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Rural Business Research

Farm Business Survey

2014/2015

Organic Farming in England

Charles Scott

May 2016

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2014/15

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Foreword to the Tenth Series

This series of reports on the economics of agriculture and horticulture in England celebrates ten years of *Rural Business Research (RBR)* providing independent data and analysis to the individual sectors of the agricultural and horticultural industry. Drawing upon Farm Business Survey data from the 2014/15 financial year our reports are set against a modest decrease in overall Farm Business Income (FBI) of around 8% to an average £39,700 per farm. Of this overall measure of farm business profitability, the income derived from the Single Payment Scheme accounted for around 55%, highlighting the importance of support payments to the average farm business in England. The 2014/15 data relates to the 2014 harvest / production year – since this time there have been some marked downturns in a number of output prices for farm businesses – it is therefore clear that the importance of policy support to businesses at the start of 2016 is even greater than the above data indicates.

Over the ten years that RBR has been presenting this series of reports, farm businesses have witnessed widely fluctuating fortunes due to the vagaries of world market input and output prices and fluctuations in weather patterns. Throughout this period our reports have sought to demonstrate the variation in performance across farm businesses, within the specific sectors covered in each report, and also to provide businesses with the independent data required to benchmark their own performance and explore possibilities for production within the sectors. Ten years on, our aim to provide comprehensive and independent analysis remains at the very core of our work on the Farm Business Survey research programme for England.

The wider agricultural and horticultural market place in the mid-2010s clearly demonstrates the need for farm businesses to focus on the market opportunities for their produce and to understand the wider economic environment in which they operate. There are a number of technical and weather-related issues facing farm businesses at the start of 2016. But arguably the largest political issue over recent decades – the EU referendum which the current government will hold on the 23 June 2016 – represents the greatest uncertainty. There will be numerous debates and discussions about this major political issue over the coming months and, potentially, years. Given the importance of the EU Common Agricultural Policy support to the average FBI figures for 2014/15, the outcome of the EU referendum will be closely watched by those managing UK farm businesses. At the same time, the wider global economy continues to exhibit rather sluggish performance, with UK inflation remaining around the 0% mark, oil prices substantially lower than a year ago and signs of any interest rate increase in the UK being continually pushed further out into the future. With recent price volatility, and generally lower output prices, it remains important for businesses to plan ahead and focus on financial margins in contrast to physical output performance.

Against this wider economic context we hope that this tenth series of reports helps farm businesses in England to examine and benchmark their own performance. Our

research work within the FBS programme could not be possible without the direct support of our farmer and grower co-operators and the wider support of agricultural and horticultural businesses and sector stakeholders; our thanks are given to them all.

Professor Paul Wilson

Chief Executive Officer, Rural Business Research

March 2016

www.ruralbusinessresearch.co.uk

Executive Summary

Total land in organic food production increased in the late 2000s to a peak in 2009 but has subsequently reduced, largely due to the effects of the 2007/08 financial crisis and the associated fall in consumer spending on organic food. Defra (2016) report that the area in England under full organic production in 2015 was at a six year low of 293,723ha, and the area under conversion at a ten year low of 10,016ha. The number of organic producers has also fallen for the fifth year in a row (to 2336 in 2015) although the number of organic processors in England has increased for the third consecutive year to 2098 in 2015.

This report uses data from the Farm Business Survey of 1880 farms of which 150 are organic. Several measures of performance have been used in this report though Farm Business Income (FBI) is the main measure. Farm Business Output (FBO) has been split into four sources; agriculture, agri-environment, diversification and the Single Farm 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, 2014/15. Gross margin data for individual organic crop and livestock enterprises is presented whenever enterprise sample size is 10 farms or more.

The majority of organic farm types had a lower Farm Business Output than their non-organic equivalents largely due to lower output from agriculture. However, most organic farm types had lower costs than their non-organic counterparts principally due to organic farms using fewer agricultural inputs. Organic farms had a lower FBI than non-organic farms for all farm types except LFA grazing farms. On a year-on-year basis, FBI has increased for all organic farm types except cropping and mixed farms.

Organic cropping farms were typically smaller than their non-organic counterparts by an average of 83 hectares. Organic cropping farms made an average FBI of £28,854, about £19,000 less than the non-organic cropping farms – this difference is significant at the farm level but not at the per hectare level. This was principally due to the greater output from agriculture (£326,630) that non-organic farms received compared to organic farms (£151,432). Organic cropping farms saw an average decrease in FBI of £4,332 between 2013/14 and 2014/15.

The FBI for organic horticulture farms was greater than that of the non-organics (although not significant). Non-organic horticulture farms operated a much more intensive operation than organic horticulture farms; FBO was £378,046 for non-organics versus £78,385 for organic farms and total costs for non-organics were £345,760 but just £58,059 for organic farms.

Organic dairy farms generated an increase in FBO of £3,225 compared to the previous year. Total costs reduced by £2,939 leading to an average increase in FBI of £5,872. Organic dairy farms had a lower (but not significant) FBI than their non-organic counterparts by £9,398. Organic dairy farms were typically smaller in area with an average of 178.3 Grazing Livestock Units (GLU) 83.3 less than non-organic dairy farms.

As has been the case for some years organic LFA grazing farms remained more profitable than their non-organic counterparts with an average FBI of £43,467, £29,281 more than similar non-organic farms. This difference is significant at both the farm and per hectare level. This was due to the greater output of organic farms across all output sources and despite a considerably higher total costs figure. The average size of an organic LFA grazing farm is 205.9 adjusted hectares (adj. ha) carrying 141.2 GLU whereas a non-organic farm is typically 115.3 adj. ha and carries 85.2 GLU.

Organic lowland grazing farms saw an average increase in FBI between 2013/14 and 2014/15, rising from £9,157 to £12,478. So while the FBO fell by £1,443, the total costs fell by a greater amount of £4,678. In 2014/15 organic lowland grazing farms had an average FBI of £14,452 compared to their non-organic counterparts' FBI of £18,799 – and this difference was significant (at both the farm and per hectare level). The average FBO for organic farms was £19,876 less than the FBO for the non-organics, primarily due to a greater output from agriculture. Organic farms had lower total costs by £15,549.

On average, organic mixed farms had a lower FBI than their non-organic equivalents by £7,627 (but not significant). Organic mixed farms spent £63,327 less in total costs, but also had a lower FBO by £68,571. Organic mixed farms saw a fall in FBI of £6,833 from 2013/14 to 2014/15 (to £13,705) this due to a fall in FBO of £15,932 and despite a £9,388 reduction in total costs.

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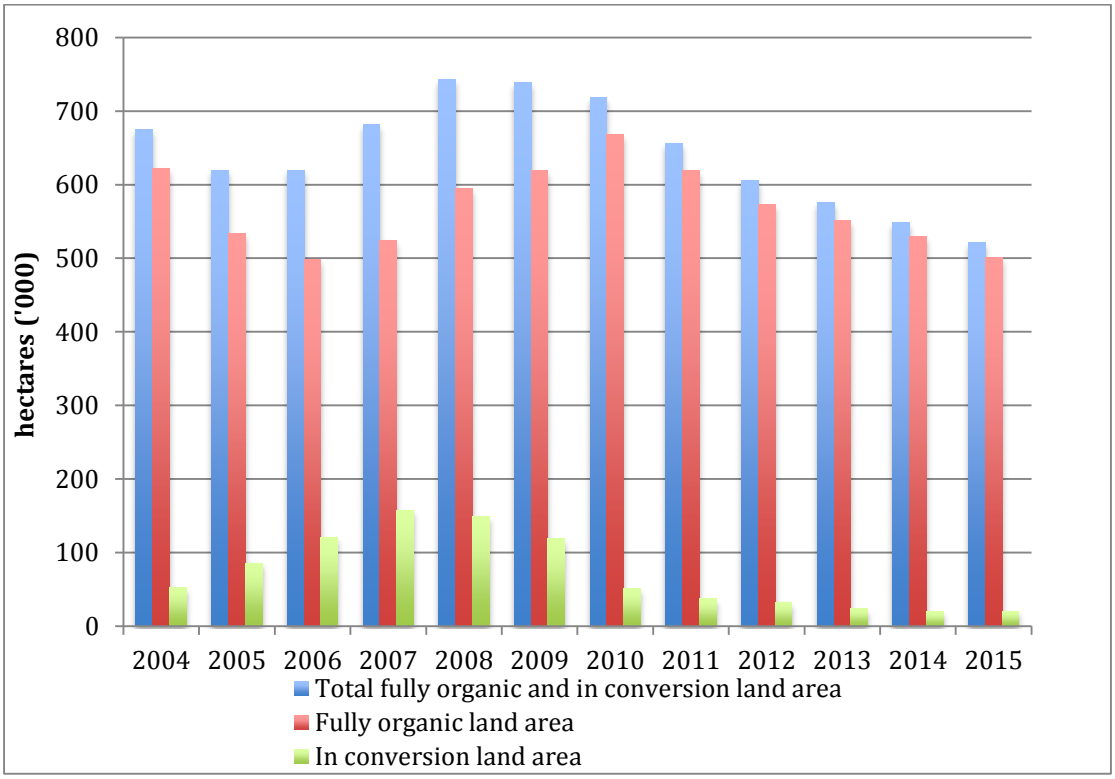
1 Organic farming in the United Kingdom

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 but has declined thereafter to 521,398 hectares in 2015. The area in conversion, having peaked in 2007/08 at 157,893 hectares then decreased to a low of 19,675 hectares in 2014, but has seen a slight upturn to 20,635 hectares in 2015.

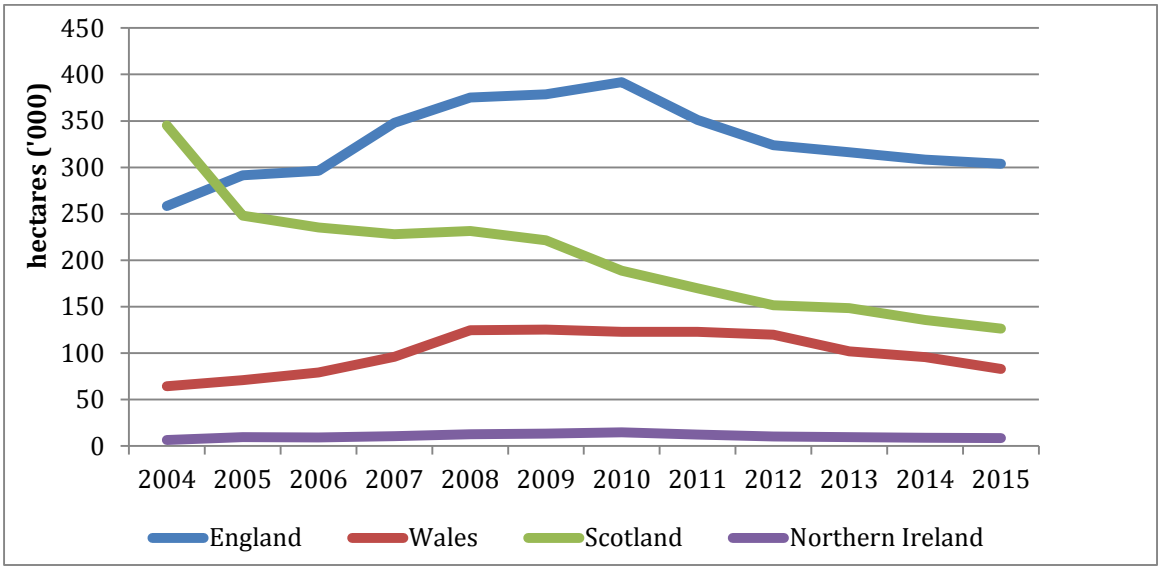
Figure 1 UK land in organic food production 2004-2015



(*Source: DEFRA 2016*)

The area of organic farmland in England has followed a similar pattern to that of the UK as a whole (Figure 2) with 303,739 hectares being classified as organic in 2015, down from a peak of 391,761 hectares in 2010 (DEFRA 2016). Scotland's organic area has been in decline for some years and at 126,267 hectares (in 2015) is only 29% of the area that was under organic production in 2002. Areas under organic production in both Wales and Northern Ireland have also been in decline for some 5 or 6 years.

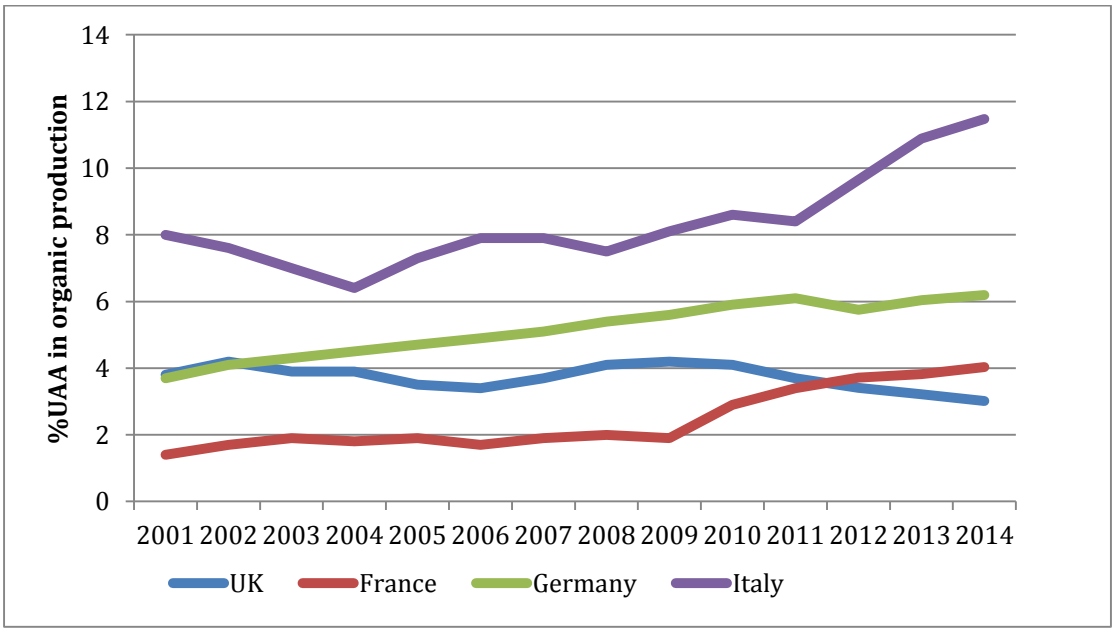
Figure 2 Land area in organic production by UK country



(*Source: DEFRA 2016*)

The UK has always had a much lower percentage of total utilised agricultural area (UAA) occupied by organic farming compared to Italy and Germany. France has traditionally lagged behind the UK in the proportion of organic UAA, but sustained increases in conversion since 2009 mean that France now has a higher organic percentage of UAA than the UK (Figure 1.3).

Figure 3 Share of Utilised Agricultural Area (UAA) in organic production in the UK, France, Germany and Italy

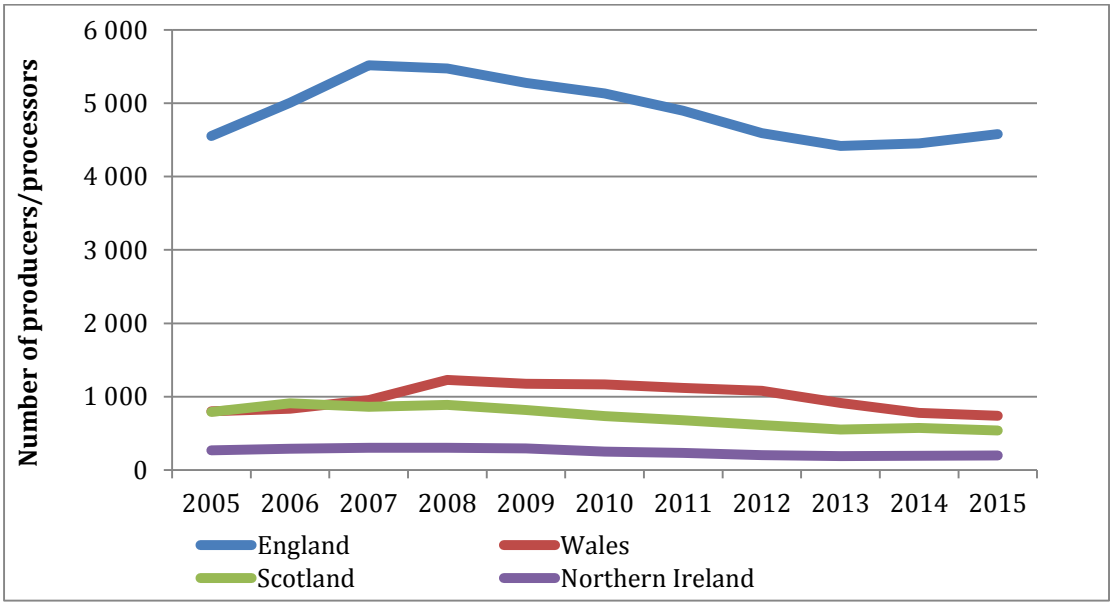


(*Source: Eurostat 2016*)

1.2 Producers

The number of organic producers and processors in the UK peaked in 2007/08, a year earlier than the area of organic land (2008/09). Producer and processor numbers have been steadily declining throughout the UK since 2007 (Figure 4) to a low of 6,002 in 2014 but have since increased slightly to 6,056 in 2015. The number of organic producers and processors continues to decline in Wales but has been increasing in Northern Ireland since 2013. England has considerably greater numbers of organic producers and processors (4,579 in 2015) than other countries in the UK and has seen the largest increase in 2015 – these were all organic processors rather than producers. Scotland has more land in organic production than Wales (Figure 2) but has fewer producers and processors; this is due to a greater proportion of Scottish organic farms being large upland hill farms.

