



# Farm Business Survey

2020-21

## Lowland Grazing Livestock Production in England



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## **Acknowledgements**

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The views expressed in this report are those of the authors and are not necessarily shared by other members of Rural Business Research or by Rural Business Research as a whole or by the Department for Environment, Food and Rural Affairs.

## **Foreword to the First Series**

This report is one of a series being produced based on the results of the Farm Business Survey (FBS) for England. The annual Farm Business Survey is the most comprehensive and independent survey of farm incomes and provides a definitive data source on the economic and physical performance of farm businesses in England. It is conducted by a Consortium comprising the Universities of Cambridge, Newcastle upon Tyne, Nottingham and Reading, and Askham Bryan, Duchy and Imperial Colleges. The Consortium is led by the University of Nottingham and its members work in partnership, using uniform and standard practices in reporting on their findings to ensure consistent data quality, accuracy and validity. The Survey is financed by Defra and the Consortium values greatly the input of their staff.

These detailed reports for various farm types and enterprises are in addition to the comprehensive Farm Business Survey Reports for Government Office Regions published at [www.farmbusinesssurvey.co.uk](http://www.farmbusinesssurvey.co.uk). The Consortium is seeking by these additional reports to ensure that timely and relevant information is available to farmers, consultants, advisers and other organisations and individuals interested in farming and land management. The analysis and publication of these reports uses data from farm businesses across England, with an individual member of the Consortium undertaking the research analysis. In line with the ethos of the Consortium, these reports present results in such a way as to ensure a significant element of continuity and consistency from one report to the other, whilst also ensuring that each report captures the contemporary issues of relevance to the sector of agriculture in England to which it relates.

We believe these reports will make a valuable and useful contribution to the farming industry and we commend them to you.

**Prof. Martin Seabrook**

(Chief Executive of the Consortium)

Spring 2007

## Foreword to the Sixteenth Series

Welcome to the sixteenth series of reports on the economics of agriculture and horticulture in England from *Rural Business Research (RBR)*. Our sixteenth series, covering the 2020/21 financial year largely corresponds with the start of the Covid-19 pandemic impact on farm businesses. In addition, the new Agriculture Act came into being (1 January 2021), alongside other changes to how farm, and other businesses, operate given the UK's exit from the EU. Readers may also be interested in our twice annual intelligence reports, published at [www.ruralbusinessresearch.co.uk](http://www.ruralbusinessresearch.co.uk), and in addition, during the spring and summer of 2020, we produced regular "Coronavirus Impact on Farming in England" reports. The importance of providing the industry and government with independent evidence on the changing fortunes of farm and horticultural business has never been greater. Through submission of data and Coronavirus reports to Defra, our work has helped to support policies that have directly benefited farm businesses, including the Dairy Response Fund in April and May 2020.

The 2020/21 financial year for farmers and growers saw seasonal, market and supply impacts in addition to, and often aligned with, Covid-19 impacts. Reduced winter cropping in 2019, led to an increase in spring cereal cropping in 2020. While cereal and oilseed crops yields were lower, strong cereal, oilseed and straw prices helped offset fixed cost increases. However, greater output prices led to higher concentrate and straw prices affecting livestock farms. There were increases in cattle and sheep prices, following temporary market collapses at the outbreak of Covid-19, but pig prices fared less well and this sector has suffered from processing capacity shortages at abattoirs. General labour shortages, alongside input supply challenges, have had short and medium term impacts. Some diversified activities were initially severely impacted by Covid-19, with "lockdown" leading to cancelled tourist and accommodation bookings, however with a subsequent large increase in demand for UK holidays, demand outstripped supply, providing welcome business recovery.

For the 2020/21 financial year, average Farm Business Income (FBI), derived from our work on the Defra-funded Farm Business Survey (FBS), increased to £51,900 per business, representing an increase of 13% on the previous 2019/20 year, and marginally greater than in 2018/19. In percentage increase terms, Lowland Grazing Livestock saw an increase of 97% in FBI, but this was from a very low base of £9,400 in 2019/20 to £18,400 in 2020/21, resulting in this farm type recording the lowest average FBI once again. Despite the challenges in the dairy sector at the start of the Covid-19 pandemic, with some farmers not having milk collected, Dairy farm businesses returned the highest average FBI of £92,500 (9% up on 2019/20), followed by Poultry (£77,700; down 12%) and Cereals (£71,700; up 14%). Of course, in order to appreciate the full drivers of these average headline data, the costs and revenues that have led to these results need to be understood. Our series of reports provide these details, and increasingly demonstrate that in some farm types it is the non-agricultural business activities that are providing important business level income.

In addition to this series of in depth reports, our free to use interactive online tools provide a further wealth of information at [www.farmbusinesssurvey.co.uk](http://www.farmbusinesssurvey.co.uk). This series of reports, along with previous versions are also all available at [www.ruralbusinessresearch.co.uk](http://www.ruralbusinessresearch.co.uk). The 2020/21 financial year, and our work on the FBS to accurately and independently report on the changing fortunes of farm and horticultural businesses, has been like no other in recent memory. Our sincere thanks go to the farmers and growers for their most valuable contribution, in not only continuing to provide access to their farm business data, but also doing so in the face of changing ways in which we have had to access data and interact with participating farm businesses due to the Covid-19 pandemic. I also thank all my colleagues for the positive way in which they have professionally adapted to the changing work circumstances that we have all experienced since March 2020.

### Professor Paul Wilson

Chief Executive Officer, Rural Business Research  
December 2021

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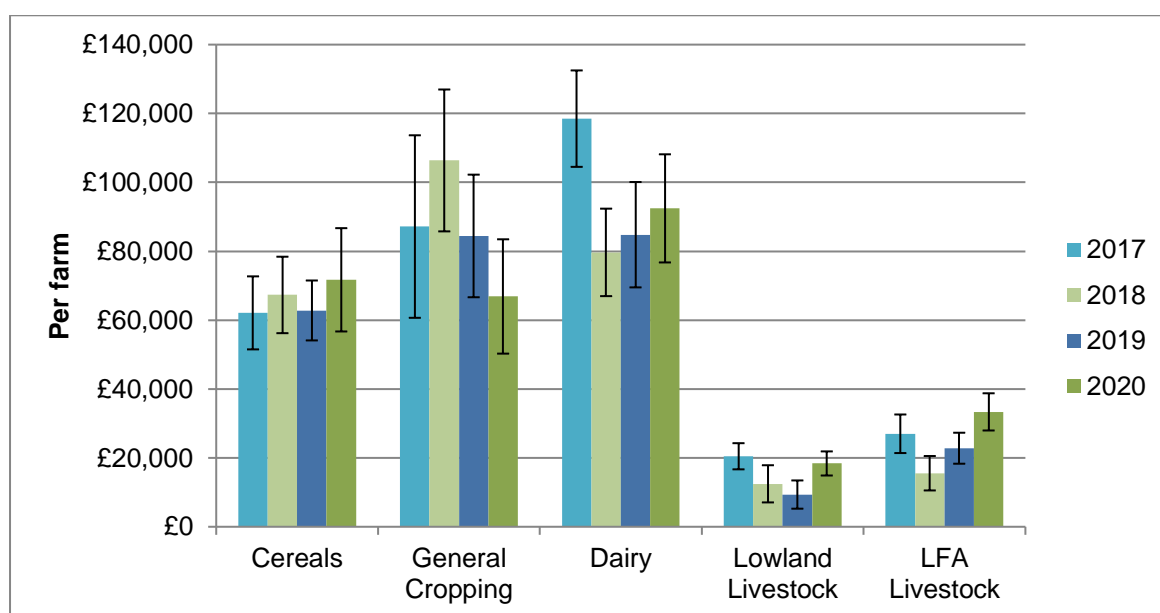
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## Key Findings of Lowland Grazing Livestock Production in England 2020-21

- Lowland Grazing Livestock farms account for about a quarter of commercial holdings in England. The majority, nearly three quarters, of these businesses are small or part-time. All other farm types are, on average, larger businesses.
- The average Farm Business Income (which closely resembles farm profit) for 2020-21 for the Lowland Grazing Livestock farms in England was £18,387 per farm, an increase of £9,032 as compared to the previous year.
- Within the Farm Business Income streams, the Agricultural element had the largest improvement with the other three elements broadly similar to the previous year.
- As compared to the other lowland land-based farm types in England, the Grazing Livestock farms produce the lowest incomes per farm, per hectare and per annual labour units.

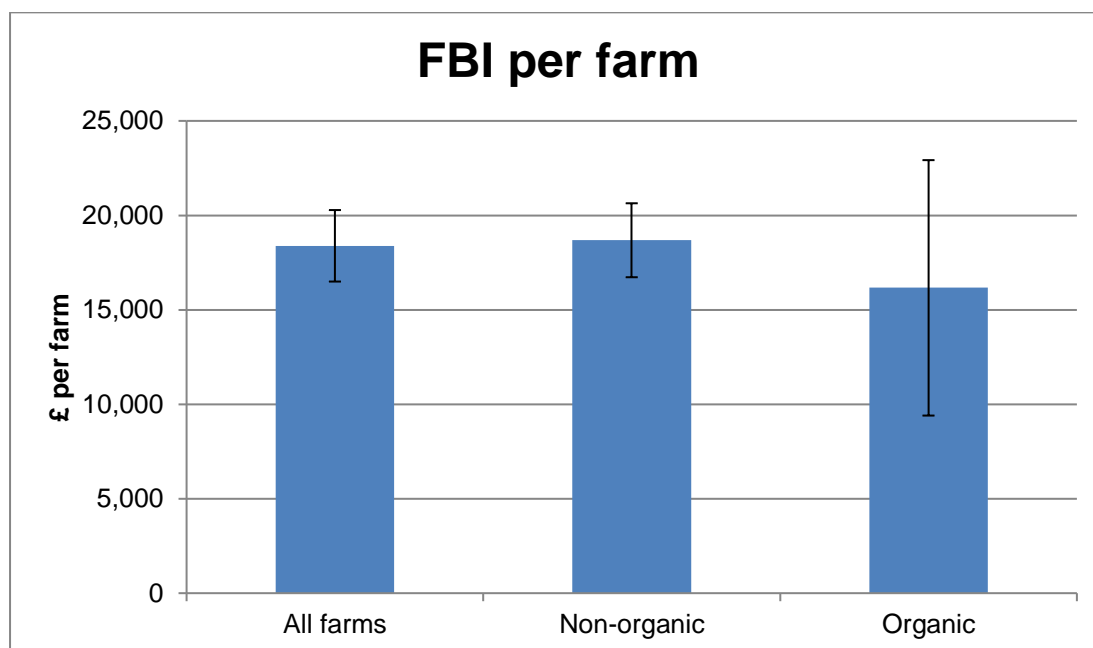
Trends in Farm Business Income £ per farm, in England, by farm type



Source: <http://www.farmbusinesssurvey.co.uk/regional/Reports-on-Farming-in-the-Regions-of-England.asp>

- Farm size is important, with the better performing businesses (based on the ratio of output/input) being much larger farms. The Low Performance Band producers farmed half the area of the High Performance producers and produced a lower Farm Business Income per hectare, a loss of £189 per hectare compared to an income of £405 per hectare for the High Performers. This is a narrowing of the range, as compared to the previous year.
- For the average Lowland Grazing Livestock farm in 2019-20 the value of unpaid labour used by the business was estimated to be £27,800 with private drawings coming to £20,800. Thus, these businesses are 'rewarding' themselves at 70% the appropriate market rate for their labour. For this year the Farm Business Income is £2,400 lower than the private drawings, thus not covering living expenses or representing any financial return on their capital invested in the business.
- This year's sub-sample of organic producers' farm, broadly, a similar area to their non-organic contemporaries, farming 90% of the land and their Farm Business Income was similar on a per hectare basis. The organic farms have more output from agri-environmental sources due to their eligibility for extra organic aid, much lower variable costs and lower fixed costs. The Farm Business Income per farm for the organic producers is not statistically different than the non-organic farms.

