RBR Rural Business Research

Newcastle University

Farm Business Survey

2020/2021

Organic Farming in England

Charles Scott

March 2022

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independent research, data and analysis

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Acknowledgments

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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, 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. This series of reports, along with previous versions are also all available at 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
www.ruralbusinessresearch.co.uk

Executive Summary

The area under organic food production (including that in conversion) in the UK rose to 488,958ha in 2020 and the area under conversion in the UK also rose to 31,318ha. The number of organic producers (including producer/processors) fell to 5,754 in 2020 (Defra 2021).

This report uses data from the 2020/21 Farm Business Survey of 1,664 farms in England, of which 135 are organic (reduced from the expected 1,750 farms due to the on-going impact of the Covid-19 outbreak on data collection in 2021). Several measures of performance have been used in this report and Farm Business Income (FBI) is used as the main measure. Farm Business Output (FBO) has been split into four sources; agriculture, agri-environment, diversification and the Basic Payment. Total costs have also been broken down into selected cost centres. Organic farms have been compared year-on-year using an identical sample and a full sample comparison of organic and non-organic farms is made for the current year. Gross margin data for individual organic crop and livestock enterprises is presented whenever enterprise sample size is 5 farms or more.

Four of the six farm types (cropping, horticulture, LFA grazing and lowland grazing) recorded higher farm profitability per hectare (FBI/ha) for the organic farms over their non-organic counterparts but these differences were not statistically significant. Organic dairy and mixed farms however, recorded a statistically lower FBI/ha than the non-organic farms in these two groups. The differences in income were broadly similar when using Net Farm Income per hectare (NFI/ha) with non-organic dairy and mixed farms showing significantly higher levels of NFI/ha. Organic farms usually generate a lower output but incur lower costs than the non-organics, LFA grazing farms is the exception generating a greater output and incurring higher costs per hectare. On a year-on-year basis, FBI/farm and FBI/ha increased for organic Horticulture, LFA grazing and Lowland grazing farms, but fell for Cropping, Dairy and Mixed farm types.

Organic cropping farms earned on average an FBI of £390/ha, £56/ha more than the non-organic cropping farms, and equating to an FBI of £36,675/farm (£70,662/farm for non-organics). The difference was significant at the farm level but not at the per hectare level. The higher FBI/ha was due to a lower expenditure on costs per hectare (£953/ha versus £1,383/ha) and despite a lower total farm output per hectare of £1,341/ha versus £1,719/ha. Net farm income was higher (not significantly) for organic cropping farms at the per hectare level (£250/ha versus £226/ha) but was significantly lower at the per farm level (£23,507/farm versus £47,860/farm). Organic cropping farms saw a 51% decrease in FBI/ha between 2019/20 and 2020/21 to £389/ha. This decrease in profitability was due to a 21% decrease in total output per hectare and a 6% increase in total costs per hectare.

The FBI/ha for organic horticulture farms of £2,349/ha was higher than that of the non-organics by £146/ha (although not significant). Non-organic horticulture farms operated a much more intensive operation than organic horticulture farms; FBO being £17,369/ha for non-organics versus £7,324/ha for organic farms. The total costs for non-organic horticulture farms were £15,167/ha and only £4,976/ha for organic farms. The FBI/ha on an identical sample of organic horticulture farms rose by 41% (to £2,416/ha) between 2019/20 and 2020/21. This was due to a 26% increase in total

farm output and despite a 20% increase in total costs. The small sample size of the identical sample means that great care must be taken in interpreting the year-on-year results.

Organic dairy farms recorded a significantly lower FBI/ha of £296/ha, £296/ha less, than the non-organic dairy farms, this due to total farm output being £1,444/ha lower on the organic dairy farms, and despite their costs being £1,162/ha lower. There is a smaller, significant difference in profitability (of £231/ha) at the NFI/ha level. Organic dairy farms have typically fewer stock (an average of 200 Grazing Livestock Units (GLU) compared to 285 GLU for the non-organics) – on average areas of 164ha and 161ha respectively. Between 2019/20 and 2020/21 the FBI/ha on organic dairy farms fell by 6%; this due to a 2% decrease in output and despite a 2% decrease in costs.

As has been the case for some years, organic LFA grazing farms continue to be more profitable than their non-organic counterparts. The average FBI/farm, of £35,828/farm, is £2,560 more than the non-organic farms – but not significant at either the farm or the per hectare level. When using NFI, the organics' profitability is also greater at the farm level and the NFI/ha level but are also not significant. Organic LFA grazing farms generated £51/ha more output per hectare (at £991/ha) but incurred £3/ha higher costs (at £705) than the non-organics. The average size of an organic LFA grazing farm is 125 adjusted hectares (adj. ha) carrying 83 GLU whereas a non-organic farm is typically 137 adj. ha and carrying 85 GLU. Organic LFA grazing farms saw a 51% increase in FBI/ha between 2019/20 and 2020/21 – attributable to a 16% increase in total output per hectare and despite a minimal 4% increase in total costs per hectare.

In 2020/21 organic lowland grazing farms recorded an average FBI/ha of £226/ha compared to their non-organic counterparts' of £204/ha but the difference was not significant. At the farm level the difference was £747/farm, but also not significant. The average FBO/ha for organic farms (of £1,067/ha) was £191/ha less than the FBO/ha for the non-organics, primarily due to a lower output from agriculture. Organic farms had considerably lower total costs (by £215/ha) of £842/ha. The profitability (by FBI/ha) of organic lowland grazing farms increased by 34% between 2019/20 and 2020/21. This was due to a 7% increase in total output per hectare with total costs remaining constant.

Organic mixed farms earned an FBI/ha of £96/ha, a significant £150/ha less than their non-organic counterparts (of £246/ha). The NFI/ha was also significantly lower, by £173/ha, at -£37/ha. Organic mixed farms earned £411/ha less in total farm output (of £1,406/ha) but they also spent £266/ha less in total costs (of £1,305/ha). Organic mixed farms saw a 44% fall in FBI from 2019/20 to 2020/21 to £146/ha. This was due to an 11% or £116/ha increase in total costs to £1,155/ha, but with total farm output remaining unchanged at £1,302/ha.

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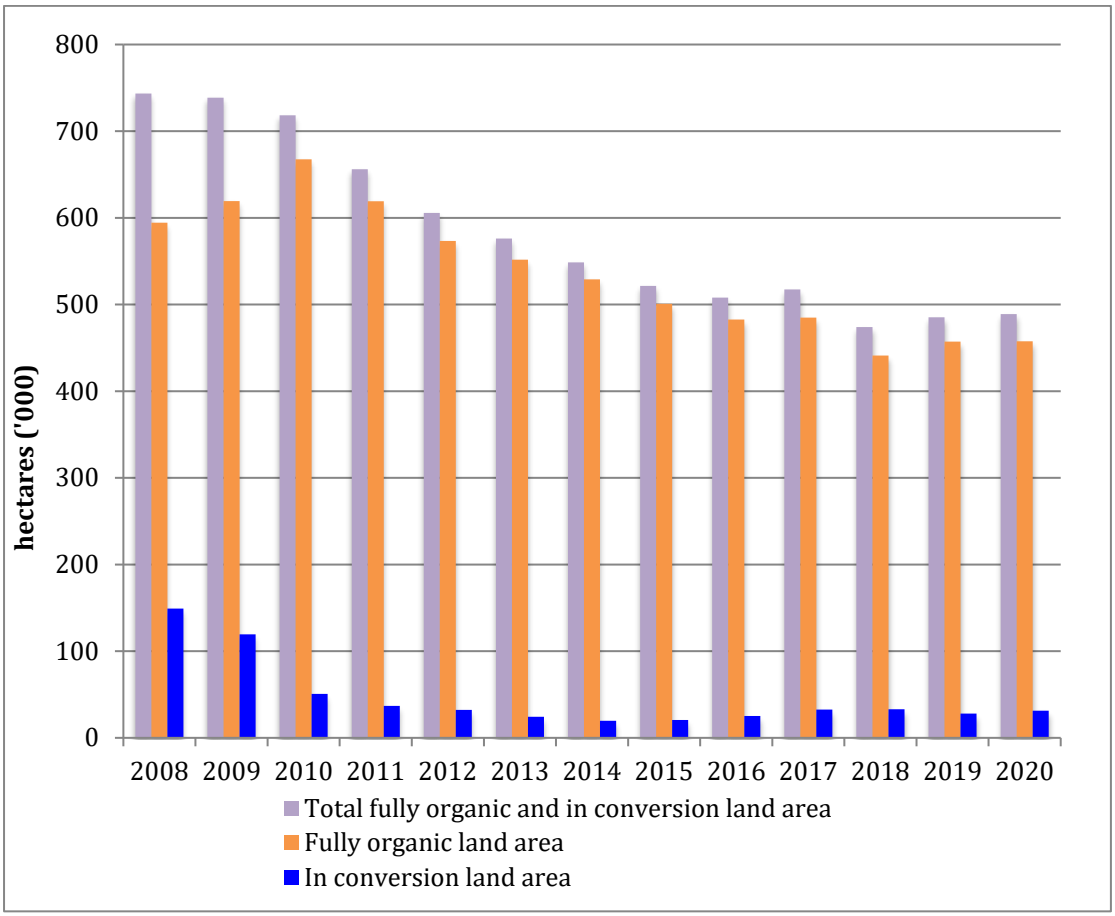
1 Organic farming in the United Kingdom

1.1 Area

The total organic agricultural area consists of land certified as fully organic and land in conversion to organic. Total UK land in organic food production peaked in 2008/09 at 743,516 hectares (ha) but has since declined to 488,958ha in 2020. The area in conversion, peaking in 2007/08 at 157,893ha, was 31,318ha in 2020.

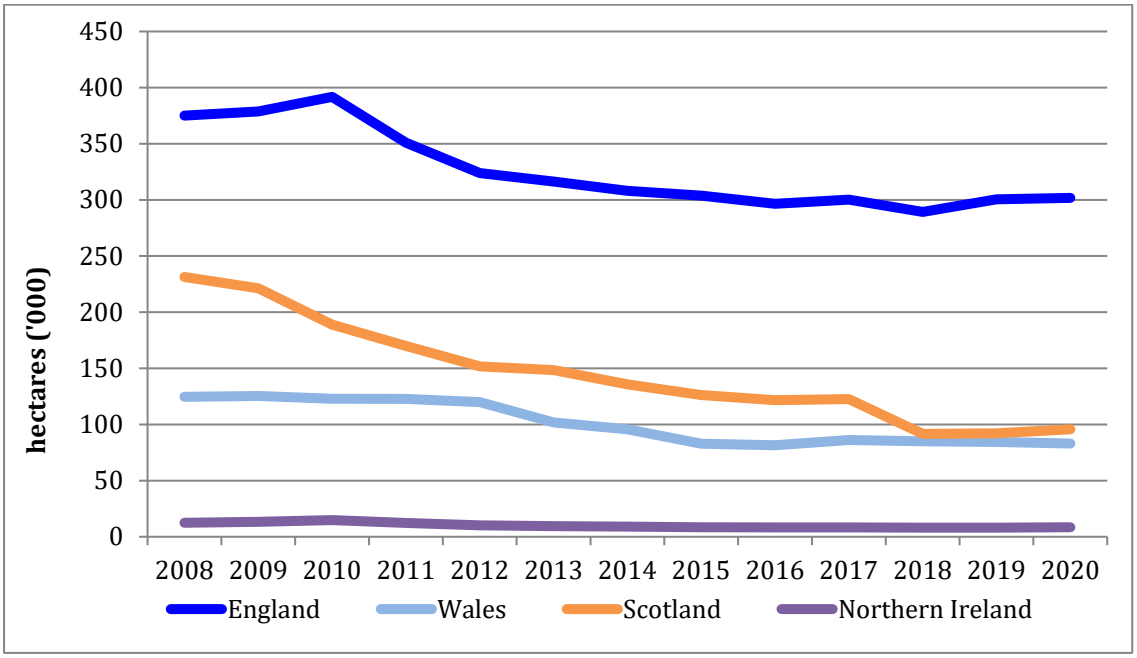
Figure 1 UK land in organic food production 2008-2020



(*Source: DEFRA 2021*)

The area of organic (including areas in conversion) farmland in England has followed a similar pattern to that of the UK as a whole (Figure 2) with 301,770ha being classified as organic (and in-conversion) in 2020, down from a peak of 391,761ha in 2010 (DEFRA 2021). Organic conversions in England, which have been roughly twenty to thirty thousand hectares per year for the past ten years, increased slightly to 31,318ha in 2020. Scotland's organic area has been in decline for some years and although it increased slightly in 2020, to 95,737ha, is only 27% of the area that was under organic production in 2003. The area under organic production in Wales has decreased slightly, to 83,891ha in 2020, and the organic area in Northern Ireland reversed a nine-year decline by increasing slightly to 8,389ha.

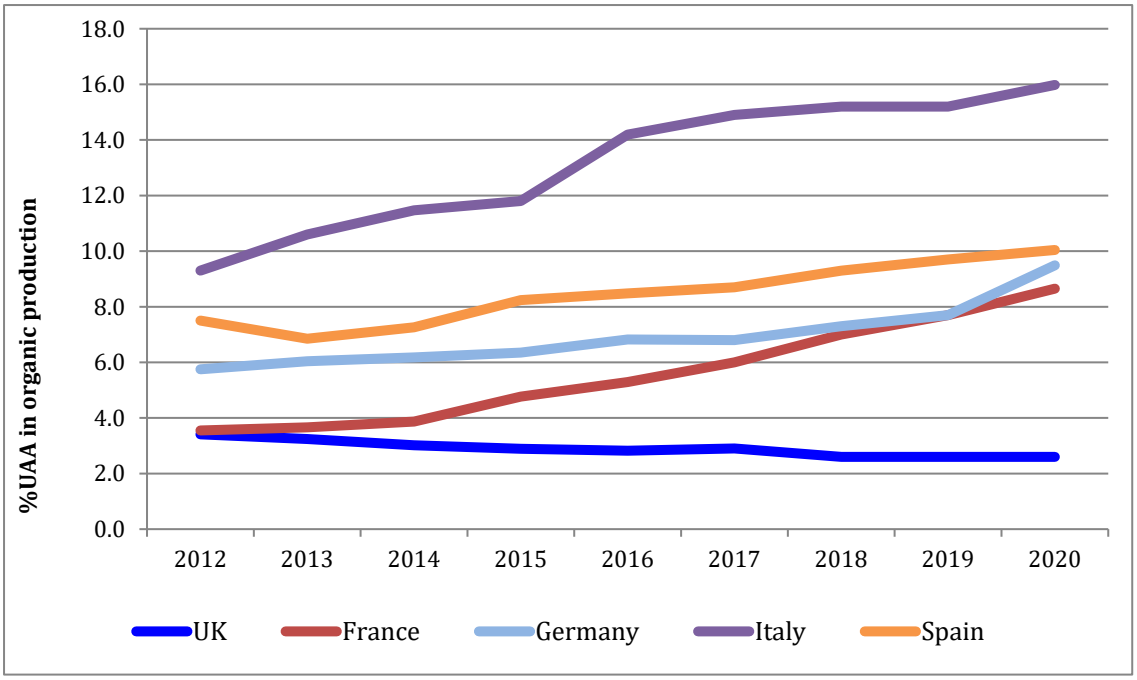
Figure 2 Land area in organic production by UK country (including in-conversion)



(*Source: DEFRA 2021*)

The organic share of the total utilised agricultural area (UAA) in the UK was 2.6% in 2020. The UK share has been declining over the past eight years, this at a time when the major organic growers of the EU are expanding – see Figure 3 and Table 1.

Figure 3 Share of UAA in organic production in the UK, France, Germany, Italy and Spain



(*Source: Eurostat 2021*)

Table 1 Share of organic area in the EU by country

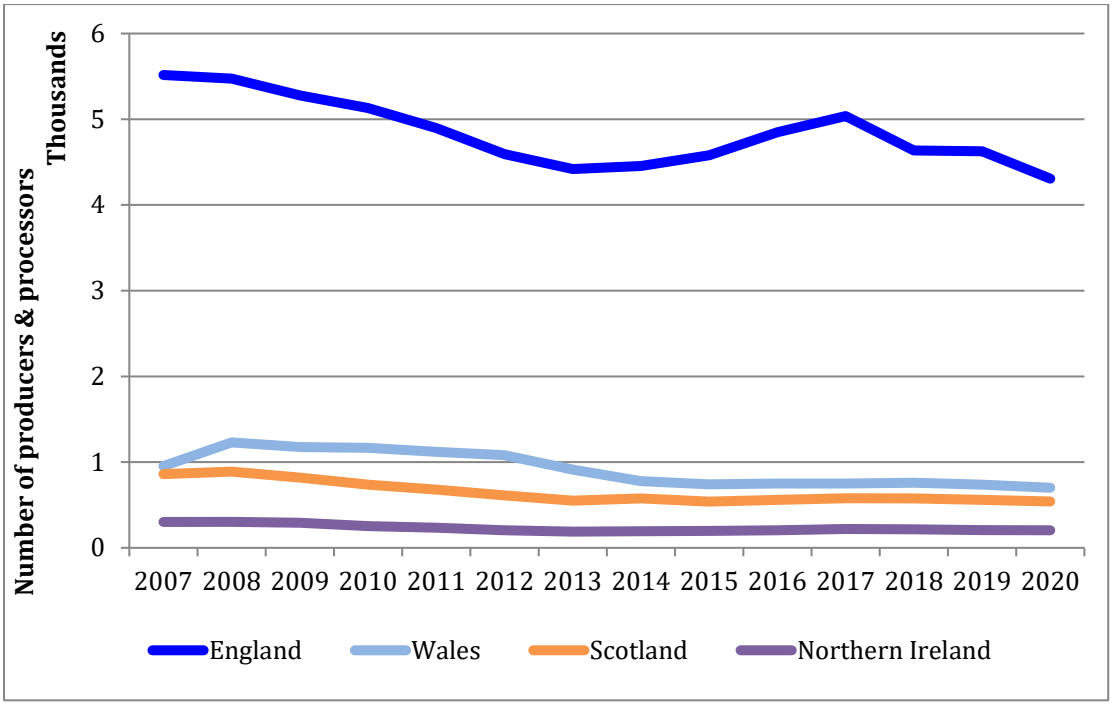
Product	2020 % share of EU27 organic area*	2019/20 % change in organic area*
Spain	16.6	4
Italy	14.0	5
France	15.7	12
Germany	9.1	23

* includes area in conversion (*Source: Eurostat 2021*)

1.2 Producers

The number of organic producers and processors in the UK was at its peak in 2007/08 (of 7,631) and has been steadily declining since then (Figure 4) to 5,754 in 2020. In 2020, of the 4,307 organic producers and processors in England, 3,604 are organic producers.

Figure 4 Organic producers and processors in the UK



(*Source: DEFRA 2021*)

2 Methods

This report presents financial and physical farm data for the 2019/20 and 2020/21 financial years. Data were collected using the standard Farm Business Survey methodology for all farms[1] by the six Rural Business Research (RBR) Units in

[1] Details of the data collection methodology for the farm accounting method used in England and Wales by DEFRA, are available from:

England; Newcastle University, Askham Bryan College, University of Nottingham, University of Cambridge, University of Reading, and Duchy College.

For the purpose of this report, an organic farm is defined as a farm business that has at least 70% of the Utilisable Agricultural Area (UAA) certified as organic in 2020/21. The organic farm data are presented as full and identical samples where applicable and sample size allows. The data are analysed for comparisons between years and with non-organic farms. Data from participating farms are used to compile a fully reconciled management profit and loss account. The surveyed farms had financial year-ends between 31st December 2020 and 30th April 2021 and consequently reflect the 2020 lamb crop and the 2020 arable harvest.

2.1 Data sample: farm type and region

This report uses data from the Farm Business Survey of 1664 farms, 135 of which are organic. Of the 135 organic farms; 126 are entirely organic and 9 farms have some non-organic enterprises or land area. A further 21 farms have some organic enterprises but with less than 70% of their UAA being classified as organic, they are considered "non-organic" in this report. Therefore organic enterprises from "non-organic" farms may be included in the Gross margin analysis section of this report. The distribution of surveyed organic farms by type and region are presented in Table 2 and Table 3.

Table 2 The distribution of surveyed organic farms by farm type 2020/21

Robust farm type	No.	%
Cereals & General cropping	8	6
Horticulture	8	6
Pigs & Poultry	7	5
Dairy	36	27
LFA Grazing	22	16
Lowland Grazing	42	31
Mixed	12	9
All farms	**135**	**100**

https://www.gov.uk/government/collections/farm-business-survey

Table 3 The distribution of surveyed organic farms by region 2020/21

Region	No	%
North East	16	12
North West	10	7
Yorks. & Humber	5	4
East Midlands	10	7
West Midlands	16	12
East of England	11	8
South East	18	13
South West	49	36
All farms	**135**	**100**

2.2 Data sample: farm type and size

The distribution of the sample by farm size is shown in Table 4 Organic sample distribution by size (2013 Standard Output). The farm size categories are based on the 2013SO (Standard Output) methodology used by DEFRA - see Appendix 5 – for more information. Farm area, unless specified as Utilisable Agricultural Area (UAA) is the total adjusted area (TAA) this includes: adjusted sole occupier rough grazing, adjusted shared grazing and short term rentals (less than 1 year).

The 2020/21 dataset was evenly distributed overall across the size bands, but within farm type groups the distribution was somewhat less even. Dairy and lowland grazing farm types made up the largest proportion of the data sample with 27% and 31% respectively, see Table 2.