Figure 4 Organic producers and processors in the UK

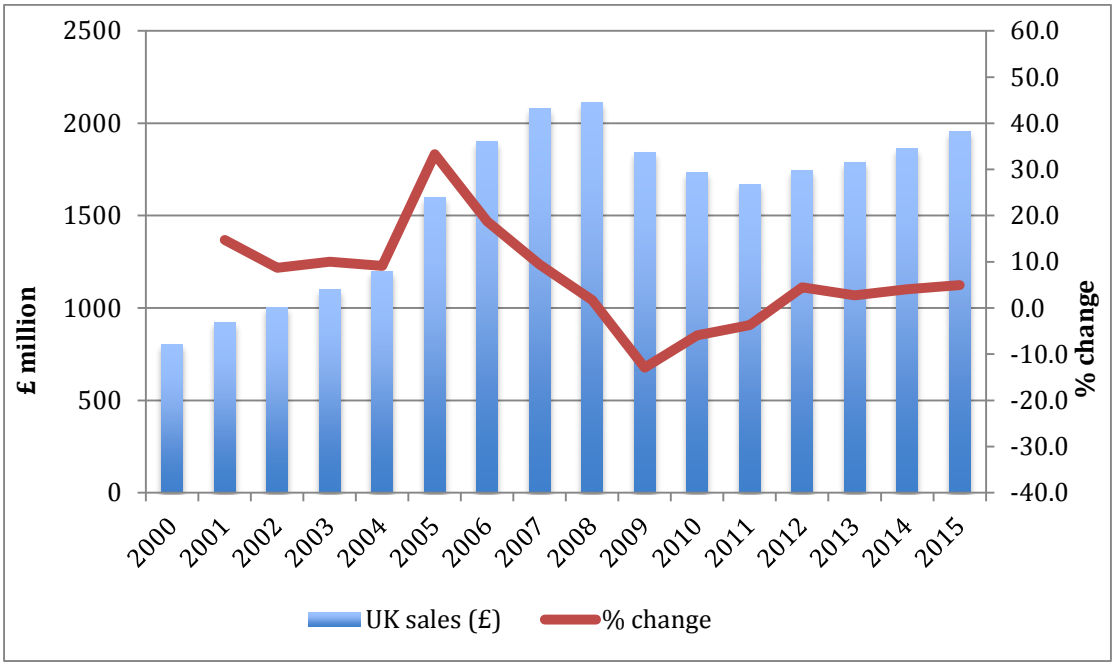


(*Source: DEFRA 2016*)

1.3 Output and sales

Sales of organic products in the UK increased by 4.9% in 2015 to a total sales value of £1.95bn (Figure 5). This is the fourth annual increase in a row to a five-year high and only slightly below the pre-recession high of £2.11bn in 2008.

Figure 5 UK sales of organic products



(Source: Soil Association, 2016)

The organic market share and the change in sales value from 2014 to 2015 for a number of products is given in Table 1. While sales values have increased for a number of organic products the organic red meat sector is one area where this trend is clearly in reverse.

Table 1 Product shares of the UK organic market and changes in sales value 2014/15

Product	2014/15 % change in sales value	2015 % share*
Cereals	5.6	1.8
Vegetables	-0.3	7.9
Fruit	10.6	8.0
Beef	-5.0	3.3
Lamb	-11.2	1.0
Pork	-4.2	0.2
Poultry	13.1	4.5
Eggs	2.6	3.8
Milk	-2.2	11.1
Yogurt	2.1	11.1
Fresh Fish	25.1	1.0

* Multiple retail sales only (Source: Soil Association, 2016)

In terms of market share by outlet, Table 2 describes how, by some considerable margin, the supermarkets handle the bulk of UK organic produce. It is also quite clear how alternative channels of consumption are realising higher growth rates in the organic sector.

Table 2 The UK organic market in 2015

Outlet	proportion of total sales (%)	growth in 2015 (%)	market value (£ million)
Supermarkets	69	3.2	1346
Catering	3	15.2	9
Box schemes	12	9.1	236
Other independent retailers	16	7.5	308

(Source: Soil Association, 2016)

2 Methods

This report presents financial and physical farm data for the 2013/14 and 2014/15 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 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 2014/15. 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 2014 and 5th April 2015 and consequently reflect the 2014 lamb crop and the 2014 arable harvest.

2.1 Data sample: farm type and region

This report uses data from the Farm Business Survey of 1880 farms, 150 of which are organic. Of the 150 organic farms, 128 are entirely organic; the remaining 22 farms have some non-organic enterprises or land area. A further 27 farms have some organic enterprises but with less than 70% of their UAA being classified as organic are considered non-organic in this report. 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 3 and Table 4.

[1] Details of the data collection methodology for the farm accounting method used in England and Wales by DEFRA, are available from: https://www.gov.uk/government/collections/farm-business-survey

Table 3 The distribution of surveyed organic farms by farm type 2014/15

Robust farm type	No.	%
Cereals	13	9
General cropping	9	6
Horticulture	10	7
Pigs	0	0
Poultry	3	2
Dairy	32	21
LFA Grazing	20	13
Lowland Grazing	40	27
Mixed	23	15
All farms	**150**	**100**

Table 4 The distribution of surveyed organic farms by region 2014/15

Region	No	%
North East	18	12
North West	10	7
Yorks. & Humber	7	5
East Midlands	10	7
West Midlands	15	10
East of England	17	11
South East	20	13
South West	53	35
All farms	**150**	**100**

2.2 Data sample: farm type and size

The distribution of the sample by farm size is shown in Table 5. The farm size categories are based on the 2010SO (Standard Output) methodology used by DEFRA - see APPENDIX 6 – DEFINITION OF TERMS 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 2014/15 dataset was evenly distributed overall across the size bands with each band contributing approximately one third each, but within farm type groups the distribution is somewhat less even. Dairy and lowland grazing farm types made up the largest proportion of the data sample with 21% and 27% respectively.

Table 5 Organic sample distribution by size (2010 Standard Output)

Farm size band	Small (€2,500-100,000)	Medium (€100,000-250,000	Large (>€250,000)	All
All	54	46	50	150
% distribution	36	31	33	100

2.3 Data sample: Limitations

Due to the small sample size (9) 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. Further, there are no longer any organic pig farms in the survey and insufficient poultry (3) farms to present their data.

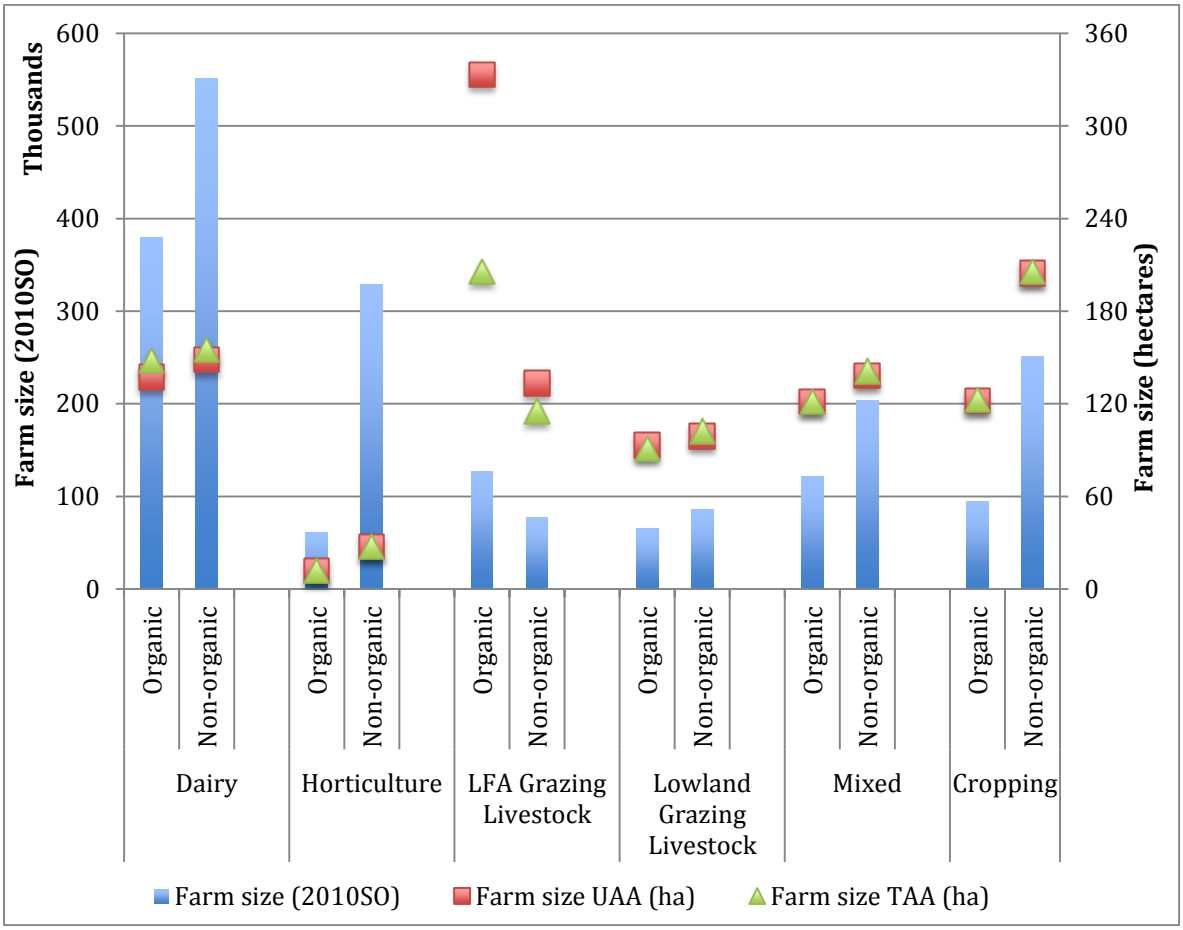
In the organic horticulture group some care must be taken in interpreting the results. The 2014/15 sample of 10 farms is composed of 3 subgroups: 2 specialist fruit, 5 specialist glass and 3 other horticulture i.e. not a uniform group of producers. Furthermore the non-organic sample (186) has a subgroup composition of: 51 specialist fruit, 68 specialist glass, 33 specialist hardy nursery stock and 34 other horticulture, clearly not perfectly comparable to the organic sample and hence the degree of caution advised above.

While the sample size does allow a year-on-year comparison of horticultural farms, the 2013/14 sample of 12 farms is composed of: 3 specialist fruit, 5 specialist glass and 4 other horticulture, so whilst similar to the 2014 horticultural sample distribution, is not exactly the same, so again care must be taken in interpreting the identical sample results.

2.4 Farm size by various measures

The common measure of farm size by Standard Output (SO) need not necessarily correspond to the area of land farmed. Figure 6 shows the weighted farm sizes for the 2014/15 sample measured by: SO, by farm area measured as Utilisable Agricultural Area (UAA) and by total adjusted area (TAA). The measure of farm size by SO represents business size in terms of agricultural output generated and allows for a comparison of business size across farms of varying types. 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.

Figure 6 Farm size by Standard Output and area



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 2000's; 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.

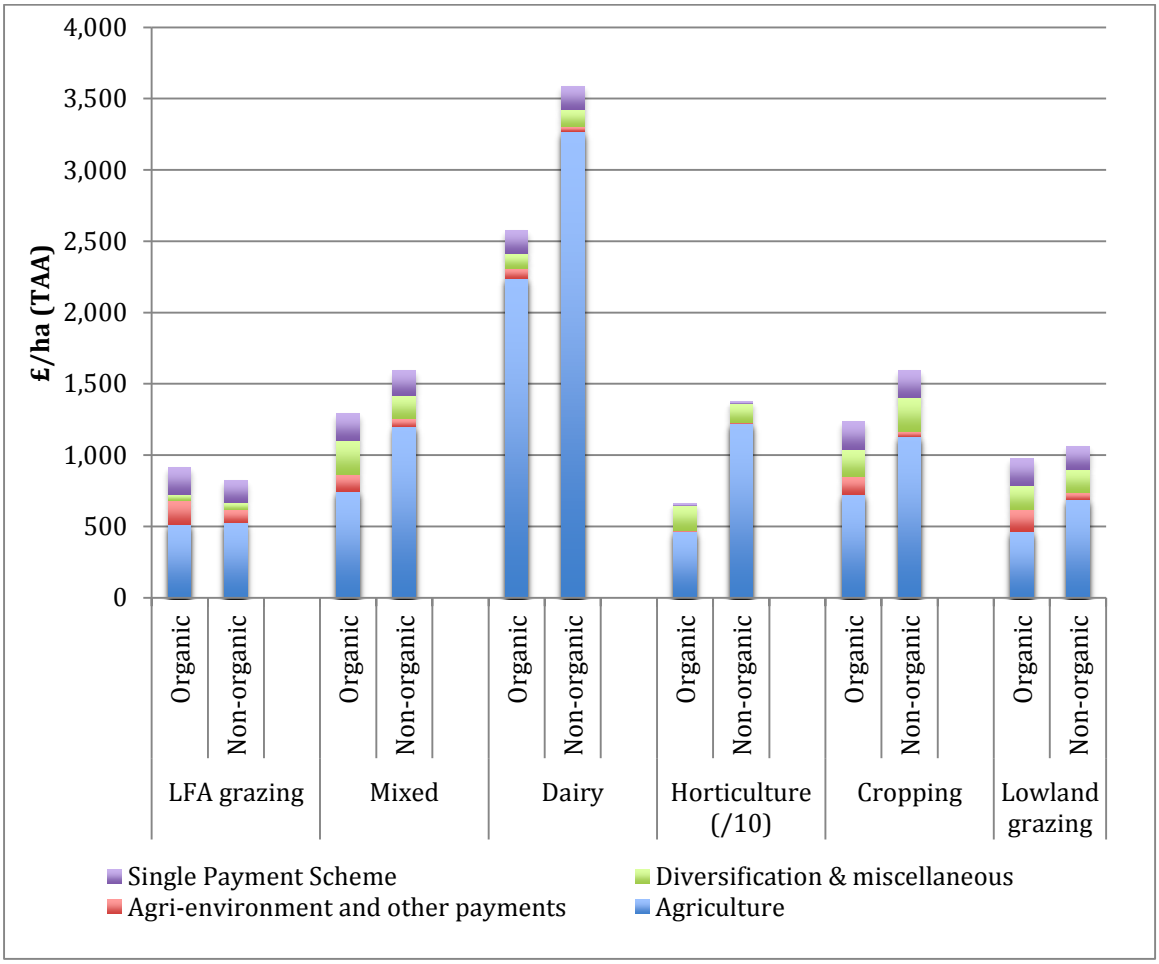
NFI "was designed as a measure which would allow individual farms of different tenure, business organisation and indebtedness to be compared directly with one another on a consistent basis" (SEERAD, 2006: p. 10) and is thus a good benchmarking measure. However unlike FBI, interest payments, director's 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 15 to Table 26). 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 6 – DEFINITION OF TERMS.

The measure of Farm area used throughout this report, unless otherwise specified, is the total adjusted area (TAA) including 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 6 – DEFINITION OF TERMS.

3.2 Farm Business Output

Figure 7 Farm Business Output per hectare by cost centre and farm type, organic and non-organic farms, 2014/15

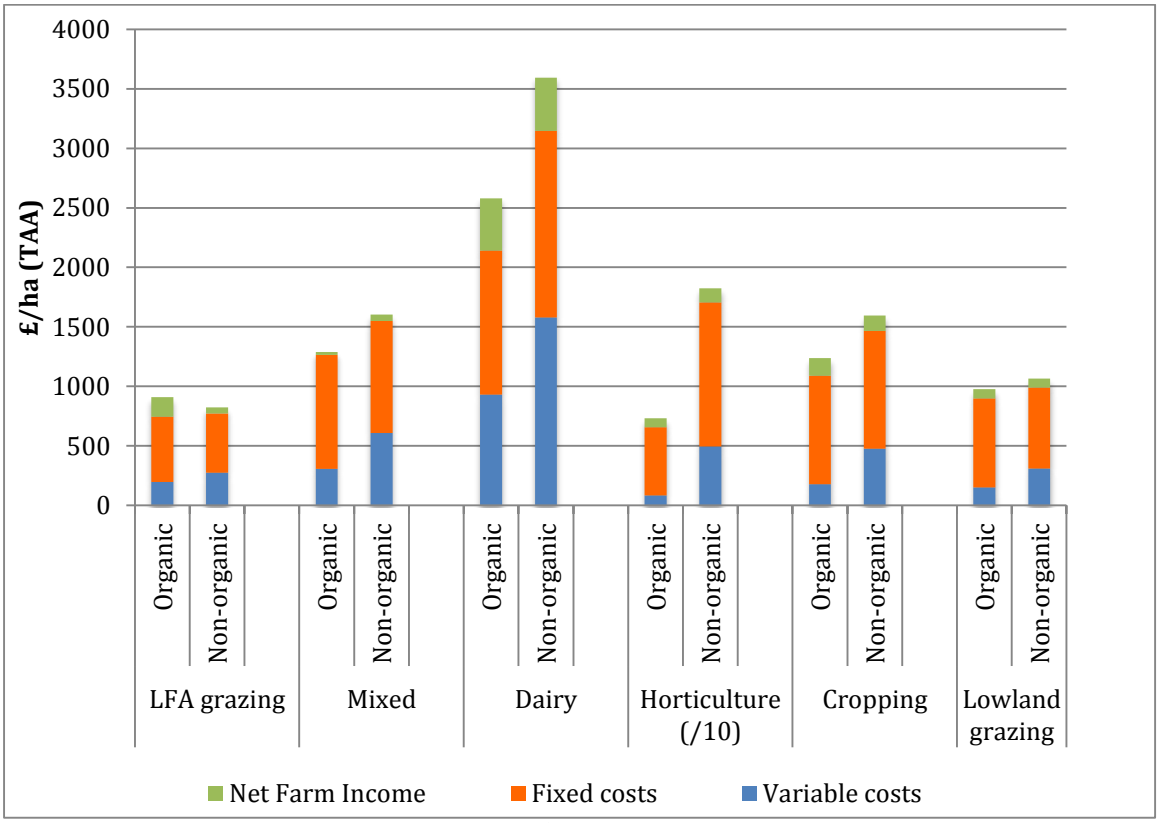


note: Horticulture data presented as 1/10th of actual

Figure 7 shows the composition of Farm Business Output per hectare for organic and non-organic farms by farm type for the 2014/15 sample. With the exception of LFA grazing, non-organic farms achieved greater Farm Business Output than their organic equivalents. Agriculture remained the largest component of Farm Business Output for all farm types both organic and non-organic, with non-organic farms consistently generating a higher Agricultural output per hectare than their organic counterparts. Organic farms however, earned consistently more through agri-environment schemes than non-organic farms. Organic farms also earned more per hectare from the Single Payment Scheme in all groups except horticulture and dairy. Earnings from diversification are varied both across farm types and between organic and non-organic farm groups.