Lowland Grazing Livestock farms- Farm Business Income per farm, by type of production. 2020-21



Sample sizes are small for some of these analyses and standard error bars have been included in the figures to indicate the accuracy of the estimate of the mean. Error bars are shown on 95% confidence intervals as a measure of the uncertainty that may apply to the estimated means. These signify that we are 95% confident that this range contains the true value. They are calculated as the standard error (se) multiplied by 1.96 to give the 95% confidence interval (95% CI)

- The Basic Payment Scheme is crucial to the level of income the Lowland Grazing Livestock farms achieve. Without the Basic Payment Scheme, the average Lowland Livestock Grazing farm, in England, for 2020-21 would be making a Farm Business Income of £1,200.
- From the gross margin analysis the premium (top third) producers, as ranked by gross margin per head, have gross margins 74% higher for the lowland beef cows and rearing cattle to sell as stores were 33% higher. Top third producers of finishing cattle have gross margins 58% higher than the average with lowland breeding ewes the top third producers are 41% better.
- Comparing the gross margin per hectare across the differing livestock enterprises on the Lowland Grazing Livestock farms, the beef bred store cattle producers have the highest margin followed by beef bred cattle finishers and the lowland breeding ewes. Beef cows produce the lowest gross margin per hectare. This relative ranking has not changed significantly in a number of years.



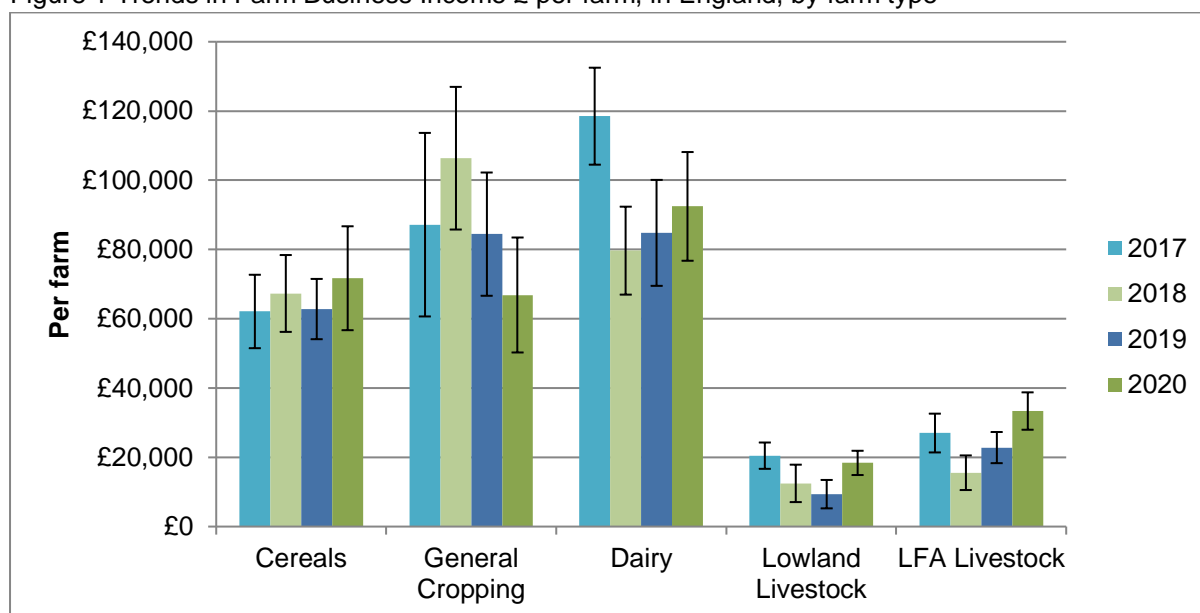
## Lowland Grazing Livestock Production in England 2020-21

- It is important to note that all surveys are subject to sampling error as they are not measuring the whole population, the FBS is no exception. It is common practice to publish 95% confidence intervals and error bars alongside any published estimated figures to give the reader an indication of the size of the sampling error. These signify that we are 95% confident that this range contains the true value. For simplicity within these reports, the confidence intervals have not always been published. Readers should be aware that the figures calculated from the FBS data have a level of uncertainty around them and that all figures are estimates. Generally, the smaller the sample size the greater the sampling error and the less confidence we have in the estimates. For details on the FBS confidence intervals, please refer to Defra FBS publications <https://www.gov.uk/government/collections/farm-business-survey>
- Of those farm businesses in England that are eligible for the Farm Business Survey about a fifth are classified as Lowland Grazing Livestock<sup>1</sup> with more than three quarters classed as either part-time or small.
- The Grazing Livestock businesses have the lowest Farm Business Income of the land based farm types in England (Figure 1).
- Lowland Grazing Livestock farms are the least profitable farm type in the English lowlands, on both a per hectare or per Annual Labour Unit basis (Figure 2).
- Over the previous three years the Farm Business Income for Lowland Grazing Livestock businesses has been declining but in 2020-21 there was a recovery and is back to 90% of the 2017-18 income. Farm Business Income is more variable than the finished prices of cattle and sheep would have suggested, indicating that the costs to the businesses, valuation changes to the livestock (which are part of the output) and other sources of output were more variable and all have a part to play in the level of income for these farms (Figure 3). Figure 3 also shows the average Farm Business Income broken down into the four cost centres, Agriculture, Agri-environment, Diversification and Basic Payment Scheme. It illustrates that the largest variation in income between years comes from the Agriculture cost centre which has not made a positive contribution for a considerable time.
- A number of Indices of Prices of Agricultural Products (United Kingdom) are illustrated in Figure 4. This shows the changes in average annual prices for energy, fertiliser, animal feed and machinery; which have all seen volatility since 2017. Output prices from cattle and sheep have also seen changes and volatility in the same period.

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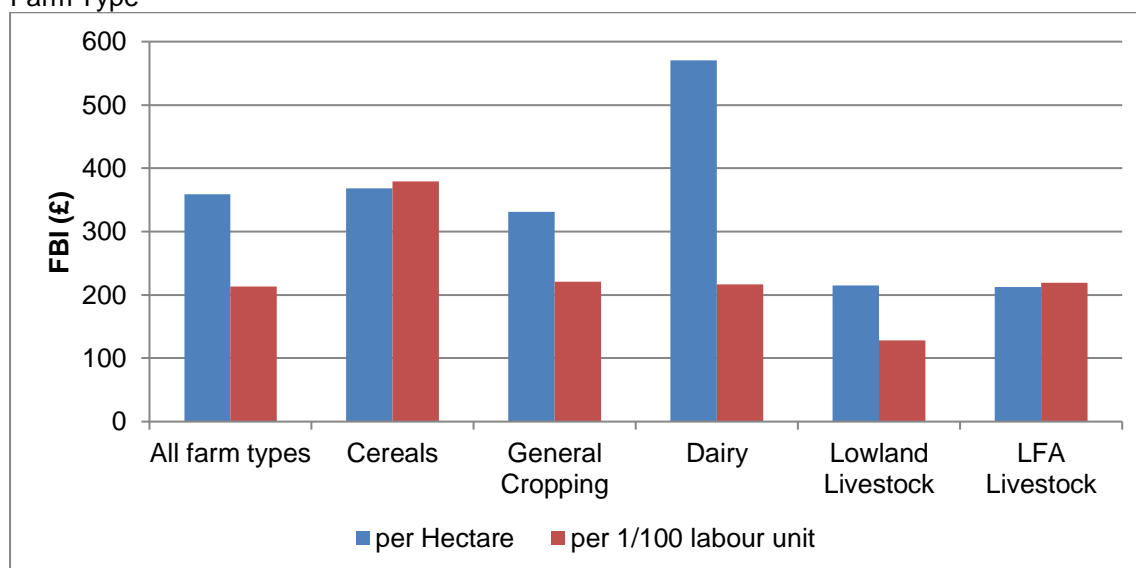
<sup>1</sup> Grazing Livestock farms are classified as farms with more than two-thirds of their total Standard Output produced by cattle and sheep (excluding holdings classified as dairy). A farm is classified as "Lowland" if less than 50% of its total area is in the Less Favoured Area.

Figure 1 Trends in Farm Business Income £ per farm, in England, by farm type



Source: <http://www.farmbusinesssurvey.co.uk/regional/Reports-on-Farming-in-the-Regions-of-England.asp>

Figure 2 Farm Business Income per hectare and per Annual Labour Unit, in England 2020-21, by Farm Type<sup>2</sup>



Source: <http://www.farmbusinesssurvey.co.uk/regional/Reports-on-Farming-in-the-Regions-of-England.asp>

<sup>2</sup> The number of farms in each group are- Cereals-341 farms, General cropping- 146 farms, Dairy- 221 farms, Lowland livestock-285 farms and LFA livestock-202 farms

Figure 3 Lowland Grazing Livestock farms in England - Average Farm Business Income by Cost Centre 2017-2020 crop years

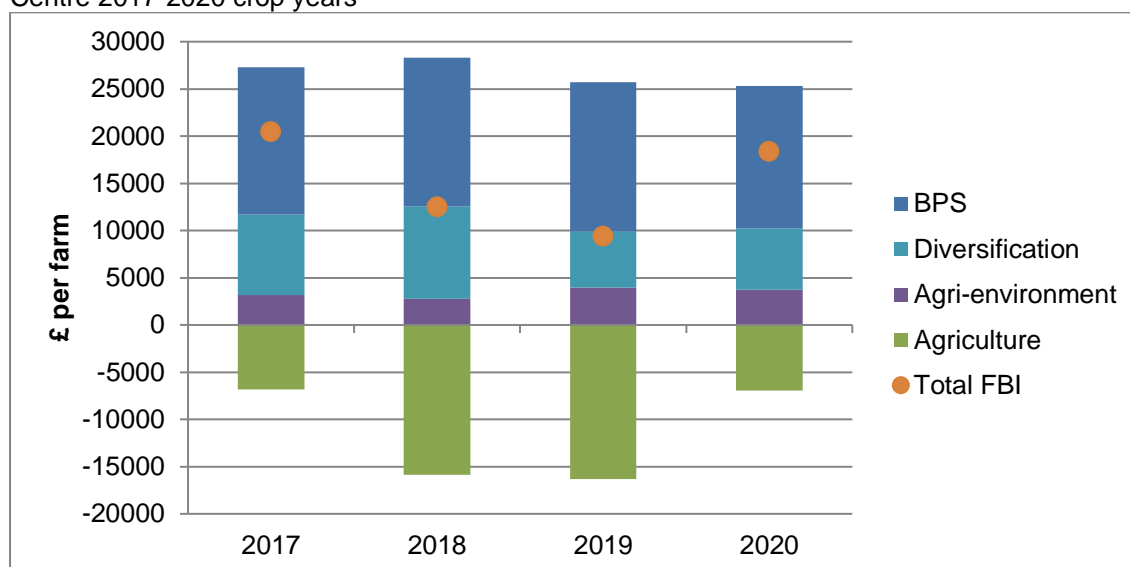
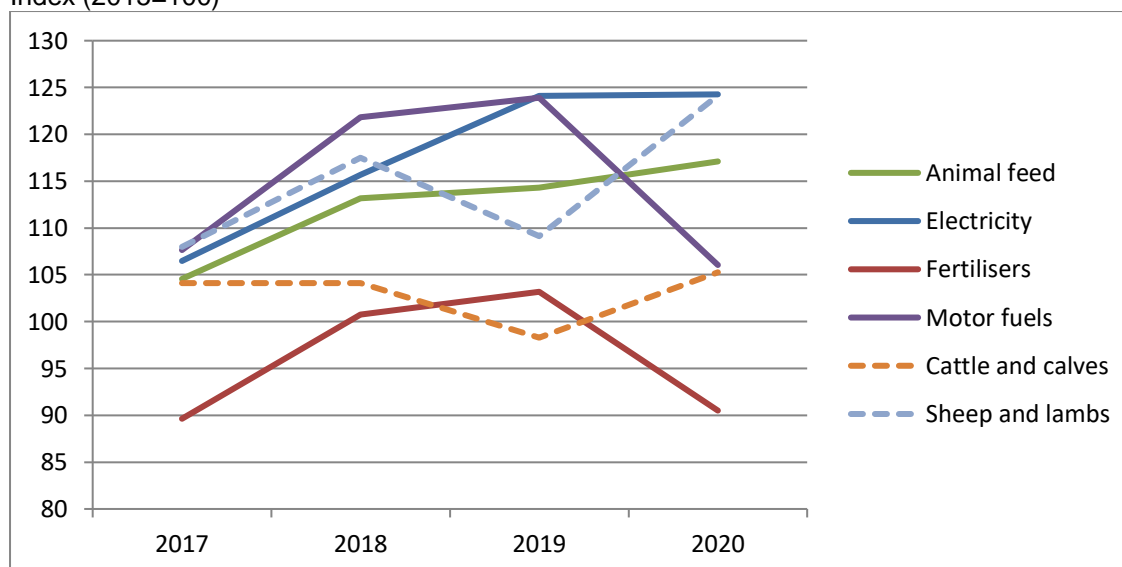


Figure 4 Indices of Producer and input Prices of Agricultural Products (United Kingdom) Index (2015=100)



Source: Defra, API

### Lowland Grazing Livestock Production in 2020-21 detailed results

- This report uses data extracted from the Farm Business Survey (FBS) for this important group of farms and includes data from 285 farms which has been 'weighted' to produce figures that represent the whole of the Lowland Grazing Livestock industry in England, excluding the smallest farms which are not included within the survey (see Appendix 1).
- The results for the FBS farms for 2020-21 show an increase in Farm Business Income per average farm from 2019-20 to £18,387, an uplift of £9,032. Basic Payment Scheme income was £702 lower and £540 more income from diversification but the largest increase in income came from 'agriculture' which was over £9,400 higher and close to the best within the decade. The Net Farm Income £7,472 per farm, again a similar increase on the previous year's figure. (Table 1).

