-grown feed	1.17	0.28	0.00	
Purchased forage	0.45	0.23	0.18	
Home-grown forage (excludes contract)	4.77	4.24	4.79	
Total feed and forage	19.62	13.84	13.51	
Vet and medicine	11.01	8.13	6.60	
Bedding	0.29	0.59	0.82	
Other livestock expenses	7.81	6.91	6.89	
Total variable costs	38.72	29.47	27.82	

Gross margin	36.63	47.20	60.34	
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Fixed costs	Bottom third	Average	Top third	My figures
Labour - paid	7.51	8.58	8.37	
Machinery repairs and spares	3.27	2.07	1.82	
Contracting	3.48	2.48	1.94	
Electricity	0.12	0.22	0.27	
Fuel	3.83	2.77	2.66	
Property maintenance and water	1.47	0.90	0.81	
Land rent (actual)	9.20	4.99	2.84	
Overheads	3.70	2.62	2.51	
Cash-only fixed costs	32.59	24.62	21.23	
Cash-only cost of production	88.66	68.81	63.00	
Cash-only net margin	4.04	22.59	39.11	

Depreciation	9.91	5.64	4.15	
Finance costs (imputed)	1.68	0.96	0.75	
Labour - unpaid (imputed)	27.01	14.75	11.97	
Land rent (imputed)	5.17	4.79	4.63	
Non-cash fixed costs	43.77	26.14	21.50	
Full investment fixed costs	76.36	50.75	42.74	
Full investment cost of production	132.43	94.94	84.50	
Full investment net margin	-39.73	-3.55	17.61	



Physical performance	Bottom third	Average	Top third	My figures
Ewe to ram ratio	41	56	67	
Scanning percentage per ewe scanned (%)	173	164	175	
Lambs born alive per 100 ewes to ram	150	150	160	
Lambs born dead per 100 ewes to ram	10	8	7	
Lambs died in first 48 hours per 100 ewes to ram	9	9	9	
Lambs died after 48 hours per 100 ewes to ram	4	4	4	
Lambs weaned per 100 ewes to ram	143	140	151	
Lambs reared per 100 ewes to ram	143	140	151	
Lamb losses from birth to rearing (% of born alive)	5	7	6	
Empty ewes (%)	5.2	4.6	3.4	
Ewe mortality (%)	5.3	3.8	3.1	
Flock replacement rate (%)	26.9	26.3	24.1	

Average age at weaning (days)	131	118	113	
Average weight at weaning (kg)	32.1	29.9	30.5	
Average liveweight per reared lamb (all lambs) (kg per lamb)	38.0	37.9	38.4	
Average liveweight (kg lwt per lamb sold finished)	40.7	41.5	41.7	
Average carcase weight (kg dwt per lamb sold finished)	19.1	19.5	19.5	
Average store weight (kg lwt per lamb sold store)	31.8	30.7	32.2	
Average age at sale (days)	147	148	150	
Daily liveweight gain to sale (kg per day)	0.25	0.25	0.24	
Lamb weight produced per forage hectare (kg)	413	561	727	

Return per lamb sold finished (£)	55.77	63.27	66.11	
Return per lamb sold store (£)	51.11	45.72	48.63	

Reared lambs sold finished (%)	39	43	42	
Reared lambs sold store (%)	4	9	13	
Reared lambs sold breeding (%)	10	7	10	
Reared lambs valued at end (%)	47	41	35	

Total FW ewe concentrate use (kg per ewe)	64	35	29	
Total DM ewe concentrate use (kg per ewe)	46	28	25	
Average ewe concentrate cost (£ per tonne)	202	225	240	
Total FW forage (kg per ewe)	198	172	194	
Total DM forage (kg per ewe)	75	60	62	
Creep feed per lamb reared (kg per lamb)	7	5	4	

Number of full grazing weeks	49	49	49	
Stocking rate (LU per ha)	0.9	1.2	1.4	
Inorganic nitrogen use (kg per ha)	22	23	32	

Labour use - paid hours per ewe	0.9	0.9	0.9	
Labour use - unpaid hours per ewe	2.8	1.6	1.3	

NON-SDA FEBRUARY/MARCH LAMBING FLOCKS

Feb/March lambing breeding flocks	Bottom third	Average	Top third	My figures
Number of flocks in sample	14	44	14	
Average flock size	352	563	531	