3.3 Costs

Figure 8 Average variable and fixed costs for organic and non-organic farms by farm type, 2014/15



note: Horticulture data presented as 1/10th of actual

For all farm types variable costs per hectare were greater for non-organic farms than organic farms. There was a mixed picture for fixed costs with differences between organic and non-organic farms being only slight in most farm types. Organic LFA grazing, mixed and lowland grazing farms had higher fixed costs than the non-organic farms of these types and non-organic dairy, horticulture and cropping farm types had higher fixed costs than the organic farms of these types (Figure 8).

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 6 – DEFINITION OF TERMS. 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 9 Average Farm Business Income (FBI/farm) on organic farms by farm type group 2013/14 and 2014/15

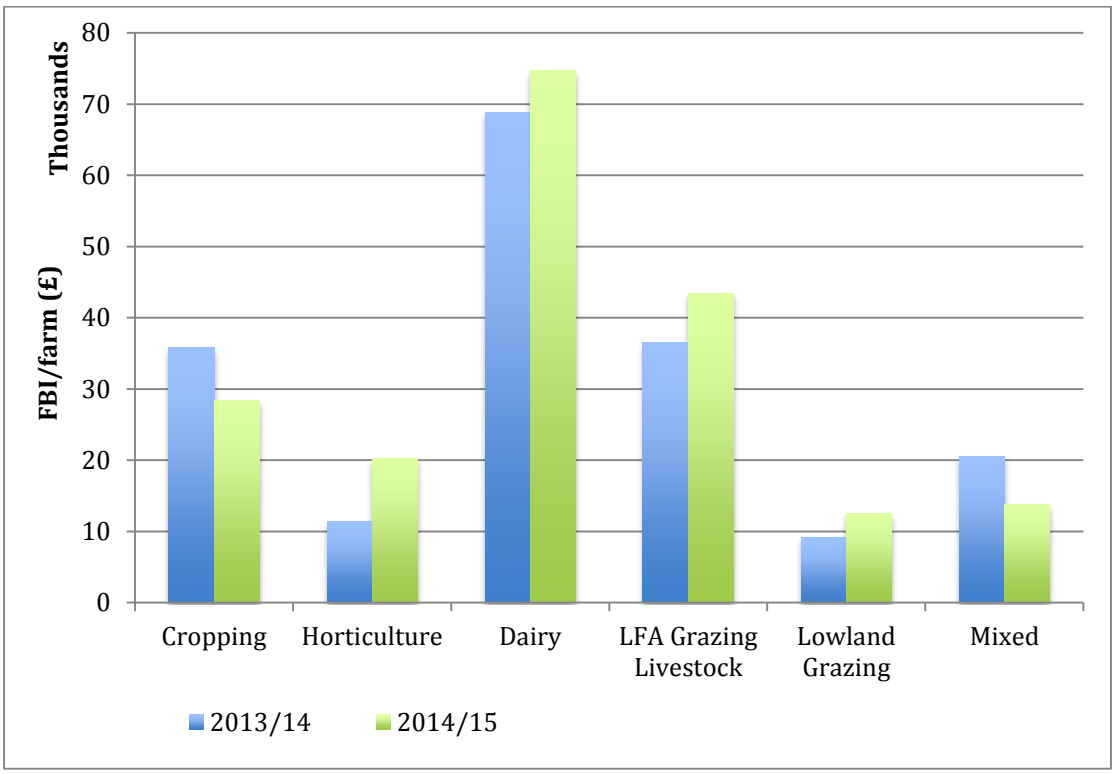


Table 6 Change in average organic FBI by farm type 2013/14 and 2014/15

Farm type	2013/14 (identical sample)				2014/15 (identical sample)			
	Sample farms	No. farms weighted	FBI - £/farm	FBI - £/ha (TAA)	Sample farms	No. farms weighted	FBI - £/farm	FBI - £/ha (TAA)
Cropping	18	321	35,800	262	18	384	28,300	221
Horticulture	10	247	11,400	1,064	10	350	20,300	1,705
Dairy	32	225	68,900	468	32	264	74,700	505
LFA Grazing	20	117	36,600	184	20	102	43,500	211
Lowland Grazing	33	745	9,200	92	33	777	12,500	134
Mixed	21	258	20,500	168	21	280	13,700	119

(*FBI/farm figures rounded to nearest hundred*)

Table 7 Change in average organic FBI/farm by farm type 2013/14 and 2014/15

FBI/Farm (£)	2013/14 Mean	2014/15 Mean	Difference	Significance
Cropping	35,794	28,317	-7,476	-
Horticulture	11,440	20,290	8,850	***
Dairy	68,869	74,741	5,872	-
LFA Grazing	36,558	43,467	6,909	-
Lowland Grazing	9,157	12,478	3,321	-
Mixed	20,538	13,705	-6,833	-
(- not significant, * significant at 10% (slight), ** at 5% (moderate), *** at 1% (strong))				

Table 8 Change in average organic FBI/ha (UAA) by farm type 2013/14 and 2014/15

FBI/ha UAA (£)	2013/14 Mean	2014/15 Mean	Difference	Significance
Cropping	263	223	-40	-
Horticulture	1,064	1,705	642	**
Dairy	492	546	54	-
LFA Grazing	107	130	23	-
Lowland Grazing	93	130	37	*
Mixed	167	119	-48	-
(- not significant, * significant at 10% (slight), ** at 5% (moderate), *** at 1% (strong))				

Table 9 Change in average FBI/ha (TAA) by farm type group 2013/14 and 2014/15

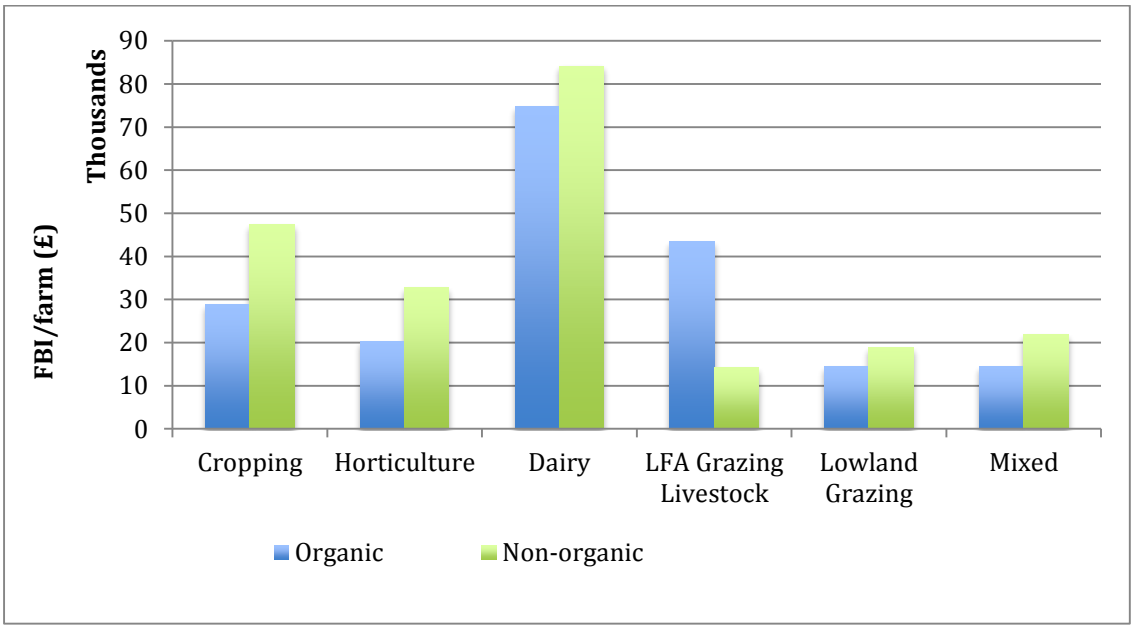
FBI/ha TAA (£)	2013/14 Mean	2014/15 Mean	Difference	Significance
Cropping	262	221	-41	-
Horticulture	1,064	1,705	642	**
Dairy	468	505	36	-
LFA Grazing	184	211	27	-
Lowland Grazing	92	134	42	*
Mixed	168	119	-48	-
(- not significant, * significant at 10% (slight), ** at 5% (moderate), *** at 1% (strong))				

Figure 9 and Table 6 show FBI/farm and FBI/ha (UAA) for organic farm types using an identical sample for 2013/14 and 2014/15. While there appear to be some increases and decreases in FBI across the groups, these changes are mostly not significant as shown by the analysis presented in Table 7 and Table 8 (using t-tests throughout). Organic horticulture farms however did show a statistically significant increase of almost £9,000 per farm from 2013/14 to 2014/15 (Table 7) and a moderate increase on a per hectare (UAA) basis (Table 8). Lowland grazing farms are the only other farm group to show any statistically significant increase in FBI/ha (UAA) albeit slight. Table 9 presents FBI per hectare TAA for an identical sample in 2013/14 and

2014/15. As for FBI/ha (UAA) above, only the horticulture and lowland grazing farm groups show any significant change (increase) in FBI/ha (TAA) and at the same level as above – as might be expected for two groups where UAA is typically identical or very close to TAA.

3.4.2 Organic versus non-organic (full sample)

Figure 10 Average FBI/farm for organic and non-organic farms by farm type 2014/15



The organic LFA grazing farm group remains (as in 2013/14) the only farm group able to generate a higher FBI/farm than the non-organic LFA grazing farms (Figure 10). In all other farm type groups the non-organic farms appear to generate a higher FBI/farm than their organic counterparts, however, this is not always a significant difference – see Table 11 below. 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. Figure 11 presents the FBI/ha data by farm type group. As at the farm level above, the organic LFA grazing group generates a higher FBI/ha than the non-organic LFA grazing farms. The apparently higher FBI/ha for the cropping and horticulture farm groups is not actually statistically significant (see Table 12).

Figure 11 Average FBI/ha (TAA) for organic and non-organic farms by farm type 2014/15

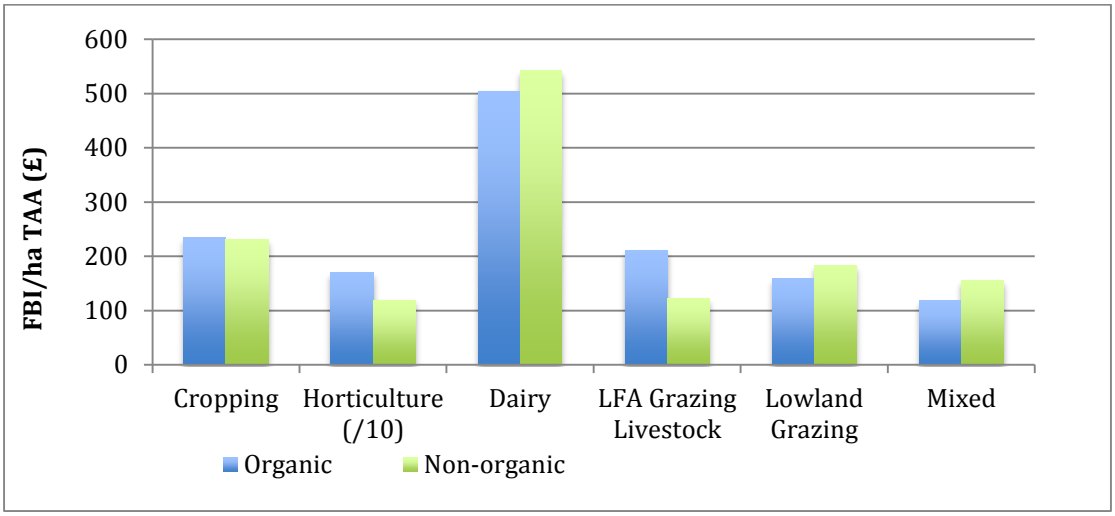


Table 10 shows the relationship by farm type, between FBI/farm and FBI/ha on both a Utilisable Agricultural Area and Total Adjusted Area basis. See section 2.4 above, Farm size by various measures, for the background to these two measures of area.

Table 10 Average FBI for organic and non-organic farms by farm type 2014/15

2014/15 (full sample)		Number of farms (sample)	Number of farms (weighted)	FBI – £/farm	FBI – £/ha (UAA)	FBI – £/ha (TAA)
Cropping	Organic	22	461	28854	237	235
	Non-organic	508	19122	47309	231	230
Horticulture	Organic	10	350	20290	1705	1705
	Non-organic	176	2945	32826	1197	1194
Dairy	Organic	32	254	74741	546	419
	Non-organic	264	6275	84139	567	542
LFA Grazing	Organic	20	217	43467	130	211
	Non-organic	102	6475	14186	106	123
Lowland Grazing	Organic	40	936	14452	155	158
	Non-organic	249	11479	18799	190	184
Mixed	Organic	23	297	14330	118	118
	Non-organic	178	5963	21957	159	155

Table 11 Statistical differences in average FBI/farm between organic and non-organic farms 2014/15

FBI/Farm (£) 2014/15	Organic Mean	Non-organic Mean	Difference	Significance
Cropping	28854	47309	-18454	**
Horticulture	20290	32826	-12537	**
Dairy	74741	84139	-9398	-
LFA Grazing	43467	14186	29281	**
Lowland Grazing	14452	18799	-4347	**
Mixed	14330	21957	-7627	-
(- not significant, * significant at 10% (slight), ** at 5% (moderate), *** at 1% (strong))				

Note: please see notes regarding sample sizes and group composition on page 7

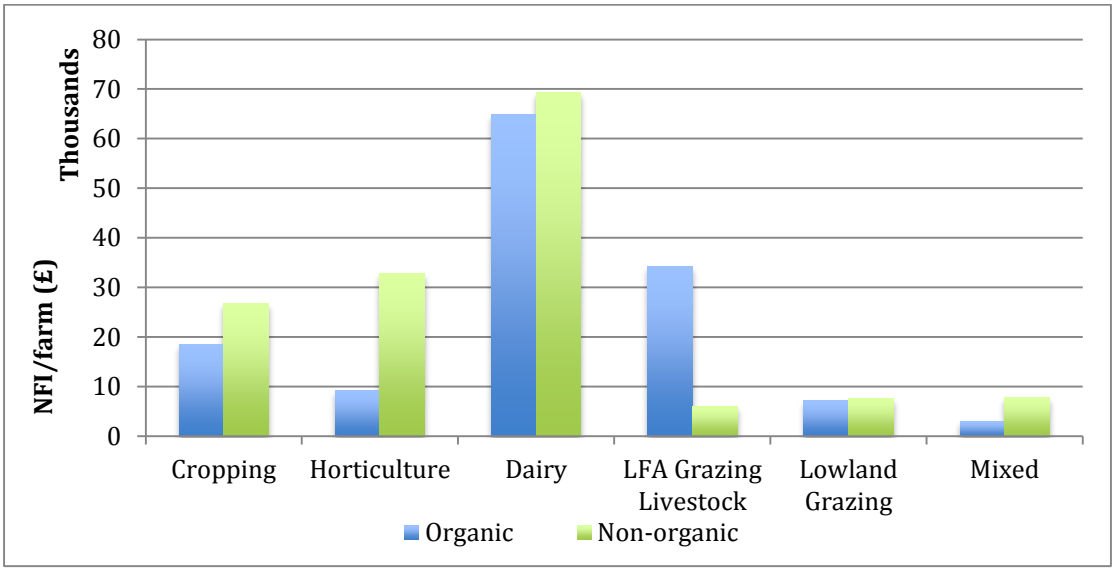
Table 12 Statistical differences in average FBI/ha between organic and non-organic farms 2014/15

FBI/ha TAA (£) 2014/15	Organic Mean	Non-organic Mean	Difference	Significance
Cropping	235	230	5	-
Horticulture	1705	1194	511	-
Dairy	505	542	-38	-
LFA Grazing	211	123	88	**
Lowland Grazing	158	184	-25	*
Mixed	118	155	-37	-
(- not significant, * significant at 10% (slight), ** at 5% (moderate), *** at 1% (strong))				

Figure 10 shows FBI/farm for the various farm type groups with Table 11 showing where this difference is actually significant. As mentioned above not all of the apparent differences in FBI are significant; there being no statistical difference in the FBI/farm between organic and non-organic farms for both the dairy and mixed farm groups. Figure 11 shows FBI/ha for the farm type groups with Table 12 showing where this difference is significant. It is only the LFA and lowland grazing groups where the difference is actually significant, and even then only moderate for the LFA grazing group and slight for the lowland grazing group.