- The average Lowland Grazing Livestock farm was 57% owner occupied and the average area farmed was 85.4 hectares. Permanent grassland and rough grazing covers 71% of the area with temporary grassland and fodder crops another 16%. The stocking rate is low, emphasising the 'extensive' type of production adopted by this farm type, with only 1.0 Grazing Livestock Units per hectare. Cattle account for 69% of these livestock units (Table 2).
- The balance sheet for the average farm shows over £97,200 of liabilities with the majority of borrowing held by the banks, as loans or overdraft. Total assets for the business of £1,237,000 are dominated by the land and buildings which account for 89% of the total. (Table 3). The balance sheet ratios therefore indicate a strong financial position for these farms in terms of ratios of assets to liabilities, but with the low incomes earned, extra borrowing is still difficult to justify and then service.
- The relationship between trading profit generated, capital investment made, drawings taken by the farming family/families, and the funding of the trading business is summarised by the 'flow of funds' (Table 4). The trading net fund surplus from these farms is £33,670 after depreciation on buildings and machinery is added back to Farm Business Income and the increase in live and deadstock valuations is deducted. Close to £19,000 was spent on capital purchases. There was £2,500 net investment in land and property, whilst machinery investment was close to £12,500. The machinery pool on these farms was more than maintained, with re-investment being £2,500 more than the level of machinery depreciation charged to these businesses. This left a farm fund flow surplus of over £14,400. The private drawings from the farm were £21,000 offset by £19,300 of net transfer in of private funds, resulting in a £12,978 surplus, reflected in an increase in net bank balances. The introduction of funds from private sources has been a feature of Lowland Grazing Livestock farms for a long period, where the low incomes have not been sufficient to allow for both re-investments in the business and private drawings to support the farming family.
- Farm performance is measured as the ratio of farm business output to farm business costs. An imputed value for unpaid manual labour, including that of the farmer and spouse is added to farm business costs. The value of paid managerial input is subtracted. The farms are ranked in descending order according to this ratio and allocated to quartiles with the top quartile (25 percent) representing the high performance band.<sup>3</sup> Farm size is important, with the better performing businesses being much larger farms and therefore able to spread their fixed costs over a larger area (Table 1). Farm Business Income per hectare still tends to be higher on the High performing farms (Table 5). Low performing farms tended to have lower levels of farm output per hectare. Variable costs are broadly similar across all performance levels but substantial cost savings are made with fixed costs. Lower costs are seen in all the fixed cost categories for the High performing group but the differences in the machinery costs have the largest impact.
- The organic farms are 11% smaller than their non-organic counterparts but the percentage of the land they own is 28% higher. Output from the organic farms is lower when compared to non-organic equivalents. However, there are important differences in how this output is achieved; organic farms tend to get more than their non-organic counterparts from agri-environment schemes and renewable energy production but less from livestock and crops. For the organic producers the output from the agri-environment type schemes is more than twice the non-organic farms reflecting the extra support they receive from the various stewardship schemes. With the lower 'farming' output, organic farms tend to have lower variable costs; 42% the level of non-organic producers. The resulting total gross margin per farm for the organic farmers is lower than the non-organic level. Fixed costs for the organic

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<sup>3</sup> Note that the farm weights are used to allocate farms to quartiles so the number of farms in a quartile will not necessarily be equivalent to a quarter of the sample.

farms are also lower than to the non-organic producers. Thus the Farm Business Income per farm for the organic producers is lower than that of their non-organic counterparts per farm and per hectare, but the difference is not statistically significant (Table 6).

- Farm size can be described in terms of Standard Labour Requirement<sup>4</sup>. The average size of the Part-time farms is 51 hectares (125 acres), compared to the Very Large farms, which are close to seven times larger in terms of land area (Table 7). The total area farmed by the business increases in relation to the Standard Labour Requirement and the proportion of tenanted land also increases with size, with Part-time farms renting 25% of their farmed area to Very Large farms renting 76% of the land they farm. As a trend the gross margin per hectare is similar across size of business but with the Very Large having lower per hectare gross margin. On a per hectare basis the Very Large farms have a gross margin of 80% the level achieved by the Part-time businesses. In general the fixed costs per hectare reduce with scale of business.

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<sup>4</sup> Full details of the definitions relating to farm size are given in Appendix 1.

Table 1: Income details, for All Farms, and by Performance Band

Financial details, 2020/21	Performance Level			
	Average all farms	Low	Medium	High
Number of farms in group	285	46	134	105
Average farmed area (hectares)	85.4	61.0	75.8	127.4
Average % of owned total farmed area	57%	56%	61%	54%
	£ per farm			
<b>Output</b>				
Cattle	39,747	22,298	41,210	53,829
Sheep	19,105	9,462	14,788	36,685
Other livestock	874	542	469	1,969
Crops	4,457	1,274	4,084	8,251
Forage	3,650	1,584	2,691	7,481
Environmental schemes	4,792	1,978	4,304	8,448
Basic Payment Scheme	17,176	11,961	16,138	24,204
Rental income	5,132	2,083	5,294	7,773
Contract work	4,491	1,431	4,527	7,383
Renewable energy production	1,631	746	1,245	3,226
Miscellaneous output	9,562	2,229	10,678	14,520
<b>Total Farm Output</b>	<b>110,618</b>	<b>55,588</b>	<b>105,429</b>	<b>173,768</b>
<b>Variable costs</b>				
Concentrates	12,129	6,630	12,224	17,264
Purchased fodder	1,654	1,415	1,474	2,229
Veterinary and medicines	2,963	2,141	2,814	4,042
Other livestock costs	7,616	5,463	7,486	9,947
Seeds	1,329	811	1,272	1,939
Fertilisers	3,621	1,915	3,759	5,009
Crop protection	865	423	866	1,289
Other crop costs	787	441	896	915
<b>Total Variable Costs</b>	<b>30,963</b>	<b>19,240</b>	<b>30,790</b>	<b>42,635</b>
<b>Gross Margin</b>	<b>79,654</b>	<b>36,348</b>	<b>74,638</b>	<b>131,134</b>
<b>Fixed costs</b>				
Paid labour	5,313	3,798	3,411	10,413
Contract	5,633	3,558	5,595	7,712
Machinery repairs	5,383	3,658	5,722	6,406
Machinery fuel	3,629	2,420	3,730	4,604
Machinery depreciation	10,182	8,838	9,857	12,102
General costs	13,183	10,514	13,543	15,078
Property maintenance	5,418	4,325	5,378	6,552
Rent, hired in keep and bare land	6,211	5,258	5,424	8,639
Buildings depreciation	3,909	2,779	3,749	5,308
Interest	2,406	2,594	2,206	2,608
<b>Total Fixed Costs</b>	<b>61,267</b>	<b>47,742</b>	<b>58,615</b>	<b>79,421</b>
<b>FARM BUSINESS INCOME</b>	<b>18,387</b>	<b>-11,393</b>	<b>16,024</b>	<b>51,712</b>
All unpaid labour	29,762	31,052	30,879	26,379
<i>Equals</i> - FARM CORPORATE INCOME	-11,375	-42,445	-14,856	25,333
Plus - Net Interest	2,356	2,585	2,187	2,457
<i>Equals</i> - FARM INVESTMENT INCOME	-9,019	-39,860	-12,669	27,790

<b>Alternative Income Measures, 2020/21</b>					
		Average all farms	Performance Level		
			Low	Medium	High
<b>Reconciliation between Net Farm Income and Farm Business Income</b>					
	FARM BUSINESS INCOME	18,387	-11,393	16,024	51,712
Plus-	Directors remuneration	328	27	483	323
Less-	Net income from assets associated with the farm business	0	0	0	0
Plus-	Buildings and works depreciation	3,909	2,779	3,749	5,308
Plus-	Landlord type expenses	507	324	581	543
Plus-	Imputed rental income	422	445	367	503
Less-	Imputed rent and rental value	13,111	8,601	12,667	18,324
Plus-	Net Interest	2,356	2,585	2,187	2,457
Less-	Unpaid labour of partners	5,325	5,646	5,712	4,275
Equals-	<b>NET FARM INCOME**</b>	<b>7,472</b>	<b>-19,481</b>	<b>5,012</b>	<b>38,246</b>

\*\* Excluding Breeding Livestock Stock Appreciation

Table 2 Land Use, for All Farms, and by Performance Band

Land Use and Indicators of Technical Efficiency, 2020/21	Performance Level			
	Average all farms	Low	Medium	High
Number of farms in group	285	46	134	105
Average farmed area (hectares)	85.4	61.0	75.8	127.4
Average proportion of owned total farmed area(%)	57%	56%	61%	54%
Land use				
Area of crops	4.3	1.3	3.9	7.9
Temporary grass	11.1	7.2	10.9	15.3
Permanent grass	58.4	45.1	51.8	83.9
Fodder crops	2.7	1.2	2.0	5.3
Rough grazing	2.2	1.9	1.0	4.9
Uncropped, fallow and turf	1.2	0.6	1.7	0.9
Forage hired in	5.5	3.8	4.6	9.1
Stocking				
Average number of dairy cows	0	0	0	1
Average number of beef cows	22	18	24	24
Average number of other cattle	71	51	73	88
Average number of ewes	144	97	107	262
Average number of other sheep	155	79	112	311
Grazing livestock units	GLUs per farm			
Dairy cows	0.4	0.3	0.2	0.9
Beef cows	11.1	8.8	11.8	11.9
Other cattle	43.0	31.4	43.4	53.5
Sheep	22.9	14.3	16.8	42.6
Other livestock	1.8	0.5	2.0	2.7
Total	79.1	55.4	74.2	111.5
GLUs per ha	0.99	0.94	1.06	0.94
GLUs per adjusted ha	1.00	0.94	1.06	0.96



Table 3 Balance Sheet details, for All Farms, and by Performance Band

Balance Sheet, 2020/21 (end of year)	Performance Level			
	Average all farms	Low	Medium	High
Number of farms in group	285	46	134	105
Average farmed area (hectares)	85.4	61.0	75.8	127.4
Average proportion of owned total farmed area	57%	56%	61%	54%
	£ per farm			
End of year assets & liabilities				
Land & buildings	998,269	794,565	924,773	1,335,818
Basic Payment Scheme	15,945	11,110	15,154	22,133
Machinery	70,615	60,158	68,807	84,186
Tenant's other assets	193	205	222	126
Breeding livestock	42,780	31,104	40,184	59,035
<b>Total fixed assets</b>	<b>1,127,802</b>	<b>897,143</b>	<b>1,049,140</b>	<b>1,501,298</b>
Trading livestock	43,770	32,734	41,647	58,503
Crops	1,222	696	1,345	1,495
Forage and cultivations	5,706	4,054	5,989	6,765
Stores	5,561	4,204	6,010	6,015
Debtors and loans	9,687	5,729	9,453	13,963
Bank credit and cash	42,882	16,823	50,587	53,361
Other current assets	0	0	0	0
<b>Total current assets</b>	<b>108,828</b>	<b>64,240</b>	<b>115,030</b>	<b>140,101</b>
<b>Total assets</b>	<b>1,236,629</b>	<b>961,383</b>	<b>1,164,170</b>	<b>1,641,400</b>
Financed by				
AMC	16,250	5,315	16,605	26,150
Bank loans	39,283	28,603	38,983	50,188
Other long term	14,410	15,892	11,663	18,225
<b>Total long term</b>	<b>69,943</b>	<b>49,810</b>	<b>67,251</b>	<b>94,563</b>
HP and lease	6,208	4,028	6,504	7,751
Creditors	9,911	7,499	10,534	11,054
Bank overdraft	10,865	13,136	9,536	11,209
Other short term	261	193	359	141
<b>Total current liabilities</b>	<b>27,246</b>	<b>24,856</b>	<b>26,933</b>	<b>30,155</b>
<b>Total Liabilities</b>	<b>97,188</b>	<b>74,666</b>	<b>94,184</b>	<b>124,718</b>
<b>Net worth</b>	<b>1,139,441</b>	<b>886,717</b>	<b>1,069,986</b>	<b>1,516,681</b>
Balance sheet ratios-				
% Owner equity (net worth v.total assets)	92%	92%	92%	92%
% Fixed assets vs. total assets	91%	93%	90%	91%
Gearing (long-term loans v.total assets)	6%	5%	6%	6%
Total debt (external liabilities v.net worth)	9%	8%	9%	8%