Table 4 Organic sample distribution by size (2013 Standard Output)

Farm size band	Small (€2,500-100,000)	Medium (€100,000-250,000	Large (>€250,000)	All
All	42	42	51	135
% distribution	31	31	38	100

2.3 Data sample: Limitations

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*](https://www.gov.uk/government/collections/farm-business-survey)

Due to sample size of one of the organic general cropping farm type this farm type has been merged with organic cereals and the combined group is referred to as cropping farms in this report.

In the organic horticulture group some care must be taken in interpreting the results. The 2020/21 sample of 8 farms is composed of 3 subgroups: specialist fruit, specialist glass, and other horticulture i.e. not a uniform group of producers. Furthermore the non-organic sample, of 139 horticulture farms, has a subgroup composition of: 43 specialist fruit, 38 specialist glass, 22 specialist hardy nursery stock and 36 other horticulture. The non-organic horticultural farms are clearly not perfectly comparable to the organic sample and hence the degree of caution advised above.

The identical sample of horticultural farms used to compare the 2019/20 and 2020/21 farming years is limited to 7 farms. These farms do have an identical sub-grouping composition between the years, but the very small sample size means that great care must be taken in interpreting the identical sample results.

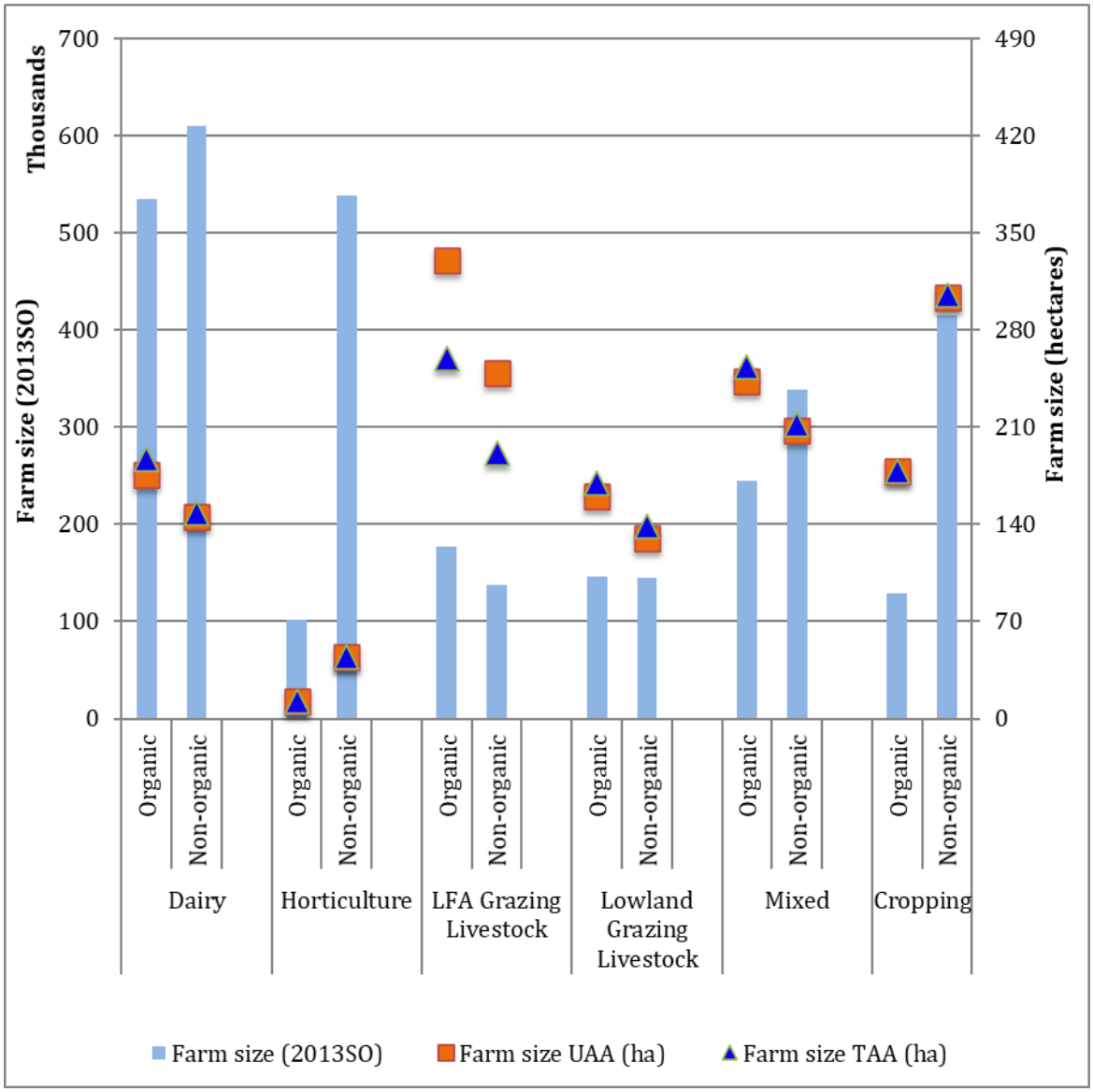
The identical sample of cropping farms used to compare the 2019/20 and 2020/21 farming years is limited to 8 farms, this very small sample size means that great care must be taken in interpreting the identical sample results.

2.4 Farm size

The common measure of farm size of Standard Output (SO) represents a theoretical business size in terms of agricultural output generated. This measure allows for a comparison of business size across farms of varying types of farm but does not necessarily correspond to the area of land farmed. Figure 5 shows the weighted farm sizes for the 2020/21 sample measured by SO and two alternative measures of farm size by farm area; Utilisable Agricultural Area (UAA) and by total adjusted area (TAA). While there is little difference between the area measurements of UAA and TAA in most groups, in the case of LFA grazing farms there is a marked difference. The choice of farm size and area measurement is therefore critical when

benchmarking and making comparisons across farm types. The measure of area used throughout this report is TAA.

Figure 5 Farm size by Standard Output and area (2020/21)



**A part of this figure was derived from data with less than 15 observations in the sample which could reduce the robustness of the results*

3 Whole-farm results

3.1 Presentation of results

This section presents summary data in the form of tables and figures giving breakdowns of farm sizes, output sources, cost centres and a range of farm income measures at both farm and hectare levels for cropping, horticulture, dairy, LFA grazing, lowland grazing, and mixed farms.

This report focuses on two main income measures: Farm Business Income (FBI) and Net Farm Income (NFI). FBI has been the headline farm income measure since the mid 2000s; it 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. However, FBI excludes imputed rental values for owner-occupied land and unpaid labour, both of which are included in NFI.

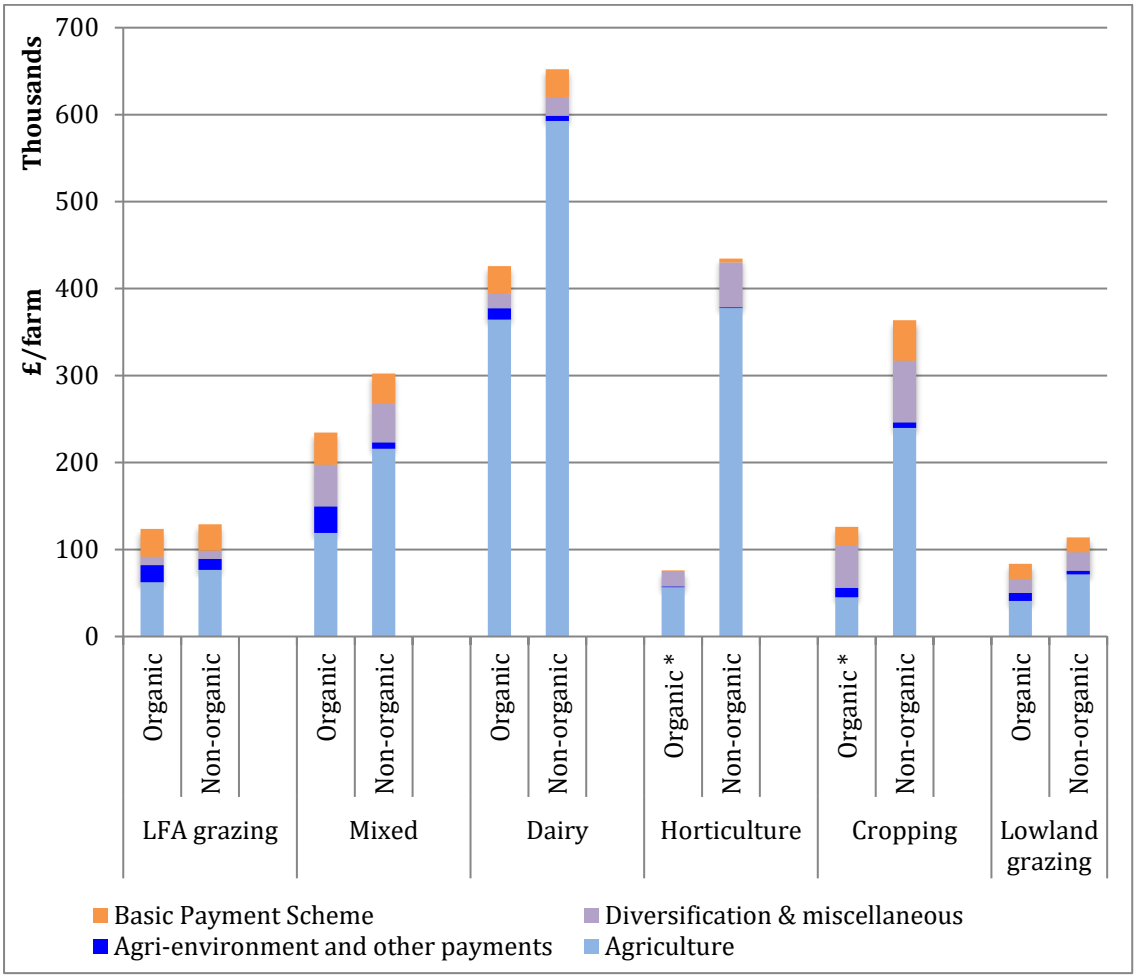
Net Farm Income allows individual farms of different tenure, business organisation and indebtedness to be compared directly with one another on a consistent basis and is thus an excellent farm benchmarking measure. However unlike FBI, interest payments, director's remuneration and ownership costs are not considered in NFI.

A further measure of Management and Investment Income (MII) has also been included in the farm type tables (Table 14 to Table 25). MII, like NFI, provides a good benchmarking tool for farmers; it represents the return to the farm after the subtraction of the farmer and spouse's own manual labour. A definition of terms explaining the various income measures is included in Appendix 5 – Definition of terms.

The measure of Farm area used throughout this report, unless otherwise specified, is the total adjusted area (TAA). TAA includes adjusted common grazing and short term lets taken in (less than 1 year). The area measure of Utilisable Agricultural Area (UAA) differs from the total adjusted area in that it excludes common grazing, does not "adjust" the area of sole-occupier rough grazing, and excludes short term lets. See Appendix 5 – Definition of terms.

3.2 Farm Business Output

Figure 6 Farm Business Output per farm by cost centre and farm type, organic and non-organic farms, 2020/21

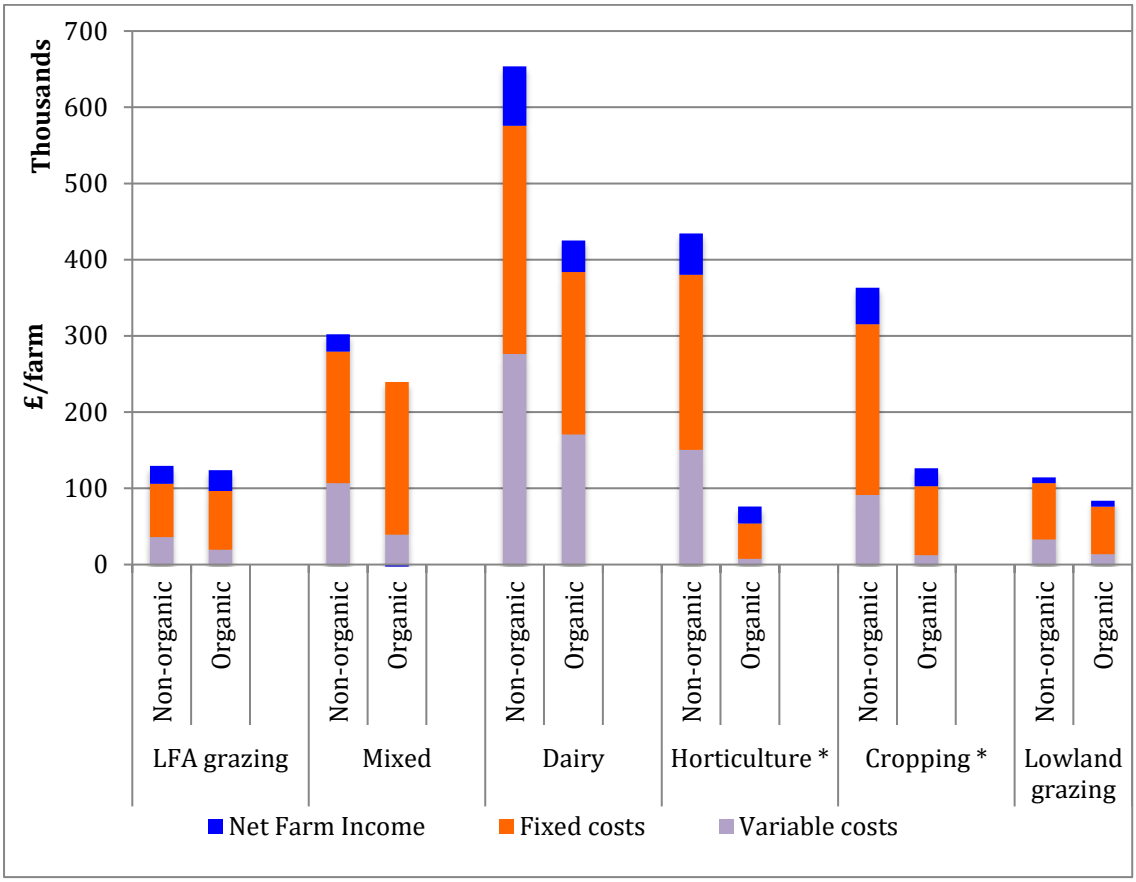


**A part of this figure was derived from data with less than 15 observations in the sample which could reduce the robustness of the results*

Figure 6 illustrates the composition of Farm Business Output per farm for organic and non-organic farms by farm type for the 2020/21 sample. Agriculture remained the largest component of Farm Business Output for all farm types both organic and non-organic. Organic farms, with the exception of the horticulture group, earned consistently more through agri-environment schemes than non-organic farms. Earnings from both the Basic Payment Scheme and diversification activities are varied both across farm types and between organic and non-organic farm groups.

3.3 Costs

Figure 7 Average variable and fixed costs for organic and non-organic farms by farm type, 2020/21



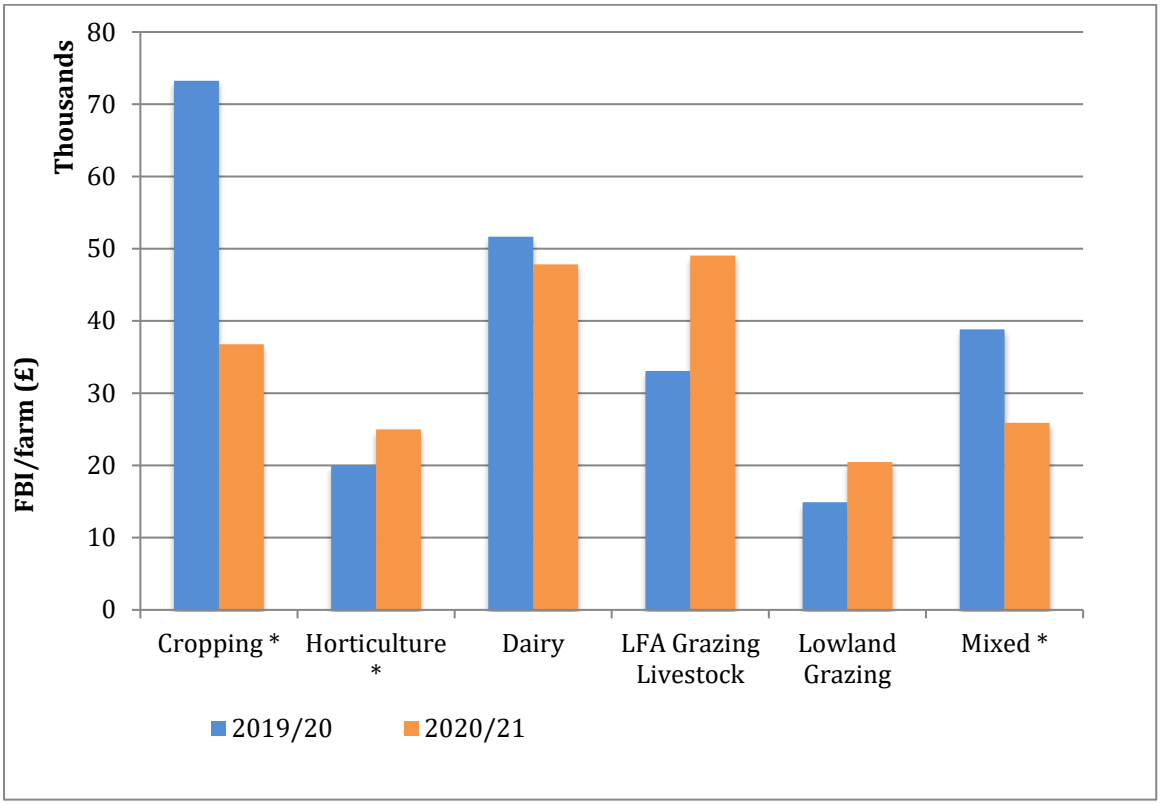
**A part of this figure was derived from data with less than 15 observations in the sample which could reduce the robustness of the results*

The fixed costs presented here are as for the calculation of Net Farm Income (NFI) hence include unpaid family labour (excluding farmer and spouse) and an imputed rent for owned land – see Appendix 5 – . Hence NFI plus costs equals total farm output (net of profit or loss on the sale of fixed assets).

3.4 Farm Business income

3.4.1 Organic farms year on year (identical sample)

Figure 8 Average Farm Business Income (FBI/farm) on organic farms by farm type group 2019/20 and 2020/21



**A part of this figure was derived from data with less than 15 observations in the sample which could reduce the robustness of the results*

Table 5 Change in average organic FBI by farm type 2019/20 and 2020/21

	2019/20 (identical sample)			2020/21 (identical sample)		
	No farms in sample	FBI - £/farm	FBI - £/ha (TAA)	No farms in sample	FBI - £/farm	FBI - £/ha (TAA)
Cropping *	8	73,243	802	8	36,765	389
Horticulture *	7	20,044	1,716	7	24,986	2,416
Dairy	35	51,657	320	35	47,832	300
LFA Grazing	19	33,076	223	19	49,048	336
Lowland Grazing	41	14,905	189	41	20,470	254
Mixed *	10	38,827	259	10	25,889	146

**A part of this table was derived from data with less than 15 observations in the sample which could reduce the robustness of the results*

The large drop in cropping FBI from 2019/20 to 2020/21 comes in the context of a small sample size, and care should be taken when interpreting this result.