3.5 Net Farm Income

Figure 12 Average NFI/farm for organic and non-organic farms by farm type 2014/15



As discussed in section 3.1 above, 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. NFI, while including an imputed rental charge for owned land, excludes land ownership costs and interest payments (see APPENDIX 6 – DEFINITION OF TERMS 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 at least, if not in absolute terms. And as was the case with FBI/farm, it is only the LFA grazing group where the organic farms realise a higher NFI/farm than the non-organic farms. The statistical differences are however only significant for two of the farm types; horticulture and LFA grazing (see Table 13).

Table 13 Differences in NFI/farm between organic and non-organic farms by farm type 2014/15

NFI/Farm (£) 2014/15	Organic Mean	Non-organic Mean	Difference	Significance
Cropping	18378	26747	-8369	-
Horticulture	9212	32794	-23582	***
Dairy	64863	69253	-4389	-
LFA Grazing	34154	5987	28166	**
Lowland Grazing	7162	7602	-440	-
Mixed	3024	7750	-4726	-
(- not significant, * significant at 10% (slight), ** at 5% (moderate), *** at 1% (strong))				

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**. Figure** 13 shows the differences in NFI/ha by farm type (with the horticulture group results reduced by a factor of ten to facilitate presentation).

Interestingly several of the apparent income differences at the farm level appear to be reversed at the per hectare level – however it is only the LFA grazing group that actually shows a statistically significant difference in income, see Table 14.

Figure 13 Average NFI/ha for organic and non-organic farms by farm type 2014/15

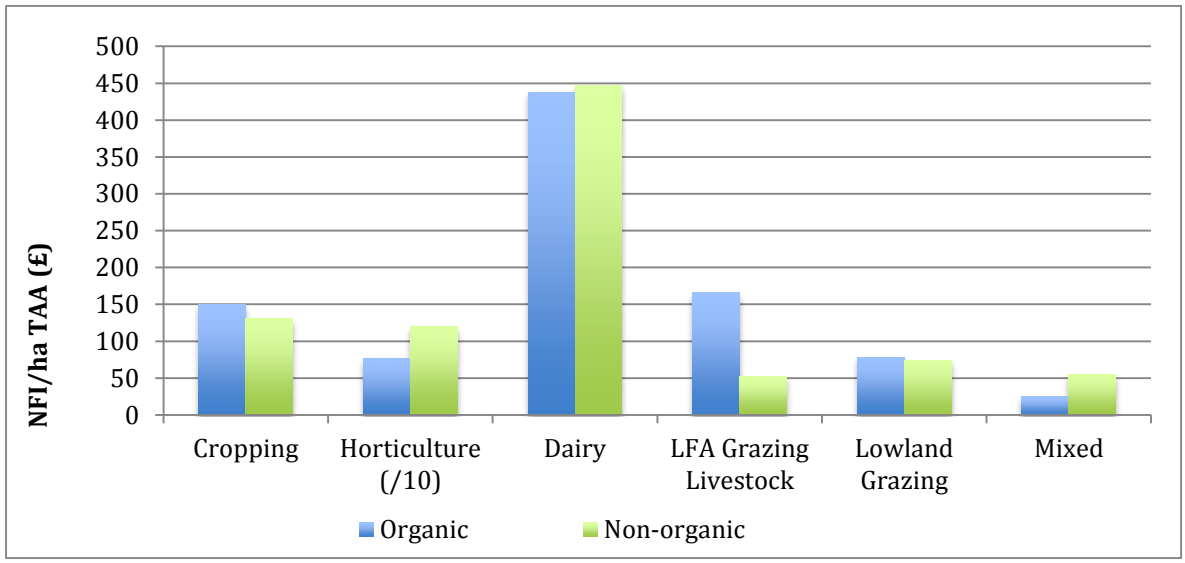


Table 14 Differences in average NFI/ha between organic and non-organic farms by farm type 2014/15

NFI/ha TAA (£) 2014/15	Organic Mean	Non-organic Mean	Difference	Significance
Cropping	150	130	20	-
Horticulture	774	1193	-419	-
Dairy	438	446	-9	-
LFA Grazing	166	52	114	**
Lowland Grazing	79	74	4	-
Mixed	25	55	-30	-
(- not significant, * significant at 10% (slight), ** at 5% (moderate), *** at 1% (strong))				

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 (2013/14 and 2014/15) and the full sample (2014/15) 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.

4.1 Cropping

The cropping group includes farms from both the cereal and general cropping farm types – there are insufficient farms in these groups to allow separate presentation.

Organic cropping farms year-on-year
Farm Business Output per hectare fell by 3% to £1270/ha. Agricultural output, which accounts for 63% of farm output, fell by 3%. The crop component, contributing 96% of agricultural output, also fell by 3%, and the livestock component by 17%. Agri-environment scheme revenues (10% of total) increased by 6%, offsetting a 6% fall in Single payment revenue (15% of total). Diversification and miscellaneous revenues, which provide 12% of total revenue, remained constant (Table 15).
Costs for organic cropping farms also fell, but only by 1% to generate a Farm Business Income of £201/ha in 2014/15, a 10% reduction on 2013/14. Net Farm Income (NFI) also fell (by 13%) to £149/ha, which after having deducted an imputed figure for farmer and spouse manual labour fails to generate a positive figure for Management and Investment Income (MII) – effectively the return on the capital invested in the business.

Cropping farms, organic and non-organic
Table 16 details the differences between the full sample of organic and non-organic cropping farms for the 2014 crop year. The average organic cropping farm size is 122.7ha compared to 205.4ha for a non-organic cropping farm. Organic cropping farms generate only 46% of the farm business output of a non-organic farm at the farm level, but at the per hectare level the difference is much closer with organic cropping farms generating £1234/ha – nearly 80% of the output/ha of the non-organic farms. The agricultural output per hectare of organic cropping farms is some 64% of the non-organics (and that remains about the same for both livestock and crop outputs) but organic farms are able to earn over three times the revenue per hectare from agri-environment schemes as their non-organic counterparts. The non-organic cropping farms generate considerably more revenue from diversification and miscellaneous sources. Revenues are broadly equal from the Single payment.
Organic cropping farms incurred total costs of £1,003/ha, 27% less than the non-organic farms with fertiliser and crop protection costs almost completely accounting for this difference. Overhead costs were slightly lower for organic cropping farms at £824/ha (versus £890/ha for the non-organics). The resultant FBI of £235/ha for organic cropping farms is not significantly greater than the figure of £230/ha for the non-organic farms. The corresponding NFI of £150/ha for organic cropping farms is also not significantly higher than the £130/ha of the non-organics (see Table 14**)**

Further detailed commentary on organic cropping farms is given in APPENDIX 1 – ORGANIC CROPPING.

Table 15 Cropping farms, organic identical sample 2013/14 and 2014/15

The average cropping farm	Organic identical sample 2013/14			2014/15		
Number (unweighted)	16			16		
Number (weighted)	270			311		
Farm size (2010SO)	113,916			108,376		
Farm area (adjusted ha)	148.9			143.0		
Grazing livestock units	11.9			11.2		
	£/farm	£/ha		£/farm	£/ha	
Agriculture:	122,664	824	63%	113,861	796	63%
Livestock component	5,151	35	*4%*	4,117	29	*4%*
Crop component	117,514	789	*96%*	109,743	767	*96%*
Agri-environment and other payments	17,346	117	9%	17,698	124	10%
Diversification & miscellaneous	23,609	159	12%	22,577	158	12%
Single Payment Scheme	30,412	204	16%	27,515	192	15%
Farm Business Output (a)	**194,032**	**1303**	100%	**181,651**	**1270**	**100%**
Livestock variable costs:	1,950	13	1%	1,165	8	1%
Feed	928	6	*48%*	258	2	*22%*
Vet & medicine	245	2	*13%*	116	1	*10%*
Other livestock costs	777	5	*40%*	791	6	*68%*
Crop variable costs:	28,595	192	18%	28,922	202	19%
Seed	15,447	104	*54%*	15,293	107	*53%*
Fertiliser	3,183	21	*11%*	3,532	25	*12%*
Crop protection	1,296	9	*5%*	1,161	8	*4%*
Other crop costs	8,669	58	*30%*	8,936	62	*31%*
Contract	17,812	120	11%	17,858	125	12%
Paid Labour	24,976	168	15%	21,375	149	14%
Machinery:	31,760	213	20%	28,495	199	19%
Fuel & oil	9,024	61	*28%*	7,871	55	*28%*
Repairs	7,508	50	*24%*	6,608	46	*23%*
Depreciation	15,227	102	*48%*	14,015	98	*49%*
Paid Rents	16,152	108	10%	15,834	111	10%
Other costs	39,906	268	25%	40,088	280	26%
Total Costs (b)	**161,151**	**1082**	100%	**153,736**	**1,075**	**100%**
Profit/(loss) on sale of fixed assets	192			826		
Farm Business Income (c=a-b)	**33,073**	**222**		**28,741**	**201**	
Unpaid manual labour excl. farmer & spouse (d)	428	3		555	4	
Interest payments (e)	1,600	11		1,121	8	
Imputed rents (f)	19,588	132		20,339	142	
Director's remuneration (g)	6,114	41		7,190	50	
Ownership costs (h)	4,660	31		5,149	36	
Net Farm Income (i=c-d+e-f+g+h)	**25,431**	**171**		**21,307**	**149**	
Farmer & Spouse unpaid labour (j)	23,112	155		22,987	161	
Paid managerial labour (k)	1,447	10		1,085	8	
Management and Investment Income (l=i-j+k)	**3,766**	**25**		**-595**	**-4**	

Table 16 Cropping farms, organic and non-organic, full sample 2014/15

The average cropping farm	Non-organic 2014/15			Organic 2014/15		
Number (unweighted)	508			22		
Number (weighted)	19,122			461		
Farm size (2010SO)	250,953			94,267		
Farm area (adjusted ha)	205.4			122.7		
Grazing livestock units	14.7			9.3		
	£/farm	£/ha		£/farm	£/ha	
Agriculture:	231,658	1,128	71%	88,557	722	58%
Livestock	9,307	45	*4%*	2,993	24	*3%*
Crops	222,351	1,082	*96%*	85,564	697	*97%*
Agri-environment and other payments	8,440	41	3%	15,432	126	10%
Diversification & miscellaneous	48,021	234	15%	23,615	192	16%
Single Payment Scheme	38,511	187	12%	23,829	194	16%
Farm Business Output (a)	**326,630**	**1,590**	**100%**	**151,432**	**1,234**	**100%**
Livestock variable costs:	5,177	25	2%	857	7	1%
Feed	2,841	14	*55%*	231	2	*27%*
Vet & medicine	587	3	*11%*	84	1	*10%*
Other livestock costs	1,748	9	*34%*	543	4	*63%*
Crop variable costs:	92,702	451	33%	21,154	172	17%
Seed	16,715	81	*18%*	11,638	95	*55%*
Fertiliser	32,845	160	*35%*	2,596	21	*12%*
Crop protection	32,550	158	*35%*	783	6	*4%*
Other crop costs	10,592	52	*11%*	6,137	50	*29%*
Contract	20,032	98	7%	13,107	107	11%
Paid Labour	28,553	139	10%	16,305	133	13%
Machinery:	62,033	302	22%	24,737	202	20%
Fuel & oil	16,076	78	*26%*	6,593	54	*27%*
Repairs	15,377	75	*25%*	5,918	48	*24%*
Depreciation	30,580	149	*49%*	12,225	100	*49%*
Paid Rents	19,238	94	7%	12,870	105	10%
Other costs	52,901	258	19%	34,113	278	28%
Total Costs (b)	**280,636**	**1,366**	**100%**	**123,144**	**1,003**	**100%**
Profit/(loss) on sale of fixed assets	1,314			566		
Farm Business Income (c=a-b)	**47,309**	**230**		**28,854**	**235**	
Unpaid manual labour excl. farmer & spouse (d)	5,605	27		1,708	14	
Interest payments (e)	5,335	26		920	7	
Imputed rents (f)	32,532	158		18,938	154	
Director's remuneration (g)	3,287	16		4,884	40	
Ownership costs (h)	8,954	44		4,366	36	
Net Farm Income (i=c-d+e-f+g+h)	**26,747**	**130**		**18,378**	**150**	
Farmer & Spouse unpaid labour (j)	17,475	85		20,551	167	
Paid managerial labour (k)	208	1		731	6	
Management and Investment Income (l=i-j+k)	**9,480**	**46**		**-1,441**	**-12**	

4.2 Horticulture

As with previous years the sample of organic horticulture farms remains low with only 10 farms available. These same 10 farms were also present in the 2013/14 dataset so a year on year comparison is possible. However extreme care must be taken when making conclusions about the horticulture sample due to the diverse nature of enterprises contained within the sample, see 2.3 Data sample: Limitations.

Organic horticulture farms year-on-year

Table 17 shows how Farm Business Output (FBO) for organic horticulture farms increased by 44% to £6,588/ha in 2014/15. Agriculture output, which is almost exclusively crop output, increased by 50% to £4,614/ha. Diversification and miscellaneous income, which accounts for 26% of farm output also increased, by 30%, to £1702/ha. Agri-environment payments and the Single farm payment combined only account for 4% of total farm output.

Total costs for organic horticulture farms increased by 38% to £4,880/ha with the major contributors being a 64% increase in paid labour costs (to £1,173ha, 24% of total costs) and other overhead costs, which increased by 38% (to £1,537/ha, 31% of total costs). Paid rents saw a marked increase of 72% to £468/ha (10% of total costs) and crop variable costs, due almost entirely to other crop costs, rose by 20% to £815/ha.

The overall effect on Farm Business Income (FBI) was a resultant 60% increase to £1,705/ha. After allowing for the appropriate adjustments Net Farm Income (NFI) showed a 134% increase to £774/ha. However, this figure fails to cover an imputed wage for farmer and spouse manual labour of £2,924/ha, thus returning a negative Management and Investment Income (MII) of £-2,149/ha.

Horticulture farms, organic and non-organic

The average organic horticulture farm at 11.9ha is less than half the size of its non-organic counterpart (of 27.5ha). When measured on a Standard Output (SO) (see APPENDIX 6 – DEFINITION OF TERMS) basis, the average non-organic horticulture farm is five times the size of an organic unit (Table 18). Organic horticulture farms generate, on average, an FBO of £6,588/ha, about half of that of a non-organic farm, of £13,754/ha. As might be expected this is mainly due to the difference in output from agriculture (almost exclusively crop output) where organic farms typically receive £4,614/ha and the non-organics achieve £12,225/ha. Diversification revenues appear to be slightly more important to the organic group at £1,702/ha in contrast to £1,295/ha for the non-organic group.

Total costs for organic horticulture farms, of £4,880/ha, were about one third of that of the non-organic farms, of £12,579/ha. Variable costs make up 17% of total costs on organic farms (39% on non-organic farms). Paid labour accounts for 24% of total costs on organic horticultural farms, machinery 16%, and rents 10%.

The resultant FBI is £1,705/ha for the organic farms and £1,194 for the non-organics (this difference is not statistically significant). However, after the deduction of, mainly unpaid manual labour excluding farmer and spouse, and the other adjustments to calculate NFI this apparent difference is reversed with the organic farms realising an NFI of £774/ha and the non-organics £1,193/ha. After an imputed wage for farmer and spouse manual labour is deducted from NFI the resultant MII is a negative -£2,149/ha for organic horticultural farms, and £402/ha for the non-organic farms.