Table 4 Fund flow, for All Farms, and by Performance Band

FUND FLOWS, 2020/21	Average all farms	Performance Level		
		Low	Medium	High
Number of farms in group	285	46	134	105
Average farmed area (hectares)	85.4	61.0	75.8	127.4
Average proportion of owned total farmed area(%)	57%	56%	61%	54%
	£ per farm			
<b>Funds available from trading</b>				
Farm Business Income	18,387	-11,393	16,024	51,712
Buildings and works depreciation	3,909	2,779	3,749	5,308
Machinery depreciation	10,182	8,838	9,857	12,102
Change in valuation *	1,192	2,248	1,941	-1,261
Trading net fund flow surplus	33,670	2,472	31,570	67,861
<b>Funds used for farm investments</b>				
Net property and quota purchases	2,526	7,348	-340	3,343
Net landlord capital purchases	4,020	696	4,543	6,237
Net machinery and equipment purchases	12,692	6,602	14,227	15,649
Capital net fund flow	19,239	14,646	18,429	25,229
<b>Total farm fund flow surplus</b>	<b>14,431</b>	<b>-12,174</b>	<b>13,141</b>	<b>42,633</b>
<b>Funds used for private expenditure</b>				
Private drawings	20,761	15,310	19,245	28,931
Net private funds introduced	19,308	30,233	21,749	4,072
Private fund outflow	1,453	-14,923	-2,504	24,860
<b>Total net fund flow surplus</b>	<b>12,978</b>	<b>2,749</b>	<b>15,645</b>	<b>17,773</b>
Increase in loans and deposits	4,975	1,881	11,506	-4,516
Increase in bank balance	18,200	2,506	28,876	12,972
Increase in cash in hand	22	-7	48	1
Increase in debtors	-102	1,455	53	-1,905
Increase in creditors	166	-675	1,825	-2,190
<b>Net change in funding</b>	<b>-12,978</b>	<b>-2,749</b>	<b>-15,645</b>	<b>-17,773</b>
* An increase in valuation is represented as a negative, with funds being used to increase the live and deadstock valuation				

Table 5 Farm Business Income by Performance Band, £ per hectare

Performance Level	Low	Medium	High
Number of farms in group	46	134	105
Average farmed area (hectares)	61.0	75.8	127.4
Average % of owned total farmed area	56%	61%	54%
£ per hectare			
Livestock and crops	576	834	849
Agri- environment type schemes	32	57	66
Basic Payment Scheme	196	213	190
Other	106	287	258
TOTAL FARM OUTPUT	910	1391	1363
Variable costs			
Livestock specific costs	257	317	263
Crop specific costs	59	90	72
TOTAL VARIABLE COSTS	316	407	335
TOTAL GROSS MARGIN	594	984	1028
Fixed costs			
Labour	62	45	82
Machinery	303	329	242
General farming costs	172	179	118
Land & Property	203	192	161
Interest paid	43	29	20
TOTAL FIXED COSTS	783	774	623
FARM BUSINESS INCOME	-189	210	405

Table 6 Farm Business Income for Non-organic and Organic farms

Financial details, 2020/21	Type of Production	
	Non organic	Organic
Number of farms in group	241	44
Average farmed area (hectares)	86.5	77.2
Average % of owned total farmed area	54%	82%
	£ per farm	
<b>Output</b>		
Cattle	41,430	27,088
Sheep	20,484	8,731
Other livestock	930	451
Crops	4,710	2,554
Forage	3,907	1,718
Environmental schemes	4,101	9,991
Basic Payment Scheme	17,145	17,407
Rental income	5,407	3,068
Contract work	4,995	702
Renewable energy production	1,218	4,739
Miscellaneous output	9,871	7,236
<b>Total Farm Output</b>	<b>114,199</b>	<b>83,685</b>
<b>Variable costs</b>		
Concentrates	13,320	3,164
Purchased fodder	1,667	1,552
Veterinary and medicines	3,122	1,768
Other livestock costs	7,903	5,455
Seeds	1,370	1,020
Fertilisers	4,033	527
Crop protection	976	26
Other crop costs	825	506
<b>Total Variable Costs</b>	<b>33,216</b>	<b>14,018</b>
<b>Gross Margin</b>	<b>80,982</b>	<b>69,666</b>
<b>Fixed costs</b>		
Paid labour	5,227	5,956
Contract	5,788	4,466
Machinery repairs	5,536	4,237
Machinery fuel	3,835	2,078
Machinery depreciation	10,363	8,819
General costs	13,347	11,954
Property maintenance	5,290	6,380
Rent, hired in keep and bare land	6,702	2,521
Buildings depreciation	3,764	4,998
Interest	2,448	2,095
<b>Total Fixed Costs</b>	<b>62,299</b>	<b>53,505</b>
<b>FARM BUSINESS INCOME</b>	<b>18,683</b>	<b>16,162</b>
All unpaid labour	29,847	29,126
<i>Equals</i> - FARM CORPORATE INCOME	-11,164	-12,964
Plus - Net Interest	2,393	2,076
<i>Equals</i> - FARM INVESTMENT INCOME	-8,771	-10,888

Table 7: Income details, by size of business

Financial details, 2020/21	Size of Business				
	Part-time	Small	Medium	Large	Very Large
Number of farms in group	59	88	63	40	35
Average farmed area (hectares)	50.5	82.3	112.0	159.8	359.2
Average % of owned total farmed area	75%	66%	52%	46%	24%
	£ per farm				
<b>Output</b>					
Cattle	21,600	40,197	64,839	84,086	120,549
Sheep	3,957	12,657	32,646	63,602	151,623
Other livestock	364	230	333	0	16,099
Crops	1,021	3,785	9,892	10,785	27,518
Forage	3,876	2,539	6,012	3,069	3,497
Environmental schemes	3,924	4,259	4,627	9,176	13,344
Basic Payment Scheme	11,744	17,270	21,761	28,454	54,234
Rental income	3,220	6,104	6,058	11,592	8,205
Contract work	1,851	5,080	10,430	10,455	5,827
Renewable energy production	1,723	1,510	1,351	1,809	1,953
Miscellaneous output	9,666	10,534	8,843	3,114	13,942
<b>Total Farm Output</b>	<b>62,945</b>	<b>104,166</b>	<b>166,793</b>	<b>226,141</b>	<b>416,791</b>
<b>Variable costs</b>					
Concentrates	4,778	10,633	19,691	35,349	57,162
Purchased fodder	744	1,459	3,266	3,791	6,545
Veterinary and medicines	1,287	2,560	4,536	7,092	16,279
Other livestock costs	3,818	7,651	10,996	17,132	30,326
Seeds	844	1,059	1,795	2,865	5,787
Fertilisers	1,713	3,432	6,808	8,742	11,539
Crop protection	346	701	1,824	1,894	4,288
Other crop costs	511	655	1,478	1,272	2,545
<b>Total Variable Costs</b>	<b>14,042</b>	<b>28,151</b>	<b>50,394</b>	<b>78,137</b>	<b>134,471</b>
<b>Gross Margin</b>	<b>48,903</b>	<b>76,015</b>	<b>116,399</b>	<b>148,004</b>	<b>282,320</b>
<b>Fixed costs</b>					
Paid labour	1,610	4,502	7,468	13,299	40,163
Contract	4,218	4,906	7,168	11,287	15,522
Machinery repairs	3,616	5,209	8,102	9,782	14,039
Machinery fuel	2,083	3,459	6,290	7,133	11,080
Machinery depreciation	7,157	9,697	15,194	18,589	23,857
General costs	10,599	13,845	15,797	17,473	26,374
Property maintenance	3,783	5,355	6,726	11,538	12,682
Rent, hired in keep and bare land	2,595	5,802	8,484	15,096	34,664
Buildings depreciation	3,137	3,704	4,748	6,437	8,735
Interest	1,675	2,019	3,107	5,543	7,515
<b>Total Fixed Costs</b>	<b>40,474</b>	<b>58,499</b>	<b>83,085</b>	<b>116,176</b>	<b>194,632</b>
<b>FARM BUSINESS INCOME</b>	<b>8,430</b>	<b>17,516</b>	<b>33,314</b>	<b>31,828</b>	<b>87,688</b>
All unpaid labour	24,325	32,694	38,102	36,559	40,186
<i>Equals</i> - FARM CORPORATE INCOME	-15,896	-15,178	-4,788	-4,730	47,502
Plus - Net Interest	1,649	1,986	3,081	5,539	6,839
<i>Equals</i> - FARM INVESTMENT INCOME	-14,247	-13,192	-1,707	809	54,340

### The importance of the Basic Payment Scheme to the Lowland Livestock Grazing farms

- With the low level of the Farm Business Income generated by the Lowland Grazing Livestock farms the importance of the Basic Payment Scheme (BPS) cannot be underestimated, as illustrated in Table 8. The Basic Payment Scheme per farm represents 17% of the Total Output for Lowland Livestock Grazing farms and close to the level of the total Farm Business Income. Without the Basic Payment Scheme, the average Lowland Livestock Grazing farm would be making a Farm Business Income of £1,211. Only the Part-time farms would be making a negative income but all other business sizes have an income well below the level of their private drawings of these businesses.
- Regarding the importance of the Basic Payment Scheme to the Lowland Grazing Livestock farms, the reality of farming without the majority of this support would look bleak and unlikely to be sustainable in the current structure even in a relatively good year for this farm type.

Table 8 Farm Business Income and Basic Payment Scheme, 2020-21

	All Farms	Part-time	Small	Medium	Large	Very Large
	£ per farm					
Farm Business Income	18,387	8,430	17,516	33,314	31,828	87,688
Basic Payment Scheme Income	17,176	11,744	17,270	21,761	28,454	54,234
Farm Business Income less BPS	1,211	-3,314	246	11,553	3,374	33,454
Private drawings	20,761	16,283	20,603	28,522	30,472	40,263

### Farm Business Income by 'Cost Centre'<sup>5</sup>

- The majority of the Farm Business Income comes from the Basic Payment Scheme 'cost centre' - 82% of the total Farm Business Income figure for 'All farms'. (Table 9).
- The Farm Business Income from the Agri-environment cost centre has been relatively steady since 2015 at £3,400, but is slightly higher this year at £3,715. (Table 9).
- The Farm Business Income from the Diversification cost centre has been increasing from 2013 and in 2018 crop year was the highest in the last 10 years, but for the 2019 crop year this fell by nearly £3,800 with a small recovery in 2020 crop year.
- There is still a loss from the Agriculture cost centre but it is the second lowest in the last five years. Only in 2011 did the Agriculture Cost centre actually make a positive contribution to the

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<sup>5</sup> For these calculations, Casual labour and Contracting are considered variable costs rather than fixed costs as in our other tables, and interest is net rather than being shown as an income and a cost.

total Farm Business Income. All other years there were losses and this averages, since 2017, to more than £11,500 per year (Table 9). The loss for the 2020 crop year was £6,928.