Table 6 Change in average organic FBI/farm by farm type 2019/20 and 2020/21

FBI/Farm (£)	2019/20 Mean	2020/21 Mean	Difference	Significance
Cropping *	73,243	36,765	-36,478	**
Horticulture *	20,044	24,986	4,942	-
Dairy	51,657	47,832	-3,825	-
LFA Grazing	33,076	49,048	15,972	**
Lowland Grazing	14,905	20,470	5,565	*
Mixed *	38,827	25,889	-12,939	-
(- not significant, * significant at 10% (slight), ** at 5% (moderate), *** at 1% (strong))				

**A part of this table was derived from data with less than 15 observations in the sample which could reduce the robustness of the results*

Table 7 Change in average organic FBI/ha (UAA) by farm type 2019/20 and 2020/21

FBI/ha UAA (£)	2019/20 Mean	2020/21 Mean	Difference	Significance
Cropping *	802	389	-412	**
Horticulture *	1,716	2,416	699	-
Dairy	341	323	-18	-
LFA Grazing	184	259	75	*
Lowland Grazing	193	258	65	**
Mixed *	260	148	-112	-
(- not significant, * significant at 10% (slight), ** at 5% (moderate), *** at 1% (strong))				

**A part of this table was derived from data with less than 15 observations in the sample which could reduce the robustness of the results*

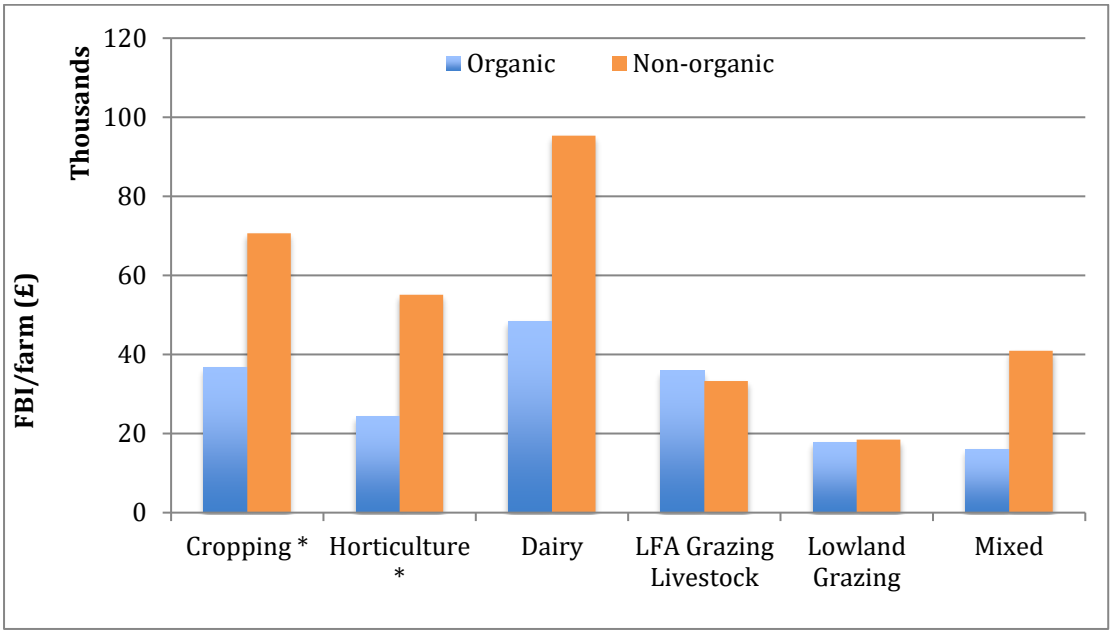
Table 8 Change in average FBI/ha (TAA) by farm type group 2019/20 and 2020/21

FBI/ha TAA (£)	2019/20 Mean	2020/21 Mean	Difference	Significance
Cropping *	802	389	-412	**
Horticulture *	1,716	2,416	699	-
Dairy	320	300	-21	-
LFA Grazing	223	336	113	**
Lowland Grazing	189	254	65	**
Mixed *	259	146	-113	-
(- not significant, * significant at 10% (slight), ** at 5% (moderate), *** at 1% (strong))				

**A part of this table was derived from data with less than 15 observations in the sample which could reduce the robustness of the results*

3.4.2 Organic versus non-organic (full sample)

Figure 9 Average FBI/farm for organic and non-organic farms by farm type 2020/21



**A part of this figure was derived from data with less than 15 observations in the sample which could reduce the robustness of the results*

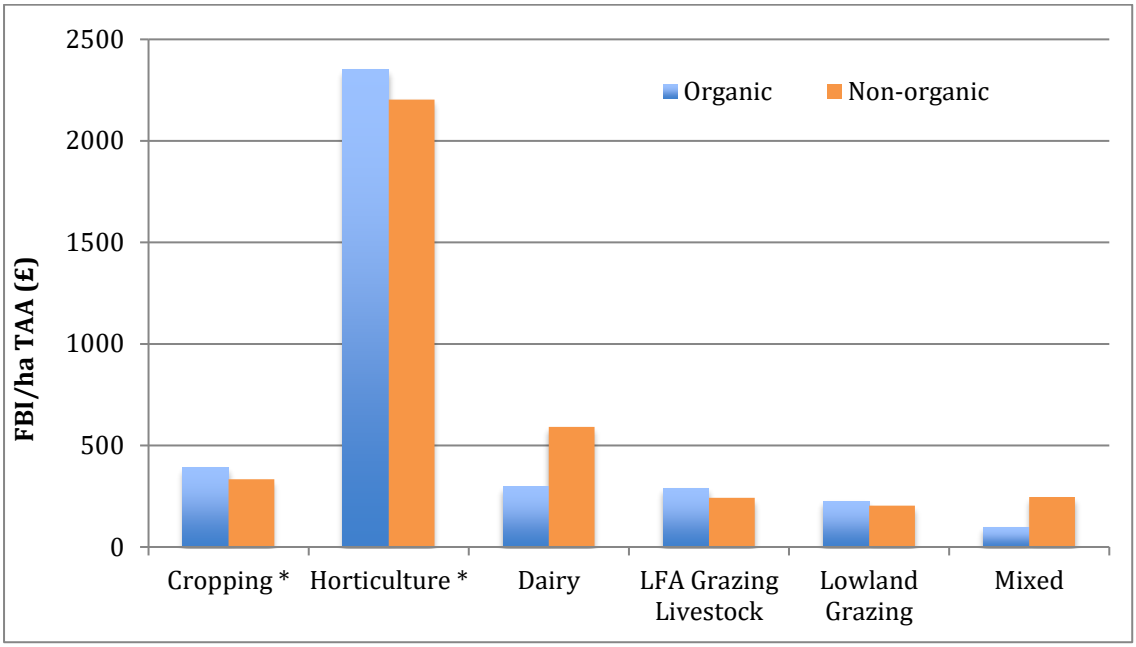
In 2020/21 only organic LFA grazing farms recorded a higher average FBI/farm than the non-organic farms (Figure 9) but this difference was not statistically significant. In all other farm type groups the non-organic farms generated a higher average FBI/farm and the difference was significant for all groups (Table 9) except lowland grazing. While the FBI/farm figure is best able to inform profitability at a national level, the per hectare figure is often seen as more appropriate at farm level. Table 10 presents the FBI/ha data by farm type group. At the per hectare level organic: cropping, horticulture, LFA grazing and lowland grazing all generate a higher FBI/ha than the non-organic farms but this difference is not statistically significant (see Table 10). Non-organic dairy and mixed farms do however enjoy a significantly higher FBI/ha than their organic counterparts.

Table 9 Statistical differences in average FBI/farm between organic and non-organic farms 2020/21

FBI/Farm (£) 2020/21	Organic Mean	Non-organic Mean	Difference	Significance
Cropping *	36,675	70,662	-33,987	***
Horticulture *	24,414	55,110	-30,697	**
Dairy	48,401	95,345	-46,943	***
LFA Grazing	35,828	33,268	2,560	-
Lowland Grazing	17,723	18,471	-747	-
Mixed *	15,988	40,934	-24,945	**
(- not significant, * significant at 10% (slight), ** at 5% (moderate), *** at 1% (strong))				

**A part of this table was derived from data with less than 15 observations in the sample which could reduce the robustness of the results*

Figure 10 Average FBI/ha (TAA) for organic and non-organic farms by farm type 2020/21



**A part of this figure was derived from data with less than 15 observations in the sample which could reduce the robustness of the results*

Table 10 Statistical differences in average FBI/ha between organic and non-organic farms 2020/21

FBI/ha TAA (£) 2020/21	Organic Mean	Non-organic Mean	Difference	Significance
Cropping *	390	334	56	-
Horticulture *	2,349	2,203	146	-
Dairy	296	592	-296	***
LFA Grazing	287	242	45	-
Lowland Grazing	226	204	22	-
Mixed *	96	246	-150	*
(- not significant, * significant at 10% (slight), ** at 5% (moderate), *** at 1% (strong))				

**A part of this table was derived from data with less than 15 observations in the sample which could reduce the robustness of the results*

Table 11 shows the relationship by farm type, between FBI/farm and FBI/ha on both a Utilisable Agricultural Area and Total Adjusted Area basis. See section 2.4 above, Farm size, for the background to these two measures of area.

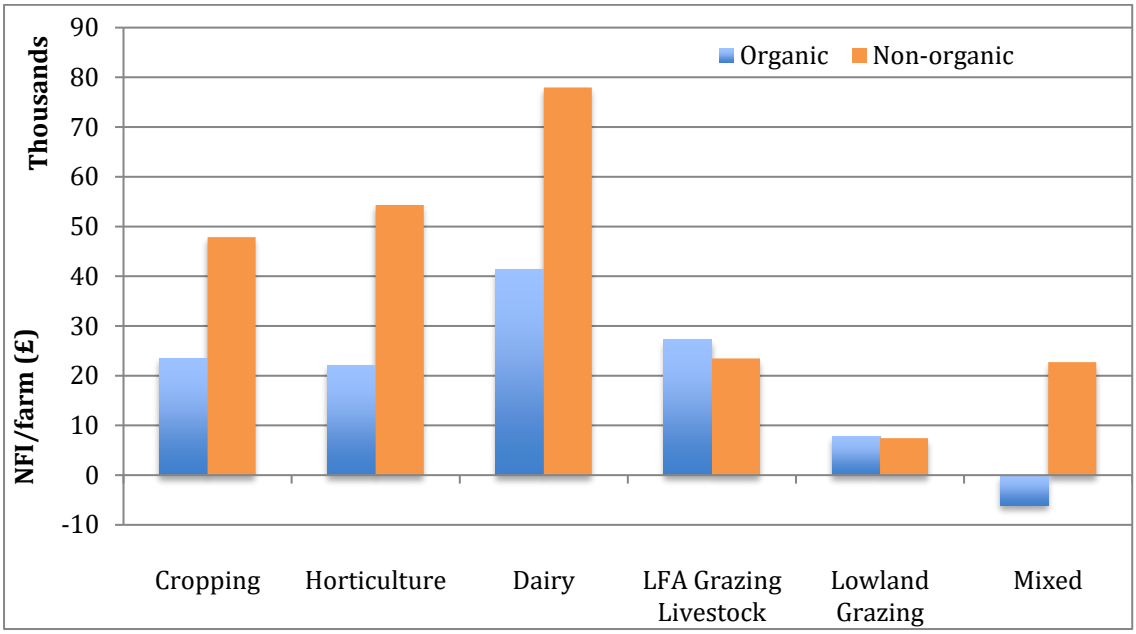
Table 11 Average FBI for organic and non-organic farms by farm type 2020/21

2020/21 (full sample)		Number of farms (sample)	Number of farms (weighted)	FBI – £/farm	FBI – £/ha (UAA)	FBI – £/ha (TAA)
Cropping	Organic *	8	205	36,675	390	390
	Non-organic	479	19,222	70,662	336	334
Horticulture	Organic *	8	181	24,414	2,349	2,349
	Non-organic	139	2,358	55,110	2,219	2,203
Dairy	Organic	36	350	48,401	317	296
	Non-organic	185	5,330	95,345	611	592
LFA Grazing	Organic	22	245	35,828	219	287
	Non-organic	180	6,573	33,268	212	242
Lowland Grazing	Organic	42	1,434	17,723	229	226
	Non-organic	243	11,350	18,471	216	204
Mixed	Organic *	12	168	15,988	97	96
	Non-organic	151	5,743	40,934	253	246

**A part of this table was derived from data with less than 15 observations in the sample which could reduce the robustness of the results*

3.5 Net Farm Income

Figure 11 Average NFI/farm for organic and non-organic farms by farm type 2020/21



**A part of this figure was derived from data with less than 15 observations in the sample which could reduce the robustness of the results*

Net Farm Income (NFI) remains the preferred measure of farm income with which to compare farms on an equal basis with differing levels of land ownership (see section 3.1). NFI, while including an imputed rental charge for owned land, excludes land ownership costs and interest payments (see Appendix 5 – for a full definition). The differences in farm income between organic and non-organic farms are broadly similar when measured by either NFI or FBI, in direction if not in absolute terms. Organic LFA and lowland grazing farms earn a higher NFI/farm than their non-organic counterparts but this difference is not significant. The organic cropping, horticulture, dairy and mixed groups earn a significantly lower NFI/farm than the non-organics (see Table 12).

Table 12 Differences in NFI/farm between organic and non-organic farms by farm type 2020/21

NFI/Farm (£) 2020/21	Organic Mean	Non-organic Mean	Difference	Significance
Cropping *	23,507	47,860	-24,353	**
Horticulture *	22,125	54,322	-32,197	**
Dairy	41,327	77,952	-36,626	***
LFA Grazing	27,216	23,473	3,743	-
Lowland Grazing	7,831	7,426	405	-
Mixed *	-6,088	22,719	-28,807	**
(- not significant, * significant at 10% (slight), ** at 5% (moderate), *** at 1% (strong))				

**A part of this table was derived from data with less than 15 observations in the sample which could reduce the robustness of the results*

At the farm level the per hectare measure of income remains a more relevant benchmark figure in that it removes (arguably not completely) the impact of farm size on farm income levels. The organic dairy and mixed farm groups recorded a significantly lower NFI/ha than the non-organics, for all other groups none of the differences in NFI/ha were significant – see Table 13.

Table 13 Differences in average NFI/ha between organic and non-organic farms by farm type 2020/21

NFI/ha TAA (£) 2020/21	Organic Mean	Non-organic Mean	Difference	Significance
Cropping *	250	226	24	-
Horticulture *	2,129	2,172	-43	-
Dairy	253	484	-231	***
LFA Grazing	218	171	47	-
Lowland Grazing	100	82	18	-
Mixed *	-37	137	-173	*
(- not significant, * significant at 10% (slight), ** at 5% (moderate), *** at 1% (strong))				

**A part of this table was derived from data with less than 15 observations in the sample which could reduce the robustness of the results*

4 Detailed costs and returns by farm type

The following section provides a detailed breakdown by farm type on a per farm and per hectare basis, of revenue by cost centre and farm income measures for: an identical sample of organic farms year-on-year (2019/20 and 2020/21) and the full sample (2020/21) on an organic versus non-organic basis. **This commentary focuses on the per hectare results**, which, as discussed above, minimises the effect of farm size on the results. Year-on-year percentage changes are based on per hectare figures.

4.1 Cropping

The cropping group includes farms from both the cereal and general cropping farm types – there were insufficient farms in these groups to allow separate presentation. *Please note that these groups include less than 15 observations in the sample which could reduce the robustness of the results.* **The large drop in cropping FBI from 2019/20 to 2020/21 comes in the context of a small sample size, and care should be taken when interpreting this result.**

Organic cropping farms year-on-year

An identical sample of organic cropping farms saw a fall in Farm Business Output of 21% between 2019/20 and 2020/21 to £1,340/ha. Agricultural output, which generated 36% of farm output, fell by 34% to £481/ha. This output is now almost entirely due to crop output; the livestock component now being <1%. Agri-environment scheme revenues (9% of total revenue) decreased by 26%, and the Basic payment, 17% of total revenue, was the same year on year. Diversification and miscellaneous revenues, which provided 38% of total revenue, decreased by 12% to £514/ha in 2020/21 (Table 14).

Total costs on organic cropping farms rose by 6% to £954/ha. The resultant Farm Business Income in 2020/21 was 51% lower (than in 2019/20) at £389/ha. Net Farm Income (NFI) fell by 63% to £250/ha (£23,596/farm) which after having deducted an imputed figure for farmer and spouse manual labour generated a Management and Investment Income (MII) - effectively the return on the capital invested in the business, of £45/ha, or an average of £4,206/farm.

Cropping farms, organic and non-organic

Table 15 details the differences between the full sample of organic and non-organic cropping farms for the 2020 crop year. The average organic cropping farm size is only 94.0ha compared to 211.5ha for a non-organic cropping farm. At the per hectare level organic cropping farms generate 22% less output than the non-organic farms at £1,341/ha. The agricultural output per hectare of organic cropping farms (at £479/ha) is 42% of that of the non-organics. Organic cropping farms are however, able to earn four times the revenue per hectare (at £117/ha, or £10,969/farm) from agri-environment schemes as their non-organic counterparts.

Organic cropping farms incurred total costs of £953/ha, 31% less than the non-organic farms. Variable costs were £301/ha less on organic cropping farms, with fertiliser and crop protection costs accounting for most of this difference. Overhead costs were £128/ha lower for organic cropping farms with contract, machinery and labour costs being the main components. The Farm Business Income of £390/ha for organic cropping farms is not significantly greater than the figure of £334/ha for the non-organic farms. The corresponding NFI of £250/ha for organic cropping farms is also not significantly higher than the £226/ha of the non-organics (see Table 13).

Table 14 Cropping farms, organic identical sample 2019/20 and 2020/21

The average cropping farm	Organic identical sample 2019/20			2020/21		
Number (unweighted)	8			8		
Number (weighted)	263			243		
Farm size (2013SO)	66,068			67,358		
Farm area (adjusted ha)	91.3			94.4		
Grazing livestock units	3.0			3.4		
	£/farm	£/ha		£/farm	£/ha	
Agriculture:	66,556	729	43%	45,414	481	36
Livestock component	417	5	*1%*	107	1	*0%*
Crop component	66,138	724	*99%*	45,306	480	*100*
Agri-environment and other payments	14,352	157	9%	10,975	116	9%
Diversification & miscellaneous	53,512	586	34%	48,524	514	38
Basic Payment Scheme	20,924	229	13%	21,614	229	17
Farm Business Output (a)	**155,344**	**1,701**	**100**	**126,527**	**1,340**	**100**
Livestock variable costs:	495	5	1%	360	4	0%
Feed	300	3	*61%*	100	1	*28%*
Vet & medicine	36	0	*7%*	30	0	*8%*
Other livestock costs	158	2	*32%*	230	2	*64%*
Crop variable costs:	11,767	129	14%	11,914	126	13
Seed	6,866	75	*58%*	8,355	89	*70%*
Fertiliser	3,386	37	*29%*	970	10	*8%*
Crop protection	46	0	*0%*	93	1	*1%*
Other crop costs	1,469	16	*12%*	2,496	26	*21%*
Contract	7,853	86	10%	8,855	94	10
Paid Labour	9,734	107	12%	8,981	95	10
Machinery:	15,551	170	19%	15,816	168	18
Fuel & oil	2,978	33	*19%*	3,249	34	*21%*
Repairs	4,985	55	*32%*	4,911	52	*31%*
Depreciation	7,588	83	*49%*	7,656	81	*48%*
Paid Rents	4,992	55	6%	5,495	58	6%
Other costs	31,772	348	39%	38,614	409	43
Total Costs (b)	**82,163**	**900**	**100**	**90,035**	**954**	**100**
Profit/(loss) on sale of fixed assets	63			273		
Farm Business Income (c=a-b)	**73,243**	**802**		**36,765**	**389**	
Unpaid manual labour excl. farmer & spouse (d)	0	0		0	0	
Interest payments (e)	2,876	31		2,031	22	
Imputed rents (f)	18,968	208		19,484	206	
Director's remuneration (g)	80	1		86	1	
Ownership costs (h)	4,200	46		4,199	44	
Net Farm Income (i=c-d+e-f+g+h)	**61,431**	**673**		**23,596**	**250**	
Farmer & Spouse unpaid labour (j)	18,507	203		19,390	205	
Paid managerial labour (k)	0	0		0	0	
Management and Investment Income (l=i-j+k)	**42,924**	**470**		**4,206**	**45**	

**A part of this table was derived from data with less than 15 observations in the sample which could reduce the robustness of the results*

Table 15 Cropping farms, organic and non-organic, full sample 2020/21

The average cropping farm	Non-organic 2020/21			Organic 2020/21		
Number (unweighted)	479			8		
Number (weighted)	19,222			205		
Farm size (2013SO)	272,553			66,954		
Farm area (adjusted ha)	211.5			94.0		
Grazing livestock units	11.2			3.3		
	£/farm	£/ha		£/farm	£/ha	
Agriculture:	239,724	1,133	66%	45,054	479	36%
Livestock	8,859	42	*4%*	107	1	*0%*
Crops	230,865	1,091	*96%*	44,947	478	*100%*
Agri-environment and other payments	6,447	30	2%	10,969	117	9%
Diversification & miscellaneous	71,007	336	20%	48,476	516	38%
Basic Payment Scheme	46,406	219	13%	21,530	229	17%
Farm Business Output (a)	**363,584**	**1,719**	**100%**	**126,029**	**1,341**	**100%**
Livestock variable costs:	4,419	21	2%	358	4	0%
Feed	2,146	10	*49%*	100	1	*28%*
Vet & medicine	528	2	*12%*	30	0	*8%*
Other livestock costs	1,745	8	*39%*	229	2	*64%*
Crop variable costs:	86,840	410	30%	11,868	126	13%
Seed	17,906	85	*21%*	8,345	89	*70%*
Fertiliser	29,743	141	*34%*	962	10	*8%*
Crop protection	27,733	131	*32%*	91	1	*1%*
Other crop costs	11,458	54	*13%*	2,469	26	*21%*
Contract	23,214	110	8%	8,877	94	10%
Paid Labour	30,430	144	10%	8,825	94	10%
Machinery:	63,348	299	22%	15,736	167	18%
Fuel & oil	11,394	54	*18%*	3,234	34	*21%*
Repairs	18,301	87	*29%*	4,885	52	*31%*
Depreciation	33,653	159	*53%*	7,617	81	*48%*
Paid Rents	20,312	96	7%	5,435	58	6%
Other costs	63,922	302	22%	38,527	410	43%
Total Costs (b)	**292,484**	**1,383**	**100%**	**89,625**	**953**	**100%**
Profit/(loss) on sale of fixed assets	-438			272		
Farm Business Income (c=a-b)	**70,662**	**334**		**36,675**	**390**	
Unpaid manual labour excl. farmer & spouse (d)	6,134	29		0	0	
Interest payments (e)	7,107	34		2,008	21	
Imputed rents (f)	38,640	183		19,452	207	
Director's remuneration (g)	2,965	14		85	1	
Ownership costs (h)	11,901	56		4,191	45	
Net Farm Income (i=c-d+e-f+g+h)	**47,860**	**226**		**23,507**	**250**	
Farmer & Spouse unpaid labour (j)	19,760	93		19,340	206	
Paid managerial labour (k)	236	1		0	0	
Management and Investment Income (l=i-j+k)	**28,337**	**134**		**4,167**	**44**	

**A part of this table was derived from data with less than 15 observations in the sample which could reduce the robustness of the results*

4.2 Horticulture

As with previous years the sample of organic horticulture farms remains low with only 8 organic horticulture farms in 2020/21, fortunately 7 of these farms are also present in the 2019/20 dataset for a year on year comparison. However extreme care must be taken when making conclusions about the horticulture sample due to the very small sample size and diverse nature of enterprises contained within the sample, see 2.3 Data sample: Limitations.

Organic horticulture farms year-on-year

Table 16 shows Farm Business Output (FBO) for organic horticulture farms saw a 26% increase to £7,504/ha in 2020/21 to give an average £77,613/farm. Crop output increased by 34% to £5,588/ha. Diversification and miscellaneous income, which accounted for 22% of farm output, increased by 8% to £1,652/ha. Agri-environment payments and the Basic payment combined only account for 3% of total farm output of organic horticulture farms.