Financial performance (£ per ewe to ram)	Bottom third	Average	Top third	My figures
Lamb output	97.64	95.35	98.81	
Other income	2.13	2.21	2.20	
Gross output	99.78	97.56	101.02	
Replacement costs	15.25	10.72	9.71	
Output less replacement costs	84.52	86.84	91.31	

Variable costs	Bottom third	Average	Top third	My figures
Purchased feed including minerals	22.85	14.09	9.99	
Home-grown feed	0.47	0.46	0.23	
Purchased forage	0.37	0.22	0.37	
Home-grown forage (excludes contract)	7.47	4.93	2.82	
Total feed and forage	31.15	19.70	13.41	
Vet and medicine	10.20	8.03	5.68	
Bedding	2.49	1.26	0.73	
Other livestock expenses	8.53	7.27	6.37	
Total variable costs	52.38	36.25	26.19	

Gross margin	32.14	50.59	65.12	
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Fixed costs	Bottom third	Average	Top third	My figures
Labour - paid	15.58	10.11	6.28	
Machinery repairs and spares	3.29	2.46	2.41	
Contracting	4.90	3.06	2.42	
Electricity	0.29	0.39	0.41	
Fuel	3.88	2.66	2.83	
Property maintenance and water	3.30	2.22	1.56	
Land Rent (actual)	3.41	5.76	6.38	
Overheads	5.97	4.15	4.21	
Cash-only fixed costs	40.62	30.82	26.50	
Cash-only cost of production	108.25	77.79	62.40	
Cash-only net margin	-8.48	19.77	38.62	

Depreciation	12.09	7.77	7.15	
Finance costs (Imputed)	2.13	1.77	1.41	
Labour - unpaid (Imputed)	17.32	15.16	13.98	
Land Rent (Imputed)	14.55	10.70	6.64	
Non-cash fixed costs	46.09	35.40	29.17	
Full investment fixed costs	86.71	66.22	55.66	
Full investment cost of production	154.35	113.19	91.57	
Full investment net margin	-54.57	-15.63	9.45	



Physical performance	Bottom third	Average	Top third	My figures
Ewe to ram ratio	45	42	35	
Scanning percentage per ewe scanned (%)	172	176	180	
Lambs born alive per 100 ewes to ram	164	156	157	
Lambs born dead per 100 ewes to ram	7	9	9	
Lambs died in first 48 hours per 100 ewes to ram	7	8	6	
Lambs died after 48 hours per 100 ewes to ram	5	6	7	
Lambs weaned per 100 ewes to ram	152	144	146	
Lambs reared per 100 ewes to ram	152	143	145	
Lamb losses from birth to rearing (% of born alive)	7	8	8	
Empty ewes (%)	3.6	4.5	3.7	
Ewe mortality (%)	4.7	3.6	3.9	
Flock replacement rate (%)	21.5	21.3	21.9	

Average age at weaning (days)	104	115	129	
Average weight at weaning (kg)	35.8	34.9	34.3	
Average liveweight per reared lamb (all lambs) (kg per lamb)	40.3	40.2	39.9	
Average liveweight (kg lwt per lamb sold finished)	42.0	42.3	42.5	
Average carcase weight (kg dwt per lamb sold finished)	19.5	19.7	19.8	
Average store weight (kg lwt per lamb sold store)	34.2	36.4	35.6	
Average age at sale (days)	140	160	177	
Daily liveweight gain to sale (kg per day)	0.27	0.24	0.22	
Lamb weight produced per forage hectare (kg)	423	480	437	

Return per lamb sold finished (£)	68.56	68.82	70.57	
Return per lamb sold store (£)	52.97	54.27	54.62	

Reared lambs sold finished (%)	65	59	50	
Reared lambs sold store (%)	3	7	12	
Reared lambs sold breeding (%)	0	4	6	
Reared lambs valued at end (%)	32	31	33	

Total FW ewe concentrate use (kg per ewe)	63	51	33	
Total DM ewe concentrate use (kg per ewe)	55	41	26	
Average ewe concentrate cost (£ per tonne)	209	198	209	
Total FW forage (kg per ewe)	309	211	78	
Total DM forage (kg per ewe)	104	63	39	
Creep feed per lamb reared (kg per lamb)	22	11	9	

Number of full grazing weeks	44	45	46	
Stocking rate (LU per ha)	0.8	1.0	0.9	
Inorganic nitrogen use (kg per ha)	53	36	22	

Labour use - paid hours per ewe	1.5	1.0	0.7	
Labour use - unpaid hours per ewe	1.7	1.5	1.4	