- The Agriculture cost centre accounts for most of the difference between the Farm Business Income per hectare of the three performance groups. Farm Business Income per hectare from 'Agriculture' increases with performance band with the Low performers making a loss of £381 per hectare, the Medium making a loss of £110 and the High performers making £90 per hectare. The Low performance band showed a reduction in loss per hectare of £213 with the Medium performers gaining an extra £66 per hectare and High performers increasing by £147 per hectare compared to the previous year. (Figure 5).
- The Farm Business Income generated by the Basic Payment Scheme cost centre is lowest for Low performing farms (£ per ha) with High performing farms receiving £18 more per hectare, and £35 higher per hectare for Medium performing farms. (Figure 5).
- When considering the size of business, the contribution from the 'Agriculture' cost centre is negative for Part-time, Small and Large farms. For Medium and Very Large farms 'Agriculture' makes a positive contribution. The Medium sized farms have the highest Farm Business Income per hectare income, with the lowest income per hectare on the Part-time farms (Figure 6).
- The value of unpaid labour used by the businesses is illustrated alongside the Farm Business Income by Cost centre (Figure 6). Only the Very Large farms have a Farm Business Income greater than the value of unpaid labour.
- The contribution from the Basic Payment Scheme cost centre ranges from 54% of the total Farm Business Income for Very large farms, 59% for Medium farms, 78% for Large farms, 87% for Small farms and 121% for Part-time farms.

Table 9 Farm Business Income by Cost Centre by Performance Band, 2020-21

£ per farm	All farms	Low	Medium	High
Total Farm Business Income	18,387	-11,393	16,024	51,712
<i>Of which, by cost apportionment</i>				
Agriculture	-6,928	-23,243	-8,320	11,512
Agri-environment and other payments	3,715	1,444	3,134	7,021
Diversification out of agriculture	6,489	974	6,827	11,180
Basic Payment Scheme	15,111	9,432	14,383	21,999

Figure 5 Farm Business Income and Unpaid labour per hectare by Cost Centre, by Performance Band, 2020-21

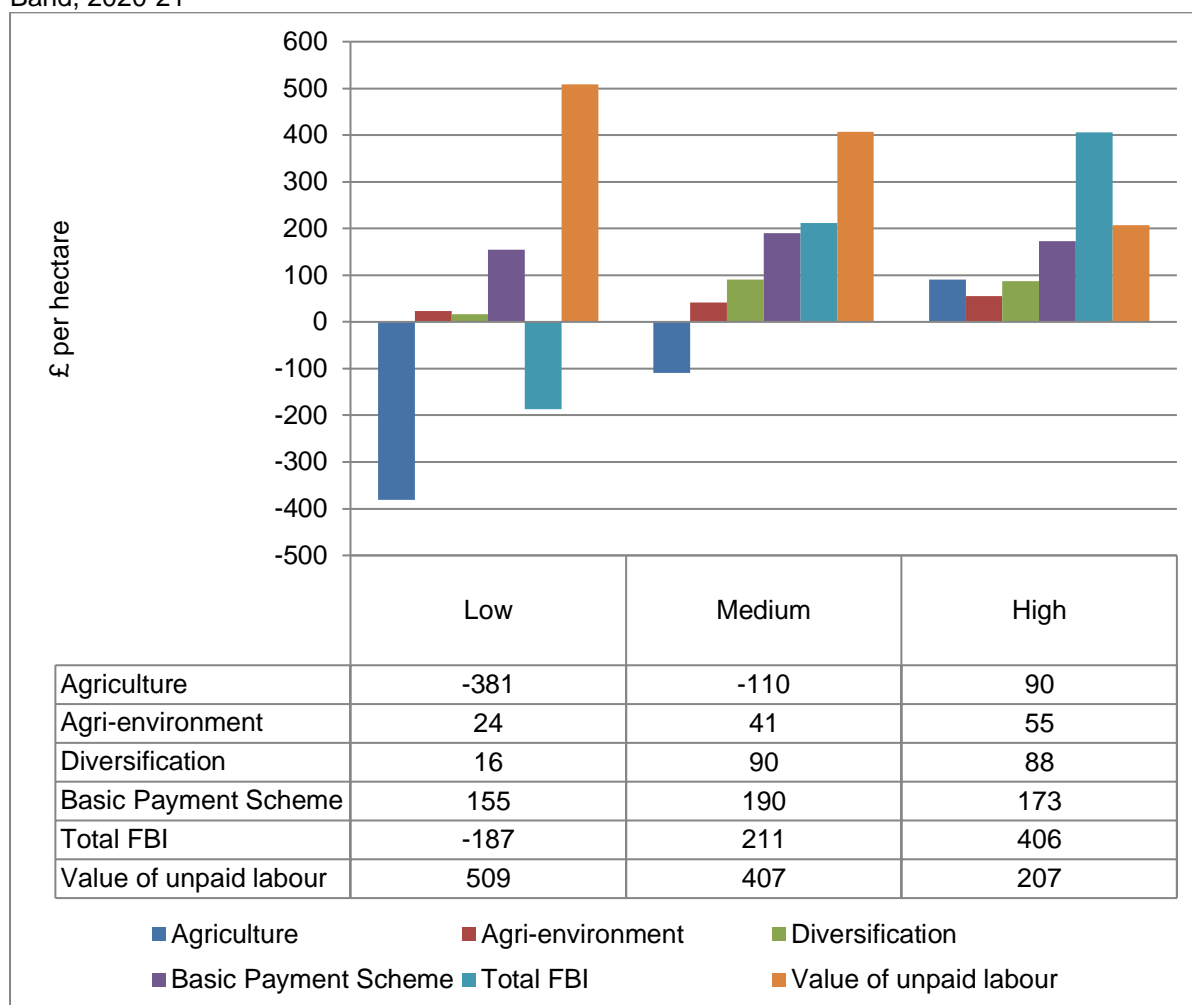
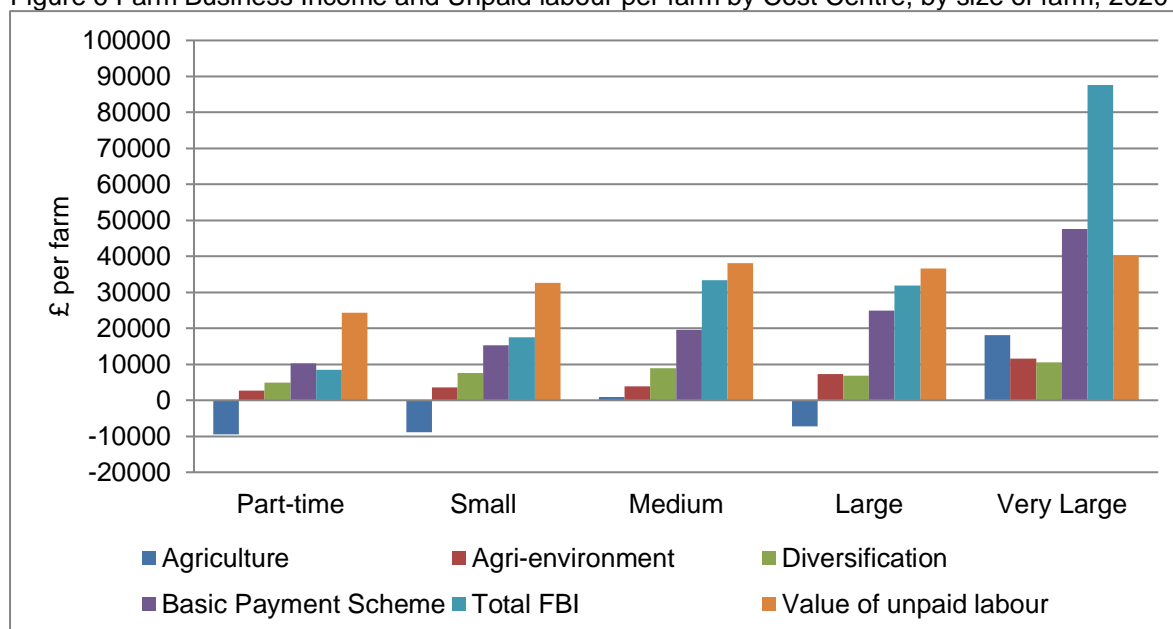


Figure 6 Farm Business Income and Unpaid labour per farm by Cost Centre, by size of farm, 2020-21





## Gross Margin data from the Lowland Grazing Livestock farms<sup>6</sup>

- Gross margin per beef cow is slightly higher for the organic producers as compared to non-organic producers, but with lower stocking rates, the gross margin per hectare for the organic producers is lower than non-organic producers. The Top Third producers' gross margins per cow are more than 58% higher than that of the average, with the difference due to both higher output and lower variable costs. (Table 10)
- For non-organic producers the gross margin per beef cow declined each year from 2017-18 until 2019-20 but recovered in 2020-21. Over the same period the gross margin per cow is slightly more variable for Organic producers. (Figure 7)
- The gross margin per cow and per hectare tends to increase with the scale of the enterprise but care is needed to interpret the data due to small sample sizes (Figure 8).
- The beef rearing gross margin data for 'beef bred' store cattle and finished cattle are summarized in Table 11 and Figure 9. Both systems produce a broadly similar gross margin per head, both on average and at the premium level but in favour of the store systems in 2020-21. The gross margins for beef rearing systems have followed a similar trend to the beef cows with declining margins in the last three years but a recovery in 2020-21.
- For the beef bred store cattle systems organic producers have the lower variable costs per head (£147 against £340) alongside lower output (£557 against £614) thus the average non-organic beef bred finisher with the lower gross margin per head. The higher stocking rate compensates for the lower gross margin per head leaving similar gross margin per hectare (See Table 11).
- The gross margins from the cattle rearing systems show the top third group of producers having margins per head more than 50% higher than those achieved by the average. On a per hectare basis a similar increase can also be seen for both the premium beef finishers and store cattle producers. As with most of the gross margins from these farms the Top third producers have higher output with lower variable costs.
- The output per head from the Beef Bred Store Cattle producers increases with scale of enterprise but the variable costs also increase with scale, particularly concentrate feeds, leaving broadly similar gross margins (Figure 10)<sup>7</sup>. The stocking rate is greatest for the largest herds and broadly increased with scale of system.
- The gross margin per ewe for the lowland ewes for the non-organic producers is similar to the organic producers. The stocking rates for both types of production are low, 5.8 ewes per hectare or lower which is about half the stocking rate of Dairy farms when calculated on a GLU basis. As compared to the previous year the gross margin per ewe from both non-organic and organic lowland sheep flocks was close to a third higher (Table 12 and Figure 11).

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<sup>6</sup> A number of the farms within the sample are able to calculate gross margins for their enterprises. Enterprises with small numbers of farms have not been included. Where the sample sizes allow, top third group figures (weighted total population) are also produced. Sample sizes are small for some of these analyses and standard error bars have been included in the figures to indicate the accuracy of the estimate of the mean. Error bars are shown on 95% confidence intervals as a measure of the uncertainty that may apply to the estimated means. These signify that we are 95% confident that this range contains the true value. They are calculated as the standard error (se) multiplied by 1.96 to give the 95% confidence interval (95% CI)

<sup>7</sup> The number of data points for each herd size group is low (less than 30 in each case) so differences between groups should be treated with some caution.

- The gross margin achieved for the lowland ewes either per head or per hectare show no statistical differences with scale of enterprise due to the large variations in performance in any size group (Figure 12).
- Gross margins per hectare from all the main livestock enterprises are either the lowest for the last five years or the second lowest in the case of lowland ewes. Comparing the average gross margin per hectare across the differing livestock enterprises (Figure 13) - the cattle rearing enterprises (either store or finishing beef systems) tend to have higher margin per hectare than the breeders, beef cows having the lowest gross margin per hectare. This has been the same for at least the last five years.

Table 10 Lowland Beef Cow Gross Margin data

Gross margins per cow, per LU and per hectare (Weighted average performance)		Average		2020/21 Top Third*
		Non-organic	Organic	Non-organic
Number of farms		135	34	45
Cows per herd		37	31	38
Stocking rate:	LU/ha	1.04	0.90	1.14
	ha/LU	0.96	1.11	0.88
£ per cow				
Output -	calf output	562.8	523.1	624.8
	depreciation	-82.2	-80.9	-38.1
ENTERPRISE OUTPUT (excl. BLSA)		480.6	442.2	586.7
Concentrates		41.0	23.9	29.4
Coarse fodder		17.0	25.9	9.9
Veterinary and medicines		32.8	28.0	25.4
Other livestock costs		73.0	70.7	57.8
Forage †		57.4	21.1	53.4
TOTAL VARIABLE COSTS ‡		221.2	169.6	175.8
GROSS MARGIN per cow (excl. BLSA)		259.4	272.7	410.9
GROSS MARGIN per LU (excl. BLSA)		300	303	473
GROSS MARGIN per hectare (excl. BLSA)		270	246	468
Concentrates per £100 output		9	5	5
<i>Averages - previous year</i>				
Stocking rate:	LU/ha	1.06	0.88	1.08
Gross Margin: £/cow		180	211	307
Gross Margin: £/ha		190	279	331
* Top Third of Weighted Population				
† Forage includes seeds, fertilisers, sprays and other crop costs				
‡ Restricted to concentrates, coarse fodder, veterinary and medicines, other livestock costs and forage.				