Total costs for organic horticulture farms increased by 20% to £5,089/ha. Crop variable costs, which account for 15% of costs, rose by 5% to £741/ha. Paid labour (35% of total costs) rose by 58% to £1,762/ha. Unpaid labour saw a 30% reduction to £162/ha (from £231/ha). Paid rents rose by 57% to £320/ha (which, plus an imputed rent on owner occupied land of £293/ha gives an overall rent figure of £614/ha).

The overall effect on Farm Business Income (FBI) was a 41% increase to £2,416/ha. After allowing for the appropriate adjustments Net Farm Income (NFI) showed an 60% increase to £2,190/ha. However, this figure fails to cover an imputed wage for farmer and spouse manual labour of £3,367/ha, thus returning a negative Management and Investment Income (MII) of £-1,177/ha.

Horticulture farms, organic and non-organic

The average organic horticulture farm at 10.4ha is less than half the size of its non-organic counterpart (of 25.0ha). When measured on a Standard Output (SO) (see Appendix 5 – Definition of terms) basis, the average non-organic horticulture farm is over three times the size of an organic unit (Table 17). Organic horticulture farms generate, on average, an FBO of £7,324/ha which is only 42% of that of the non-organic farms (of £17,369/ha). As might be expected this is mainly due to the difference in output from crops, where organic farms typically generate £5,464/ha which is 36% of that generated by the non-organics (of £15,076/ha). Diversification revenues are slightly lower in the organic group (£1,598/ha versus £2,063/ha for the non-organics). The Basic payment and agri-environmental payments are both higher for the organics but only contribute 4% to overall farm output.

Total costs for organic horticulture farms, of £4,976/ha, were a third of those of the non-organic farms. Variable costs make up 14% of total costs on organic farms (40% on non-organic farms). Paid labour accounts for 34% of total costs on organic horticultural farms, machinery 13%, and paid rents 6%.

The resultant FBI is greater (but not significant) for the non-organics at the farm level but this difference is reversed (but also not significant) at the per hectare level (£2,349/ha for the organic farms and £2,203/ha for the non-organics). At the NFI level the organic farms realise an NFI of £2,129/ha and the non-organics £2,172/ha (not statistically significant). After an imputed wage for farmer and spouse manual labour is deducted from NFI the resultant MII is a negative -£1,126/ha for organic horticultural farms, and £1,196/ha for the non-organic farms.

Table 16 Horticulture farms, organic identical sample 2019/20 and 2020/21

The average horticulture farm	Organic identical sample 2019/20			Organic identical sample 2020/21		
Number (unweighted)	7			7		
Number (weighted)	237			180		
Farm size (2013SO)	75,147			77,722		
Farm area (adjusted ha)	11.7			10.3		
Grazing livestock units	0.0			0.0		
	£/farm	£/ha		£/farm	£/ha	
Agriculture:	48,628	4,164	70%	57,800	5,588	74%
Livestock component	0	0	0%	0	0	*0%*
Crop component	48,628	4,164	100%	57,800	5,588	*100%*
Agri-environment and other payments	846	72	1%	820	79	1%
Diversification & miscellaneous	17,896	1,532	26%	17,085	1,652	22%
Basic Payment Scheme	2,189	187	3%	1,908	185	2%
Farm Business Output (a)	**69,558**	**5,956**	100%	**77,613**	**7,504**	**100**
Livestock variable costs:	0	0	0%	0	0	0%
Feed	0	0	-	0	0	-
Vet & medicine	0	0	-	0	0	-
Other livestock costs	0	0	-	0	0	-
Crop variable costs:	8,216	704	17%	7,665	741	15%
Seed	4,388	376	*53%*	4,193	405	*55%*
Fertiliser	420	36	*5%*	264	26	*3%*
Crop protection	63	5	*1%*	28	3	*0%*
Other crop costs	3,345	286	*41%*	3,180	307	*41%*
Contract	1,454	124	3%	1,905	184	4%
Paid Labour	13,040	1,117	26%	18,228	1,762	35%
Machinery:	7,145	612	14%	6,770	654	13%
Fuel & oil	2,440	209	*34%*	1,756	170	*26%*
Repairs	2,691	230	*38%*	2,740	265	*40%*
Depreciation	2,014	172	*28%*	2,274	220	*34%*
Paid Rents	2,385	204	5%	3,314	320	6%
Other costs	17,274	1,479	35%	14,757	1,427	28%
Total Costs (b)	**49,514**	**4,240**	100%	**52,638**	**5,089**	**100**
Profit/(loss) on sale of fixed assets	0			11		
Farm Business Income (c=a-b)	**20,044**	**1,716**		**24,986**	**2,416**	
Unpaid manual labour excl. farmer & spouse (d)	2,692	231		1,673	162	
Interest payments (e)	57	5		232	22	
Imputed rents (f)	3,669	314		3,035	293	
Director's remuneration (g)	800	69		724	70	
Ownership costs (h)	1,426	122		1,420	137	
Net Farm Income (i=c-d+e-f+g+h)	**15,967**	**1,367**		**22,653**	**2,190**	
Farmer & Spouse unpaid labour (j)	36,894	3,159		34,826	3,367	
Paid managerial labour (k)	0	0		0	0	
Management and Investment Income (l=i-j+k)	**-20,927**	**-1,792**		**-12,173**	**-1,177**	

**A part of this table was derived from data with less than 15 observations in the sample which could reduce the robustness of the results*

Table 17 Horticulture farms, organic and non-organic full sample, 2020/21

The average horticulture farm	Non-organic 2020/21			Organic 2020/21		
Number (unweighted)	139			8		
Number (weighted)	2,358			181		
Farm size (2013SO)	261,164			78,932		
Farm area (adjusted ha)	25.0			10.4		
Grazing livestock units	0.7			0.0		
	£/farm	£/ha		£/farm	£/ha	
Agriculture:	377,587	15,096	87%	56,779	5,464	75%
Livestock	477	19	*0%*	0	0	*0%*
Crops	377,110	15,076	*100%*	56,779	5,464	*100%*
Agri-environment and other payments	908	36	0%	788	76	1%
Diversification & miscellaneous	51,612	2,063	12%	16,604	1,598	22%
Basic Payment Scheme	4,351	174	1%	1,938	186	3%
Farm Business Output (a)	**434,458**	**17,369**	**100%**	**76,109**	**7,324**	**100**
Livestock variable costs:	298	12	0%	0	0	0%
Feed	185	7	*62%*	0	0	-
Vet & medicine	23	1	*8%*	0	0	-
Other livestock costs	90	4	*30%*	0	0	-
Crop variable costs:	150,102	6,001	40%	7,443	716	14%
Seed	70,410	2,815	*47%*	4,040	389	*54%*
Fertiliser	12,759	510	*8%*	254	24	*3%*
Crop protection	8,199	328	*5%*	80	8	*1%*
Other crop costs	58,734	2,348	*39%*	3,069	295	*41%*
Contract	7,505	300	2%	2,219	214	4%
Paid Labour	124,202	4,965	33%	17,664	1,700	34%
Machinery:	27,186	1,087	7%	6,688	644	13%
Fuel & oil	5,020	201	*18%*	1,707	164	*26%*
Repairs	9,127	365	*34%*	2,678	258	*40%*
Depreciation	13,038	521	*48%*	2,304	222	*34%*
Paid Rents	5,403	216	1%	3,230	311	6%
Other costs	64,690	2,586	17%	14,462	1,392	28%
Total Costs (b)	**379,386**	**15,167**	**100%**	**51,706**	**4,976**	**100**
Profit/(loss) on sale of fixed assets	39			11		
Farm Business Income (c=a-b)	**55,110**	**2,203**		**24,414**	**2,349**	
Unpaid manual labour excl. farmer & spouse (d)	7,166	287		1,617	156	
Interest payments (e)	3,048	122		239	23	
Imputed rents (f)	12,840	513		2,992	288	
Director's remuneration (g)	6,589	263		700	67	
Ownership costs (h)	9,580	383		1,380	133	
Net Farm Income (i=c-d+e-f+g+h)	**54,322**	**2,172**		**22,125**	**2,129**	
Farmer & Spouse unpaid labour (j)	24,650	985		33,830	3,256	
Paid managerial labour (k)	233	9		0	0	
Management and Investment Income (l=i-j+k)	**29,905**	**1,196**		**-11,706**	**-1,126**	

**A part of this table was derived from data with less than 15 observations in the sample which could reduce the robustness of the results*

4.3 Dairy

Organic dairy farms year-on-year

Organic dairy farms saw a 6% decrease in Farm Business Income (FBI) to £300/ha in 2020/21. This converted to a Net Farm Income (NFI) figure of £250/ha, which, having deducted the imputed figure for farmer and spouse manual labour, gives a Management and Investment Income (MII) of £25/ha.

Total Farm Business Output, of £2,552/ha, was 2% lower than in 2019/20. Agricultural production, which contributed 86% of this total, was down by 3% and within this total, livestock output was down by 2% to £2,137/ha. Agri-environment payments were up by 19% to £79/ha. Diversification output was up by 26% to £100/ha and the Basic payment contribution fell by 4% to £189/ha.

Total costs were down by 2% to £2,248/ha. Livestock variable costs, which account for 43% of total costs, were almost unchanged at £964/ha (feed being 73% of this). Paid labour, 12% of total costs, was unchanged at £262/ha, and machinery, 14% of total costs, was up by 5% to £307/ha. Paid rents, 5% of total, were down by 3%.

Dairy farms, organic and non-organic

The average organic dairy farm has a farm area of 163.6 hectares and carries 200 grazing livestock units (GLU) – slightly larger but with considerably fewer stock than the average for non-organic dairy farms, which has 161.1 hectares and 285 GLU.

The Farm Business Income of £296/ha for organic dairy farms is significantly lower than the £592/ha figure for the non-organic farms. This FBI figure translates to an NFI of £253/ha, which is also significantly lower than the £484/ha for the non-organic dairy farms.

The Farm Business Output, of £2,603/ha for organic dairy farms is considerably lower than the £4,048/ha for non-organic farms. On organic farms 86% of this total is derived from agricultural production and this figure is 91% on non-organic farms. The organic dairy farms derive over twice the revenue from Agri-environment schemes than non-organics, and slightly less from Diversification activities.

The total costs on organic dairy farms (of £2,304/ha) are £1,162/ha lower than on non-organic farms but the proportional distribution of costs among the cost components is broadly similar. The livestock variable costs, which make up 43% of the total costs for both groups of farms, have a very similar distribution among the sub-categories with the exception of vet costs which are over twice as much on the non-organic farms than on the organics. The £173/ha lower spend on crop variable costs is due to lower fertiliser and chemical costs.

Please see Appendix 3 – Organic dairy production for a more detailed commentary on organic dairy production.

Table 18 Dairy farms, organic identical sample 2019/20 and 2020/21

The average dairy farm	Organic identical sample 2019/20			2020/21		
Number (unweighted)	35			35		
Number (weighted)	368			374		
Farm size (2013SO)	476,897			462,596		
Farm area (adjusted ha)	161.2			159.6		
Grazing livestock units	192.9			188.0		
	£/farm	£/ha		£/farm	£/ha	
Agriculture:	363,420	2,255	87%	348,474	2,183	86%
Livestock component	350,452	2,174	96%	341,049	2,137	*98%*
Crop component	12,969	80	4%	7,425	47	*2%*
Agri-environment and other payments	10,728	67	3%	12,599	79	3%
Diversification & miscellaneous	12,800	79	3%	15,967	100	4%
Basic Payment Scheme	31,722	197	8%	30,184	189	7%
Farm Business Output (a)	**418,670**	**2,597**	100	**407,224**	**2,552**	**100**
Livestock variable costs:	155,797	967	42%	153,787	964	43%
Feed	114,226	709	*73%*	111,684	700	*73%*
Vet & medicine	8,048	50	*5%*	8,038	50	*5%*
Other livestock costs	33,523	208	*22%*	34,065	213	*22%*
Crop variable costs:	7,479	46	2%	7,205	45	2%
Seed	4,361	27	*58%*	4,778	30	*66%*
Fertiliser	1,296	8	*17%*	816	5	*11%*
Crop protection	12	0	*0%*	23	0	*0%*
Other crop costs	1,810	11	*24%*	1,588	10	*22%*
Contract	21,437	133	6%	20,591	129	6%
Paid Labour	42,256	262	11%	41,800	262	12%
Machinery:	47,067	292	13%	49,057	307	14%
Fuel & oil	9,475	59	*20%*	7,927	50	*16%*
Repairs	14,143	88	*30%*	17,291	108	*35%*
Depreciation	23,449	145	*50%*	23,839	149	*49%*
Paid Rents	18,886	117	5%	18,105	113	5%
Other costs	75,372	468	20%	68,245	428	19%
Total Costs (b)	**368,293**	**2,285**	100	**358,789**	**2,248**	**100**
Profit/(loss) on sale of fixed assets	1,279			-603		
Farm Business Income (c=a-b)	**51,657**	**320**		**47,832**	**300**	
Unpaid manual labour excl. farmer & spouse (d)	6,899	43		6,421	40	
Interest payments (e)	10,129	63		8,719	55	
Imputed rents (f)	27,914	173		27,350	171	
Director's remuneration (g)	2,590	16		2,714	17	
Ownership costs (h)	14,466	90		14,396	90	
Net Farm Income (i=c-d+e-f+g+h)	**44,028**	**273**		**39,891**	**250**	
Farmer & Spouse unpaid labour (j)	35,339	219		35,932	225	
Paid managerial labour (k)	0	0		0	0	
Management and Investment Income (l=i-j+k)	**8,689**	**54**		**3,960**	**25**	

Table 19 Dairy farms, organic and non-organic full sample, 2020/21

The average dairy farm	Non-organic 2020/21			Organic 2020/21		
Number (unweighted)	185			36		
Number (weighted)	5,330			350		
Farm size (2013SO)	700,411			484,810		
Farm area (adjusted ha)	161.1			163.6		
Grazing livestock units	285.4			200.2		
	£/farm	£/ha		£/farm	£/ha	
Agriculture:	592,748	3,679	91%	364,293	2,227	86%
Livestock	559,420	3,472	*94%*	357,307	2,185	*98%*
Crops	33,329	207	*6%*	6,986	43	*2%*
Agri-environment and other payments	5,807	36	1%	13,129	80	3%
Diversification & miscellaneous	21,265	132	3%	17,150	105	4%
Basic Payment Scheme	32,363	201	5%	31,240	191	7%
Farm Business Output (a)	**652,183**	**4,048**	**100**	**425,812**	**2,603**	**100%**
Livestock variable costs:	240,814	1,495	43%	163,056	997	43%
Feed	175,466	1,089	*73%*	116,288	711	*71%*
Vet & medicine	18,360	114	*8%*	8,753	54	*5%*
Other livestock costs	46,988	292	*20%*	38,014	232	*23%*
Crop variable costs:	35,397	220	6%	7,686	47	2%
Seed	6,674	41	*19%*	4,732	29	*62%*
Fertiliser	18,999	118	*54%*	1,226	7	*16%*
Crop protection	5,978	37	*17%*	23	0	*0%*
Other crop costs	3,746	23	*11%*	1,705	10	*22%*
Contract	34,253	213	6%	20,408	125	5%
Paid Labour	60,727	377	11%	44,266	271	12%
Machinery:	72,661	451	13%	50,264	307	13%
Fuel & oil	12,610	78	*17%*	8,070	49	*16%*
Repairs	24,100	150	*33%*	17,700	108	*35%*
Depreciation	35,951	223	*49%*	24,495	150	*49%*
Paid Rents	20,200	125	4%	18,333	112	5%
Other costs	94,346	586	17%	72,811	445	19%
Total Costs (b)	**558,398**	**3,466**	**100**	**376,823**	**2,304**	**100%**
Profit/(loss) on sale of fixed assets	1,560			-588		
Farm Business Income (c=a-b)	**95,345**	**592**		**48,401**	**296**	
Unpaid manual labour excl. farmer & spouse (d)	15,262	95		6,741	41	
Interest payments (e)	11,680	72		10,438	64	
Imputed rents (f)	36,315	225		28,197	172	
Director's remuneration (g)	2,834	18		2,641	16	
Ownership costs (h)	19,671	122		14,785	90	
Net Farm Income (i=c-d+e-f+g+h)	**77,952**	**484**		**41,327**	**253**	
Farmer & Spouse unpaid labour (j)	32,865	204		36,130	221	
Paid managerial labour (k)	300	2		0	0	
Management and Investment Income (l=i-j+k)	**45,387**	**282**		**5,196**	**32**	

4.4 LFA grazing

Organic LFA grazing farms year-on-year

The profitability of organic LFA grazing farms rose by 51% between 2019/20 and 2020/21 to a Farm Business Income (FBI) of £336/ha. This increase in FBI translated into a 71% rise in Net Farm Income, to £260/ha (£38,033/farm) and a consequential Management and Investment Income (MII) of £107/ha (Table 20). These increases in profitability followed a 16% increase in Farm Business Output, to £1,000/ha, and only a 4% increase in total costs (to £665/ha). The increase in total farm output was attributable to: a 13% increase per hectare in output from production agriculture (51% of total output) a 30% increase in Agri-environment revenues (16% of output) and a 24% increase in Diversification revenues per hectare.

Of the £665 total costs per hectare, 19% were livestock variable costs, primarily feed costs (36% of that total) and 25% were machinery costs. Paid labour contributed to 9% of the total and paid rents 8%.

LFA grazing farms, organic and non-organic

The average organic LFA grazing farm is 124.8ha (TAA) and carries 84 grazing livestock units (GLU) – this is smaller than the average non-organic LFA grazing farm which is 137.3ha and carries 85 GLU. This gives a, surprisingly, slightly higher stocking rate of 0.67GLU/ha on organic farms against 0.62GLU/ha on the non-organics.

Organic LFA grazing farms made a profit of £287/ha Farm Business Income (FBI) in 2020/21 whereas the non-organic farms only managed £242/ha although this difference is not statistically significant. This difference is maintained when these figures are adjusted to Net farm Income (NFI) where the organic farms saw a profit of £218/ha, versus £171/ha for the non-organics. Having deducted an imputed sum for farmer and spouse labour (of £162/ha for organics and £172/ha for the non-organics) the difference in profitability is £56/ha at the Management and Investment Income level (£56/ha for the organics and £0/ha for the non-organics).

Farm Business Output for the organic LFA grazing farms averaged £991/ha against £940/ha for the non-organics. The organic LFA farms generate a lower agricultural output (of £500/ha) than the non-organic farms (of £557). Agri-environment revenues, Diversification activities and the Basic payment are all greater per hectare on organic farms.

Total costs for organic LFA grazing farms were £705/ha and £702/ha for the non-organics. Organic farms had noticeably lower livestock variable costs (at £132/ha versus £223/ha) and lower crop variable costs (of £23/ha versus £39/ha). Organic farms had higher fixed cost of: contract (£46/ha for organics and £32/ha for the non-organics) paid labour (£60 for organics, £51/ha for the non-organics) and machinery (£164/ha for organics and £136/ha for the non-organics). Paid rents on organic farms were £52/ha against £54/ha on non-organics, and other fixed costs were £228/ha for organics and £166/ha on non-organics.

Further detailed commentary on organic LFA grazing farms is given in Appendix 2 – Organic LFA cattle and sheep.