Table 17 Horticulture farms, organic identical sample 2013/14 and 2014/15

The average horticulture farm	Organic identical sample 2013/14			2014/15		
Number (unweighted)	10			10		
Number (weighted)	247			350		
Farm size (2010SO)	61,086			60,409		
Farm area (adjusted ha)	10.8			11.9		
Grazing livestock units	0.8			0.8		
	£/farm	£/ha		£/farm	£/ha	
Agriculture:	33,064	3075	67%	54,893	4614	70%
Livestock component	492	46	*1%*	178	15	*0%*
Crop component	32,573	3029	*99%*	54,715	4599	*100%*
Agri-environment and other payments	390	36	1%	1,344	113	2%
Diversification & miscellaneous	14,090	1310	29%	20,245	1702	26%
Single Payment Scheme	1,788	166	4%	1,904	160	2%
Farm Business Output (a)	**49,332**	**4587**	100%	**78,385**	**6588**	**100%**
Livestock variable costs:	157	15	0%	238	20	0%
Feed	101	9	*64%*	40	3	*17%*
Vet & medicine	29	3	*18%*	153	13	*64%*
Other livestock costs	27	3	*17%*	45	4	*19%*
Crop variable costs:	7,329	681	19%	9,697	815	17%
Seed	3,628	337	*50%*	3,941	331	*41%*
Fertiliser	441	41	*6%*	715	60	*7%*
Crop protection	0	0	*0%*	2	0	*0%*
Other crop costs	3,260	303	*44%*	5,039	423	*52%*
Contract	868	81	2%	931	78	2%
Paid Labour	7,708	717	20%	13,952	1,173	24%
Machinery:	6,973	648	18%	9,392	789	16%
Fuel & oil	2,151	200	*31%*	2,153	181	*23%*
Repairs	2,324	216	*33%*	4,766	401	*51%*
Depreciation	2,497	232	*36%*	2,473	208	*26%*
Paid Rents	2,925	272	8%	5,566	468	10%
Other costs	12,047	1120	32%	18,283	1,537	31%
Total Costs (b)	**38,007**	**3534**	100%	**58,059**	**4,880**	**100%**
Profit/(loss) on sale of fixed assets	115			-37		
Farm Business Income (c=a-b)	**11,440**	**1064**		**20,290**	**1,705**	
Unpaid manual labour excl. farmer & spouse (d)	6,363	592		10,303	866	
Interest payments (e)	142	13		153	13	
Imputed rents (f)	3,274	304		2,777	233	
Director's remuneration (g)	0	0		0	0	
Ownership costs (h)	1,608	149		1,848	155	
Net Farm Income (i=c-d+e-f+g+h)	**3,552**	**330**		**9,212**	**774**	
Farmer & Spouse unpaid labour (j)	28,980	2695		34,786	2,924	
Paid managerial labour (k)	0	0		0	0	
Management and Investment Income (l=i-j+k)	**-25,428**	**-2364**		**-25,574**	**-2,149**	

Table 18 Horticulture farms, organic and non-organic, full sample 2014/15

The average horticulture farm	Non-organic 2014/15			Organic 2014/15		
Number (unweighted)	176			10		
Number (weighted)	2,945			350		
Farm size (2010SO)	328,256			60,409		
Farm area (adjusted ha)	27.5			11.9		
Grazing livestock units	1.7			0.8		
	£/farm	£/ha		£/farm	£/ha	
Agriculture:	336,033	12,225	89%	54,893	4,614	70%
Livestock	969	35	*0%*	178	15	*0%*
Crops	335,065	12,190	*100%*	54,715	4,599	*100%*
Agri-environment and other payments	2,116	77	1%	1,344	113	2%
Diversification & miscellaneous	35,608	1,295	9%	20,245	1,702	26%
Single Payment Scheme	4,289	156	1%	1,904	160	2%
Farm Business Output (a)	**378,046**	**13,754**	**100%**	**78,385**	**6,588**	**100%**
Livestock variable costs:	694	25	0%	238	20	0%
Feed	418	15	*60%*	40	3	*17%*
Vet & medicine	60	2	*9%*	153	13	*64%*
Other livestock costs	216	8	*31%*	45	4	*19%*
Crop variable costs:	135,710	4,937	39%	9,697	815	17%
Seed	52,179	1,898	*38%*	3,941	331	*41%*
Fertiliser	11,216	408	*8%*	715	60	*7%*
Crop protection	9,735	354	*7%*	2	0	*0%*
Other crop costs	62,580	2,277	*46%*	5,039	423	*52%*
Contract	6,549	238	2%	931	78	2%
Paid Labour	113,752	4,138	33%	13,952	1,173	24%
Machinery:	27,817	1,012	8%	9,392	789	16%
Fuel & oil	6,838	249	*25%*	2,153	181	*23%*
Repairs	9,278	338	*33%*	4,766	401	*51%*
Depreciation	11,701	426	*42%*	2,473	208	*26%*
Paid Rents	6,963	253	2%	5,566	468	10%
Other costs	54,274	1,975	16%	18,283	1,537	31%
Total Costs (b)	**345,760**	**12,579**	**100%**	**58,059**	**4,880**	**100%**
Profit/(loss) on sale of fixed assets	540			-37		
Farm Business Income (c=a-b)	**32,826**	**1,194**		**20,290**	**1,705**	
Unpaid manual labour excl. farmer & spouse (d)	5,695	207		10,303	866	
Interest payments (e)	3,669	133		153	13	
Imputed rents (f)	9,010	328		2,777	233	
Director's remuneration (g)	6,183	225		0	0	
Ownership costs (h)	4,820	175		1,848	155	
Net Farm Income (i=c-d+e-f+g+h)	**32,794**	**1,193**		**9,212**	**774**	
Farmer & Spouse unpaid labour (j)	22,433	816		34,786	2,924	
Paid managerial labour (k)	697	25		0	0	
Management and Investment Income (l=i-j+k)	**11,058**	**402**		**-25,574**	**-2,149**	

4.3 Dairy

Organic dairy farms year-on-year

Organic dairy farms saw an 8% increase in Farm Business Income (FBI) to £505/ha from 2013/14 to 2014/15. This converts to a Net Farm Income (NFI) figure of £438/ha, which, having deducted the imputed figure for farmer and spouse manual labour, gives a Management and Investment Income (MII) of £237/ha.

Total Farm Business Output, of £2,574/ha in 2014/15, was virtually unchanged on 2013/14. Agricultural production, which contributes 87% of this total, was also unchanged but within this livestock output was down (by 2%) with the crop component increasing to make up the difference. Agri-environment payments had increased slightly to £74/ha. Diversification output was also up, by 9% to £102/ha, but the Single payment contribution had dropped by an equal amount to £160/ha.

Total costs were down by 2% to £2,074/ha. Livestock variable costs, which account for 43% of total costs, were down by 5%. Paid labour and machinery, 13% and 14% of total costs respectively, were both down, but paid rents, 5% of total, were up by 10%. Other overhead costs, 18% of total costs, were up slightly by 3%.

Dairy farms, organic and non-organic

The average organic dairy farm has a farm area of 148.1 hectares and carries 178.3 grazing livestock units (GLU) – slightly smaller than the average for non-organic dairy farms which has 155.1 hectares and 261.6 GLU. Stocking rates are 1.2 GLU/ha for organic dairy farms and 1.7 GLU/ha for the non-organics.

The Farm Business Income of £505/ha for organic dairy farms was not significantly different from the £542/ha figure for the non-organic farms. This FBI figure translates to an NFI of £438/ha, which again, is not significantly lower than the figure of £446/ha for the non-organic dairy farms.

The Farm Business Output, of £2,547/ha, for organic dairy farms is considerably lower than the £3,587/ha for non-organic farms. Where 87% of this total is derived from agricultural production on organic farms, this figure is 91% on non-organic farms. It follows therefore that organic dairy farms derive a slightly larger fraction of their output per hectare from Agri-environment schemes, Diversification activities and the Single Payment Scheme; in each of these categories the organic farms receive slightly less per hectare than the non-organic dairy farms.

The total costs on organic dairy farms (of £2,074/ha) are about £1,000/ha lower than on non-organic farms. The proportional distribution of costs among the cost components is however very similar. The livestock variable costs, which make up nearly half of the total costs for both groups of farms, have a very similar distribution among the sub-categories.

Further detailed commentary on organic dairy farms is given in APPENDIX 4 – ORGANIC DAIRY PRODUCTION

Table 19 Dairy farms, organic identical sample 2013/14 and 2014/15

The average dairy farm	Organic identical sample 2013/14			2014/15		
Number (unweighted)	32			32		
Number (weighted)	225			264		
Farm size (2010SO)	375,391			379,330		
Farm area (adjusted ha)	147.0			148.1		
Grazing livestock units	180.9			178.3		
	£/farm	£/ha		£/farm	£/ha	
Agriculture:	328,935	2238	87%	331,462	2238	87%
Livestock component	323,442	2200	98%	320,993	2167	*97%*
Crop component	5,493	37	2%	10,469	71	*3%*
Agri-environment and other payments	9,425	64	2%	10,978	74	3%
Diversification & miscellaneous	13,743	93	4%	15,119	102	4%
Single Payment Scheme	25,967	177	7%	23,737	160	6%
Farm Business Output (a)	**378,070**	**2572**	100%	**381,296**	**2574**	**100%**
Livestock variable costs:	137,157	933	44%	131,117	885	43%
Feed	96,724	658	71%	91,517	618	*70%*
Vet & medicine	8,176	56	6%	7,801	53	*6%*
Other livestock costs	32,257	219	24%	31,799	215	*24%*
Crop variable costs:	7,060	48	2%	6,720	45	2%
Seed	4,655	32	66%	4,124	28	*61%*
Fertiliser	826	6	12%	1,024	7	*15%*
Crop protection	21	0	0%	23	0	*0%*
Other crop costs	1,557	11	22%	1,550	10	*23%*
Contract	16,570	113	5%	18,715	126	6%
Paid Labour	40,198	273	13%	39,570	267	13%
Machinery:	42,901	292	14%	41,541	280	14%
Fuel & oil	10,002	68	23%	8,838	60	*21%*
Repairs	13,188	90	31%	12,712	86	*31%*
Depreciation	19,711	134	46%	19,991	135	*48%*
Paid Rents	13,911	95	4%	15,422	104	5%
Other costs	52,346	356	17%	54,119	365	18%
Total Costs (b)	**310,143**	**2110**	100%	**307,203**	**2,074**	**100%**
Profit/(loss) on sale of fixed assets	941			649		
Farm Business Income (c=a-b)	**68,869**	**468**		**74,741**	**505**	
Unpaid manual labour excl. farmer & spouse (d)	5,142	35		5,440	37	
Interest payments (e)	6,505	44		6,262	42	
Imputed rents (f)	22,491	153		23,262	157	
Director's remuneration (g)	1,640	11		2,162	15	
Ownership costs (h)	9,696	66		10,401	70	
Net Farm Income (i=c-d+e-f+g+h)	**59,076**	**402**		**64,863**	**438**	
Farmer & Spouse unpaid labour (j)	28,558	194		30,263	204	
Paid managerial labour (k)	444	3		453	3	
Management and Investment Income (l=i-j+k)	**30,962**	**211**		**35,053**	**237**	

Table 20 Dairy farms, organic and non-organic, full sample 2014/15

The average dairy farm	Non-organic 2014/15			Organic 2014/15		
Number (unweighted)	254			32		
Number (weighted)	6,275			264		
Farm size (2010SO)	550,951			379,330		
Farm area (adjusted ha)	155.1			148.1		
Grazing livestock units	261.6			178.3		
	£/farm	£/ha		£/farm	£/ha	
Agriculture:	507,624	3,272	91%	331,462	2,238	87%
Livestock	478,011	3,081	*94%*	320,993	2,167	*97%*
Crops	29,612	191	*6%*	10,469	71	*3%*
Agri-environment and other payments	4,864	31	1%	10,978	74	3%
Diversification & miscellaneous	18,916	122	3%	15,119	102	4%
Single Payment Scheme	25,094	162	5%	23,737	160	6%
Farm Business Output (a)	**556,498**	**3,587**	**100%**	**381,296**	**2,574**	**100%**
Livestock variable costs:	209,019	1,347	44%	131,117	885	43%
Feed	153,571	990	*73%*	91,517	618	*70%*
Vet & medicine	16,061	104	*8%*	7,801	53	*6%*
Other livestock costs	39,387	254	*19%*	31,799	215	*24%*
Crop variable costs:	35,954	232	8%	6,720	45	2%
Seed	5,713	37	*16%*	4,124	28	*61%*
Fertiliser	20,236	130	*56%*	1,024	7	*15%*
Crop protection	6,110	39	*17%*	23	0	*0%*
Other crop costs	3,895	25	*11%*	1,550	10	*23%*
Contract	28,188	182	6%	18,715	126	6%
Paid Labour	45,006	290	10%	39,570	267	13%
Machinery:	63,353	408	13%	41,541	280	14%
Fuel & oil	14,060	91	*22%*	8,838	60	*21%*
Repairs	19,322	125	*30%*	12,712	86	*31%*
Depreciation	29,971	193	*47%*	19,991	135	*48%*
Paid Rents	18,707	121	4%	15,422	104	5%
Other costs	73,012	471	15%	54,119	365	18%
Total Costs (b)	**473,239**	**3,051**	**100%**	**307,203**	**2,074**	**100%**
Profit/(loss) on sale of fixed assets	881			649		
Farm Business Income (c=a-b)	**84,139**	**542**		**74,741**	**505**	
Unpaid manual labour excl. farmer & spouse (d)	14,268	92		5,440	37	
Interest payments (e)	11,373	73		6,262	42	
Imputed rents (f)	28,301	182		23,262	157	
Director's remuneration (g)	884	6		2,162	15	
Ownership costs (h)	15,426	99		10,401	70	
Net Farm Income (i=c-d+e-f+g+h)	**69,253**	**446**		**64,863**	**438**	
Farmer & Spouse unpaid labour (j)	30,464	196		30,263	204	
Paid managerial labour (k)	75	0		453	3	
Management and Investment Income (l=i-j+k)	**38,863**	**251**		**35,053**	**237**	

4.4 LFA grazing

Organic LFA grazing farms year-on-year

The profitability of LFA grazing farms increased between 2013/14 and 2014/15. When measured by Farm Business Income (FBI) the FBI per hectare increased by 15% to £211/ha. This increase in FBI translated into a 12% increase in Net Farm Income, to £166/ha, and a 40% increase in Management and Investment Income (MII) to £80/ha (Table 21). These increases in profit were due to a 5% increase in Farm Business Output, to £910/ha, and despite a 2% increase in total costs (to £700/ha). The increase in total farm output was attributable to: a 10% increase per hectare in output from Agriculture, a 4% increase in Agri-environment incomes, a 49% increase in Diversification incomes and despite a 12% reduction in revenue from the Single payment scheme.

Overall costs increased by 2% per hectare. This included a 5% decrease in livestock variable costs (23% of total costs) which was more than offset by increases in; paid labour (by 4%, 12% of total costs) machinery (up by 11%, 21% of total costs) paid rents (13% increase, 9% of total costs) and other overheads (increased by 4%, 23% of total costs).

LFA grazing farms, organic and non-organic

The average organic LFA grazing farm is 205.9ha and carries 141.2 grazing livestock units (GLU) – this is rather larger than the average non-organic LFA grazing farm which is 115.3ha and carries 85.2 GLU.

Organic LFA grazing farms made a profit of £211/ha Farm Business Income (FBI) in 2014/15 whereas the non-organic farms only managed £123/ha (Table 22). This gap widened further when these figures are adjusted to Net farm Income (NFI) where the organic farms saw a profit of £166/ha NFI and the non-organic farms £52/ha NFI. The difference increased again at the Management and Investment Income level where the organic farms achieved £80/ha but the non-organics returned a negative £-132/ha.

Farm Business Output for the organic LFA grazing farms averaged £910/ha against £823/ha for the non-organics. While the organic LFA farms only achieved 98% of the agricultural output of the non-organic farms (at £511/ha) they more than made up for this small difference with greater revenues from Agri-environment payments (£171/ha) and the Single Payment Scheme. Organic farms earned slightly less from Diversification and miscellaneous activities than the non-organic farms.

Total costs for organic and non-organic LFA grazing farms were almost identical at £700/ha and £701/ha respectively. Organic farms had noticeably lower livestock variable costs (at £164/ha versus £225/ha) and slightly lower machinery costs of £145/ha against £148/ha. In all other cost items the organic farms had higher costs per hectare than the non-organics, with contract (£51/ha for organics and £30/ha for the non-organics) and paid labour (£85ha for organics, £38/ha for the non-organics) being the most obvious.