\* Top third selected by level of gross margin per cow

Figure 7 Gross Margin per head for Beef Cows<sup>8</sup>

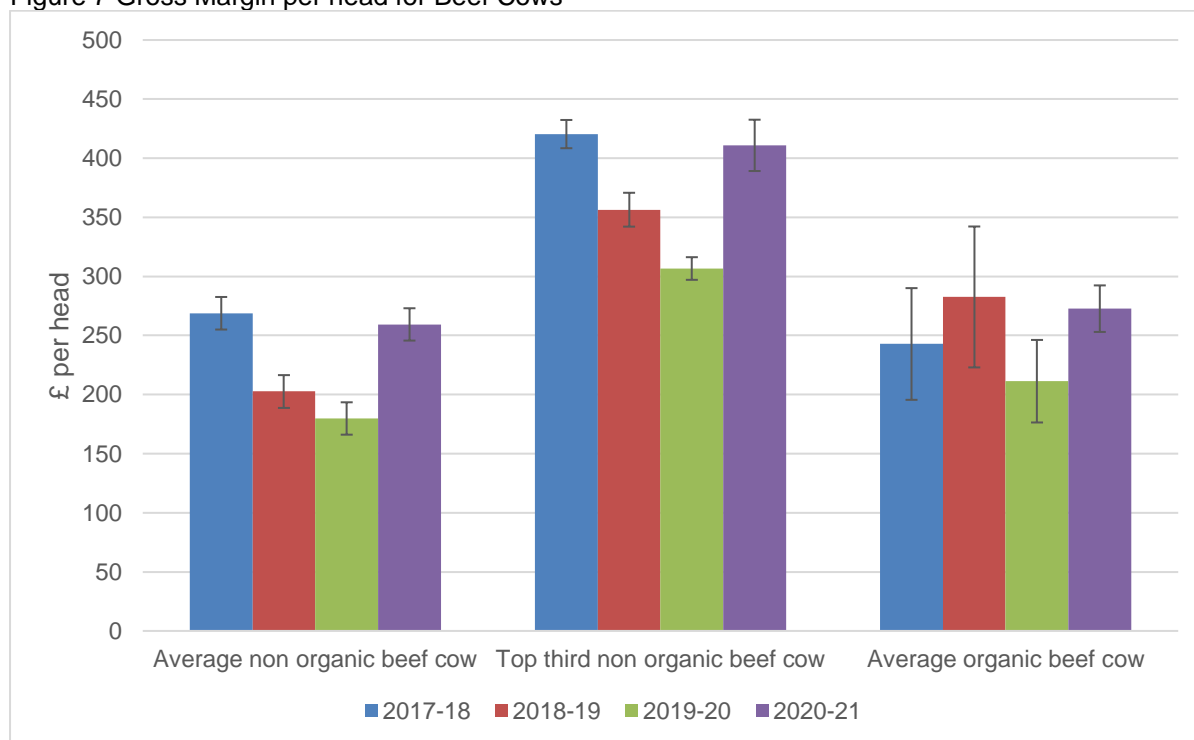


Figure 8 Lowland Beef Cow Gross Margin, by Herd size, non-organic farms, 2020-21



<sup>8</sup> The 2017-18 year has been recalculated on the 2013 Standard Output basis

Table 11- Lowland Beef Rearing Enterprise Gross Margin data

Gross margins per head, per LU and per hectare						2020/21	
(Weighted average performance)		Store cattle			Finished cattle		
Beef bred cattle selling mainly-		Average		Top third*	Average	Top third*	
		Non-organic	Organic	Non-organic	Non-organic	Non-organic	
Number of farms		73	23	24	76	25	
Cattle per herd		84	50	72	40	41	
Stocking rate:	LU/ha	1.14	0.92	1.06	1.01	1.02	
	ha/LU	0.88	1.09	0.94	0.99	0.98	
		£ per head					
OUTPUT		613.9	557.0	716.7	443.4	529.7	
Concentrates		192.9	39.4	148.9	91.7	61.9	
Coarse fodder		14.4	16.7	15.7	15.6	11.2	
Veterinary and medicines		16.3	11.0	13.2	17.8	15.9	
Other livestock costs		74.2	61.5	70.9	74.0	65.8	
Forage †		41.9	18.8	42.2	39.4	37.7	
TOTAL VARIABLE COSTS ‡		339.6	147.3	290.9	238.4	192.5	
GROSS MARGIN per head		274.3	409.6	425.8	205.0	337.2	
GROSS MARGIN per LU		463	621	662	289	453	
GROSS MARGIN per hectare		528	569	701	291	460	
Concentrates per £100 output		31	7	21	21	12	
Averages - previous year							
Stocking rate:		LU/ha	1.12	0.99	0.96	1.18	1.09
Gross Margin: £/head			130.9	185.5	303.6	172.1	356.3
Gross Margin: £/ha			261	356	509	349	648
* Top Third of Weighted Population							
† Forage includes seeds, fertilisers, sprays and other crop costs							
‡ Restricted to concentrates, coarse fodder, veterinary and medicines, other livestock costs and forage.							

\* Top third selected by level of gross margin per head

Figure 9 Gross margins per head of Cattle Rearing Systems<sup>9</sup>

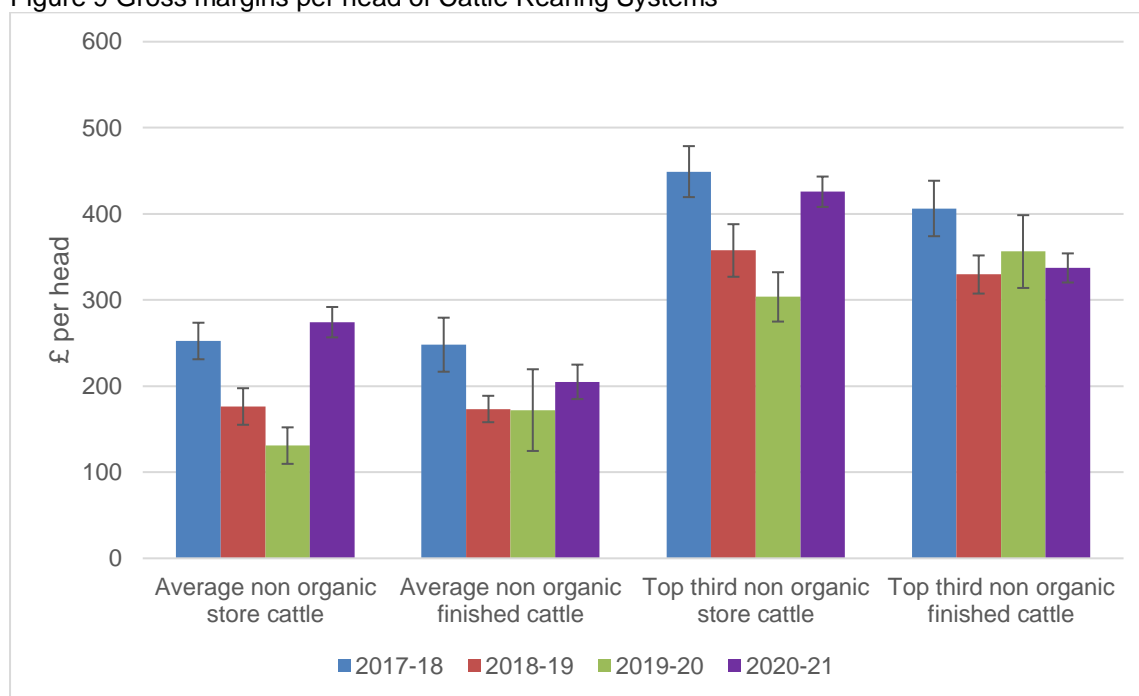
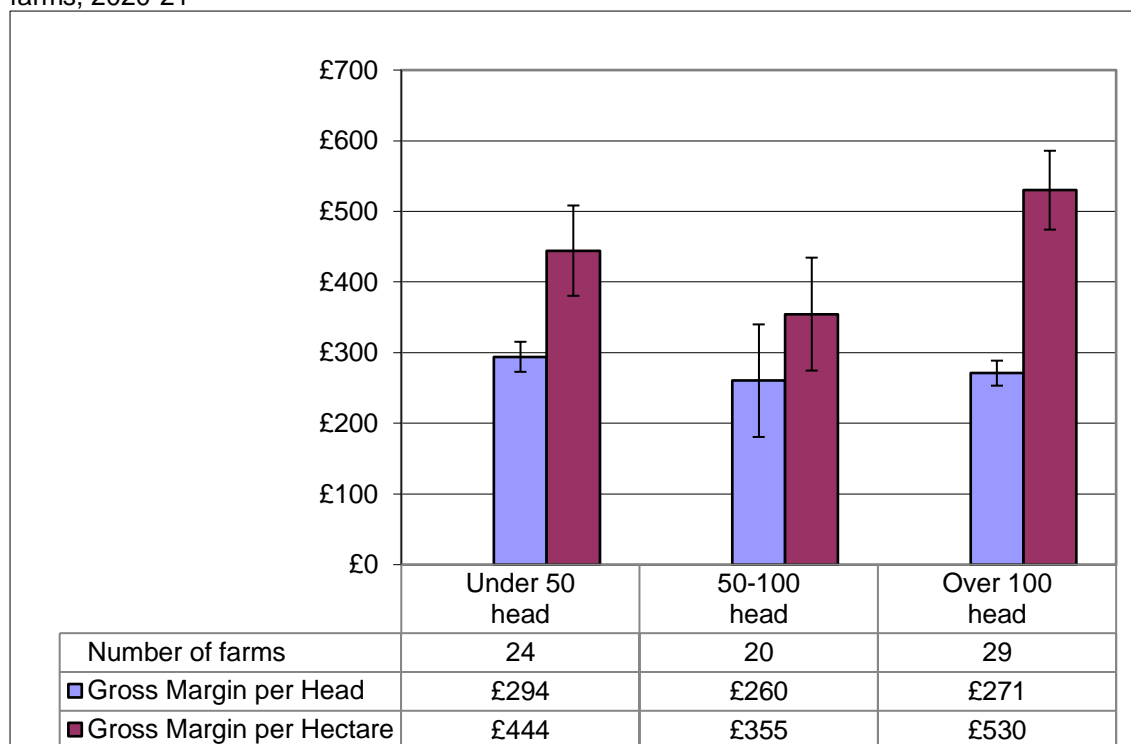


Figure 10 Beef Bred Store Cattle Gross Margin per Head & per Hectare, by herd size non-organic farms, 2020-21



<sup>9</sup> The 2017-18 year has been recalculated on the 2013 Standard Output basis

Table 12 –Lowland Ewe Gross Margin data

Gross margins per ewe and per hectare			2020/21	
(Weighted average performance)		Average		Top Third*
		Non-organic	Organic	Non-organic
Number of flocks		114	22	38
Ewes per flock		348	166	379
Average lamb sale price - £/lamb		93.2	96.7	95.3
Stocking rate - ewes per hectare		5.7	4.5	5.8
		£ per head		
Output -	lambs	142.9	125.6	168.3
	wool	1.0	1.1	1.1
	depreciation	-12.1	-13.7	-6.8
ENTERPRISE OUTPUT (excl. BLSA)		131.8	113.1	162.6
Concentrates		20.6	5.7	21.5
Coarse fodder		2.6	1.8	2.8
Veterinary and medicines		8.4	9.5	9.4
Other livestock costs		14.2	13.4	15.3
Forage †		7.8	4.8	7.3
TOTAL VARIABLE COSTS ‡		53.7	35.2	56.3
GROSS MARGIN per ewe (excl. BLSA)		78.1	77.8	106.3
GROSS MARGIN per LU (excl. BLSA)		497	484	648
GROSS MARGIN per hectare (excl. BLSA)		441	353	621
Concentrates per £100 of output		16	5	13
Averages - previous year				
Stocking rate:	ewes/ hectare	5.2	4.3	6.5
Gross Margin: £/ewe		60.4	60.6	86.7
Gross Margin: £/ha		314	259	560
Average finished sale price- £ /head		83.1	83.4	85.4
* Top Third of Weighted Population				
† Forage includes seeds, fertilisers, sprays and other crop costs				
‡ Restricted to concentrates, coarse fodder, veterinary and medicines, other livestock costs and forage.				