Table 20 LFA grazing farms, organic identical sample 2019/20 and 2020/21

The average LFA grazing farm	Organic identical sample 2019/20			2020/21		
Number (unweighted)	19			19		
Number (weighted)	207			213		
Farm size (2013SO)	108,277			102,696		
Farm area (adjusted ha)	148.6			146.0		
Grazing livestock units	103.0			97.2		
	£/farm	£/ha		£/farm	£/ha	
Agriculture:	67,591	455	53%	75,138	515	51%
Livestock component	59,991	404	89%	71,175	487	*95%*
Crop component	7,600	51	11%	3,962	27	*5%*
Agri-environment and other payments	18,630	125	15%	23,726	162	16%
Diversification & miscellaneous	7,910	53	6%	9,646	66	7%
Basic Payment Scheme	33,784	227	26%	37,491	257	26%
Farm Business Output (a)	**127,915**	**861**	100	**146,001**	**1,000**	**100**
Livestock variable costs:	20,053	135	21%	18,751	128	19%
Feed	7,797	52	39%	6,701	46	*36%*
Vet & medicine	3,896	26	19%	3,838	26	*20%*
Other livestock costs	8,361	56	42%	8,211	56	*44%*
Crop variable costs:	3,935	26	4%	3,695	25	4%
Seed	1,447	10	37%	1,243	9	*34%*
Fertiliser	1,322	9	34%	1,157	8	*31%*
Crop protection	13	0	0%	2	0	*0%*
Other crop costs	1,153	8	29%	1,292	9	*35%*
Contract	7,234	49	8%	6,304	43	6%
Paid Labour	8,114	55	8%	8,445	58	9%
Machinery:	24,826	167	26%	23,912	164	25%
Fuel & oil	4,530	30	18%	3,833	26	*16%*
Repairs	7,344	49	30%	7,563	52	*32%*
Depreciation	12,952	87	52%	12,516	86	*52%*
Paid Rents	5,440	37	6%	7,812	53	8%
Other costs	25,881	174	27%	28,183	193	29%
Total Costs (b)	**95,483**	**642**	100	**97,100**	**665**	**100**
Profit/(loss) on sale of fixed assets	645			147		
Farm Business Income (c=a-b)	**33,076**	**223**		**49,048**	**336**	
Unpaid manual labour excl. farmer & spouse (d)	2,210	15		1,748	12	
Interest payments (e)	2,528	17		2,148	15	
Imputed rents (f)	17,027	115		17,198	118	
Director's remuneration (g)	959	6		1,711	12	
Ownership costs (h)	5,299	36		4,072	28	
Net Farm Income (i=c-d+e-f+g+h)	**22,625**	**152**		**38,033**	**260**	
Farmer & Spouse unpaid labour (j)	22,128	149		22,460	154	
Paid managerial labour (k)	0	0		0	0	
Management and Investment Income (l=i-j+k)	**497**	**3**		**15,572**	**107**	

Table 21 LFA grazing farms, organic and non-organic full sample, 2020/21

The average LFA grazing farm	Non-organic 2020/21			Organic 2020/21		
Number (unweighted)	180			22		
Number (weighted)	6,573			245		
Farm size (2013SO)	95,458			88,155		
Farm area (adjusted ha)	137.3			124.8		
Grazing livestock units	84.5			83.5		
	£/farm	£/ha		£/farm	£/ha	
Agriculture:	76,501	557	59%	62,398	500	50%
Livestock	72,867	531	*95%*	59,546	477	*95%*
Crops	3,634	26	*5%*	2,852	23	*5%*
Agri-environment and other payments	12,799	93	10%	19,635	157	16%
Diversification & miscellaneous	9,369	68	7%	9,604	77	8%
Basic Payment Scheme	30,386	221	24%	32,040	257	26%
Farm Business Output (a)	**129,055**	**940**	**100**	**123,677**	**991**	**100**
Livestock variable costs:	30,608	223	32%	16,464	132	19%
Feed	16,744	122	*55%*	5,416	43	*33%*
Vet & medicine	4,654	34	*15%*	3,388	27	*21%*
Other livestock costs	9,210	67	*30%*	7,660	61	*47%*
Crop variable costs:	5,371	39	6%	2,930	23	3%
Seed	464	3	*9%*	1,001	8	*34%*
Fertiliser	3,769	27	*70%*	878	7	*30%*
Crop protection	434	3	*8%*	2	0	*0%*
Other crop costs	704	5	*13%*	1,049	8	*36%*
Contract	4,329	32	4%	5,691	46	6%
Paid Labour	7,056	51	7%	7,484	60	9%
Machinery:	18,720	136	19%	20,451	164	23%
Fuel & oil	3,711	27	*20%*	3,228	26	*16%*
Repairs	5,240	38	*28%*	6,842	55	*33%*
Depreciation	9,769	71	*52%*	10,381	83	*51%*
Paid Rents	7,440	54	8%	6,516	52	7%
Other costs	22,765	166	24%	28,392	228	32%
Total Costs (b)	**96,289**	**702**	**100**	**87,928**	**705**	**100**
Profit/(loss) on sale of fixed assets	501			79		
Farm Business Income (c=a-b)	**33,268**	**242**		**35,828**	**287**	
Unpaid manual labour excl. farmer & spouse (d)	4,947	36		1,432	11	
Interest payments (e)	2,696	20		3,659	29	
Imputed rents (f)	11,520	84		16,066	129	
Director's remuneration (g)	287	2		1,298	10	
Ownership costs (h)	3,690	27		3,930	31	
Net Farm Income (i=c-d+e-f+g+h)	**23,473**	**171**		**27,216**	**218**	
Farmer & Spouse unpaid labour (j)	23,583	172		20,271	162	
Paid managerial labour (k)	76	1		0	0	
Management and Investment Income (l=i-j+k)	**-33**	**0**		**6,945**	**56**	

4.5 Lowland grazing farms

Organic lowland grazing farms year-on-year

The average organic lowland grazing farm saw a 34% increase in Farm Business Income to £254/ha in 2020/21. This corresponds to a Net farm Income of £133/ha (a 97% increase on 2019/20). However, once an imputed figure for farmer and spouse manual labour (of £318/ha) is deducted, the resultant Management and Investment Income is a negative -£185/ha (Table 22).

Farm Business Output rose by 7% on 2019/20 (to £1,065/ha). Within this gross output figure output from agriculture increased by 13% to £522/ha - largely due to a 48% increase in crop output. Agri-environment payments fell by 12% to £118/ha and Diversification revenues rose by 16% to £208/ha.

Within the total costs figure of £812/ha; livestock variable costs were up by 14% and crop variable costs down by 7% on 2019/20 figures. Contract costs (7% of total) were down by 10% and paid labour (6% of total) was down by 17%. Machinery costs were down 20% to £180/ha. Paid rents, which account for 5% of total costs, were up by 21% to £40/ha (imputed rents on owned land combine to give an overall rent figure of £225/ha). Other costs, (insurance, interest, professional fees, water etc.) which account for 39% of total costs, were £319/ha.

Lowland grazing farms, organic and non-organic

The average organic lowland grazing farm (at 78.3ha) is slightly smaller than the average non-organic farm and has 18 fewer livestock units. The stocking rate on organic farms, of 0.81GLU/ha, compares to 0.90GLU/ha for the non-organic farms. The average Farm Business Income of £226/ha for organic lowland grazing farms is slightly higher than the £204/ha figure for non-organic lowland grazing farms but this difference is not statistically significant. At the Net Farm Income level, where the profitability measured £100/ha for organic farms and £82/ha for non-organics, this difference is also not statistically significant.

Organic lowland grazing farms produce a total output of £1,067/ha compared to £1,258/ha for the non-organic farms. Agri-environment schemes, Diversification and Basic payment sources collectively account for 51% of total output on the organic farms leaving agriculture to generate the remaining 49% at £523/ha. On non-organic lowland grazing farms the agricultural output of £788/ha accounts for 63% of total output. Variable costs on organic lowland grazing farms (of £175ha) account for 21% of total costs and on non-organic lowland grazing farms this figure is 35% of total costs at £363/ha. Paid labour (6% total costs) is slightly lower on organic farms at £51/ha and contract costs (6% of total) are also slightly lower at £54/ha (£56/ha for labour and £64/ha for contract on non-organics). Machinery costs, at £197/ha, are lower on the organics than on the non-organics (£221/ha). Other (overhead) costs account for 39% of total costs for organic farms (£327/ha). Paid rents for organic farms, when combined with an imputed rent on owned land, give an overall rent figure of £229/ha in comparison to an overall rent figure of £212/ha for the non-organic lowland grazing farms.

Table 22 Lowland grazing farms, organic identical sample 2019/20 and 2020/21

The average lowland grazing farm	Organic identical sample 2019/20			2020/21		
Number (unweighted)	41			41		
Number (weighted)	1513			1463		
Farm size (2013SO)	61,582			66,208		
Farm area (adjusted ha)	78.9			80.7		
Grazing livestock units	61.4			65.2		
	£/farm	£/ha		£/farm	£/ha	
Agriculture:	36,472	462	47%	42,079	522	49%
Livestock component	33,894	430	93%	38,184	473	*91%*
Crop component	2,578	33	7%	3,896	48	*9%*
Agri-environment and other payments	10,542	134	13%	9,501	118	11%
Diversification & miscellaneous	14,187	180	18%	16,806	208	20%
Basic Payment Scheme	17,170	218	22%	17,532	217	20%
Farm Business Output (a)	**78,370**	**994**	100%	**85,919**	**1,065**	**100**
Livestock variable costs:	9,927	126	16%	11,534	143	18%
Feed	3,067	39	31%	4,351	54	*38%*
Vet & medicine	1,888	24	19%	1,660	21	*14%*
Other livestock costs	4,972	63	50%	5,524	68	*48%*
Crop variable costs:	2,153	27	3%	2,039	25	3%
Seed	1,009	13	47%	987	12	*48%*
Fertiliser	634	8	29%	507	6	*25%*
Crop protection	23	0	1%	18	0	*1%*
Other crop costs	487	6	23%	527	7	*26%*
Contract	4,740	60	7%	4,374	54	7%
Paid Labour	4,818	61	8%	4,111	51	6%
Machinery:	17,800	226	28%	14,517	180	22%
Fuel & oil	2,567	33	14%	2,106	26	*15%*
Repairs	6,385	81	36%	4,322	54	*30%*
Depreciation	8,848	112	50%	8,089	100	*56%*
Paid Rents	2,639	33	4%	3,262	40	5%
Other costs	21,739	276	34%	25,703	319	39%
Total Costs (b)	**63,817**	**809**	100%	**65,540**	**812**	**100**
Profit/(loss) on sale of fixed assets	351			91		
Farm Business Income (c=a-b)	**14,905**	**189**		**20,470**	**254**	
Unpaid manual labour excl. farmer & spouse (d)	2,862	36		3,346	41	
Interest payments (e)	2,257	29		2,263	28	
Imputed rents (f)	14,508	184		14,914	185	
Director's remuneration (g)	1,465	19		2,218	27	
Ownership costs (h)	4,056	51		4,031	50	
Net Farm Income (i=c-d+e-f+g+h)	**5,314**	**67**		**10,721**	**133**	
Farmer & Spouse unpaid labour (j)	24,581	312		25,647	318	
Paid managerial labour (k)	0	0		0	0	
Management and Investment Income (l=i-j+k)	**-19,268**	**-244**		**-14,926**	**-185**	

Table 23 Lowland grazing farms, organic and non-organic full sample, 2020/21

The average lowland grazing farm	Non-organic 2020/21			Organic 2020/21		
Number (unweighted)	243			42		
Number (weighted)	11,350			1434		
Farm size (2013SO)	87,199			64,035		
Farm area (adjusted ha)	90.6			78.3		
Grazing livestock units	81.1			63.4		
	£/farm	£/ha		£/farm	£/ha	
Agriculture:	71,371	788	63%	40,937	523	49%
Livestock	62,623	691	*88%*	36,795	470	*90%*
Crops	8,748	97	*12%*	4,142	53	*10%*
Agri-environment and other payments	4,351	48	4%	9,180	117	11%
Diversification & miscellaneous	21,094	233	19%	16,164	206	19%
Basic Payment Scheme	17,158	189	15%	17,317	221	21%
Farm Business Output (a)	**113,974**	**1,258**	**100**	**83,599**	**1,067**	**100**
Livestock variable costs:	25,699	284	27%	11,712	150	18%
Feed	14,703	162	*57%*	4,432	57	*38%*
Vet & medicine	3,119	34	*12%*	1,731	22	*15%*
Other livestock costs	7,877	87	*31%*	5,549	71	*47%*
Crop variable costs:	7,188	79	8%	1,970	25	3%
Seed	1,376	15	*19%*	956	12	*49%*
Fertiliser	4,015	44	*56%*	505	6	*26%*
Crop protection	972	11	*14%*	17	0	*1%*
Other crop costs	825	9	*11%*	492	6	*25%*
Contract	5,811	64	6%	4,224	54	6%
Paid Labour	5,114	56	5%	3,966	51	6%
Machinery:	20,028	221	21%	15,465	197	23%
Fuel & oil	3,824	42	*19%*	2,081	27	*13%*
Repairs	5,846	65	*29%*	4,594	59	*30%*
Depreciation	10,357	114	*52%*	8,790	112	*57%*
Paid Rents	6,799	75	7%	2,997	38	5%
Other costs	25,170	278	26%	25,623	327	39%
Total Costs (b)	**95,808**	**1,058**	**100**	**65,957**	**842**	**100**
Profit/(loss) on sale of fixed assets	304			82		
Farm Business Income (c=a-b)	**18,471**	**204**		**17,723**	**226**	
Unpaid manual labour excl. farmer & spouse (d)	5,606	62		3,103	40	
Interest payments (e)	2,389	26		2,091	27	
Imputed rents (f)	12,400	137		14,984	191	
Director's remuneration (g)	107	1		2,071	26	
Ownership costs (h)	4,465	49		4,033	51	
Net Farm Income (i=c-d+e-f+g+h)	**7,426**	**82**		**7,831**	**100**	
Farmer & Spouse unpaid labour (j)	24,276	268		25,715	328	
Paid managerial labour (k)	12	0		0	0	
Management and Investment Income (l=i-j+k)	**-16,837**	**-186**		**-17,884**	**-228**	

4.6 Mixed farms

Please note that this group includes less than 15 observations in the sample which could reduce the robustness of the results.

Organic mixed farms year-on-year

Organic mixed farms saw a 44% decrease in Farm Business Income (FBI) from £259/ha (in 2019/20) to £146ha in 2020/21. This translated into a 86% decrease in Net Farm Income (NFI) to £20/ha. Having deducted an imputed figure for farmer and spouse labour of £154/ha (in 2020/21) from the NFI, the Management and Investment Income corresponded to -£135/ha (Table 24).

This fall in FBI was due to an 11% increase in total costs to £1,155/ha for 2020/21 while output remained static at £1,302/ha. Output from agriculture, which generated 47% of total output, fell by 14% to £614/ha; crop output being down by 25% to £257ha and livestock output being down 4% to £357/ha. Revenues from agri-environment schemes were up by 32%, and income from Diversification was up by 30% to £257ha.

Livestock variable costs, which account for 9% of total costs, increased by 14% to £108/ha, and crop variable costs, 9% of total at £106/ha in 2020/21 were up 9% on 2019/20. Contract costs, 7% of total costs, were up 4% to £76/ha and paid labour (15% of total) were up 10% to £170/ha. Machinery costs, which account for 19% of total costs, were down 8% to £221/ha in 2020/21. Other (overhead) costs (33% of total costs) were up 40% to £387/ha.

Mixed farms, organic and non-organic

The average size of an organic mixed farm is 167ha and it carries 87 grazing livestock units (GLU). The average non-organic mixed farm is 166ha and carries 72 GLU (Table 25).

In 2020/21 the average organic mixed farm realised a Farm Business Income of £96/ha against a figure of £246/ha for the non-organic mixed farms and this difference is significant. There is also a significant difference between organic and non-organic mixed farms at the Net Farm Income level (-£37/ha organics and £137/ha non-organics). Having deducted an imputed figure for farmer and spouse manual labour the resultant Management and Investment Income is -£202/ha for the organic group and -£16/ha for the non-organics.

Farm Business Output for the average organic mixed farm was £1,406/ha in 2020/21 against £1,818/ha for the average non-organic mixed farm. The output from agriculture was lower on the organic farms (£715/ha) than on the non-organics (£1,298/ha). The organic farms derived four times the income per hectare than the non-organic farms from Agri-environmental schemes (at £184/ha). Diversification activities and Basic payment revenues were slightly higher at £287/ha and £221/ha respectively (versus £266/ha and £209/ha for non-organics).

The total costs for organic mixed farms, at £1,305/ha, were 17% lower per hectare than for the non-organic farms. Variable costs of £235/ha, which form 18% of total costs on organic farms, are less than half of those on the non-organic farms – where they constitute 41% of total costs. Contract costs were lower on organic mixed farms, at £70/ha versus £89/ha, and total machinery costs were lower (at £280/ha) on organic farms than on the non-organics (at £315/ha). The average organic mixed farm spent £207/ha on paid labour (16% of total costs) against £132/ha (8% of total) for non-organic farms. Other overhead costs, at £424/ha, make up 33% of total costs against a figure of £308/ha (20% of total costs) for the non-organic farms.

Table 24 Mixed farms, organic identical sample 2019/20 and 2020/21

The average mixed farm	Organic identical sample 2019/20			Organic identical sample 2020/21		
Number (unweighted)	10			10		
Number (weighted)	160			145		
Farm size (2013SO)	163,366			172,509		
Farm area (adjusted ha)	149.9			177.3		
Grazing livestock units	81.5			85.7		
	£/farm	£/ha		£/farm	£/ha	
Agriculture:	106,807	712	55%	108,847	614	47%
Livestock component	55,667	371	52%	63,230	357	*58%*
Crop component	51,140	341	48%	45,617	257	*42%*
Agri-environment and other payments	23,164	154	12%	36,188	204	16%
Diversification & miscellaneous	29,618	198	15%	45,550	257	20%
Basic Payment Scheme	34,825	232	18%	40,284	227	17%
Farm Business Output (a)	**194,414**	**1297**	100	**230,869**	**1302**	**100**
Livestock variable costs:	14,169	94	9%	19,112	108	9%
Feed	3,125	21	22%	5,826	33	*30%*
Vet & medicine	2,551	17	18%	2,692	15	*14%*
Other livestock costs	8,493	57	60%	10,593	60	*55%*
Crop variable costs:	14,593	97	9%	18,772	106	9%
Seed	10,237	68	70%	12,346	70	*66%*
Fertiliser	1,782	12	12%	2,578	15	*14%*
Crop protection	700	5	5%	685	4	*4%*
Other crop costs	1,873	12	13%	3,163	18	*17%*
Contract	11,033	74	7%	13,509	76	7%
Paid Labour	23,151	154	15%	30,063	170	15%
Machinery:	35,938	240	23%	39,209	221	19%
Fuel & oil	6,403	43	18%	6,143	35	*16%*
Repairs	12,751	85	35%	14,897	84	*38%*
Depreciation	16,784	112	47%	18,170	102	*46%*
Paid Rents	15,437	103	10%	15,627	88	8%
Other costs	41,515	277	27%	68,591	387	33%
Total Costs (b)	**155,836**	**1039**	100	**204,883**	**1,155**	**100**
Profit/(loss) on sale of fixed assets	249			-97		
Farm Business Income (c=a-b)	**38,827**	**259**		**25,889**	**146**	
Unpaid manual labour excl. farmer & spouse (d)	3,489	23		4,597	26	
Interest payments (e)	3,311	22		4,054	23	
Imputed rents (f)	23,804	159		32,637	184	
Director's remuneration (g)	0	0		0	0	
Ownership costs (h)	6,636	44		10,750	61	
Net Farm Income (i=c-d+e-f+g+h)	**21,481**	**143**		**3,458**	**20**	
Farmer & Spouse unpaid labour (j)	28,463	190		27,382	154	
Paid managerial labour (k)	0	0		0	0	
Management and Investment Income (l=i-j+k)	**-6,982**	**-47**		**-23,924**	**-135**	

**A part of this table was derived from data with less than 15 observations in the sample which could reduce the robustness of the results*

Table 25 Mixed farms, organic and non-organic full sample, 2020/21

The average mixed farm	Non-organic 2020/21			Organic 2020/21		
Number (unweighted)	151			12		
Number (weighted)	5,743			168		
Farm size (2013SO)	269,572			163,511		
Farm area (adjusted ha)	166.3			166.7		
Grazing livestock units	71.8			87.4		
	£/farm	£/ha		£/farm	£/ha	
Agriculture:	215,876	1,298	71%	119,078	715	51%
Livestock	109,552	659	*51%*	79,991	480	*67%*
Crops	106,324	639	*49%*	39,086	235	*33%*
Agri-environment and other payments	7,404	45	2%	30,592	184	13%
Diversification & miscellaneous	44,254	266	15%	47,887	287	20%
Basic Payment Scheme	34,821	209	12%	36,843	221	16%
Farm Business Output (a)	**302,354**	**1,818**	**100%**	**234,400**	**1,406**	**100**
Livestock variable costs:	63,121	380	24%	23,201	139	11%
Feed	44,499	268	*70%*	8,648	52	*37%*
Vet & medicine	4,524	27	*7%*	3,295	20	*14%*
Other livestock costs	14,098	85	*22%*	11,259	68	*49%*
Crop variable costs:	43,772	263	17%	15,955	96	7%
Seed	8,672	52	*20%*	10,626	64	*67%*
Fertiliser	17,380	104	*40%*	2,069	12	*13%*
Crop protection	12,763	77	*29%*	552	3	*3%*
Other crop costs	4,957	30	*11%*	2,708	16	*17%*
Contract	14,764	89	6%	11,748	70	5%
Paid Labour	21,965	132	8%	34,453	207	16%
Machinery:	52,438	315	20%	46,738	280	21%
Fuel & oil	9,658	58	*18%*	6,853	41	*15%*
Repairs	15,169	91	*29%*	16,268	98	*35%*
Depreciation	27,611	166	*53%*	23,616	142	*51%*
Paid Rents	13,971	84	5%	14,676	88	7%
Other costs	51,251	308	20%	70,680	424	33%
Total Costs (b)	**261,283**	**1,571**	**100%**	**217,450**	**1,305**	**100**
Profit/(loss) on sale of fixed assets	-138			-962		
Farm Business Income (c=a-b)	**40,934**	**246**		**15,988**	**96**	
Unpaid manual labour excl. farmer & spouse (d)	9,853	59		6,232	37	
Interest payments (e)	6,184	37		3,874	23	
Imputed rents (f)	26,088	157		35,646	214	
Director's remuneration (g)	2,071	12		0	0	
Ownership costs (h)	9,471	57		15,927	96	
Net Farm Income (i=c-d+e-f+g+h)	**22,719**	**137**		**-6,088**	**-37**	
Farmer & Spouse unpaid labour (j)	25,416	153		27,502	165	
Paid managerial labour (k)	62	0		0	0	
Management and Investment Income (l=i-j+k)	**-2,635**	**-16**		**-33,589**	**-202**	

5 Enterprise Gross Margins

5.1 Data sample

The distribution of available crop and livestock margin data by robust farm type and size for organic farms are shown in Table 26 and Table 37.

All data presented in the following gross margin tables are weighted. All variable costs to gross margin level are allocated through careful recording and in consultation with participating farmers.

Table 27 and Table 38 show the sample size of organic crop and livestock enterprises that have been analysed to gross margin level. Where sample numbers allowed, analyses for a premium group (top third by weighted numbers by: GM/litre, GM/head or GM/ha) are presented.

For livestock enterprises, forage areas and stocking rates are calculated on the basis of the total adjusted forage area including commons; see Appendix 5 – for more information. This is to allow the inclusion at the appropriate rate of all sole occupier rough grazing and all grazed common land. Unused commons are not included and the forage area figures are net of land let out and taken in. Stock sent away on agistment are excluded from the stocking rate calculations and monies spent on agistment is included in the figure for coarse fodder.