NON-SDA APRIL/MAY LAMBING FLOCKS

April/May lambing breeding flocks	Bottom third	Average	Top third	My figures
Number of flocks in sample	14	43	14	
Average flock size	452	836	1393	

Financial performance (£ per ewe to ram)	Bottom third	Average	Top third	My figures
Lamb output	83.37	87.18	88.21	
Other income	2.71	3.69	4.42	
Gross output	86.08	90.88	92.63	
Replacement costs	0.52	8.01	9.46	
Output less replacement costs	85.56	82.87	83.18	

Variable costs	Bottom third	Average	Top third	My figures
Purchased feed including minerals	6.95	3.56	1.82	
Home-grown feed	0.26	0.34	0.26	
Purchased forage	1.30	0.44	0.02	
Home-grown forage (excludes contract)	10.65	4.91	3.46	
Total feed and forage	19.16	9.26	5.56	
Vet and medicine	10.80	6.55	4.76	
Bedding	0.68	0.37	0.29	
Other livestock expenses	8.56	8.45	8.27	
Total variable costs	39.20	24.63	18.88	

Gross margin	46.36	58.24	64.30	
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Fixed costs	Bottom third	Average	Top third	My figures
Labour - paid	19.63	11.07	8.08	
Machinery repairs and spares	3.74	1.99	1.43	
Contracting	3.55	2.42	1.95	
Electricity	0.17	0.12	0.11	
Fuel	5.14	2.80	2.12	
Property maintenance and water	1.52	1.12	0.76	
Land rent (actual)	22.79	8.85	6.68	
Overheads	5.77	3.66	2.45	
Cash-only fixed costs	62.31	32.01	23.58	
Cash-only cost of production	102.03	64.65	51.92	
Cash-only net margin	-15.95	26.23	40.72	

Depreciation	6.92	4.97	4.39	
Finance costs (imputed)	1.24	1.09	1.14	
Labour - unpaid (imputed)	16.25	10.86	8.71	
Land rent (imputed)	8.01	8.85	6.16	
Non-cash fixed costs	32.41	25.77	20.40	
Full investment fixed costs	94.72	57.78	43.98	
Full investment cost of production	134.44	90.41	72.32	
Full investment net margin	-48.37	0.46	20.32	

Physical performance	Bottom third	Average	Top third	My figures
Ewe to ram ratio	42	50	54	
Scanning percentage per ewe scanned (%)	169	165	155	
Lambs born alive per 100 ewes to ram	150	147	142	
Lambs born dead per 100 ewes to ram	6	8	9	
Lambs died in first 48 hours per 100 ewes to ram	10	8	7	
Lambs died after 48 hours per 100 ewes to ram	6	4	4	
Lambs weaned per 100 ewes to ram	136	136	131	
Lambs reared per 100 ewes to ram	136	136	131	
Lamb losses from birth to rearing (% of born alive)	9	8	8	
Empty ewes (%)	6.0	6.8	8.6	
Ewe mortality (%)	3.1	3.1	3.0	
Flock replacement rate (%)	19.0	23.6	25.5	
Average age at weaning (days)	120	118	112	
Average weight at weaning (kg)	32.6	31.3	30.8	
Average liveweight per reared lamb (all lambs) (kg per lamb)	36.0	36.4	37.1	
Average liveweight (kg lwt per lamb sold finished)	42.6	41.4	41.5	
Average carcase weight (kg dwt per lamb sold finished)	19.7	19.1	18.9	
Average store weight (kg lwt per lamb sold store)	30.9	31.4	30.7	
Average age at sale (days)	163	163	164	
Daily liveweight gain to sale (kg per day)	0.21	0.21	0.21	
Lamb weight produced per forage hectare (kg)	246	351	396	
Return per lamb sold finished (£)	68.27	68.94	68.90	
Return per lamb sold store (£)	50.55	49.01	48.54	
Reared lambs sold finished (%)	30	27	27	
Reared lambs sold store (%)	21	11	9	
Reared lambs sold breeding (%)	4	5	7	
Reared lambs valued at end (%)	45	56	56	
Total FW ewe concentrate use (kg per ewe)	17	22	7	
Total DM ewe concentrate use (kg per ewe)	15	13	6	
Average ewe concentrate cost (£ per tonne)	231	147	209	
Total FW forage (kg per ewe)	499	254	196	
Total DM forage (kg per ewe)	104	59	47	
Creep feed per lamb reared (kg per lamb)	5	2	1	
Number of full grazing weeks	47	48	49	
Stocking rate (LU per ha)	0.6	0.8	0.9	
Inorganic nitrogen use (kg per ha)	41	22	15	
Labour use - paid hours per ewe	2.4	1.2	0.8	
Labour use - unpaid hours per ewe	1.6	1.2	0.9	