Further detailed commentary on organic LFA grazing farms is given in APPENDIX 3 – ORGANIC LFA CATTLE AND SHEEP

Table 21 LFA grazing farms, organic identical sample 2013/14 and 2014/15

The average LFA grazing farm	Organic identical sample 2013/14			2014/15		
Number (unweighted)	20			20		
Number (weighted)	117			102		
Farm size (2010SO)	116,942			127,296		
Farm area (adjusted ha)	198.8			205.9		
Grazing livestock units	135.0			141.2		
	£/farm	£/ha		£/farm	£/ha	
Agriculture:	92,127	463	54%	105,323	511	56%
Livestock component	84,229	424	91%	98,061	476	*93%*
Crop component	7,898	40	9%	7,262	35	*7%*
Agri-environment and other payments	32,678	164	19%	35,313	171	19%
Diversification & miscellaneous	5,766	29	3%	8,885	43	5%
Single Payment Scheme	41,345	208	24%	37,871	184	20%
Farm Business Output (a)	**171,916**	**865**	100%	**187,392**	**910**	**100%**
Livestock variable costs:	34,474	173	25%	33,871	164	23%
Feed	17,816	90	52%	15,734	76	*46%*
Vet & medicine	5,685	29	16%	6,921	34	*20%*
Other livestock costs	10,972	55	32%	11,215	54	*33%*
Crop variable costs:	6,762	34	5%	7,036	34	5%
Seed	2,614	13	39%	1,843	9	*26%*
Fertiliser	2,652	13	39%	3,463	17	*49%*
Crop protection	384	2	6%	365	2	*5%*
Other crop costs	1,112	6	16%	1,366	7	*19%*
Contract	11,364	57	8%	10,529	51	7%
Paid Labour	16,270	82	12%	17,556	85	12%
Machinery:	25,818	130	19%	29,763	145	21%
Fuel & oil	7,540	38	29%	6,682	32	*22%*
Repairs	5,556	28	22%	8,059	39	*27%*
Depreciation	12,721	64	49%	15,022	73	*50%*
Paid Rents	10,765	54	8%	12,642	61	9%
Other costs	30,436	153	22%	32,755	159	23%
Total Costs (b)	**135,889**	**684**	100%	**144,151**	**700**	**100%**
Profit/(loss) on sale of fixed assets	532			226		
Farm Business Income (c=a-b)	**36,558**	**184**		**43,467**	**211**	
Unpaid manual labour excl. farmer & spouse (d)	3,224	16		3,813	19	
Interest payments (e)	1,705	9		3,071	15	
Imputed rents (f)	15,388	77		17,118	83	
Director's remuneration (g)	2,733	14		2,181	11	
Ownership costs (h)	7,067	36		6,365	31	
Net Farm Income (i=c-d+e-f+g+h)	**29,451**	**148**		**34,154**	**166**	
Farmer & Spouse unpaid labour (j)	18,138	91		17,739	86	
Paid managerial labour (k)	46	0		70	0	
Management and Investment Income (l=i-j+k)	**11,359**	**57**		**16,485**	**80**	

Table 22 LFA grazing farms, organic and non-organic, full sample 2014/15

The average LFA grazing farm	Non-organic 2014/15			Organic 2014/15		
Number (unweighted)	217			20		
Number (weighted)	6,475			102		
Farm size (2010SO)	76,813			127,296		
Farm area (adjusted ha)	115.3			205.9		
Grazing livestock units	85.2			141.2		
	£/farm	£/ha		£/farm	£/ha	
Agriculture:	60,414	524	64%	105,323	511	56%
Livestock	57,561	499	*95%*	98,061	476	*93%*
Crops	2,853	25	*5%*	7,262	35	*7%*
Agri-environment and other payments	10,792	94	11%	35,313	171	19%
Diversification & miscellaneous	5,830	51	6%	8,885	43	5%
Single Payment Scheme	17,793	154	19%	37,871	184	20%
Farm Business Output (a)	**94,829**	**823**	**100%**	**187,392**	**910**	**100%**
Livestock variable costs:	25,913	225	32%	33,871	164	23%
Feed	15,424	134	*60%*	15,734	76	*46%*
Vet & medicine	3,506	30	*14%*	6,921	34	*20%*
Other livestock costs	6,984	61	*27%*	11,215	54	*33%*
Crop variable costs:	5,891	51	7%	7,036	34	5%
Seed	322	3	*5%*	1,843	9	*26%*
Fertiliser	4,567	40	*78%*	3,463	17	*49%*
Crop protection	385	3	*7%*	365	2	*5%*
Other crop costs	618	5	*10%*	1,366	7	*19%*
Contract	3,441	30	4%	10,529	51	7%
Paid Labour	4,380	38	5%	17,556	85	12%
Machinery:	17,099	148	21%	29,763	145	21%
Fuel & oil	4,480	39	*26%*	6,682	32	*22%*
Repairs	3,869	34	*23%*	8,059	39	*27%*
Depreciation	8,750	76	*51%*	15,022	73	*50%*
Paid Rents	6,235	54	8%	12,642	61	9%
Other costs	17,893	155	22%	32,755	159	23%
Total Costs (b)	**80,853**	**701**	**100%**	**144,151**	**700**	**100%**
Profit/(loss) on sale of fixed assets	210			226		
Farm Business Income (c=a-b)	**14,186**	**123**		**43,467**	**211**	
Unpaid manual labour excl. farmer & spouse (d)	4,110	36		3,813	19	
Interest payments (e)	1,939	17		3,071	15	
Imputed rents (f)	8,973	78		17,118	83	
Director's remuneration (g)	99	1		2,181	11	
Ownership costs (h)	2,846	25		6,365	31	
Net Farm Income (i=c-d+e-f+g+h)	**5,987**	**52**		**34,154**	**166**	
Farmer & Spouse unpaid labour (j)	21,227	184		17,739	86	
Paid managerial labour (k)	28	0		70	0	
Management and Investment Income (l=i-j+k)	**-15,212**	**-132**		**16,485**	**80**	

4.5 Lowland grazing farms

Organic lowland grazing farms year-on-year

The average organic lowland grazing farm saw Farm Business Income rise by 45% to £134/ha in 2014/15. This corresponds to a Net farm Income of £61/ha, a rise of 53% from the 2013/14 figures. However, once an imputed figure for farmer and spouse manual labour is deducted, the resultant Management and Investment Income is a negative £148/ha (Table 23).

The increase in profitability was attributable to a 5% increase in overall Farm Business Output (to £964/ha) – total costs being almost unchanged between years, at £835/ha in 2014/15. Within this gross output figure, output from agriculture increased by 8% to £472/ha, and the livestock component, which accounts for 86% of this figure, increased by 7% to £408/ha. Crop output also increased slightly (by 21%). Agri-environment payments and Single Payment revenues fell by 10% and 6% per hectare respectively. Revenues from Diversification increased by 21% to £184/ha.

Within the total costs figure of £835/ha; livestock and crop variable costs were 4% and 12% lower per hectare than in 2013/14, contract costs (6% of total) was up by 13% and paid labour (6% of total) was down by 11%. Machinery costs were down 1% at £234/ha. Paid rents, which account for 6% of total costs, were down by 12% to £54/ha. Other costs, which account for 36% of total costs, were up by 8% to £298/ha.

Lowland grazing farms, organic and non-organic

The average organic lowland grazing farms is about 10ha smaller than the average non-organic farm, has about 20 fewer livestock units and has stocking rate of 0.79GLU/ha, compared to 0.89GLU/ha for the non-organic equivalent (Table 24).

The average Farm Business Income of £158/ha for organic lowland grazing farms is not significantly lower than the £184/ha figure for non-organic lowland grazing farms. At the Net Farm Income level, where the profitability measures £79/ha for organic farms and £74/ha for non-organics, this difference is also not statistically significant.

Organic lowland grazing farms produce a total output of £973/ha compared to £1,060/ha for the non-organic farms. Agri-environment schemes, Diversification and Single payment sources collectively account for 52% of total output on the organic farms (all greater on a per hectare basis than the equivalent sources on the non-organic farms) leaving agriculture to generate the remaining 48% at £466/ha. On non-organic lowland grazing farms agricultural output at £686/ha accounts for 65% of total output.

The variable costs on organic lowland grazing farms account for 19% of total costs (£152/ha) – this figure is 35% for the non-organics at £310/ha. Contract charges and paid labour are slightly higher on non-organic farms (both £59/ha) than on the organic farms (£54/ha and £48/ha respectively) but on both farm types accounting for between 6% and 7% of total costs per hectare. Machinery costs at £219/ha (27% of total) are higher than on the non-organics (£186/ha, 21% of total). Other (overhead) costs account for 36% of total costs for organic farms (£293/ha) in comparison to the figure of £220/ha (25% of total costs) for the non-organic lowland grazing farms.

Further detailed commentary on organic lowland grazing farms is given in APPENDIX 2 – ORGANIC LOWLAND CATTLE AND SHEEP

Table 23 Lowland grazing farms, organic identical sample 2013/14 and 2014/15

The average lowland grazing farm	Organic identical sample 2013/14			2014/15		
Number (unweighted)	33			33		
Number (weighted)	745			777		
Farm size (2010SO)	67,400			65,985		
Farm area (adjusted ha)	99.0			93.0		
Grazing livestock units	74.1			73.4		
	£/farm	£/ha		£/farm	£/ha	
Agriculture:	43,085	435	47%	43,901	472	49%
Livestock component	37,803	382	88%	37,927	408	*86%*
Crop component	5,282	53	12%	5,974	64	*14%*
Agri-environment and other payments	13,166	133	14%	11,127	120	12%
Diversification & miscellaneous	15,029	152	16%	17,085	184	19%
Single Payment Scheme	19,867	201	22%	17,592	189	20%
Farm Business Output (a)	**91,147**	**921**	100%	**89,704**	**964**	**100%**
Livestock variable costs:	12,316	124	15%	11,061	119	14%
Feed	4,851	49	39%	4,152	45	*38%*
Vet & medicine	1,660	17	13%	1,592	17	*14%*
Other livestock costs	5,805	59	47%	5,317	57	*48%*
Crop variable costs:	3,060	31	4%	2,518	27	3%
Seed	1,903	19	62%	1,462	16	*58%*
Fertiliser	474	5	15%	274	3	*11%*
Crop protection	40	0	1%	42	0	*2%*
Other crop costs	643	6	21%	739	8	*29%*
Contract	4,791	48	6%	4,992	54	6%
Paid Labour	5,532	56	7%	4,644	50	6%
Machinery:	23,337	236	28%	21,749	234	28%
Fuel & oil	4,087	41	18%	3,478	37	*16%*
Repairs	4,980	50	21%	4,949	53	*23%*
Depreciation	14,269	144	61%	13,322	143	*61%*
Paid Rents	6,053	61	7%	5,013	54	6%
Other costs	27,313	276	33%	27,749	298	36%
Total Costs (b)	**82,403**	**832**	100%	**77,726**	**835**	**100%**
Profit/(loss) on sale of fixed assets	413			499		
Farm Business Income (c=a-b)	**9,157**	**92**		**12,478**	**134**	
Unpaid manual labour excl. farmer & spouse (d)	4,395	44		4,197	45	
Interest payments (e)	3,666	37		3,623	39	
Imputed rents (f)	11,260	114		13,522	145	
Director's remuneration (g)	3,478	35		3,660	39	
Ownership costs (h)	3,269	33		3,597	39	
Net Farm Income (i=c-d+e-f+g+h)	**3,915**	**40**		**5,640**	**61**	
Farmer & Spouse unpaid labour (j)	20,559	208		19,498	210	
Paid managerial labour (k)	57	1		78	1	
Management and Investment Income (l=i-j+k)	**-16,587**	**-168**		**-13,781**	**-148**	

Table 24 Lowland grazing farms, organic and non-organic, full sample 2014/15

The average lowland grazing farm	Non-organic 2014/15			Organic 2014/15		
Number (unweighted)	249			40		
Number (weighted)	11,479			936		
Farm size (2010SO)	85,758			65,321		
Farm area (adjusted ha)	102.4			91.2		
Grazing livestock units	91.5			72.5		
	£/farm	£/ha		£/farm	£/ha	
Agriculture:	70,304	686	65%	42,511	466	48%
Livestock	58,893	575	*84%*	36,775	403	*87%*
Crops	11,411	111	*16%*	5,737	63	*13%*
Agri-environment and other payments	5,290	52	5%	13,667	150	15%
Diversification & miscellaneous	16,858	165	16%	15,678	172	18%
Single Payment Scheme	16,146	158	15%	16,867	185	19%
Farm Business Output (a)	**108,598**	**1,060**	**100%**	**88,723**	**973**	**100%**
Livestock variable costs:	23,558	230	26%	11,224	123	15%
Feed	13,211	129	*56%*	4,372	48	*39%*
Vet & medicine	2,844	28	*12%*	1,666	18	*15%*
Other livestock costs	7,503	73	*32%*	5,185	57	*46%*
Crop variable costs:	8,172	80	9%	2,659	29	4%
Seed	1,141	11	*14%*	1,536	17	*58%*
Fertiliser	5,017	49	*61%*	329	4	*12%*
Crop protection	1,129	11	*14%*	42	0	*2%*
Other crop costs	885	9	*11%*	751	8	*28%*
Contract	6,033	59	7%	4,887	54	7%
Paid Labour	5,997	59	7%	4,384	48	6%
Machinery:	19,036	186	21%	19,992	219	27%
Fuel & oil	4,856	47	*26%*	3,376	37	*17%*
Repairs	4,847	47	*25%*	4,610	51	*23%*
Depreciation	9,332	91	*49%*	12,007	132	*60%*
Paid Rents	4,928	48	5%	4,858	53	7%
Other costs	22,559	220	25%	26,730	293	36%
Total Costs (b)	**90,283**	**881**	**100%**	**74,734**	**820**	**100%**
Profit/(loss) on sale of fixed assets	483			463		
Farm Business Income (c=a-b)	**18,799**	**184**		**14,452**	**158**	
Unpaid manual labour excl. farmer & spouse (d)	4,416	43		3,973	44	
Interest payments (e)	2,727	27		3,327	36	
Imputed rents (f)	13,223	129		13,591	149	
Director's remuneration (g)	20	0		3,379	37	
Ownership costs (h)	3,696	36		3,568	39	
Net Farm Income (i=c-d+e-f+g+h)	**7,602**	**74**		**7,162**	**79**	
Farmer & Spouse unpaid labour (j)	22,017	215		20,362	223	
Paid managerial labour (k)	21	0		64	1	
Management and Investment Income (l=i-j+k)	**-14,394**	**-141**		**-13,135**	**-144**	

4.6 Mixed farms

Organic mixed farms year-on-year

Organic mixed farms saw a 29% fall in Farm Business Income from £168/ha (in 2013/14) to £119/ha in 2014/15. This translated to an 80% fall in Net Farm Income to £12/ha, and that in turn, having deducted an imputed figure for farmer and spouse labour (of £237/ha in 2014/15) to a Management and Investment Income of -£224 (Table 25).

The fall in profitability was due to a 3% fall in output to £1314/ha for 2014/15, costs being held constant (£1194/ha in 2014/15). Output from agriculture, which generates 60% of total output, was down by 4% to £793/ha; livestock and crop outputs being reduced by 6% and 1% per hectare respectively. Revenues from agri-environment schemes and the single payment were also reduced, by 6% and 7% respectively, but income from diversification increased by 3% to £215/ha.

Total costs for organic mixed farms remained almost constant at £1,194/ha in 2014/15. Livestock variable costs, which account for 20% of total costs, increased by 1% to £238/ha, and crop variable costs, 8% of total at £98/ha in 2014/15 were down 14% on 2013/14. Contract costs were up 8% to £88/ha (7% of total) and paid labour, unchanged at £149/ha (12% of total). Machinery costs, which account for 22% of total costs, were up 5% to £262/ha in 2014/15. Other (overhead) costs (25% of total costs) were down 1% at £302/ha.

Mixed farms, organic and non-organic

The average size of an organic mixed farm is 121.3ha and it carries 61.4 grazing livestock units (GLU) this making it about 20 ha smaller and with about 18 fewer GLU than the average non-organic mixed farm (Table 26).

In 2014/15 the average organic mixed farm realised a Farm Business Income of £118/ha against a figure of £155/ha for the non-organic mixed farms, there is however no significant statistical difference between these two figures. There is also no significant difference between organic and non-organic mixed farms at the Net Farm Income level (£25/ha organics and £55/ha non-organics). Having deducted an imputed figure for farmer and spouse manual labour the resultant Management and Investment Income is negative for both groups; -£193 for organics and -£107 for the non-organics.

Farm Business Output for the average organic mixed farm was £1,290, about 80% of that generated by the average non-organic mixed farm. The output from agriculture was lower on the organic farms, 58% of total output at £746/ha, than on the non-organics, at 75% of total at £1,198/ha. In all other income categories: Agri-environment, Diversification and Single payment, the organic farms derived more income per hectare than the non-organic farms.

Total costs for organic mixed farms, at £1,172/ha, were 19% lower than for the non-organic farms. Variable costs of £308/ha, which form 26% of total costs on organic farms, are about 50% of those on the non-organic farms – where they constitute 42% of total costs. Contract costs were broadly similar at £82/ha (organic) and £84/ha (non-organic) and total machinery costs were similar at £251/ha on organic farms and £281/ha on the non-organics. The average organic mixed farm spent £148/ha on paid labour (13% of total costs) against £117/ha (8% of total) for non-organic farms. Other (overhead) costs, at £329/ha, make up 28% of total costs against a figure of £274/ha (19% of total costs) for the non-organic farms.