The dairy sample of 39 enterprises comprises 4 LFA and 35 lowland farms.

Crop enterprise gross margins are shown in Table 28 to Table 36.

Livestock enterprise gross margins are shown in Table 39 to Table 48.

Standard deviations are calculated on the *per litre, per head* or per *hectare* figures.

5.2 Organic cropping enterprises gross margins

Table 26 Sample distribution of organic crop margin data (>5 records) by robust farm type and size (2013SO)

Robust farm type	Small (€2,500-100,000)	Medium (€100,000-250,000	Large (>€250,000)	All
Cereals	5	9	6	20
General cropping	6	2	1	9
Horticulture	5	4	1	10
Pigs	0	1	0	1
Poultry	0	0	1	1
Dairy	0	1	15	16
LFA Grazing	2	3	5	10
Lowland Grazing	5	14	6	25
Mixed	4	5	13	22
All	**27**	**39**	**48**	**114**

Table 27 Sample size for organic crop gross margin analysis

Enterprise	Sample size	Weighted sample size	Average Crop area (ha)	Premium sample size	Weighted sample size	Average crop area (ha)
Winter wheat *	10	82	14.8	-	-	-
Spring wheat *	5	87	33.9	-	-	-
Spring barley	31	320	24.2	12	99	15.7
Winter oats *	14	187	18.7	7	61	40.9
Spring oats	19	337	15.3	6	112	18.1
Spring beans *	11	96	15.9	-	-	-
Field vegetables *	9	269	3.7	-	-	-
Protected vegetables *	6	257	0.2	-	-	-
Top fruit *	9	242	2.2	-	-	-

**A part of this table was derived from data with less than 15 observations in the sample which could reduce the robustness of the results*

Please note that there are farms that have fully organic enterprises but, because less than 70% of the farm UAA is not classified as organic, the farm itself does not classify as organic. This explains the slight difference in sample sizes between Table 26 and Table 4.

Table 28 Organic winter wheat gross margin

2020 harvest year	Sample	10	crops	
	Sample weighted	82	crops	
	Average crop area	14.8	hectares	
Crop Yield and Output		**per crop**	**per ha**	**std dev**
Yield (tonnes and tonnes/ha)		57	3.8	1.6
Price of crop sold (£/t)		296		77
Crop output		16,098	1,084	398
By product output		1,540	104	99
Total		**17,639**	**1,188**	
Variable Costs		**per crop**	**per ha**	
Seed		1,433	97	35
Fertiliser (incl. lime, purchased FYM, trace elements, etc.)		297	20	32
Crop protection materials		147	10	28
Other crop costs (including levies and commission)		470	32	59
Fuel for heating & drying		40	3	4
Total		**2,388**	**161**	**77**
Gross Margin		**15,250**	**1,027**	**382**

**A part of this table was derived from data with less than 15 observations in the sample which could reduce the robustness of the results*

Table 29 Organic spring wheat gross margin

2020 harvest year	Sample	5	crops	
	Sample weighted	87	crops	
	Average crop area	33.9	hectares	
Crop Yield and Output		**per crop**	**per ha**	**std dev**
Yield (tonnes and tonnes/ha)		131	3.9	0.7
Price of crop sold (£/t)		239		18
Crop output		31,811	938	114
By product output		2,709	80	49
Total		**34,520**	**1,018**	
Variable Costs		**per crop**	**per ha**	
Seed		3,992	118	31
Fertiliser (incl. lime, purchased FYM, trace elements, etc.)		781	23	20
Crop protection materials		0	0	0
Other crop costs (including levies and commission)		874	26	23
Fuel for heating & drying		28	1	1
Total		**5,675**	**167**	**53**
Gross Margin		**28,845**	**851**	**113**

**A part of this table was derived from data with less than 15 observations in the sample which could reduce the robustness of the results*

Table 30 Organic spring barley gross margin

2020 harvest year	Sample	31	crops		Top third	12	crops	
	Sample weighted	320	crops		Top third weighted	99	crops	
	Average crop area	24.2	hectares		Average crop area	15.7	hectares	
Crop Yield and Output		**per crop**	**per ha**	**std dev**		**per crop**	**per ha**	**std dev**
Yield (tonnes and tonnes/ha)		78	3.2	1.3		68	4.3	1.8
Price of crop sold (£/t)		270		104		382		79
Crop output		18,584	769	293		18,763	1,196	410
By product output		1,592	66	87		1,354	86	102
Total		**20,176**	**835**			**20,117**	**1,282**	
Variable Costs		**per crop**	**per ha**			**per crop**	**per ha**	
Seed		2,598	108	62		1,572	100	81
Fertiliser (incl. lime, purchased FYM, trace elements, etc.)		453	19	50		197	13	25
Crop protection materials		10	0	2		34	2	3
Other crop costs (including levies and commission)		714	30	42		986	63	61
Fuel for heating & drying		67	3	4		96	6	6
Total		**3,842**	**159**	**97**		**2,885**	**184**	**121**
Gross Margin		**16,334**	**676**	**308**		**17,233**	**1,099**	**400**

**A part of this table was derived from data with less than 15 observations in the sample which could reduce the robustness of the results*

Table 31 Organic winter oats gross margin

2020 harvest year	Sample	14	crops		Top third	7	crops	
	Sample weighted	187	crops		Top third weighted	61	crops	
	Average crop area	18.7	hectares		Average crop area	40.9	hectares	
Crop Yield and Output		**per crop**	**per ha**	**std dev**		**per crop**	**per ha**	**std dev**
Yield (tonnes and tonnes/ha)		80	4.3	2.3		209	5.1	1.3
Price of crop sold (£/t)		278		82		278		84
Crop output		22,997	1231	797		62,015	1516	549
By product output		1,741	93	88		4,264	104	116
Total		**24,739**	**1324**			**66,279**	**1620**	
Variable Costs		**per crop**	**per ha**			**per crop**	**per ha**	
Seed		1,385	74	42		2,641	65	32
Fertiliser (incl. lime, purchased FYM, trace elements, etc.)		474	25	35		816	20	24
Crop protection materials		71	4	15		179	4	25
Other crop costs (including levies and commission)		268	14	60		659	16	102
Fuel for heating & drying		14	1	4		36	1	7
Total		**2,213**	**118**	**87**		**4,330**	**106**	**130**
Gross Margin		**22,526**	**1205**	**842**		**61,948**	**1515**	**420**

**A part of this table was derived from data with less than 15 observations in the sample which could reduce the robustness of the results*

Table 32 Organic spring oats gross margin

2020 harvest year	Sample	19	crops		Top third	6	crops	
	Sample weighted	337	crops		Top third weighted	112	crops	
	Average crop area	15.3	hectares		Average crop area	18.1	hectares	
Crop Yield and Output		**per crop**	**per ha**	**std dev**		**per crop**	**per ha**	**std dev**
Yield (tonnes and tonnes/ha)		59	3.8	1.4		78	4.3	1.3
Price of crop sold (£/t)		269		63		268		36
Crop output		14,681	961	426		21,466	1,184	213
By product output		1,071	70	58		2,051	113	80
Total		**15,753**	**1,031**			**23,517**	**1,297**	
Variable Costs		**per crop**	**per ha**			**per crop**	**per ha**	
Seed		1,463	96	54		2,042	113	52
Fertiliser (incl. lime, purchased FYM, trace elements, etc.)		515	34	40		523	29	32
Crop protection materials		40	3	3		66	4	3
Other crop costs (including levies and commission)		816	53	53		566	31	37
Fuel for heating & drying		40	3	4		19	1	3
Total		**2,875**	**188**	**103**		**3,216**	**177**	**72**
Gross Margin		**12,878**	**843**	**367**		**20,301**	**1120**	**235**

**A part of this table was derived from data with less than 15 observations in the sample which could reduce the robustness of the results*

Table 33 Organic spring beans gross margin

2020 harvest year	Sample	11	crops	
	Sample weighted	96	crops	
	Average crop area	15.9	hectares	
Crop Yield and Output		**per crop**	**per ha**	**std dev**
Yield (tonnes and tonnes/ha)		37	2.3	1.0
Price of crop sold (£/t)		316		72
Crop output		11,020	691	321
By product output		67	4	8
Total		**11,088**	**695**	
Variable Costs		**per crop**	**per ha**	
Seed		2,065	129	53
Fertiliser (incl. lime, purchased FYM, trace elements, etc.)		472	30	35
Crop protection materials		49	3	14
Other crop costs (including levies and commission)		740	46	48
Fuel for heating & drying		42	3	3
Total		**3,368**	**211**	**90**
Gross Margin		**7,720**	**484**	**294**

**A part of this table was derived from data with less than 15 observations in the sample which could reduce the robustness of the results*

Table 34 Organic field vegetables gross margin

2020 harvest year	Sample	9	crops	
	Sample weighted	269	crops	
	Average crop area	3.7	hectares	
Crop Yield and Output		**per crop**	**per ha**	**std dev**
Yield (tonnes and tonnes/ha)		18.3	4.9	4.6
Price of crop sold (£/t)		-		-
Crop output		43,492	11,604	9,152
By product output		0	0	0
Total		**43,492**	**11,604**	
Variable Costs		**per crop**	**per ha**	
Seed		5,465	1,458	838
Fertiliser (incl. lime, purchased FYM, trace elements, etc.)		550	147	98
Crop protection materials		160	43	45
Other crop costs (including levies and commission)		2,803	748	503
Fuel for heating & drying		0	0	0
Total		**8,977**	**2,395**	**1,297**
Gross Margin		**34,515**	**9,209**	**8,198**

**A part of this table was derived from data with less than 15 observations in the sample which could reduce the robustness of the results*

Table 35 Organic protected vegetables gross margin

2020 harvest year	Sample	6	crops	
	Sample weighted	257	crops	
	Average crop area	0.2	hectares	
Crop Yield and Output		**per crop**	**per ha**	**std dev**
Yield (tonnes and tonnes/ha)		0.1	0.4	0.6
Price of crop sold (£/t)		-		-
Crop output		10,601	58,852	45,902
By product output		0	0	0
Total		**10,601**	**58,852**	
Variable Costs		**per crop**	**per ha**	
Seed		547	3,037	1,761
Fertiliser (incl. lime, purchased FYM, trace elements, etc.)		186	1,031	1,071
Crop protection materials		0	0	0
Other crop costs (including levies and commission)		934	5,186	3,990
Fuel for heating & drying		0	0	0
Total		**1,667**	**9,254**	**5,977**
Gross Margin		**8,934**	**49,598**	**40,790**

**A part of this table was derived from data with less than 15 observations in the sample which could reduce the robustness of the results*

Table 36 Organic top fruit gross margin

2019 harvest year	Sample	9	crops	
	Sample weighted	242	crops	
	Average crop area	2.2	hectares	
Crop Yield and Output		**per crop**	**per ha**	**std dev**
Yield (tonnes and tonnes/ha)		12.7	5.8	4.5
Price of crop sold (£/t)		-		-
Crop output		3,200	1,467	1,486
By product output		0	0	0
Total		**3,200**	**1,467**	
Variable Costs		**per crop**	**per ha**	
Seed		268	123	284
Fertiliser (incl. lime, purchased FYM, trace elements, etc.)		0	0	0
Crop protection materials		5	2	3
Other crop costs (including levies and commission)		103	47	107
Fuel for heating & drying		0	0	0
Total		**377**	**173**	**327**
Gross Margin		**2,824**	**1,294**	**1,361**

**A part of this table was derived from data with less than 15 observations in the sample which could reduce the robustness of the results*

5.3 Organic livestock enterprises gross margins

There are 312 organic livestock enterprises within the full 2020/21 FBS sample. Of these, 267 are in activities with 5 or more farms and are presented below.

Table 37 Sample distribution of organic livestock margin data (>4 records) by robust farm type and size (2013SO)

Robust farm type	Small (€2,500-100,000)	Medium (€100,000-250,000)	Large (>€250,000)	All
Cereals	0	0	0	0
General cropping	2	4	1	7
Horticulture	0	0	3	3
Pigs	0	1	0	1
Poultry	0	1	2	3
Dairy	0	12	63	75
LFA Grazing	17	24	16	57
Lowland Grazing	50	30	17	97
Mixed	2	8	14	24
All	**71**	**80**	**116**	**267**

Table 38 Sample size for organic livestock gross margin analysis

Enterprise	Sample		Premium	
	Sample size	Weighted sample size	Sample size	Weighted sample size
Dairy cows	39	367	13	122
LFA suckler cows	17	251	7	110
Lowland suckler cows	53	1,465	25	490
Dairy followers	28	278	10	99
Fat cattle from suckler bred calves or stores	40	941	16	286
Store cattle from suckler bred calves or stores	26	738	11	264
Lowland sheep	30	730	12	201
LFA sheep (hill) *	7	93	0	0
LFA sheep (upland) *	13	101	5	27

**A part of this table was derived from data with less than 15 observations in the sample which could reduce the robustness of the results*

Table 39 Organic dairy cows gross margin – sample

Sample size	39			
No farms in population	367			
Production information				
Average cow numbers	130			
Enterprise grazing livestock units	130.5			
Total milk produced (litres)	809,422			
Total milk produced per cow (lt/cow)	6,249			
Average price of milk sold (pence/lt)	36.32			
Calves per cow (sold or transferred)	0.93			
Herd replacement rate (%)	0.23			
Adjusted forage area (including commons)	103.8			
Stocking rate (cows per adj. forage ha.)	1.25			
Stocking rate (GLUs per adj. forage ha.)	1.26			
Enterprise Output	**Total**	**per cow**	**per litre**	**per adj for ha**
	(£)	**(£)**	**(pence)**	**(£)**
Milk	293,972	2,269	36.3	2,831
Calves and other dairy related output	17,016	131	2.1	164
Less Herd Depreciation	23,625	182	2.9	227
Total Gross Output (A)	**287,364**	**2,218**	**35.5**	**2,768**
Variable Costs				
Concentrates	83,813	647	10.4	807
Coarse fodder	8,024	62	1.0	77
Vet and Medicines	6,918	53	0.9	67
Other livestock costs	27,916	216	3.5	269
Total Variable Costs (B)	**126,671**	**978**	**15.6**	**1,220**
Gross Margin before forage (A-B) = (C)	**160,693**	**1,240**	**19.9**	**1,548**
Forage Variable Costs (D)	2,806	22	0.4	27
Gross Margin after forage (C-D) = (E)	**157,887**	**1,218**	**19.5**	**1,521**
Prices				
Average quota leasing in price (pence/lt)	na			
Calf price (£/calf)	136			
Cull cow price (£/cow)	714			
Replacement heifer/cow price (£/head)	1,340			
Forage Costs				
Fertilizer (£/ha)	4			
Seed (£/ha)	16			
Spray (£/ha)	0			
Other crop costs (£/ha)	6			
Total (£/ha)	27			
Unadjusted forage area excluding commons	101.1			

Table 40 Organic dairy cows gross margin – premium

Premium sample size	13			
No farms in population	122			
Production information				
Average cow numbers	128			
Enterprise grazing livestock units	129.7			
Total milk produced (litres)	704,507			
Total milk produced per cow (lt/cow)	5,504			
Average price of milk sold (pence/lt)	37.62			
Calves per cow (sold or transferred)	0.92			
Herd replacement rate (%)	0.22			
Adjusted forage area (including commons)	104.8			
Stocking rate (cows per adj. forage ha.)	1.22			
Stocking rate (GLUs per adj. forage ha.)	1.24			
Enterprise Output	**Total**	**per cow**	**per litre**	**per adj for ha**
	(£)	**(£)**	**(pence)**	**(£)**
Milk	265,035	2,071	37.6	2,528
Calves and other dairy related output	16,213	127	2.3	155
Less Herd Depreciation	16,011	125	2.3	153
Total Gross Output (A)	**265,238**	**2,073**	**37.7**	**2,530**
Variable Costs				
Concentrates	63,834	499	9.1	609
Coarse fodder	3,187	25	0.5	30
Vet and Medicines	5,164	40	0.7	49
Other livestock costs	20,815	163	3.0	199
Total Variable Costs (B)	**93,001**	**727**	**13.2**	**887**
Gross Margin before forage (A-B) = (C)	**172,237**	**1,346**	**24.5**	**1,643**
Forage Variable Costs (D)	2,428	19	0.3	23
Gross Margin after forage (C-D) = (E)	**169,809**	**1,327**	**24.1**	**1,620**
Prices				
Average quota leasing in price (pence/lt)	na			
Calf price (£/calf)	130			
Cull cow price (£/cow)	812			
Replacement heifer/cow price (£/head)	1,221			
Forage Costs				
Fertilizer (£/ha)	4			
Seed (£/ha)	12			
Spray (£/ha)	0			
Other crop costs (£/ha)	6			
Total (£/ha)	23			
Unadjusted forage area excluding commons	104.7			

**A part of this table was derived from data with less than 15 observations in the sample which could reduce the robustness of the results*

Table 41 Organic LFA Suckler cows gross margin

	Sample			Premium		
No farms in sample	20			7		
No farms in population	251			110		
Production information						
Average cow numbers	36			37		
Enterprise grazing livestock units *	32.8			35.8		
Calves per cow	1.02			1.04		
Herd replacement rate (%)	14%			8%		
Adjusted forage area (including commons)	44.52			47.99		
Stocking rate (cows per adj. forage ha.)	0.81			0.77		
Stocking rate (GLUs per adj. forage ha.)	0.74			0.75		
Enterprise Output	**Total**	**per cow**	**per adj for ha**	**Total**	**per cow**	**per adj for ha**
	(£)	**(£)**	**(£)**	**(£)**	**(£)**	**(£)**
Suckler calves †	20,029	555	450	24,578	666	512
Less Herd Depreciation	3,294	91	74	2,818	76	59
Total Output (A)	**16,735**	**464**	**376**	**21,760**	**590**	**453**
Variable Costs						
Concentrates	413	11	9	440	12	9
Coarse fodder	198	5	4	315	9	7
Vet and Medicines	1,049	29	24	833	23	17
Other livestock costs	2,074	57	47	1,926	52	40
Total Variable Costs (B)	**3,734**	**102**	**84**	**3,514**	**96**	**73**
Gross Margin before forage (A-B) = (C)	**13,001**	**362**	**292**	**18,245**	**494**	**380**
Forage Variable Costs	361	10	8	364	10	8
Gross Margin after forage (A-B) = (C)	**12,639**	**352**	**284**	**17,881**	**484**	**372**
Prices						
Calf price (£/calf) †	695			760		
Cull cow price (£/cow)	807			740		
Replacement heifer/cow price (£/head)	1,176			1,350		
Forage Costs						
Fertilizer (£/ha)	3			3		
Seed (£/ha)	2			2		
Spray (£/ha)	0			0		
Other crop costs (£/ha)	3			3		
Total (£/ha)	8			8		
Unadjusted forage area excluding commons	46.82			47.94		
* excludes stock away on agistment						
† Calf price is as sold at < 2 years						

**A part of this table was derived from data with less than 15 observations in the sample which could reduce the robustness of the results*

Table 42 Organic lowland suckler cows gross margin

	Sample			Premium		
No farms in sample	53			25		
No farms in population	1,465			490		
Production information						
Average cow numbers	30			43		
Enterprise grazing livestock units *	26.8			38.6		
Calves per cow	0.92			0.95		
Herd replacement rate (%)	16%			13%		
Adjusted forage area (including commons)	34.00			51.42		
Stocking rate (cows per adj. forage ha.)	0.88			0.84		
Stocking rate (GLUs per adj. forage ha.)	0.79			0.75		
Enterprise Output	**Total**	**per cow**	**per adj for ha**	**Total**	**per cow**	**per adj for ha**
	(£)	**(£)**	**(£)**	**(£)**	**(£)**	**(£)**
Suckler calves †	15,382	512	452	24,719	569	481
Less Herd Depreciation	3,499	116	103	3,082	71	60
Total Output (A)	**11,883**	**396**	**349**	**21,637**	**498**	**421**
Variable Costs						
Concentrates	818	27	24	1,095	25	21
Coarse fodder	821	27	24	484	11	9
Vet and Medicines	809	27	24	928	21	18
Other livestock costs	2,224	74	65	2,883	66	56
Total Variable Costs (B)	**4,672**	**155**	**137**	**5,389**	**123**	**104**
Gross Margin before forage (A-B) = (C)	**7,211**	**241**	**212**	**16,247**	**375**	**317**
Forage Variable Costs	284	9	8	373	9	7
Gross Margin after forage (A-B) = (C)	**6,927**	**232**	**204**	**15,874**	**366**	**310**
Prices						
Calf price (£/calf) †	738			742		
Cull cow price (£/cow)	706			834		
Replacement heifer/cow price (£/head)	1,105			1,098		
Forage Costs						
Fertilizer (£/ha)	2			1		
Seed (£/ha)	4			3		
Spray (£/ha)	0			0		
Other crop costs (£/ha)	2			3		
Total (£/ha)	8			7		
Unadjusted forage area excluding commons	31.03			42.95		
* excludes stock away on agistment						
† Calf price is as sold at <2 years						