LAMB FINISHING

Lamb finishing	Bottom third	Average	Top third	My figures
Number of flocks in sample	20	61	20	
Average head of output	229	577	1022	

Financial performance (£ per head output)	Bottom third	Average	Top third	My figures
Lamb output	68.70	73.94	76.41	
Other income	0.00	0.09	0.02	
Gross output	68.70	74.03	76.43	
Purchase costs	53.99	54.39	55.39	
Output less purchase costs	14.71	19.63	21.05	

Variable costs	Bottom third	Average	Top third	My figures
Purchased feed including minerals	2.67	1.37	0.49	
Home-grown feed	0.59	0.27	0.05	
Purchased forage	0.00	0.00	0.00	
Home-grown forage (excludes contract)	1.07	1.70	2.13	
Total feed and forage	4.34	3.33	2.67	
Vet and medicine	1.13	0.85	0.55	
Bedding	0.05	0.04	0.02	
Other livestock expenses	4.04	2.66	2.28	
Total variable costs	9.56	6.87	5.52	

Gross margin	5.15	12.76	15.52	
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Fixed costs	Bottom third	Average	Top third	My figures
Labour - paid	3.32	1.23	0.97	
Machinery repairs and spares	1.41	0.49	0.26	
Contracting	0.70	0.41	0.29	
Electricity	0.03	0.02	0.01	
Fuel	1.57	0.79	0.57	
Property maintenance and water	1.56	0.79	0.39	
Land rent (actual)	2.12	1.09	0.79	
Overheads	3.88	2.62	2.04	
Cash-only fixed costs	14.60	7.44	5.32	
Cash-only cost of production (inc purchase costs)	78.15	68.71	66.23	
Cash-only net margin	-9.45	5.32	10.20	

Depreciation	3.50	1.51	1.10	
Finance costs (imputed)	0.86	0.63	0.60	
Labour - unpaid (imputed)	4.43	1.70	0.93	
Land rent (imputed)	1.96	1.33	1.29	
Non-cash fixed costs	10.76	5.17	3.92	
Full investment fixed costs	25.36	12.61	9.25	
Full investment cost of production	88.90	73.88	70.16	
Full investment net margin	-20.21	0.15	6.28	



Physical performance	Bottom third	Average	Top third	My figures
Mortality (%)	1.1	1.4	1.1	
Feeding period (days)	100	95	91	
Average liveweight at start (kg)	34.7	33.8	33.6	
Average liveweight at sale (kg)	41.2	42.3	42.8	
Daily liveweight gain (kg per day)	0.07	0.10	0.11	
Average carcase weight (kg)	19.3	19.7	19.8	
Purchase value per lamb (£)	53.40	53.69	54.80	
Return per lamb (£)	68.70	73.94	76.41	
Liveweight price all lambs (£ per kg lwt)	1.67	1.75	1.78	
Return per kg deadweight: finished lambs (£ per kg dwt)	3.57	3.77	3.87	
Lambs sold finished (%)	95	96	97	
Lambs sold or retained breeding (%)	5	4	3	
Total FW concentrate use (kg per lamb)	20	9	3	
Average concentrate cost (£ per tonne)	161	179	167	
Inorganic nitrogen use (kg per ha)	14	23	11	
Labour use - paid hours per lamb	0.3	0.1	0.1	
Labour use - unpaid hours per lamb	0.4	0.2	0.1	

MARGINS AND AVERAGE £ PER HECTARE

MARGINS PER HECTARE

The following margins per forage hectare are based on the full economic margin for the enterprise divided by the total forage hectares allocated to that enterprise.