Table 25 Mixed farms, organic identical sample 2013/14 and 2014/15

The average mixed farm	Organic identical sample 2013/14			2014/15		
Number (unweighted)	21			21		
Number (weighted)	258			280		
Farm size (2010SO)	129,269			121,762		
Farm area (adjusted ha)	122.6			114.9		
Grazing livestock units	66.6			63.7		
	£/farm	£/ha		£/farm	£/ha	
Agriculture:	101,438	828	61%	91,143	793	60%
Livestock component	63,512	518	63%	55,836	486	*61%*
Crop component	37,926	309	37%	35,307	307	*39%*
Agri-environment and other payments	15,804	129	9%	13,924	121	9%
Diversification & miscellaneous	25,461	208	15%	24,696	215	16%
Single Payment Scheme	24,127	197	14%	21,135	184	14%
Farm Business Output (a)	**166,830**	**1361**	100%	**150,898**	**1314**	**100%**
Livestock variable costs:	28,928	236	20%	27,310	238	20%
Feed	18,389	150	64%	18,265	159	*67%*
Vet & medicine	1,677	14	6%	1,661	14	*6%*
Other livestock costs	8,862	72	31%	7,384	64	*27%*
Crop variable costs:	14,055	115	10%	11,269	98	8%
Seed	8,946	73	64%	6,755	59	*60%*
Fertiliser	1,947	16	14%	1,786	16	*16%*
Crop protection	507	4	4%	584	5	*5%*
Other crop costs	2,655	22	19%	2,144	19	*19%*
Contract	9,969	81	7%	10,075	88	7%
Paid Labour	18,228	149	12%	17,085	149	12%
Machinery:	30,515	249	21%	30,135	262	22%
Fuel & oil	6,390	52	21%	6,701	58	*22%*
Repairs	7,312	60	24%	6,961	61	*23%*
Depreciation	16,814	137	55%	16,473	143	*55%*
Paid Rents	7,629	62	5%	6,596	57	5%
Other costs	37,226	304	25%	34,693	302	25%
Total Costs (b)	**146,551**	**1196**	100%	**137,164**	**1,194**	**100%**
Profit/(loss) on sale of fixed assets	259			-30		
Farm Business Income (c=a-b)	**20,538**	**168**		**13,705**	**119**	
Unpaid manual labour excl. farmer & spouse (d)	3,907	32		2,231	19	
Interest payments (e)	3,345	27		3,796	33	
Imputed rents (f)	20,316	166		21,140	184	
Director's remuneration (g)	516	4		435	4	
Ownership costs (h)	7,351	60		6,814	59	
Net Farm Income (i=c-d+e-f+g+h)	**7,527**	**61**		**1,379**	**12**	
Farmer & Spouse unpaid labour (j)	27,129	221		27,271	237	
Paid managerial labour (k)	117	1		109	1	
Management and Investment Income (l=i-j+k)	**-19,486**	**-159**		**-25,784**	**-224**	

Table 26 Mixed farms, organic and non-organic, full sample 2014/15

The average mixed farm	Non-organic 2014/15			Organic 2014/15		
Number (unweighted)	178			23		
Number (weighted)	5,963			297		
Farm size (2010SO)	203,884			121,172		
Farm area (adjusted ha)	141.2			121.3		
Grazing livestock units	78.9			61.4		
	£/farm	£/ha		£/farm	£/ha	
Agriculture:	169,191	1,198	75%	90,437	746	58%
Livestock	92,147	653	*54%*	53,187	439	*59%*
Crops	77,044	546	*46%*	37,250	307	*41%*
Agri-environment and other payments	7,872	56	3%	14,565	120	9%
Diversification & miscellaneous	23,142	164	10%	28,831	238	18%
Single Payment Scheme	24,793	176	11%	22,593	186	14%
Farm Business Output (a)	**224,998**	**1,593**	**100%**	**156,427**	**1,290**	**100%**
Livestock variable costs:	48,894	346	24%	25,905	214	18%
Feed	34,549	245	*71%*	17,289	143	*67%*
Vet & medicine	3,523	25	*7%*	1,570	13	*6%*
Other livestock costs	10,821	77	*22%*	7,046	58	*27%*
Crop variable costs:	37,074	263	18%	11,414	94	8%
Seed	6,196	44	*17%*	6,918	57	*61%*
Fertiliser	15,780	112	*43%*	1,883	16	*17%*
Crop protection	11,746	83	*32%*	551	5	*5%*
Other crop costs	3,352	24	*9%*	2,062	17	*18%*
Contract	11,841	84	6%	9,904	82	7%
Paid Labour	16,529	117	8%	17,953	148	13%
Machinery:	39,705	281	19%	30,469	251	21%
Fuel & oil	9,948	70	*25%*	7,035	58	*23%*
Repairs	10,379	73	*26%*	7,124	59	*23%*
Depreciation	19,378	137	*49%*	16,310	134	*54%*
Paid Rents	11,659	83	6%	6,648	55	5%
Other costs	38,763	274	19%	39,846	329	28%
Total Costs (b)	**204,466**	**1,448**	**100%**	**142,139**	**1,172**	**100%**
Profit/(loss) on sale of fixed assets	1,424			41		
Farm Business Income (c=a-b)	**21,957**	**155**		**14,330**	**118**	
Unpaid manual labour excl. farmer & spouse (d)	6,993	50		2,101	17	
Interest payments (e)	4,656	33		6,457	53	
Imputed rents (f)	19,456	138		22,908	189	
Director's remuneration (g)	1,234	9		410	3	
Ownership costs (h)	6,352	45		6,836	56	
Net Farm Income (i=c-d+e-f+g+h)	**7,750**	**55**		**3,024**	**25**	
Farmer & Spouse unpaid labour (j)	22,885	162		26,565	219	
Paid managerial labour (k)	70	0		102	1	
Management and Investment Income (l=i-j+k)	**-15,065**	**-107**		**-23,439**	**-193**	

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 27 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 28 and Table 38 show the sample size of organic crop and livestock enterprises that have been analysed to gross margin level. Where sample numbers allow analyses for a premium group (top third by weighted numbers by GM/ha or GM/head) are presented.

There are 11 poultry enterprises recorded to gross margin level but they are a mix of: layers (4) turkeys (3) broilers (2) and other poultry (2) and as such a gross margin of this composite group would be of little value.

For livestock enterprises, forage areas and stocking rates are calculated on the basis of the total adjusted forage area including commons; see APPENDIX 6 – DEFINITION OF TERMS 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 32 enterprises comprises of 3 LFA and 29 lowland dairy farms, of these, 3 are retailers and 29 are wholesalers.

Crop enterprise gross margins are shown in Table 29 to Table 36.

Livestock enterprise gross margins are shown in Table 39 to Table 47.

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

5.2 Organic cropping enterprises

Table 27 Sample distribution of organic crop margin data (>10 records) by robust farm type and size (2010SO)

Robust farm type	Small (€2,500-100,000)	Medium (€100,000-250,000	Large (>€250,000)	All
Cereals	12	13	9	34
General cropping	7	1	13	21
Horticulture	5	1	0	6
Pigs	0	0	0	0
Poultry	0	0	2	2
Dairy	0	0	21	21
LFA Grazing	5	0	7	12
Lowland Grazing	14	11	9	34
Mixed	8	16	10	34
All	**51**	**42**	**71**	**164**

Table 28 Sample size for organic crop gross margin analysis

Enterprise	Sample			Premium		
	Sample size	Weighted sample size	Average crop area (ha)	Sample size	Weighted sample size	Average crop area (ha)
Winter wheat	26	360	18.0			
Spring wheat	15	142	27.4			
Spring barley	41	571	14.7	14	188	16.7
Winter oats	17	244	13.5			
Spring oats	34	473	12.7	10	160	5.9
Spring beans	10	96	20.1			
Field vegetables	11	182	13.2			
Flowers etc	10	404	2.6			

Table 29 Organic winter wheat gross margin

2014 harvest year	Sample	26	crops	
	Sample weighted	360	crops	
	Average crop area	18.0	hectares	
Crop Yield and Output		**per crop**	**per ha**	**std dev**
Yield (tonnes and tonnes/ha)		72	4.0	1.2
Price of crop sold (£/t)		228		33
Crop output		15,465	861	274
By product output		1,052	59	65
Area payment (Protein or energy crop supplements)		0	0	0
Total		**16,517**	**920**	
Variable Costs		**per crop**	**per ha**	
Seed		1,847	103	84
Fertiliser (incl. lime, purchased FYM, trace elements, etc.)		555	31	39
Crop protection materials		201	11	22
Other crop costs (including levies and commission)		276	15	27
Fuel for heating & drying		36	2	7
Total		**2,916**	**162**	**96**
Gross Margin		**13,601**	**757**	**260**

Table 30 Organic spring wheat gross margin

2014 harvest year	Sample	15	crops	
	Sample weighted	142	crops	
	Average crop area	27.4	hectares	
Crop Yield and Output		**per crop**	**per ha**	**std dev**
Yield (tonnes and tonnes/ha)		91	3.3	1.1
Price of crop sold (£/t)		257		28
Crop output		22,058	804	303
By product output		2,004	73	65
Area payment (Protein or energy crop supplements)		0	0	0
Total		**24,063**	**877**	
Variable Costs		**per crop**	**per ha**	
Seed		2,505	91	54
Fertiliser (incl. lime, purchased FYM, trace elements, etc.)		973	35	39
Crop protection materials		45	2	5
Other crop costs (including levies and commission)		846	31	33
Fuel for heating & drying		109	4	8
Total		**4,478**	**163**	**59**
Gross Margin		**19,584**	**714**	**313**

Table 31 Organic spring barley gross margin

2014 harvest year	Sample	41	crops		Top third	14	crops	
	Sample weighted	571	crops		Top third weighted	188	crops	
	Average crop area	14.7	hectares		Average crop area	16.7	hectares	
Crop Yield and Output		**per crop**	**per ha**	**std dev**		**per crop**	**per ha**	**std dev**
Yield (tonnes and tonnes/ha)		49	3.3	1.8		69	4.1	2.9
Price of crop sold (£/t)		195		35		219		26
Crop output		9,014	614	206		12,943	777	199
By product output		840	57	62		1,269	76	77
Area payment (Protein or energy crop supplements)		0	0	0		0	0	0
Total		**9,854**	**671**			**14,212**	**853**	
Variable Costs		**per crop**	**per ha**			**per crop**	**per ha**	
Seed		1,457	99	49		1,471	88	43
Fertiliser (incl. lime, purchased FYM, trace elements, etc.)		397	27	54		438	26	56
Crop protection materials		24	2	10		32	2	2
Other crop costs (including levies and commission)		215	15	27		333	20	23
Fuel for heating & drying		50	3	5		49	3	6
Total		**2,143**	**146**	**85**		**2,323**	**139**	**75**
Gross Margin		**7,711**	**525**	**216**		**11,889**	**714**	**262**

Table 32 Organic winter oats gross margin

2014 harvest year	Sample	17	crops	
	Sample weighted	244	crops	
	Average crop area	13.5	hectares	
Crop Yield and Output				
		per crop	per ha	std dev
Yield (tonnes and tonnes/ha)		59	4.4	1.1
Price of crop sold (£/t)		194		32
Crop output		11,064	820	266
By product output		1,136	84	124
Area payment (Protein or energy crop supplements)		0	0	0
Total		**12,199**	**904**	
Variable Costs		**per crop**	**per ha**	
Seed		1,460	108	42
Fertiliser (incl. lime, purchased FYM, trace elements, etc.)		264	20	55
Crop protection materials		59	4	16
Other crop costs (including levies and commission)		301	22	27
Fuel for heating & drying		11	1	8
Total		**2,095**	**155**	**82**
Gross Margin		**10,104**	**749**	**258**

Table 33 Organic spring beans gross margin

2014 harvest year	Sample	10	crops	
	Sample weighted	96	crops	
	Average crop area	20.1	hectares	
Crop Yield and Output				
		per crop	per ha	std dev
Yield (tonnes and tonnes/ha)		64	3.2	1.3
Price of crop sold (£/t)		269		11
Crop output		17,298	861	386
By product output		0	0	0
Area payment (Protein or energy crop supplements)		0	0	0
Total		**17,298**	**861**	
Variable Costs		**per crop**	**per ha**	
Seed		2,020	100	39
Fertiliser (incl. lime, purchased FYM, trace elements, etc.)		349	17	30
Crop protection materials		237	12	23
Other crop costs (including levies and commission)		365	18	39
Fuel for heating & drying		55	3	6
Total		**3,027**	**151**	**91**
Gross Margin		**14,271**	**710**	**329**

Table 34 Organic spring oats gross margin

2014 harvest year	Sample	34	crops		Top third	10	crops	
	Sample weighted	473	crops		Top third weighted	160	crops	
	Average crop area	12.7	hectares		Average crop area	5.9	hectares	
Crop Yield and Output		**per crop**	**per ha**	**std dev**		**per crop**	**per ha**	**std dev**
Yield (tonnes and tonnes/ha)		39	3.1	1.0		22	3.8	1.3
Price of crop sold (£/t)		231		31		222		17
Crop output		8,442	667	235		4,577	780	286
By product output		981	77	266		1,104	188	450
Area payment (Protein or energy crop supplements)		0	0	0		0	0	0
Total		**9,423**	**744**			**5,681**	**969**	
Variable Costs		**per crop**	**per ha**			**per crop**	**per ha**	
Seed		1,081	85	54		531	91	79
Fertiliser (incl. lime, purchased FYM, trace elements, etc.)		294	23	55		0	0	23
Crop protection materials		14	1	2		16	3	3
Other crop costs (including levies and commission)		423	33	31		104	18	31
Fuel for heating & drying		31	2	4		9	1	3
Total		**1,842**	**145**	**75**		**659**	**112**	**64**
Gross Margin		**7,581**	**599**	**220**		**5,022**	**856**	**309**

Table 35 Organic field vegetables gross margin

2014 harvest year	Sample	11	crops	
	Sample weighted	182	crops	
	Average crop area	13.2	hectares	
Crop Yield and Output				
		per crop	per ha	std dev
Yield (tonnes and tonnes/ha)		155	11.8	11.9
Price of crop sold (£/t)		-		-
Crop output		102,989	7,832	5,872
By product output		0	0	0
Area payment (Protein or energy crop supplements)		0	0	0
Total		**102,989**	**7,832**	
Variable Costs		**per crop**	**per ha**	
Seed		11,723	891	587
Fertiliser (incl. lime, purchased FYM, trace elements, etc.)		1,457	111	117
Crop protection materials		436	33	33
Other crop costs (including levies and commission)		17,692	1,345	1,269
Fuel for heating & drying		0	0	0
Total		**31,307**	**2,381**	**1,894**
Gross Margin		**71,681**	**5,451**	**4,330**

Table 36 Organic flowers etc. gross margin

2014 harvest year	Sample	10	crops	
	Sample weighted	404	crops	
	Average crop area	2.6	hectares	
Crop Yield and Output				
		per crop	per ha	std dev
Yield (tonnes and tonnes/ha)		-	-	-
Price of crop sold (£/t)		-		-
Crop output		26,418	9,987	6,417
By product output		0	0	0
Area payment (Protein or energy crop supplements)		0	0	0
Total		**26,418**	**9,987**	
Variable Costs		**per crop**	**per ha**	
Seed		1,800	680	426
Fertiliser (incl. lime, purchased FYM, trace elements, etc.)		114	43	82
Crop protection materials		0	0	0
Other crop costs (including levies and commission)		3,032	1,146	804
Fuel for heating & drying		0	0	0
Total		**4,945**	**1,869**	**1,100**
Gross Margin		**21,473**	**8,117**	**5,407**

5.3 Organic livestock enterprises

Table 37 Sample distribution of organic livestock margin data (>10 records) by robust farm type and size (2010SO)

Robust farm type	Small (€2,500-100,000)	Medium (€100,000-250,000)	Large (>€250,000)	All
Cereals	1	3	6	10
General cropping	2	2	5	9
Horticulture	4	0	0	4
Pigs	0	0	0	0
Poultry	0	1	3	4
Dairy	2	16	49	67
LFA Grazing	15	19	20	54
Lowland Grazing	45	36	13	94
Mixed	13	19	10	42
All	**82**	**96**	**106**	**284**

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	32	260	11	88
LFA suckler cows	18	111	-	-
Lowland suckler cows	62	1226	27	408
Dairy followers	27	226	-	-
Fat cattle from suckler bred calves or stores	49	801	16	266
Store cattle from suckler bred calves or stores	27	558	-	-
Lowland sheep	39	548	20	183
LFA sheep (upland)	15	98	-	-

Table 39 Organic dairy cows gross margin – sample

Sample size	32			
No farms in population	260			
Production information				
Average cow numbers	117			
Enterprise grazing livestock units	117.8			
Total milk produced (litres)	735,381			
Total milk produced per cow (lt/cow)	6,289			
Average price of milk sold (pence/lt)	38.41			
Calves per cow (sold or transferred)	0.83			
Herd replacement rate (%)	0.25			
Adjusted forage area (including commons)	93.2			
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	282,454	2,416	38.4	3,030
Calves and other dairy related output	11,722	100	1.6	126
Less Herd Depreciation	23,959	205	3.3	257
Total Gross Output (A)	**270,217**	**2,311**	**36.7**	**2,899**
Variable Costs				
Concentrates	69,194	592	9.4	742
Coarse fodder	3,217	28	0.4	35
Vet and Medicines	6,530	56	0.9	70
Other livestock costs	25,305	216	3.4	271
Total Variable Costs (B)	**104,247**	**892**	**14.2**	**1,118**
Gross Margin before forage (A-B) = (C)	**165,970**	**1,419**	**22.6**	**1,781**
Forage Variable Costs (D)	2,510	21	0.3	27
Gross Margin after forage (C-D) = (E)	**163,461**	**1,398**	**22.2**	**1,754**
Prices				
Average quota leasing in price (pence/lt)	na			
Calf price (£/calf)	121			
Cull cow price (£/cow)	602			
Replacement heifer/cow price (£/head)	1,381			
Forage Costs				
Fertilizer (£/ha)	5			
Seed (£/ha)	14			
Spray (£/ha)	0			
Other crop costs (£/ha)	7			
Total (£/ha)	27			
Unadjusted forage area excluding commons	89.5			