Table 43 Organic dairy followers gross margin

	Sample		Premium	
No farms in sample	28		10	
No farms	278		99	
Production information				
Enterprise grazing livestock units *	46.0		59.0	
Adjusted forage area (including commons)	36.07		42.97	
Stocking rate (GLUs per adj. forage ha.)	1.28		1.38	
Enterprise Output		**per adj for ha**		**per adj for ha**
		£		**£**
Cattle output	44,227	1,226	70,778	1,647
Total Output (A)	**44,227**	**1,226**	**70,778**	**1,647**
Variable Costs				
Concentrates	14,564	404	19,527	454
Coarse fodder	2,264	63	1,445	34
Vet and Medicines	1,212	34	1,468	34
Other livestock costs	7,116	197	11,771	274
Total Variable Costs (B)	**25,156**	**698**	**34,211**	**796**
Gross Margin before forage (A-B) = (C)	**19,070**	**528**	**36,567**	**851**
Forage Variable Costs (D)	391	11	639	15
Gross Margin after forage (C-D) = (E)	**18,679**	**517**	**35,928**	**836**
Prices				
Dairy heifer transfer or sale price £	1,330		1,369	
Finished cattle price £	1,311		1,248	
Store cattle price £	777		808	
Forage Costs				
Fertilizer (£/ha)	0		1	
Seed (£/ha)	7		11	
Spray (£/ha)	0		0	
Other crop costs (£/ha)	3		4	
Total (£/ha)	11		15	
Unadjusted forage area excluding commons	35.30		42.99	
* excludes stock away on agistment				

**A part of this table was derived from data with less than 15 observations in the sample which could reduce the robustness of the results*

Table 44 Organic fat cattle from suckler bred calves or stores gross margin

	Sample		Premium	
No farms in sample	40		16	
No farms	941		286	
Production information				
Enterprise grazing livestock units *	33.3		54.2	
Adjusted forage area (including commons)	41.65		54.65	
Stocking rate (GLUs per adj. forage ha.)	0.80		0.99	
Enterprise Output		**per adj for ha**		**per adj for ha**
		(£)		**(£)**
Cattle output	28,436	683	58,235	1,066
Total Output (A)	**28,436**	**683**	**58,235**	**1,066**
Variable Costs				
Concentrates	2,170	52	3,183	58
Coarse fodder	716	17	1,190	22
Vet and Medicines	559	13	866	16
Other livestock costs	3,200	77	5,663	104
Total Variable Costs (B)	**6,644**	**159**	**10,902**	**200**
Gross Margin before forage (A-B) = (C)	**21,791**	**524**	**47,333**	**866**
Forage Variable Costs (D)	464	11	1,065	19
Gross Margin after forage (C-D) = (E)	**21,327**	**513**	**46,268**	**847**
Prices				
Dairy heifer transfer or sale price £	na		na	
Finished cattle price £	1,305		1,412	
Store cattle price £	752		734	
Forage Costs				
Fertilizer (£/ha)	4		9	
Seed (£/ha)	4		7	
Spray (£/ha)	0		0	
Other crop costs (£/ha)	3		3	
Total (£/ha)	11		19	
Unadjusted forage area excluding commons	39.66		56.90	
* excludes stock away on agistment				

Table 45 Organic store cattle from suckler bred calves or stores gross margin

Store cattle from suckler bred calves or stores	**Sample**		**Premium**	
No farms in sample	26		11	
No farms	738		264	
Production information				
Enterprise grazing livestock units *	21.9		22.6	
Adjusted forage area (including commons)	28.31		28.04	
Stocking rate (GLUs per adj. forage ha.)	0.77		0.81	
Enterprise Output		**per adj for ha**		**per adj for ha**
		(£)		**(£)**
Cattle output	4,862	172	10,991	392
Total Output (A)	**4,862**	**172**	**10,991**	**392**
Variable Costs				
Concentrates	1,050	37	490	17
Coarse fodder	445	16	31	1
Vet and Medicines	268	9	377	13
Other livestock costs	1,332	47	1,430	51
Total Variable Costs (B)	**3,095**	**109**	**2,328**	**82**
Gross Margin before forage (A-B) = (C)	**1,767**	**63**	**8,663**	**310**
Forage Variable Costs (D)	144	5	95	3
Gross Margin after forage (C-D) = (E)	**1,623**	**58**	**8,567**	**307**
Prices				
Dairy heifer transfer or sale price £	na		na	
Finished cattle price £	979		866	
Store cattle price £	754		786	
Forage Costs				
Fertilizer (£/ha)	1		1	
Seed (£/ha)	3		2	
Spray (£/ha)	0		0	
Other crop costs (£/ha)	1		1	
Total (£/ha)	5		3	
Unadjusted forage area excl. commons (ha)	22.63		24.49	
* excludes stock away on agistment				

**A part of this table was derived from data with less than 15 observations in the sample which could reduce the robustness of the results*

Table 46 Organic lowland sheep gross margin

2020 lamb crop	Sample			Premium		
No farms in sample	30			12		
No farms in population	730			201		
Production information						
Average ewe numbers	150			147		
Enterprise grazing livestock units *	23.5			24.3		
Lambs reared per ewe	1.28			1.50		
Flock replacement rate (%)	26%			23%		
Adjusted forage area (including commons)	29.45			35.40		
Stocking rate (ewes per adj. forage ha.)	5.11			4.16		
Stocking rate (GLUs per adj. forage ha.)	0.80			0.69		
Enterprise Output	**Total**	**per ewe**	**per adj for ha**	**Total**	**per ewe**	**per adj for ha**
	(£)	**(£)**	**(£)**	**(£)**	**(£)**	**(£)**
Lambs †	19,054	127	647	24,035	163	679
Wool	163	1	6	401	3	11
Less Flock Depreciation	2,565	17	87	1,156	8	33
Total Output (A)	**16,651**	**111**	**566**	**23,280**	**158**	**657**
Variable Costs						
Concentrates	1,042	7	35	634	4	18
Coarse fodder	454	3	15	295	2	8
Vet and Medicines	1,461	10	50	899	6	25
Other livestock costs	1,991	13	68	2,264	15	64
Total Variable Costs (B)	**4,948**	**33**	**168**	**4,092**	**27**	**115**
Gross Margin before forage (A-B) = (C)	**11,703**	**78**	**398**	**19,189**	**131**	**542**
Forage Variable Costs (D)	252	2	9	252	2	7
Gross Margin after forage (C-D) = (E)	**11,451**	**76**	**389**	**18,937**	**129**	**535**
Prices	**£/hd**	**% sales**		**£/hd**	**% sales**	
Fat Lamb price	96	66		100	98	
Store Lamb price	68	31		95	2	
Ewe Lamb price	130	3		na	0	
Draft ewe price	92			89		
Cull ewe price (£/ewe)	66			84		
Wool price (£/kg)	0.79			1.40		
Replacement price (£/head)	113			95		
Forage Costs						
Fertilizer (£/ha)	2			2		
Seed (£/ha)	5			4		
Spray (£/ha)	0			0		
Other crop costs (£/ha)	2			1		
Total (£/ha)	9			7		
Unadjusted forage area excl. commons (ha)	32.05			37.31		
* excludes stock away on Agistment † includes all enterprise output except wool						

**A part of this table was derived from data with less than 15 observations in the sample which could reduce the robustness of the results*

Table 47 Organic LFA (upland) sheep gross margin

2020 lamb crop	Sample			Premium		
No farms in sample	13			5		
No farms in population	101			27		
Production information						
Average ewe numbers	417			558		
Enterprise grazing livestock units *	58.5			89.9		
Lambs reared per ewe	1.47			1.54		
Flock replacement rate (%)	29%			36%		
Adjusted forage area (including commons)	80.78			106.73		
Stocking rate (ewes per adj. forage ha.)	5.16			5.23		
Stocking rate (GLUs per adj. forage ha.)	0.72			0.84		
Enterprise Output	**Total**	**per ewe**	**per adj for ha**	**Total**	**per ewe**	**per adj for ha**
	(£)	**(£)**	**(£)**	**(£)**	**(£)**	**(£)**
Lambs †	67,668	162	838	124,943	224	1171
Wool	289	1	4	729	1	7
Less Flock Depreciation	7,245	17	90	6,658	12	62
Total Output (A)	**60,713**	**146**	**752**	**119,014**	**213**	**1116**
Variable Costs						
Concentrates	4,776	11	59	8,694	16	81
Coarse fodder	1,012	2	13	2,261	4	21
Vet and Medicines	3,577	9	44	5,015	9	47
Other livestock costs	6,044	14	75	9,876	18	93
Total Variable Costs (B)	**15,410**	**36**	**191**	**25,846**	**47**	**242**
Gross Margin before forage (A-B) = (C)	**45,303**	**110**	**561**	**93,167**	**166**	**874**
Forage Variable Costs (D)	578	1	7	891	2	8
Gross Margin after forage (C-D) = (E)	**44,725**	**109**	**554**	**92,276**	**164**	**866**
Prices	**£/hd**	**% sales**		**£/hd**	**% sales**	
Fat Lamb price	96	74		97	97	
Store Lamb price	76	23		55	1	
Ewe Lamb price	120	3		153	2	
Draft ewe price	118			135		
Cull ewe price (£/ewe)	63			58		
Wool price (£/kg)	0.43			0.76		
Replacement price (£/head)	114			116		
Forage Costs						
Fertilizer (£/ha)	2			0		
Seed (£/ha)	3			6		
Spray (£/ha)	0			0		
Other crop costs (£/ha)	2			2		
Total (£/ha)	7			8		
Unadjusted forage area excl. commons (ha)	95.17			105.13		

* excludes stock away on Agistment † includes all enterprise output except wool

**A part of this table was derived from data with less than 15 observations in the sample which could reduce the robustness of the results*

Table 48 Organic LFA (hill) sheep gross margin

2020 lamb crop	Sample			Premium		
No farms in sample	7					
No farms in population	93					
Production information						
Average ewe numbers	233					
Enterprise grazing livestock units *	28.5					
Lambs reared per ewe	1.22					
Flock replacement rate (%)	30%					
Adjusted forage area (including commons)	37.61					
Stocking rate (ewes per adj. forage ha.)	6.19					
Stocking rate (GLUs per adj. forage ha.)	0.76					
Enterprise Output	**Total**	**per ewe**	**per adj for ha**	**Total**	**per ewe**	**per adj for ha**
	(£)	**(£)**	**(£)**	**(£)**	**(£)**	**(£)**
Lambs †	22,512	97	599			
Wool	190	1	5			
Less Flock Depreciation	2,995	13	80			
Total Output (A)	**19,707**	**85**	**524**			
Variable Costs						
Concentrates	1,794	8	48			
Coarse fodder	23	0	1			
Vet and Medicines	1,740	7	46			
Other livestock costs	2,479	11	66			
Total Variable Costs (B)	**6,036**	**26**	**161**			
Gross Margin before forage (A-B) = (C)	**13,671**	**59**	**363**			
Forage Variable Costs (D)	277	1	7			
Gross Margin after forage (C-D) = (E)	**13,394**	**58**	**356**			
Prices	**£/hd**	**% sales**			**£/hd**	
Fat Lamb price	83	42				
Store Lamb price	71	58				
Ewe Lamb price	79	1				
Draft ewe price	na					
Cull ewe price (£/ewe)	55					
Wool price (£/kg)	0.47					
Replacement price (£/head)	84					
Forage Costs						
Fertilizer (£/ha)	1					
Seed (£/ha)	2					
Spray (£/ha)	0					
Other crop costs (£/ha)	4					
Total (£/ha)	7					
Unadjusted forage area excl. commons (ha)	41.26					

* excludes stock away on Agistment † includes all enterprise output except wool

**A part of this table was derived from data with less than 15 observations in the sample which could reduce the robustness of the results*

6 Appendix 1 – Organic LFA cattle and sheep

The current sample of 202 English LFA grazing farms includes 22 fully organic farms. Within this there are 19 organic suckler herds, 11 organic upland flocks and 6 organic hill flocks.

Table 6.1 compares suckler herd performance to the gross margin (GM) and net margin (NM) level across organic and non-organic farms. The organic suckler herd output is £11/cow less than the non-organic output but with £93/cow less spent on variable costs (particularly concentrates and purchased fodder) the gross margin for organic sucklers is £82/cow more than the non-organic average. As can be seen from the spread of GMs there is considerable variation across farms. Organic fixed costs are higher than the non-organics, by £54/cow, giving the organic farms a £28/cow advantage at the net margin level (excepting farmer and spouse labour). After allowing for the farmer and spouse labour the final net margins are £20/cow lower for organic herds than the non-organic herds (albeit negative in both cases). The stocking rate for both the organic and the non-organic farms is 0.73 GLU/total adjusted area (including commons and all land rented in).

Table 6.1 LFA Suckler Herd Performance Non-organic and Organic (£/cow)

2020/21	All Suckler herds	
	Non-organic	Organic
Number of farms	122	19
Number of farms (weighted)	3,496	222
Herd size (no. cows)	40	38
	£ per cow	
Enterprise Output (excluding BLSA)	464	453
BLSA	71	70
Total Variable costs	223	130
Concentrates	64	12
Purchased fodder and keep	17	6
Veterinary and medicines	30	31
Other livestock costs	67	57
Forage costs	46	24
Gross Margin (excluding BLSA)	240	322
Gross Margin range	-3046 to 1690	-119 to 568
Total Fixed costs	439	493
Total costs	662	623
Enterprise Net Margin (excluding BLSA)	-199	-171
Enterprise NM after F&S labour (excl. BLSA)	-364	-383
Stocking rate (GLUs/total adj ha)	0.73	0.73

Table 6.2 compares organic and non-organic Upland SDA flocks to the GM and NM level. Enterprise output is £4/ewe lower for organics (at £119/ewe) than that of the non-organics. Variable costs are £16/ewe lower for organic flocks (at £37/ewe) than the non-organics. The resultant gross margin is £81/ewe for organic flocks and £69/ewe for the non-organic flocks. Fixed costs are £93/ewe for organic flocks and £80/ewe for non-organics – this results in net

margins (after farmer and spouse labour) of -£35/ewe for organic flocks and -£44/ewe for non-organic flocks.

Table 6.2 Upland SDA Flock Performance Non-organic and Organic

2020 lamb crop	SDA flocks	
	Non-organics	Organics
Number of farms	83	11
Number of farms (weighted)	2,820	68
Flock size (no. ewes)	518	446
	£ per ewe	
Enterprise Output (excluding BLSA)	122.4	118.6
BLSA	13.1	17.2
Total Variable costs	53.6	37.3
Concentrates	20.1	10.5
Purchased fodder and keep	3.8	1.8
Veterinary and medicines	9.3	8.8
Other livestock costs	14.2	13.6
Forage costs	6.1	2.7
Gross Margin (excluding BLSA)/Ewe	68.8	81.3
Gross Margin range	-12 to 179	59 to 79
Total Fixed costs	79.8	93.0
Total costs	133.4	130.4
Enterprise Net Margin (excluding BLSA)	-11.0	-11.8
Enterprise NM after F&S labour (excl. BLSA)	-44.1	-34.7
Stocking rate (GLUs/total adj ha)	0.66	0.65
Lambing rate (born and reared/average no. ewes)	1.49	1.47

**A part of this table was derived from data with less than 15 observations in the sample which could reduce the robustness of the results*

Table 6.3 compares whole farm profitability across all four cost centres between the 22 fully organic farms and the 180 non-organic LFA grazing farms in the sample. This table shows that the overall difference in profit favours the organic farms by £2,560 in Farm Business Income and by around £10,000 in Farm Corporate Income and Farm Investment Income. After the appropriate adjustments these profit figures translate to a Net Farm Income (NFI) of £27,216, which is £3,743 higher than the non-organic LFA grazing farms, and a Management and Investment Income (MII) profit of £6,945, which is £6,978 better than the non-organic farms' loss of -£33. The greater FBI of organic farms is down to the higher profitability (by FBI) of the non-production cost centres more than offsetting the loss of the Agriculture cost centre. Clearly the large area advantage that the organic farms enjoy goes some way to explain the difference in the Basic Payment revenue – see Table 6.4. Table 6.4 compares the Organic sample with the Non-organic sample through a series of land use, stocking, outputs and variable costs. With an average area farmed of 172ha, organic farms are 15% larger, in area terms, than the non-organics (156ha) and while a large portion of this is rough grazing very little of it is common land. Organic LFA farms are 58% owner occupied, against 47% for the non-organics, and actually use 18% less labour (at 1.2 agricultural labour units per farm) than the non-organic average. Further comment on Hill farms may be found in a sister publication - see Appendix 4 – Reports in this series.

Table 6.3 Farm Income measures by cost centre, Organic vs. Non-organic

2020 lamb crop		Cost Centre (£ per farm)									
		Agriculture		**Agri-environment and other payments**		**Diversification out of agriculture**		**Basic Payment Scheme**		**Farm Business Income**	
Derivation of farm income measures		Non-organic	Organic	Non-organic	Organic	Non-organic	Organic	Non-organic	Organic	Non-organic	Organic
% contribution of centre revenue to total:		62%	53%	10%	16%	5%	5%	24%	26%		
Total output (Revenue)	(a)	**79,898**	**65,597**	**12,799**	**19,635**	**5,972**	**6,405**	**30,386**	**32,040**	**129,055**	**123,677**
Variable costs	(b)	42,736	26,383	88	151	211	25	3	18	43,038	26,577
Total Gross margin	(**c**=a-b)	**37,163**	**39,214**	**12,711**	**19,484**	**5,761**	**6,380**	**30,383**	**32,022**	**86,017**	**97,101**
Fixed costs	(d)	44,171	49,057	2,469	5,132	2,888	2,741	3,722	4,421	53,250	61,351
Total Costs	(e=b+d)	**86,907**	**75,440**	**2,557**	**5,283**	**3,099**	**2,766**	**3,726**	**4,438**	**96,289**	**87,928**
Profit/(loss) on sale of fixed assets	(f)	501	79							501	79
Farm Business Income	(**g**=a-e+f)	**-6,507**	**-9,764**	**10,242**	**14,352**	**2,873**	**3,639**	**26,660**	**27,601**	**33,268**	**35,828**
Adjustment for unpaid manual labour	(h)	26,737	19,825	533	1,030	1,260	849	0	0	28,530	21,703
Farm Corporate Income	(**i**=g-h)	**-33,244**	**-29,589**	**9,709**	**13,322**	**1,613**	**2,790**	**26,660**	**27,601**	**4,738**	**14,125**
Interest payments (net of interest received)	(j)	2,449	3,207	64	91	87	196	96	165	2,696	3,659
Farm Investment Income	(**k**=i+j)	**-30,795**	**-26,382**	**9,774**	**13,413**	**1,699**	**2,986**	**26,756**	**27,766**	**7,434**	**17,783**
% contribution of centre total costs to total:		90%	86%	3%	6%	3%	3%	4%	5%		
								Imputed rent	(l)	11,520	16,066
								Ownership charges	(m)	3,690	3,930
								Director's remuneration	(n)	287	1,298
								Unpaid labour of principal farmer and spouse	(o)	23,583	20,271
								Net Farm Income	(**p**=k-l+m+n+o)	**23,473**	**27,216**
								Holding gains not included in farm income	(q)	9,367	6,887
								Breeding Livestock Appreciation (BLSA)	(r)	6,687	5,087
Non-organic Sample size (unweighted)	**180**							Revaluation of machinery, permananet crops, glasshouse, quota	(s)	739	739
Number (weighted)	**6,573**							Revalutation of land	(t)	1,940	1,062
Organic Sample size (unweighted)	**22**							Manager's paid managerial input	(u)	76	0
Number (weighted)	**245**							**Management and Investment Income**	(**v**=p-o+u)	**-33**	**6,945**

Table 6.4 Land use, Stocking, Outputs & Variable costs - Organic vs Non-organic

2020/21	The Average LFA Farm	
Land Use & Stocking	**Non-organic**	**Organic**
Number (unweighted)	180	22
Number (weighted)	6,573	245
Total Area (includes woodland and roads etc) (ha)	163.4	171.0
Area Farmed (ha)	156.4	171.9
Net Land Hired In (ha)	-0.7	8.5
Utilised Agricultural Area (ha)	157.1	163.3
Of which Total cropping (ha)	2.0	2.9
Grass, fodder crops and rough grazing (ha)	155.2	160.4
Of which: rough grazing (unadjusted)	51.3	66.4
Adjusted rough grazing (sole occupation)	14.6	15.7
Adjusted rough grazing (shared)	11.8	0.0
Total Adjusted Utilised Agriculture Area (ha)	120.4	112.6
Area owner occupied (ha)	73.5	99.3
Area tenanted (ha)	89.9	71.7
Average age of farmer (years)	60	63
Agricultural labour units (ALU)	1.5	1.2
Standard Output size units (2010SO)	95,458	88,155
Land Use		
Temporary Grassland Area (ha)	7.4	10.5
Permanent Grassland Area (ha)	94.5	84.0
Stocking		
Total Beef cows	22.6	36.0
Total Cattle	74.5	103.8
Ewes (LFA and lowland)	391.0	203.6
Total Sheep	750.3	407.5
Livestock Units		
Total Cattle LU	43.7	61.6
Total Sheep LU	40.1	21.5
Grazing LU (cattle, sheep, horses and others)	84.5	83.5
Outputs & Variable Costs	7.4	10.5
Farm Business Output	129,055	123,677
of which: Output from agriculture	79,898	65,597
Agri environment payment	12,799	19,635
Diversified output	5,972	6,405
Basic Payment	30,386	32,040
Livestock Enterprise Output	72,867	59,546
of which: Cattle Enterprise Output	28,802	37,166
Sheep Enterprise Output	43,893	21,875
Crop Enterprise Output	3,634	2,852
Non agriculture, no other category output	3,397	3,199
Variable Costs		
Farm Business Variable Costs	43,038	26,577
Of which: Agriculture Variable Costs	42,736	26,383
Agriculture Crop Costs	5,318	2,834
Agriculture Livestock Costs	30,608	16,464
of which: Purchased Fodder Feed	16,104	4,112
Home Produced Fodder Feed	733	1,328
Veterinary and medicines	4,654	3,388
Other Livestock Costs	9,116	7,637
Agriculture Contract Costs	4,237	5,609
Agriculture Casual Labour	2,534	1,403

7 Appendix 2 – Organic dairy production

Table 7.1: Outputs, Inputs and Margins for All Farms, Organic and Non-organic

	All		Non-organic		Organic	
	19/20	20/21	*19/20*	20/21	*19/20*	20/21
Number of farms	*228*	221	*190*	185	*38*	36
Area (ha)	*164*	160	*165*	160	*150*	158
	£/ha		**£/ha**		**£/ha**	
Output						
Milk	*2848*	2941	*2904*	3008	*1947*	1903
Calf	*141*	163	*144*	167	*83*	104
Lease Quota (net)	*0*	0	*0*	0	*0*	0
Other Dairy	*5*	4	*5*	4	*1*	5
Herd Replacement	*-245*	-282	*-251*	-291	*-153*	-149
Total Dairy Output	***2749***	**2826**	***2803***	**2888**	***1878***	**1863**
Other Livestock	*504*	594	*513*	606	*360*	405
Other	*544*	575	*550*	584	*436*	439
Total Farm Output	***3797***	**3995**	***3866***	**4078**	***2674***	**2707**
Variable Costs						
Home-grown Concentrates	*67*	84	*65*	84	*93*	89
Purchased Concentrates	*874*	902	*891*	923	*593*	576
Coarse Fodder	*78*	87	*80*	88	*48*	76
Other Livestock Concs.	*1*	1	*1*	1	*0*	0
Vet and Medicine	*105*	111	*109*	115	*51*	56
Other Livestock Costs	*273*	290	*276*	293	*223*	241
Seed	*36*	41	*37*	42	*27*	30
Fertiliser	*123*	112	*130*	119	*8*	8
Crop Protection	*35*	35	*37*	37	*1*	0
Other Crop Costs	*22*	23	*23*	23	*11*	11
Total Variable Costs	***1613***	**1687**	***1648***	**1726**	***1053***	**1087**
Fixed Costs						
Labour	*448*	466	*456*	475	*318*	324
Contract	*194*	209	*197*	214	*142*	130
Machinery Depreciation	*215*	220	*219*	225	*152*	155
Other Machinery	*226*	223	*231*	227	*150*	160
Miscellaneous	*342*	364	*344*	369	*300*	290
Rent and Rental Equivalent	*339*	353	*341*	357	*304*	298
Total Fixed Costs	***1764***	**1834**	***1789***	**1865**	***1366***	**1358**
Net Farm Income	***420***	**473**	***430***	**487**	***254***	**262**
Farmer / Spouse Labour	*199*	207	*197*	205	*231*	229
Management and Investment Income (MII)	***220***	**268**	***232***	**283**	***23***	**33**
Farm Business Income (FBI)	***516***	**578**	***530***	**596**	***298***	**307**

Farm Level Results

- Farm Business Survey data from 2020/21 shows that the average Farm Business Income (FBI) from dairying was £578/ha, which at the average farm size equates to a FBI in the region of £92,480, representing an increase in total FBI of more than 9% from 2019/20 (Table 7.1).