\*Top third selected by gross margin per ewe

Figure 11: Lowland Ewe Gross Margin per Head.<sup>10</sup>

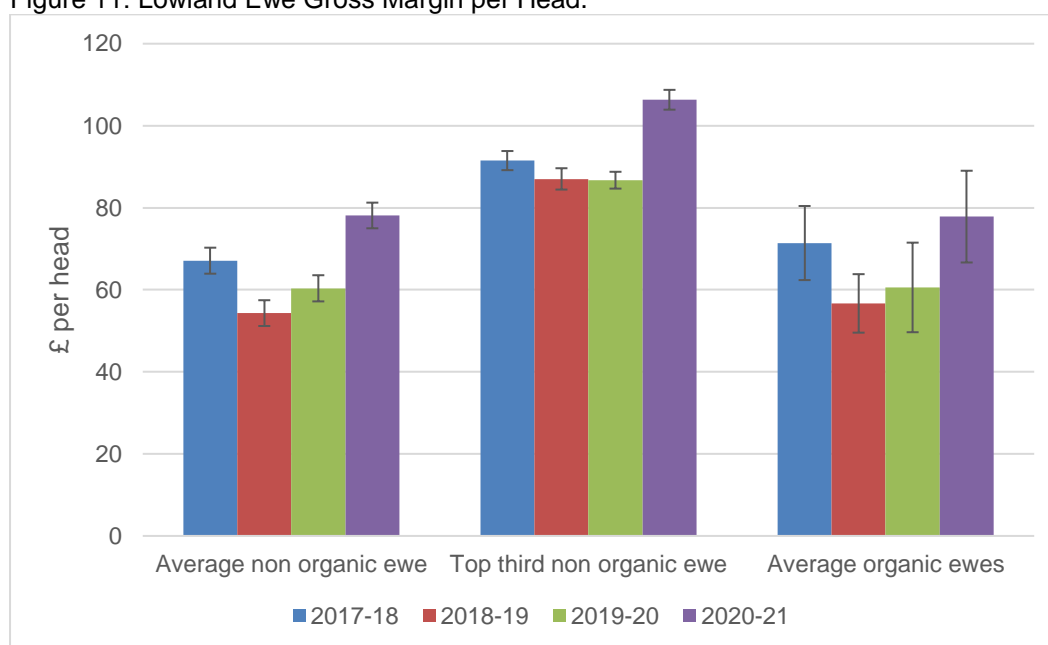
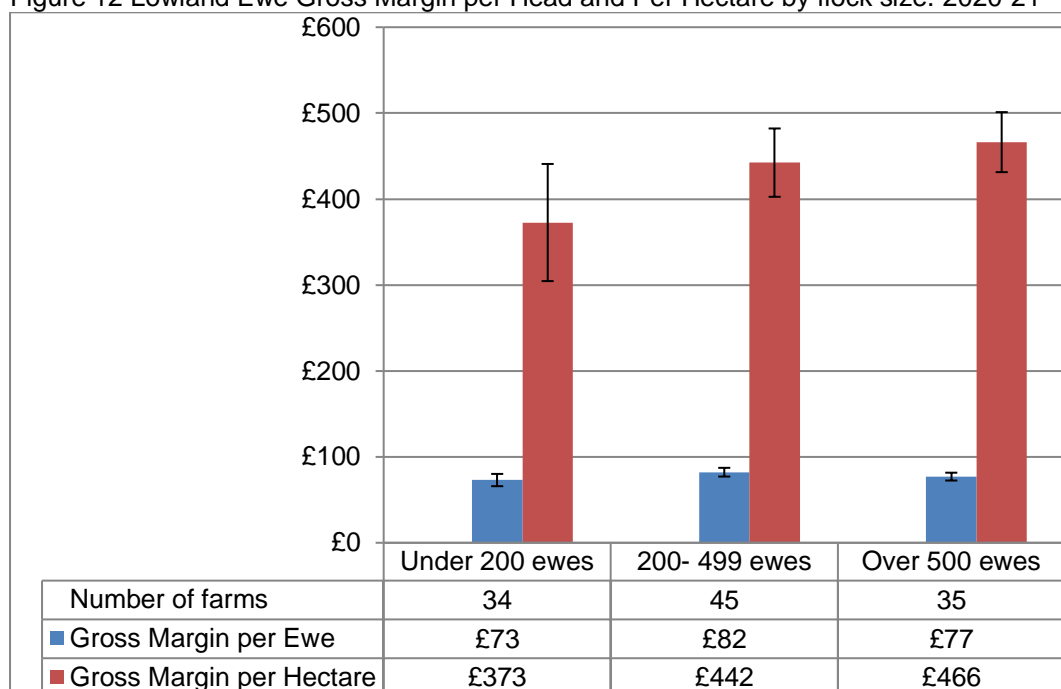
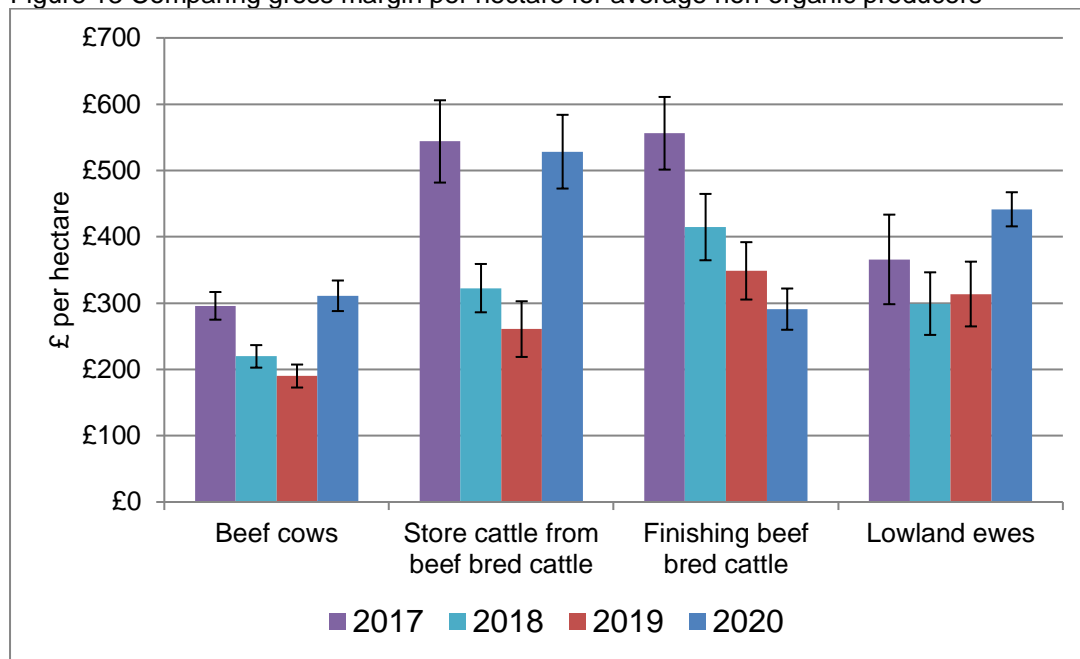


Figure 12 Lowland Ewe Gross Margin per Head and Per Hectare by flock size. 2020-21



<sup>10</sup> The 2017-18 year has been recalculated on the 2013 Standard Output basis

Figure 13 Comparing gross margin per hectare for average non-organic producers





## Appendix 1 The Farm Business Survey (FBS)

### General

The FBS sample covers businesses with an economic Standard Output of 25,000 Euros and above. Practically all of the sampled accounts close within the four months from the end of December to the end of the following April with concentrations at the close of the calendar year and towards the end of March and early April. About 75 per cent of the accounts close during these two peak periods. Thus the results relate, on average, to March - February years.

### Classification of survey farms by type of farming and size of business

A revised classification of farm types was introduced in 2010/11 based on Standard Outputs, which caused changes to the distribution of farms by farm type. Further details of the revised classification and its effect on the FBS sample may be found at:

<https://www.gov.uk/farm-business-survey-technical-notes-and-guidance>

The lower size threshold for the Farm Business Survey was also changed from 0.5 Standard Labour Requirements (in annual full-time equivalents) to a standard output of 25,000 Euros. Therefore, the results published here relate to farms for which the total standard output from cropping and stocking activities is at least 25,000 Euros.

The Standard Labour Requirement (SLR) of a farm represents the normal labour requirement, in Full Time Equivalents, for all the enterprises on a farm under typical conditions. The SLR for a farm is calculated from standard coefficients applied to each enterprise on the farm. The standard coefficients represent the input of labour required per head of livestock or per hectare of crops for enterprises of average size and performance.

Farms in the sample are grouped by type of farm based on the EC system of classification defined by Commission Decision 1242/2008 (with minor modifications to adapt it to United Kingdom conditions) and Standard Outputs per hectare of crop area and per head of livestock estimated over the period 2008-2012.

The Standard Output (SO) is a financial measure used to classify farm type. Standard outputs measure the total value of output of any one enterprise - per head for livestock and per hectare for crops. For crops, this will be the main product (e.g. wheat, barley, peas) plus any by-product that is sold, for example straw. For livestock it will be the value of the main product (milk, eggs, lamb, pork) plus the value of any secondary product (calf, wool) minus the cost of replacement. Up until 2010, standard gross margins were used for the classification of farms. The difference between standard outputs and standard gross margins is that no variable costs are deducted in the derivation of standard outputs. Each farm is assigned a total SO by aggregating the SOs for its agricultural enterprises. The farm is classified into a 'particular' type of farming by evaluating the proportion of its total SO deriving from different enterprises.

From 2018/19, the classification of farms is based on 2013 standard output (SO) coefficients. 2017/18 results have been recalculated and presented in this report on 2013 SO coefficients to allow comparability between 2017/18 and 2018/19. The results published here are therefore not directly comparable with those published in reports in earlier years which are based on previous SO coefficients. Results for 2017/18 based on the previous SO coefficients can be found at:

<https://www.ruralbusinessresearch.co.uk/archive-publications/>

The characteristics of each farm type are summarised as follows:-

**Cereals-** Farms on which cereals, oilseeds, peas and beans harvested dry account for over two-thirds of their total SO (holdings with more than two-thirds of their total SO in set-aside are excluded from the survey results).

**General cropping-** Farms with over two-thirds of their total SO in arable crops (including field scale vegetables) or a mixture of arable and horticultural crops; and holdings where arable crops account for more than one-third of total SO and no other grouping accounts for more than one-third.

**Dairy-**Farms where the dairy enterprise, including followers, accounts for over two-thirds of their total SO.

**LFA grazing livestock**-Farms with more than two-thirds of their total SO in cattle and sheep except holdings classified as dairy. A farm is classified as in the LFA if 50% or more of its total area is in the Less Favoured Area (both Disadvantaged and Severely Disadvantaged).

**Lowland grazing livestock**-farms with more than two-thirds of their total SO in cattle and sheep except holdings classified as dairy. A farm is classified as "lowland" if less than 50% of its total area is in the Less Favoured Area.

**Horticulture**- Holdings on which fruit (including vineyards), hardy nursery stock, glasshouse flowers and vegetables, market garden scale vegetables, outdoor bulbs and flowers, and mushrooms account for more than two thirds of their total SO

**Specialist pigs**- Farms on which pigs account for over two-thirds of their total SO.

**Specialist poultry** -Farms on which poultry account for over two-thirds of their total SO.

**Mixed farms**- Farms where crops account for one-third, but less than two-thirds of total SO and livestock accounts for one-third, but less than two-thirds of total SO. It also includes holdings with mixtures of cattle and sheep and pigs and poultry and holdings where one or other of these groups is dominant, but does not account for more than two-thirds of the total SO.