The total forage hectares includes:

- Grass areas, which have been apportioned based on time grazed and number of livestock units in the cases of mixed enterprise grazing. It will include areas cut for conservation and apportioned based on the actual conserved forage fed to different enterprises
- Other grazed forage areas (e.g. forage rye) and areas of grazed catch crops (e.g. stubble turnips). An adjusted catch crop area is used

- Grazed areas of rough grazing which are adjusted for quality
- Crop areas grown to specifically feed to livestock (e.g. forage maize, fodder beet). The area allocated to the enterprise apportioned based on the amounts fed to different enterprises

Forage hectares does not include:

- Areas of away-grazing
- Areas required to grow purchased or home-grown concentrates fed to the enterprise
- Areas required to grow purchased forage
- Areas of stubble or by-product (e.g. vegetable waste) grazed or carted

Average £ per hectare	Non-SDA Breeding Sheep	SDA Breeding Sheep*	Non-SDA Feb/Mar lambing	Non-SDA Ap/May lambing	Lamb finishing	My figures
Net Output	639.91	811.58	723.59	586.82	976.19	
Variable costs	224.02	311.94	302.08	174.40	341.79	
Gross Margin	415.89	499.64	421.51	412.43	634.40	
Cash-only fixed costs	236.52	260.56	256.82	226.69	369.99	
Cash-only Net Margin	179.38	239.08	164.70	185.74	264.41	
Non-cash fixed costs	227.42	276.63	294.97	182.46	257.00	
Full Investment Net Margin	-48.04	-37.55	-130.27	3.27	7.40	

*inc adjusted rough grazing

Average £ per hectare	Non-SDA Suckler herd	SDA Suckler herd*	Spring calving	Autumn calving	My figures
Net Output	610.52	593.48	602.50	767.86	
Variable costs	209.92	162.72	195.35	225.17	
Gross Margin	400.61	430.76	407.15	542.69	
Cash-only fixed costs	305.21	222.91	305.64	283.69	
Cash-only Net Margin	95.40	207.85	101.51	259.00	
Non-cash fixed costs	293.19	205.07	244.09	567.81	
Full Investment Net Margin	-197.79	2.78	-142.58	-25.11	

*inc adjusted rough grazing

Average £ per hectare	Beef stores	Beef finishing 16-24 months of age	Beef finishing over 24 months of age	My figures
Net Output	1102.73	1855.27	890.71	
Variable costs	546.06	877.72	296.76	
Gross Margin	556.67	977.55	593.95	
Cash-only fixed costs	442.26	628.50	336.46	
Cash-only Net Margin	114.41	349.05	257.49	
Non-cash fixed costs	399.84	472.66	373.94	
Full Investment Net Margin	-285.42	-123.61	-116.45	

*inc adjusted rough grazing

BEEF & LAMB KEY PERFORMANCE INDICATORS

Key Performance Indicators (KPIs) are business metrics used to evaluate factors that are crucial to success. They can be used to track performance and identify strengths and weaknesses. Below are some suggested KPIs developed by AHDB Beef & Lamb

Suckler KPIs	AHDB Target
Calves born alive per 100 cows/heifers put to the bull	>95
Calves weaned per 100 cows/heifers put to the bull	>94
Calving period – first to last calf (weeks)	< 12
% of cows/heifers calving in first 3 weeks	>65
200 day calf weight per cow/heifer put to the bull (kgs)	

Beef and lamb growing and finishing enterprises	AHDB Target
Daily liveweight gain on farm	
Mortality (% of animals at start)	< 2

Sheep KPIs	AHDB Target
Scanning percentage per ewe scanned	
% Lamb losses from scanning to rearing (% of lambs scanned)	< 14
Lambs reared per 100 ewes put to the ram	
Average daily liveweight gain birth to weaning (g per day)	> 250g
Weight of lamb reared per ewe to ram (kg)	> 60g

HOW THE STOCKTAKE DATA IS COMPILED

All the data relates to enterprises with production cycles ending during the year to 31 March 2016. Breeding enterprises will usually reflect autumn to autumn. The averages shown are for the whole enterprise sample and weighted by weighting individual enterprise information in the base data by the number of relevant animals in the enterprise.

What the Stocktake figures mean:

AVERAGE HERD/FLOCK SIZE

This is the average number of females put to the bull/ram for this production year. In the case of lamb finishing and beef enterprises, this is the output number.

GROSS OUTPUT

Gross output includes sales and transfers to other farm enterprises, including any on-farm consumption. Other income can include, for example; wool, value of manure transferred to an arable enterprise, compensation receipts.

GROSS MARGIN

The gross margin is the value of gross output minus purchase or replacement costs and less the variable costs applicable to the enterprise.

CASH-ONLY NET MARGIN

The cash-only net margin is the gross margin less cash-only fixed costs.

FULL INVESTMENT NET MARGIN

The full investment net margin is the cash-only net margin less non-cash fixed costs. Non-cash fixed costs include depreciation, the value of family labour, imputed rental cost of owner occupied land and imputed interest on working capital.