- Average FBI on conventional dairy farms in 2020/21 was £596/ha (£95,360 per farm), whilst on organic farms average FBI was £307/ha (£48,506 per farm), resulting in an increase in total FBI per farm of over 9% for conventional farms and of slightly over 8.5% for organic farms total FBI per farm (Table 7.1).

- 2020/21 saw a further increase in the gap between conventional and organic farms FBI; at £596/ha, FBI/ha on conventional farms was over 94% higher than on organic farms (£307/ha), compared with 2019/20 when FBI on conventional farms was 78% higher than organic farms (Table 7.1).

Table 7.2: Gross Margin Results for All Farms, Non-organic and Organic

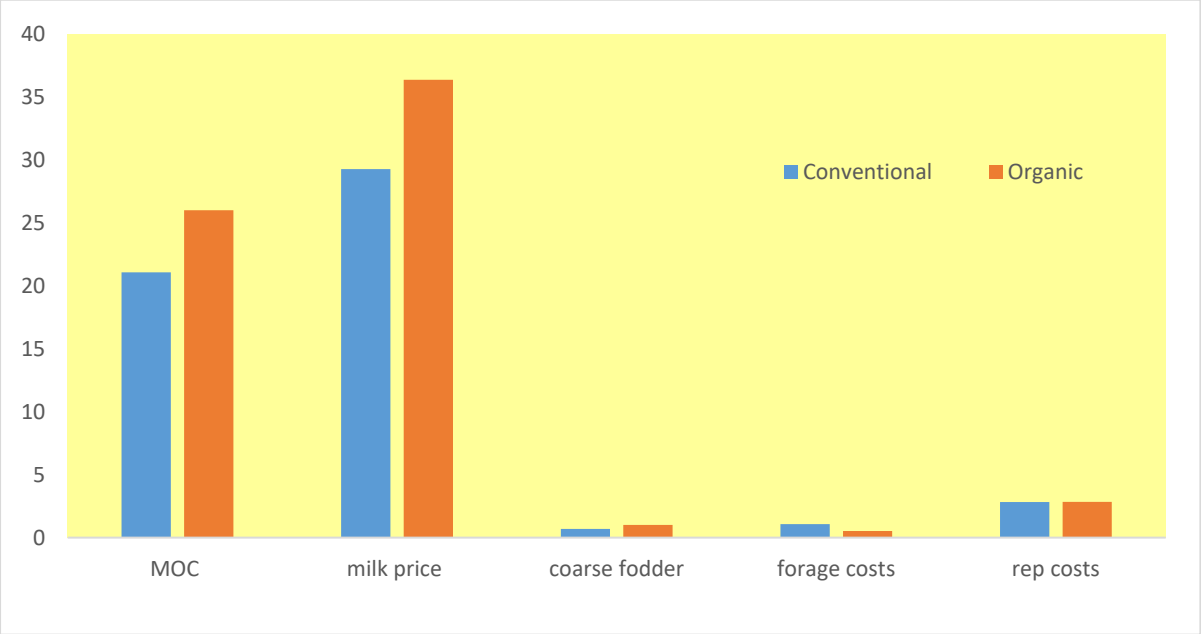
	All		Non-organic		Organic	
	19/20	20/21	*19/20*	20/21	*19/20*	20/21
Number of farms	*223*	218	*185*	182	*38*	36
Average number cows	*193*	190	*198*	193	*124*	132
Average yield (litres)	*8,262*	8,416	*8,348*	8,513	*6,290*	6,263
Milk price (ppl)	*29.7*	29.6	*29.4*	29.3	*37.5*	36.4
	£/cow		£/cow		£/cow	
Output						
Milk	*2,450*	2,488	*2,454*	2,498	*2,356*	2,279
Calf	*121*	138	*122*	138	*100*	125
Lease Quota (net)	*0*	0	*0*	0	*0*	0
Other Dairy	*4*	4	*5*	4	*1*	6
Herd Replacement	*-210*	-238	*-211*	-241	*-185*	-178
Total Dairy Output	***2,365***	**2,391**	***2,369***	**2,399**	***2,272***	**2,231**
Variable costs						
Concentrates	*660*	697	*660*	699	*673*	650
Coarse Fodder	*54*	59	*55*	59	*40*	63
Vet and Medicine	*76*	78	*77*	79	*51*	54
Other Livestock Costs	*188*	195	*188*	194	*206*	216
Forage Costs	*89*	89	*91*	91	*31*	33
Total Variable Costs	***1,068***	**1,119**	***1,071***	**1,123**	***1,001***	**1,017**
Total Gross Margin	***1,297***	**1,273**	***1,298***	**1,275**	***1,271***	**1,214**

Dairy Enterprise Results: Gross Margin for Non-organic and Organic Farms

- Enterprise-level analysis in 2020/21 shows that the conventional herd total dairy output exceeded organic total dairy output by £168/cow. Conventional herd dairy output increased by £30/cow, with an increase in yield (+165lpc) only slightly offset by a lower milk price (-0.1ppl). Organic herds' total dairy output decreased by £41/cow, as a result of a decrease in milk yield (-27lpc) coupled with a reduction in milk price of 1.1ppl. The average number of cows per herd decreased by 5 cows for the conventional herd and increased by 8 cows for the organic herd (Table 7.2).

- The lower organic dairy output was offset by lower variable costs, resulting in a gross margin of £1,214/cow compared with £1,275/cow for the conventional dairy herds. The difference between the organic and conventional dairy herd gross margins is slightly wider than in 2019/20, whereby conventional herds produced a gross margin of £1,298/cow compared with the organic herd gross margin of £1,271/cow (Table 7.2).

Figure 7.1: Key Gross Margin Components by Organic and Non-organic Herds



- The higher milk price achieved by organic herds, coupled with their lower concentrate feed costs, resulted in organic herds achieving a margin over concentrate performance that exceeded that of conventional herds by 4.93ppl, which was somewhat lower than the previous year's excess of 6.05ppl (Figure 7.1).

8 Appendix 3 – Organic lowland cattle and sheep

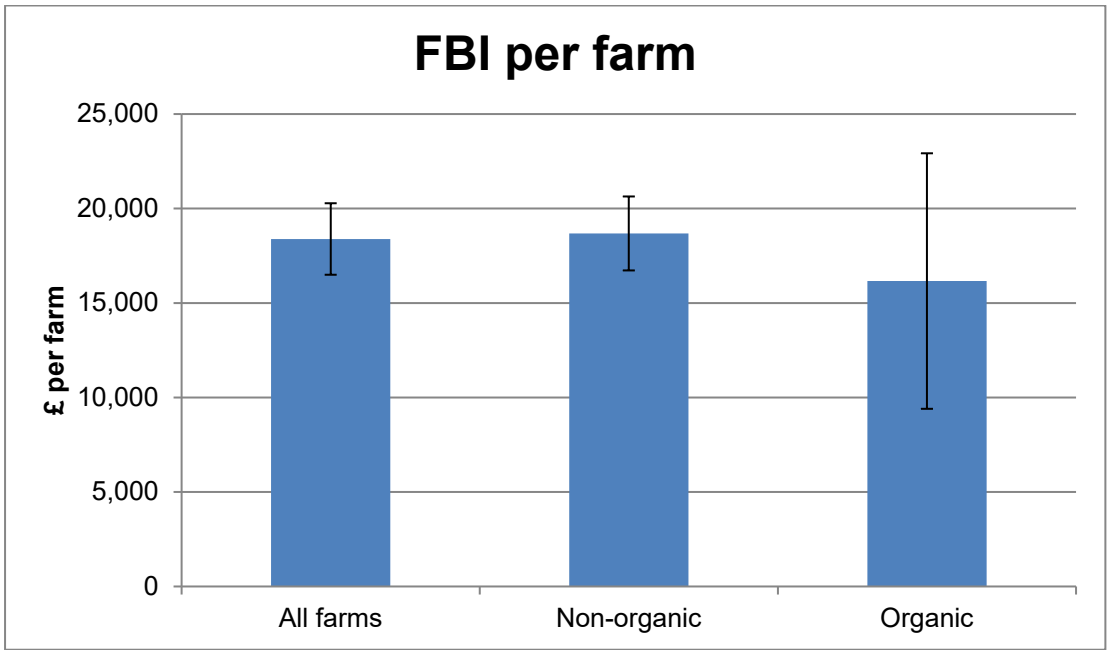
Table 8.1 Farm Business Income for Non-organic and Organic farms, 2019/20

Type of Production	Non-organic	Organic
Number of farms	241	44
Average farmed area (hectares)	86.5	77.2
Average % of owned total farmed area	54%	82%
	£ per farm	
Output		
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
Total Farm Output	114,199	83,685
Variable costs		
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
Total Variable Costs	33,216	14,018
Gross Margin	80,982	69,666
Fixed costs		
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
Total Fixed Costs	62,299	53,505
FARM BUSINESS INCOME	**18,683**	**16,162**
All unpaid labour	29,847	29,126

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 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 this difference is not statistically significant.

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)

9 Appendix 4 – Reports in this series

Crop Production in England

Dairy Farming in England

Hill Farming in England

Horticulture Production in England (Horticultural Business Data)

Lowland Grazing Livestock Production

Pig Production in England

Poultry Production in England

Details available at: www.ruralbusinessresearch.co.uk

10 Appendix 5 – Definition of terms

I. BUSINESS OUTPUTS, INPUTS, COSTS AND INCOME

1. ***Farm Business Income*** 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. 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.

2. ***Farm Corporate Income (FCI)*** 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 Income. This allows the profitability of sole traders and partnerships to be compared directly with that of 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.

3. ***Farm Investment Income (FII)*** 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.

4. ***Net Farm Income (NFI)*** is intended as a consistent measure of the profitability of tenant-type farming [2] that allows farms of different business organisation, tenure and

[2] Tenant-type farming was never conceived of as including non-agricultural activities on farm (using farm resources) except perhaps for value added activities such as small-scale food processing, e.g. sales of farm produced butter and cream and retail sales of farm produced liquid milk. However, recent research has revealed that many of the more varied non-agricultural activities which have been increasing on farms over the years have been inadvertently included in the calculation of NFI, with the result that about three-quarters of non-agricultural activities on farm by value are currently included and one-quarter excluded, without any clear basis for this division. Although this means that the definition of NFI has become untenable on the current basis, it has been decided to continue with historical practice for reasons of continuity, rather than to change the definition, pending the introduction of a wider measure to include all on-farm business activities.

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[3] 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.

5. ***Cash income*** is the difference between total revenue and total expenditure. Revenue is: receipts adjusted for debtors; and expenditure is: purchases adjusted for creditors. It is assumed, therefore, that all end of year debtor and creditor payments are settled in full, even though this may happen beyond the end of the accounting year. Cash income represents the cash return to the group with an entrepreneurial interest in the business (farmers and spouses, non-principal partners and directors and their spouses and family workers) for their manual and managerial labour and on all their investment in the business.

6. ***Family farm income*** is a measure of farm income used by the European Commission. It is based upon actual tenure and indebtedness. However, it is a broader measure than net farm income in that it represents the return to all unpaid labour (farmers and spouses, non-principal partners and directors and their spouses and family workers). It also includes breeding livestock stock appreciation although it cannot be realised without reducing the productive capacity of the farm.

II. CROPPING, STOCKING AND LABOUR TABLES

7. ***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.

8. ***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, household gardens).

9. ***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).

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

[3] Tenant-type capital comprises livestock, machinery, crops in store, stocks of consumables, work in progress, orchards, other permanent crops, glasshouses, cash and other assets needed to run the business. It does not include land and buildings.

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

12. ***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.

13. ***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. The factors used are set out in Appendix 2 of *'Farm Incomes in the United Kingdom 1999/00'.*

14. ***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.
Standard labour requirements (SLR) are theoretical measures of representative labour requirements under typical conditions for enterprises of average size and performance. Used in the classification of farms by type and size there are 6 SLR size groups measured in Full Time Equivalents (FTE) where 1 FTE equals 1900 hours per year. Farms considered "Spare time" SLR band 1, less than 0.5 FTE or less than 949 imputed hours are excluded from the Farm Business Survey. The 6 SLR size groups are:

SLR band	Descriptive	FTE	Hours/year
1	Very small, Spare time	<0.5	1 - 949
2	Very small, Part time	0.5 to <1	950 – 1899
3	Small, Full time	1 to <2	1900 – 3799
4	Medium, Full time	2 to <3	3800 – 5699
5	Large, Full time	3 to <5	5700 – 9499
6	Very large, Full time	>5	>9500

III. OUTPUTS, INPUTS AND FARM BUSINESS INCOME TABLES

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

(a) ***Livestock enterprise output*** comprises the total sales of livestock and livestock products including *direct livestock subsidies* and production grants received, 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 (except for direct livestock subsidies) 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.

(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) C***rop enterprise output***, which is the total value of crops produced by the farm (other than losses in the field and in store). 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.

(d) ***Miscellaneous output*** covers the value of output from those activities that are still within the agricultural cost centre but do not fall within either livestock or crop enterprise output. These will include revenue from wayleaves, agricultural hirework, sundry woodland sales, contract farming rent, miscellaneous insurance receipts, and compensation payments.

16. ***Agricultural costs*** 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.

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.
Purchased concentrate feed and fodder	This represents expenditure on feeds and feed additives, including charges for agistment.
Home-grown concentrate feed and fodder	This includes ex-farm value of all home produced cereals, beans, milk (excluding direct suckling), etc. fed on the farm both from the current and previous years' crops
Veterinary fees and medicines	This consists of veterinary fees and the cost of all medicines.
Other livestock costs	This comprises straw bought specifically for costs bedding materials, breeding costs (including AI and stud fees), miscellaneous dairy expenses, disinfectants, marketing and storage costs of animal products, Milk Development Council levy and other livestock costs not separately identified.

Purchased and home-grown 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 home-grown 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	These comprise all crop inputs not separately specified, e.g. marketing charges, packing materials, British Potato Council levy, baling twine and wire (though not fencing wire).
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)	This comprises wages and employer's insurance contributions, payments in kind, and salaried management. To calculate net farm income an imputed charge for unpaid labour is made, excluding that of the farmer and spouse, valued at the rate of comparable paid labour. The value of the manual labour of the farmer and spouse is not charged as an input in calculating net farm income (i.e. it is a component of 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 running costs	These represent the cost of machinery and equipment repairs, fuel and oil and car mileage expenses. It excludes depreciation.
Land and building inputs	For the calculation of farm business income these comprise any rent paid, insurance, rates and repairs to land and buildings incurred by the whole business. In the derivation of net farm income land and building costs also include an imputed rental charge for owner occupiers but exclude those costs associated with land ownership such as the insurance of farm buildings, and landlord-type repairs and upkeep.
Depreciation of machinery, glasshouses and permanent crops	Depreciation provisions in respect of machinery, glasshouses and permanent crops (e.g. orchards) are shown on a current cost basis. The rates of depreciation used (generally on a diminishing balance basis for machinery and straight line for glasshouses and permanent crops) are intended to reflect the degree of deterioration of the assets.
Other general farming costs	These consist of electricity, heating fuel, water for all farming purposes, insurance (excluding labour and farm buildings), bank charges, professional fees, vehicle licences, and other miscellaneous expenses not recorded elsewhere.
Interest payments	Interest charges on loans taken out for business purposes, net of interest receipts on monies invested temporarily outside the business, are deducted in the calculation of farm business income.

Depreciation of buildings and works	This is calculated on a current cost basis (generally on a straight line basis over 10 years) with an adjustment to allow for the effect of capital grants.

17. ***Breeding livestock stock appreciation*** represents the change in market prices of breeding cattle, sheep and pigs between the opening and closing valuations. It is not included in the calculation of farm business income but is shown separately within table 3.

IV. BALANCE SHEET TABLES

18. ***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.

19. ***Liquid assets*** comprise cash and sundry debtors.

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

21. ***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.

V. IMPLIED OUTPUT PRICES

22. ***Implied output prices*** are average unit returns excluding direct subsidies. For crops they are calculated by dividing the value of sales, closing stocks, farm house consumption, benefits in kind and own-produced feed by total production. Sales are value at prices actually received at the farm gate before the deduction of marketing charges paid direct by the farmer such as drying and cleaning costs. More detailed information about sales volumes is collected for livestock and, in this case, the unit returns refer to sales of livestock including casualties. In both cases, any compensation payments or insurance payouts for output produced in the current year and destroyed are included.

Source: DEFRA – Farm Accounts in England 2006/2007
http://webarchive.nationalarchives.gov.uk/20130315143000/http://www.defra.gov.uk/statistics/foodfarm/farmmanage/fbs/publications/farmaccounts/

Standard Output (SO)

SOs are representative of the level of output that could be expected on the average farm under "normal" conditions (i.e. no disease outbreaks or adverse weather). Different SOs are calculated for North England, East England, West England, Wales, Scotland and Northern Ireland to allow for the differences in output in different areas.

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. A Defra note looking at the effects on the population by farm type as a result of the change from SGM's to SO's is available at:
http://webarchive.nationalarchives.gov.uk/20130123162956/http:/www.defra.gov.uk/statistics/files/defra-stats-foodfarm-farmmanage-fbs-reviseclass_111221.pdf/
The SOs now in use are based on a five-year average centred on 2013. SO's are based on a five-year average in order to lessen the impact of yearly fluctuations on calculated SOs.
The 2013 SO's for England can be seen on Annex 1 under UK Farm Classification on the above site.

Source:
http://webarchive.nationalarchives.gov.uk/20130123162956/http:/www.defra.gov.uk/statistics/files/defra-stats-foodfarm-farmmanage-fbs-UK_Farm_Classification.pdf/

Adjusted Forage Area (adj. for. Ha)
The adjusted forage area allows an area of rough grazing to be equated to an equivalent area of flat mowable land. This therefore reflects the true stock carrying capacity of a parcel of land and allows meaningful comparisons on true farm stocking rates to be presented. This measure is particularly important for LFA farms with large tracts of poor quality land.

Total Adjusted Area (TAA)
The total adjusted area includes; adjusted UAA, adjusted common grazing and short term rentals (less than 1 year).

References

DEFRA (2011) *Farming Statistics Note on the Revised EC Classification of Farm Types: Effects on the June Survey Population and Farm Business Survey Sample in England.* [Online], Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/182207/defra-stats-foodfarm-landuselivestock-june-results-typology.pdf (Accessed: 26 January 2014).

DEFRA (2012) *Farm Classification in the United Kingdom.* Available at: http://webarchive.nationalarchives.gov.uk/20130123162956/http://www.defra.gov.uk/statistics/files/defra-stats-foodfarm-farmmanage-fbs-UK_Farm_Classification.pdf (Accessed 22 December 2013).

DEFRA (2021) *Organic Farming Statistics 2020.* [Online], Available at: https://www.gov.uk/government/collections/organic-farming (Accessed: 7 March 2022).

Eurostat (2021) *Organic Farming.* [Online], Available at: http://ec.europa.eu/eurostat/data/database (Accessed: 7 March 2022).

Cover photo: *Courtesy of an organic beef herd in Northumberland*