Farm business size in the United Kingdom is measured in Standard Labour Requirements (SLR) expressed in terms of full-time equivalents. Five size groups are defined for this report:

Part-time (less than 1 SLR)

Small (greater than or equal to 1 less than 2 SLR's)

Medium (greater than or equal to 2 less than 3 SLR's)

Large (greater than or equal to 3 less than 5) SLR's

Very Large (greater than or equal to 5 SLR's)

Farms are allocated to performance bands according to total farm output divided by total farm costs. The farms are then ranked and allocated to groups representing 25, 50 and 75 percentiles; equivalent to low, medium and high performance bands.

### Weighting Procedure

All results in this report are weighted so as to provide estimates for the population. The weights are based on the ratio of numbers of businesses in the population (as given by the June Survey) and in the sample within each farm type and size group. These weights are then further refined by a calibration process using information from sources other than the Census (mostly administrative data). For more information on the FBS weighting procedure and other statistical issues, please see:

<https://www.gov.uk/farm-business-survey-technical-notes-and-guidance>

### Definition of Terms

**Utilised agricultural area** is the crop area, including fodder, set-aside land, temporary and permanent grass and rough grazing in sole occupation (but not shared rough grazing) i.e. the agricultural area of the farm. It includes bare land and forage let out for less than one year.

**Total area of farm** is the utilised agricultural area plus woodland and other areas of the farm not used for agriculture (e.g. buildings, roads, water, and household gardens).

**Total tillage** comprises the utilised agricultural area, plus bare land and forage hired in from others in the accounting period, minus temporary and permanent grass and rough grazing in sole occupation (but not shared rough grazing).

**Total area farmed** comprises the total area of the farm minus woodlands and buildings, etc. plus net land hired in.

**Adjusted utilised agricultural area** comprises the utilised agricultural area with rough grazing in sole occupation converted to a permanent pasture equivalent.

**Stocking** figures are the average annual level of stocking based on estimated average livestock numbers on the farm for the year, including fractions for livestock on the farm for less than a year.

**Total livestock units** are used as an approximate measure of stocking intensity and are based on the estimated energy requirements of different species and ages of livestock. . A summary of the main livestock units is shown below

Dairy cows	1.00 LU	Beef Cows	0.75 LU	Heifers in calf	0.80 LU
Cattle over 2 years	0.80 LU	Cattle 1-2 years	0.65 LU	Cattle 0-12 months	0.34 LU
Bulls	0.75 LU	Lowland Ewes	0.10 LU	Upland Ewes	0.08 LU
Hill Ewes	0.06 LU	Store lambs	0.04 LU	Rams	0.08 LU

**Annual labour units (ALU)** are the estimated number of full time worker equivalents of persons working on the holding during the year. Part-time workers are converted to full-time equivalents in proportion to their actual working time related to that of a full-time worker. One ALU represents one person employed for 2,200 hours.

**Enterprise output** is the main measure of individual crop and livestock output. It comprises:

(a) **Cash crop enterprise output**, which is the total value of cash crops produced by the farm (other than losses in the field and in store) including *direct crop subsidies* due. It includes crops used for feed and seed by the farm business and those consumed in the farmhouse and by farm labour. Crop enterprise output is calculated on a "harvest year" as distinct from an "accounting year" basis; that is, it refers only to those crops (with the exception of certain horticultural crops) wholly or partly harvested during the accounting year and excludes any crop carried over from the previous year.

Thus valuation changes (between the previous and current crops) are not relevant and the total harvested yield of the crop is valued at market prices (plus any subsidies). However, any difference between the opening valuation of any stocks of previous crops and their ultimate disposal value (sales, used on farm and any end-year stocks) is included in total farm output and net farm income.

(b) **By-products, forage and cultivations**, which cover the value of output of the by-products of agricultural activity, sales of fodder, valuation changes for fodder and cultivations. It also covers revenue from the letting of bare land or forage on a short-term lease.

(c) **Livestock enterprise output** comprises the total sales of livestock and livestock products, part of the valuation change (see below), produce consumed in the farmhouse and by labour and the value of milk and milk products fed on the farm (excluding direct suckling) adjusted for debtors at the beginning and end of the year and transfers between enterprises; less purchases of livestock and livestock products from outside the farm business. Stock appreciation for breeding livestock (cattle, sheep and pigs) has been excluded from individual livestock enterprise outputs. However, changes in the numbers of breeding livestock between the opening and closing valuation and the total valuation change of trading livestock are included. Unlike crop enterprise output, livestock enterprise output is calculated on an accounting year basis.

(d). **Rental Income** comprises the renting-out of farm cottages and other buildings, where these are inseparable from the main farm account

(e) **Contract work** includes returns from the use of farm resources for hire work

(f) **Miscellaneous output includes** returns from recreational activities, added value activities, the private share of the rental of the farmhouse and the value of any farm labour or other inputs used for producing capital assets for the farm.

**Total farm output** is the sum of crop and livestock enterprise output, income from the agri-environment schemes, Basic payment scheme and miscellaneous output, and the adjustment for previous years' crops. It excludes breeding livestock stock appreciation.

**Inputs** comprise payments and the estimated value of non-cash inputs, including home-grown feed and seed, adjusted for changes in stocks and creditors between the beginning and end of the year. The appropriate share of any input not used entirely by the farm business is deducted.

#### **Total variable costs**

These are taken to be costs of feed, veterinary fees and medicines, other livestock costs, seeds, fertilisers, crop protection and other crop costs.

**Concentrate feed** includes (a) bought compounds and grains, sugar beet pulp, proteins, milk powder, animal and plant proteins, additives, minerals and vitamins; and (b) home produced cereals, beans, peas, milk and milk products, valued at the average ex-farm price.

**Purchased Fodder** includes purchased bulk feeds such as potatoes, vegetable residues, wet brewers' grains, hay and feed straw, and agistment. It does not include forage produced on the holding. Payments for grass keep and bare land are shown with land charges.

**Veterinary fees and medicines** consist of veterinary fees and the cost of all medicines.

**Other livestock costs** includes all expenditure relating directly to livestock production such as freeze branding, AI fees, milk tests, breed society fees, dairy and other detergents, packing materials, bedding straw, show expenses, processing and marketing charges, disposal of casualties, etc. and other livestock costs not separately identified.

**Seeds** This comprises expenditure on purchased seeds, plants and trees adjusted for changes in stocks. Home-grown seed from the previous crop is included and charged at estimated market price: any seeds from current crops and sown for a succeeding crop are excluded, but are included in the closing valuation of the crop and hence in enterprise output. This enables the value of homegrown seed used in the production of the current crop to be identified.

**Fertilizers** This includes lime, fertilisers and other manures, and is adjusted for changes in stock. Fertilisers sown for next year's crops are treated as if they were still in store and are included in the closing valuation.

**Crop protection** This includes costs of pre-emergent sprays, fungicides, herbicides, dusts and insecticides and other crop sprays.

**Other crop costs** includes all expenditure relating directly to crop production such as packing materials, baler cord, soil analyses, crop competition costs, polythene (for tunnels), all storage and market preparation costs, purchase of standing crops, marketing charges, soil sterilisation, etc. It also includes the cost of renting bare land (for growing cash crops) for less than one year.

### **Total fixed costs**

These are the costs of labour, machinery, contract work, land and buildings, other general farming costs and depreciation.

**Labour (excluding farmer and spouse)** costs include all work in connection with the normal running of the holding including field work, livestock husbandry, market preparation, maintenance, transport and other related operations. They exclude work to produce fixed assets (construction or repairs of buildings and machinery, etc.), domestic work and business travel/professional meetings, etc.

'Unpaid' labour is valued at the appropriate rate for the work actually done. The value of the manual labour of the farmer and spouse is not charged as an input in calculating net farm income

**Contract costs** These costs include expenditure on work carried out by agricultural contractors, including the costs of materials employed, such as fertilisers, unless these can be allocated to the specific heading. Costs of hiring machines to be used by the farm's own labour are also included. Expenditure on contract labour is only included here if it is associated with the hiring of a machine. Otherwise it is entered under (casual) labour.

**Machinery costs** relate to all machinery and equipment items, which originally cost more than £500, including the farm share of road vehicles. Depreciation is calculated on a replacement cost basis (broadly equivalent to 15% of current replacement costs). Repairs are recorded net of insurance receipts.

**Land expenses** include tenant-type repairs and land upkeep costs as Property repairs, the actual rents paid by tenant farmers and drainage rates where incurred. Payments for grass keep and bare land are also included. For land and buildings owned a 'rental value' is included based on similar payments made by tenants in similar circumstances.

**General overheads** include the farm share of electricity, heating fuel, water, insurance (including labour and buildings insurance) and professional fees. Bank charges, secretarial costs, consultancy fees and other sundry costs (such as subscriptions, telephone, postage, stationery, etc.) are included in Other general costs.

**Net Farm Income (NFI)** is intended as a consistent measure of the profitability of tenant-type farming which allows farms of different business organisation, tenure and indebtedness to be compared. It represents the return to the farmer and spouse alone for their manual and managerial labour and on the tenant-type capital invested in the farm business.

To represent the return to farmer and spouse alone, a notional deduction is made for any unpaid labour provided by non-principal partners and directors, their spouses and by others; this unpaid labour is valued at average local market rates for manual agricultural work.

To confine the measure to the tenant-type activities and assets of the business, an imputed rent is deducted for owner-occupied land and buildings and for landlord-type improvements made by the tenant. No deduction is made for interest payments on any farming loans, overdrafts or mortgages; interest earned on financial assets is also excluded.

Because of these two restrictions, NFI is not a proxy for farm business income; other measures, such as Net Profit and Family Farm Income should be used instead. Nor is it a proxy for farm household

income both because NFI does not accurately represent the farmer and spouse share of the business and because it takes no account of any income from off-farm sources.

**Breeding livestock stock appreciation** represents the change in market prices of breeding cattle, sheep and pigs between the opening and closing valuations.

**Farm business income (FBI)** for sole traders and partnerships represents the financial return to all unpaid labour (farmers and spouses, non-principal partners and directors and their spouses and family workers) and on all their capital invested in the farm business, including land and buildings. It is defined as Total Farm Output (TFO) plus profit / loss on sale of assets minus cost (C): where TFO is defined as the sum of output from: crop enterprises, adjustment for disposal of previous crops, livestock enterprises, separable non-agricultural diversification, Basic farm payment, agri-environmental payments, other grants and subsidies, miscellaneous receipts; C is defined as variable costs plus fixed costs. Note that prior to 2008/09 directors remuneration was not deducted in the calculation of farm business income. For corporate businesses it represents the financial return on the shareholders capital invested in the farm business. It is used when assessing the impact of new policies or regulations on the individual farm business. Although Farm Business Income is equivalent to financial Net Profit, in practice they are likely to differ because Net Profit is derived from financial accounting principles whereas Farm Business Income is derived from management accounting principles. For example in financial accounting output stocks are usually valued at cost of production, whereas in management accounting they are usually valued at market price. In financial accounting depreciation is usually calculated at historic cost whereas in management accounting it is often calculated at replacement cost.

**Farm corporate income** represents the return on own capital invested in the farm business, to risk and to entrepreneurship. It is derived by deducting unpaid labour, both manual and managerial, from Farm Business Profit. This allows the profitability of sole traders and partnerships to be compared directly with that of other companies. Currently we are able to deduct an estimate of unpaid manual labour but not of unpaid managerial labour and so the data are only approximate. However, we plan to undertake a research project to produce a method for deriving an estimate of unpaid managerial labour, so that we can produce better data for this measure in future.

**Farm investment income** represents the return on **all** capital invested in the farm business **whether borrowed or not**, to risk and to entrepreneurship. It is a general measure of the profitability of farming as an activity rather than of a particular business.

It is derived by adding net interest payments to Farm Corporate Income. Since currently the data for Farm Corporate income are only approximate, so too are the data for Farm Investment Income.

### Balance Sheet Tables

**Total fixed assets** include milk and livestock quotas, as well as land, buildings, breeding livestock, and machinery and equipment. For tenanted farmers, assets can include farm buildings, cottages, quotas, etc., where these are owned by the occupier.

**Bank term loans** and **other long and medium term loans** are loans which exceed 12 months.

**Net Worth** represents the residual claim or interest of the owner in the business. It is the balance sheet value of assets available to the owner of the business after all other claims against these assets have been met.

**Appendix 2 Reports in this series:**

Reports in this series:

Crop Production in England

Dairy Farming in England

Hill Farming in England

Horticulture Production in England

Lowland Grazing Livestock Production in England

Organic Farming in England

Pig Production in England

Poultry Production in England

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