Results have been ranked into bottom and top sections based on the full investment net margin per head of output for lamb finishing and beef enterprises, and on the basis of per ewe or cow put to the ram or bull in the case of breeding enterprises.

Variable costs are defined as follows:

PURCHASED FEED INCLUDING MINERALS

Due to the number of alternative feeds (eg by-products, wet feeds) available for feeding to livestock, these feeds are converted to a concentrate equivalent (88% DM) to arrive at a true concentrate feed rate that is shown in the physical performance comparison. The concentrate cost per tonne is calculated for an 88% DM feed equivalent.

HOME-GROWN FEED

Home-grown concentrates (eg barley) are costed to the enterprise at market value.

HOME-GROWN FORAGE VARIABLE COSTS

Includes fertiliser, seed, spray and sundry (eg silage wrap) costs. These are allocated to enterprises depending on the amount of home-grown forage consumed by that enterprise. It includes away-grazing costs but excludes any forage contractor charges.

BEDDING

Actual cost of any purchased bedding and the market value of any home-grown bedding used.

OTHER LIVESTOCK EXPENSES

Including any direct contract charges such as foot trimming, shearing, and pregnancy scanning. These costs also include any AI and breeding costs.

Cash-only fixed costs are defined as follows:

LABOUR COSTS (PAID)

Regular full-time/part-time wages and casual wages for paid labour. In addition to actual wages, employer's liability insurance and Employer National Insurance contributions are also included.

MACHINERY REPAIRS AND SPARES

Machinery repairs, spares, machinery insurance, road tax and MOT where applicable.

CONTRACTING

Contract labour and machinery hire for forage harvesting, hedge-cutting, manure carting, etc.

PROPERTY MAINTENANCE AND WATER

Water, farm building maintenance (excluding farmhouse) and property repairs.

LAND RENT (ACTUAL)

Actual rent for rented land.

OVERHEADS

General farm insurance, office costs (including telephone, fees for professional services) and miscellaneous sundries such as subscriptions.

Non-cash-only fixed costs are defined as follows:

DEPRECIATION

Machinery and fixtures depreciation, including enterprise specific equipment and forage machinery. Calculated on replacement cost based on the current value of machinery and equipment on farm and not the historic cost used in financial accounts.

IMPUTED FINANCE COSTS

Interest on working capital is calculated for costs incurred during the production cycle of the beef or sheep enterprise.

LABOUR COSTS

The value of unpaid family labour (full-time, part-time or casual). Unpaid family labour is the value of family labour that is not paid directly from farm accounts.

LAND RENT (IMPUTED)

A rental value for owner-occupied land is imputed. The rental used is based on local/regional land rental values.

Physical performance:

The calculated weighted average will not include any zero return where data is not available or not recorded on an individual farm (eg lambs born dead).

SCANNING PERCENTAGE

This is the scanning percentage of only the females that have been scanned in any enterprise or on any farm. It may not be representative of all the females in the flock/herd. Therefore, the average has not been weighted for flock/herd size.

LAMBING/CALVING/REARING/MORTALITY RATES

The number of animals born/reared/died per breeding animal put to the ram/bull. Lamb and calf deaths after live birth are also expressed as a percentage of animals born alive.

CALVING PERIOD AND PERCENTAGE BORN IN FIRST THREE WEEKS

Calving period is the number of weeks between the first and last calf born. Where a suckler herd has deliberately separate calving blocks (ie by removing the bull to result in different calving blocks), the calving period is a weighted average of the blocks. In these instances, the percentage born in the first three weeks is also a weighted average of the blocks.

DAILY LIVEWEIGHT GAIN

Calculated by taking the difference between the starting and finishing weights of the animals and dividing by the number of days in the enterprise.

STOCKING RATES

The calculation is based on the number of livestock units per forage hectare used by the enterprise, including forage hectares required to produce the home-grown forage fed to the enterprise (eg home-grown silage). It does not include any area of away-grazing or area required to grow purchased or home-grown concentrates or purchased forage.

Areas of rough grazing are adjusted for quality.

WEIGHT PRODUCED PER FORAGE HECTARE

The total liveweight kilograms produced per forage hectare allocated to the enterprise. In the case of lambs, this will be the total liveweight kilograms reared during the production cycle (tupping to tupping). In the case of suckled calves, this will be the total liveweight kilograms weaned and adjusted to a common 200-day weaning age.



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BEEF & LAMB

AHDB Beef & Lamb is a part of
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