Table 40 Organic dairy cows gross margin – premium

Premium sample size	11			
No farms in population	88			
Production information				
Average cow numbers	143			
Enterprise grazing livestock units	144.2			
Total milk produced (litres)	1,087,752			
Total milk produced per cow (lt/cow)	7,585			
Average price of milk sold (pence/lt)	39.33			
Calves per cow (sold or transferred)	0.88			
Herd replacement rate (%)	0.24			
Adjusted forage area (including commons)	99.9			
Stocking rate (cows per adj. forage ha.)	1.44			
Stocking rate (GLUs per adj. forage ha.)	1.44			
Enterprise Output	**Total**	**per cow**	**per litre**	**per adj for ha**
	(£)	**(£)**	**(pence)**	**(£)**
Milk	427,837	2,983	39.3	4,282
Calves and other dairy related output	13,973	97	1.3	140
Less Herd Depreciation	32,516	227	3.0	325
Total Gross Output (A)	**409,294**	**2,853**	**37.6**	**4,097**
Variable Costs				
Concentrates	112,417	784	10.3	1,125
Coarse fodder	2,871	20	0.3	29
Vet and Medicines	10,453	73	1.0	105
Other livestock costs	34,707	242	3.2	347
Total Variable Costs (B)	**160,447**	**1,119**	**14.7**	**1,606**
Gross Margin before forage (A-B) = (C)	**248,846**	**1,734**	**22.9**	**2,491**
Forage Variable Costs (D)	3,667	26	0.3	37
Gross Margin after forage (C-D) = (E)	**245,179**	**1,708**	**22.5**	**2,454**
Prices				
Average quota leasing in price (pence/lt)	na			
Calf price (£/calf)	110			
Cull cow price (£/cow)	569			
Replacement heifer/cow price (£/head)	1,490			
Forage Costs				
Fertilizer (£/ha)	5			
Seed (£/ha)	18			
Spray (£/ha)	0			
Other crop costs (£/ha)	13			
Total (£/ha)	37			
Unadjusted forage area excluding commons	101.0			

Table 41 Organic dairy followers gross margin

	Sample	
No farms in sample	27	
No farms	226	
Production information		
Enterprise grazing livestock units *	47.8	
Adjusted forage area (including commons)	36.36	
Stocking rate (GLUs per adj. forage ha.)	1.31	
Enterprise Output		**per adj for ha**
		(£)
Cattle output	36,924	1,015
Total Output (A)	**36,924**	**1,015**
Variable Costs		
Concentrates	15,350	422
Coarse fodder	1,383	38
Vet and Medicines	941	26
Other livestock costs	4,866	134
Total Variable Costs (B)	**22,541**	**620**
Gross Margin before forage (A-B) = (C)	**14,383**	**395**
Forage Variable Costs (D)	404	11
Gross Margin after forage (C-D) = (E)	**13,979**	**384**
Prices		
Dairy heifer transfer or sale price £	1,382	
Finished cattle price £	934	
Store cattle price £	770	
Forage Costs		
Fertilizer (£/ha)	2	
Seed (£/ha)	6	
Spray (£/ha)	0	
Other crop costs (£/ha)	3	
Total (£/ha)	11	
Unadjusted forage area excluding commons	36.85	
* excludes stock away on agistment		

Table 42 Organic LFA Suckler cows gross margin

	Sample		
No farms in sample	18		
No farms in population	111		
Production information			
Average cow numbers	44		
Enterprise grazing livestock units *	43.3		
Calves per cow	0.95		
Herd replacement rate (%)	18%		
Adjusted forage area (including commons)	56.65		
Stocking rate (cows per adj. forage ha.)	0.78		
Stocking rate (GLUs per adj. forage ha.)	0.76		
Enterprise Output	**Total**	**per cow**	**per adj for ha**
	(£)	**(£)**	**(£)**
Suckler calves †	23,930	538	422
Less Herd Depreciation	3,205	72	57
Total Output (A)	**20,725**	**466**	**365**
Variable Costs			
Concentrates	1,181	27	21
Coarse fodder	624	14	11
Vet and Medicines	1,190	27	21
Other livestock costs	2,291	52	40
Total Variable Costs (B)	**5,286**	**120**	**93**
Gross Margin before forage (A-B) = (C)	**15,439**	**346**	**272**
Forage Variable Costs	391	9	7
Gross Margin after forage (A-B) = (C)	**15,048**	**337**	**265**
Prices			
Calf price (£/calf) *	541		
Cull cow price (£/cow)	876		
Replacement heifer/cow price (£/head)	1,074		
Forage Costs			
Fertilizer (£/ha)	3		
Seed (£/ha)	2		
Spray (£/ha)	0		
Other crop costs (£/ha)	2		
Total (£/ha)	7		
Unadjusted forage area excluding commons	95.95		

* excludes stock away on agistment

† Calf price is as sold off the cow or a transfer value at weaning

Table 43 Organic lowland suckler cows gross margin

	Sample			Premium		
No farms in sample	62			27		
No farms in population	1,226			408		
Production information						
Average cow numbers	28			35		
Enterprise grazing livestock units *	28.1			35.4		
Calves per cow	0.99			1.07		
Herd replacement rate (%)	16%			17%		
Adjusted forage area (including commons)	35.66			45.03		
Stocking rate (cows per adj. forage ha.)	0.79			0.78		
Stocking rate (GLUs per adj. forage ha.)	0.79			0.79		
Enterprise Output	**Total**	**per cow**	**per adj for ha**	**Total**	**per cow**	**per adj for ha**
	(£)	**(£)**	**(£)**	**(£)**	**(£)**	**(£)**
Suckler calves †	12,490	442	350	19,403	549	431
Less Herd Depreciation	1,828	65	51	1,733	49	38
Total Output (A)	**10,661**	**377**	**299**	**17,670**	**500**	**393**
Variable Costs						
Concentrates	682	24	19	748	21	17
Coarse fodder	437	15	12	798	23	18
Vet and Medicines	551	19	15	741	21	16
Other livestock costs	1,445	51	41	1,419	40	32
Total Variable Costs (B)	**3,114**	**109**	**87**	**3,707**	**105**	**83**
Gross Margin before forage (A-B) = (C)	**7,547**	**268**	**212**	**13,963**	**395**	**310**
Forage Variable Costs	294	10	8	206	6	5
Gross Margin after forage (A-B) = (C)	**7,253**	**258**	**204**	**13,757**	**389**	**305**
Prices						
Calf price (£/calf) *	519			597		
Cull cow price (£/cow)	763			807		
Replacement heifer/cow price (£/head)	1,007			967		
Forage Costs						
Fertilizer (£/ha)	2			1		
Seed (£/ha)	4			2		
Spray (£/ha)	0			0		
Other crop costs (£/ha)	3			2		
Total (£/ha)	8			5		
Unadjusted forage area excl. commons (ha)	32.02			37.92		
* excludes stock away on agistment						
† Calf price is as sold off the cow or a transfer value at weaning						

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

	Sample		Premium	
No farms in sample	49		16	
No farms	801		266	
Production information				
Enterprise grazing livestock units *	34.2		42.7	
Adjusted forage area (including commons)	44.17		47.64	
Stocking rate (GLUs per adj. forage ha.)	0.77		0.90	
Enterprise Output		**per adj for ha**		**per adj for ha**
		(£)		**(£)**
Cattle output	21,405	485	37,103	779
Total Output (A)	**21,405**	**485**	**37,103**	**779**
Variable Costs				
Concentrates	3,207	73	3,498	73
Coarse fodder	356	8	641	13
Vet and Medicines	541	12	897	19
Other livestock costs	2,729	62	3,206	67
Total Variable Costs (B)	**6,833**	**155**	**8,241**	**172**
Gross Margin before forage (A-B) = (C)	**14,572**	**330**	**28,862**	**607**
Forage Variable Costs (D)	536	12	558	12
Gross Margin after forage (C-D) = (E)	**14,036**	**318**	**28,304**	**595**
Prices				
Dairy heifer transfer or sale price £	na		na	
Finished cattle price £	1,159		1,198	
Store cattle price £	894		787	
Forage Costs				
Fertilizer (£/ha)	3		3	
Seed (£/ha)	6		5	
Spray (£/ha)	0		1	
Other crop costs (£/ha)	3		4	
Total (£/ha)	12		12	
Unadjusted forage area excl. commons (ha)	42.95		42.72	
* excludes stock away on agistment				

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

	Sample	
No farms in sample	27	
No farms	558	
Production information		
Enterprise grazing livestock units *	14.1	
Adjusted forage area (including commons)	19.35	
Stocking rate (GLUs per adj. forage ha.)	0.73	
Enterprise Output		**per adj for ha**
		(£)
Cattle output	7,844	405
Total Output (A)	**7,844**	**405**
Variable Costs		
Concentrates	835	43
Coarse fodder	148	8
Vet and Medicines	175	9
Other livestock costs	1,222	63
Total Variable Costs (B)	**2,379**	**123**
Gross Margin before forage (A-B) = (C)	**5,465**	**282**
Forage Variable Costs (D)	95	5
Gross Margin after forage (C-D) = (E)	**5,369**	**277**
Prices		
Dairy heifer transfer or sale price £	na	
Finished cattle price £	849	
Store cattle price £	718	
Forage Costs		
Fertilizer (£/ha)	1	
Seed (£/ha)	2	
Spray (£/ha)	0	
Other crop costs (£/ha)	2	
Total (£/ha)	5	
Unadjusted forage area excl. commons (ha)	18.69	
* excludes stock away on agistment		

Table 46 Organic lowland sheep gross margin

2014 lamb crop	Sample			Premium		
No farms in sample	39			20		
No farms in population	548			183		
Production information						
Average ewe numbers	190			244		
Enterprise grazing livestock units *	29.9			38.6		
Lambs reared per ewe	1.40			1.55		
Flock replacement rate (%)	26%			29%		
Adjusted forage area (incl. commons)	35.05			41.02		
Stocking rate (ewes per adj. forage ha.)	5.42			5.94		
Stocking rate (GLUs per adj. forage ha.)	0.85			0.94		
Enterprise Output	**Total**	**per ewe**	**per adj for ha**	**Total**	**per ewe**	**per adj for ha**
	(£)	**(£)**	**(£)**	**(£)**	**(£)**	**(£)**
Lambs †	20,127	106	574	31,696	130	773
Wool	546	3	16	769	3	19
Less Flock Depreciation	3,041	16	87	2,934	12	72
Total Output (A)	**17,632**	**93**	**503**	**29,532**	**121**	**720**
Variable Costs						
Concentrates	2,411	13	69	2,413	10	59
Coarse fodder	446	2	13	866	4	21
Vet and Medicines	1,464	8	42	1,985	8	48
Other livestock costs	2,108	11	60	2,962	12	72
Total Variable Costs (B)	**6,428**	**34**	**184**	**8,225**	**34**	**200**
Gross Margin before forage (A-B) = (C)	**11,204**	**59**	**319**	**21,307**	**87**	**520**
Forage Variable Costs (D)	319	2	9	370	2	9
Gross Margin after forage (C-D) = (E)	**10,885**	**57**	**310**	**20,936**	**85**	**511**
Prices	**£/hd**	**% sales**		**£/hd**	**% sales**	
Fat Lamb price	76	80		79	97	
Store Lamb price	46	18		66	1	
Ewe Lamb price	111	2		62	2	
Draft ewe price	95			134		
Cull ewe price (£/ewe)	55			67		
Wool price (£/kg)	1.08			1.02		
Replacement price (£/head)	96			98		
Forage Costs						
Fertilizer (£/ha)	2			2		
Seed (£/ha)	5			4		
Spray (£/ha)	0			0		
Other crop costs (£/ha)	2			2		
Total (£/ha)	9			9		
Unadjusted forage area excl. commons (ha)	37.73			41.81		
* excludes stock away on agistment, † includes all enterprise output except wool						

Table 47 Organic LFA sheep gross margin

	Sample		
No farms in sample	15		
No farms in population	98		
Production information			
Average ewe numbers	428		
Enterprise grazing livestock units *	59.1		
Lambs reared per ewe	1.43		
Flock replacement rate (%)	29%		
Adjusted forage area (including commons)	76.30		
Stocking rate (ewes per adj. forage ha.)	5.61		
Stocking rate (GLUs per adj. forage ha.)	0.78		
Enterprise Output	**Total**	**per ewe**	**per adj for ha**
	(£)	**(£)**	**(£)**
Lambs †	50,972	119	668
Wool	1,030	2	14
Less Flock Depreciation	5,231	12	69
Total Output (A)	**46,771**	**109**	**613**
Variable Costs			
Concentrates	5,810	14	76
Coarse fodder	1,216	3	16
Vet and Medicines	3,973	9	52
Other livestock costs	4,297	10	56
Total Variable Costs (B)	**15,297**	**36**	**200**
Gross Margin before forage (A-B) = (C)	**31,474**	**73**	**413**
Forage Variable Costs (D)	707	2	9
Gross Margin after forage (C-D) = (E)	**30,768**	**71**	**404**
Prices	**£/hd**	**% sales**	
Fat Lamb price	77	84	
Store Lamb price	50	10	
Ewe Lamb price	90	6	
Draft ewe price	114		
Cull ewe price (£/ewe)	62		
Wool price (£/kg)	0.99		
Replacement price (£/head)	97		
Forage Costs			
Fertilizer (£/ha)	4		
Seed (£/ha)	2		
Spray (£/ha)	0		
Other crop costs (£/ha)	2		
Total (£/ha)	9		
Unadjusted forage area excl. commons (ha)	109.87		
* excludes stock away on agistment, † includes all enterprise output except wool			

6 APPENDIX 1 – ORGANIC CROPPING

Performance of Organic Arable Businesses

Market Overview and Organic Crop Areas

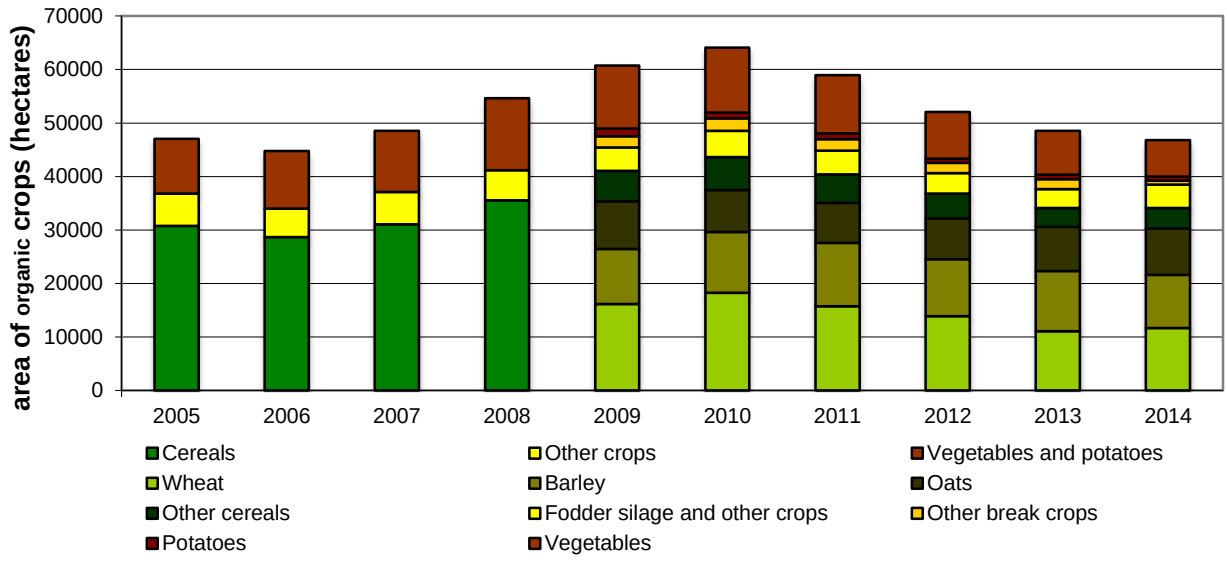
In a second successive year of increased sales of organic foods, the total UK market was £1.86 billion in 2014[2]. Sales of organic products increased by four per cent, led by box schemes, the main driver of this growth, with sales increasing by 11.7 per cent. Produce World launched a branded organic vegetable box, to be marketed through Ocado, in October 2014[3].

Despite this increase in the overall market for organic produce in 2014, there was a further reduction in the number of organic arable producers in England and a corresponding reduction in the area of organic crops. However, increased demand for organic breakfast cereals resulted in an increase in the area of organic oats.

As shown in Figure 6.1, in England, the area of organic crops reduced by 1,755 hectares to 46,800 hectares, representing 1.2 per cent of the area of all arable crops[4]. This was the fourth successive reduction in the organic crop area and the lowest area grown since 2006. However, this four per cent decline was not as great as in previous years. Some 1,100 hectares of crops were recorded as in-conversion to organic.

In 2014, there were 2,227 organic crop producers (2,299 in 2013), of which 1,082 were located in the South West region. In comparison with 2009, there were 24 per cent fewer organic crop producers in 2014. The decline was greatest in the East of England and East Midlands where there were 33 per cent fewer organic crop producers in 2014 than in 2009.

Figure 6.1 Area of Organic Crops in England, 2005 to 2014



[2] Soil Association, 24 February 2015

[3] Produce World, October 2014

[4] Organic Farming Statistics 2014, 23 June 2015, Defra

At 11,700 hectares, the organic wheat area was six per cent higher than the unusually small wheat crop of 2013, although still 22 per cent lower than the five year average. The organic barley area of 9,900 hectares was 11 per cent below the five year average, but the area of oats has increased annually since 2011 to reach 8,700 hectares in 2014, eight per cent higher than the five year average. Organic 'other cereals' accounted for 16 per cent of the total crop and organic oats accounted for eight per cent of the total crop showing that organic oats, rye and spelt are attractive cereals to consumers. This is consistent with the news that sales of organic breakfast cereals increased by 4.2 per cent in 2014, relative to 2013. We are aware of a decline in the number of producers of organic triticale and there were insufficient growers of this crop for us to report gross margins in 2013 or 2014.

The area of organic vegetables was 17 per cent lower than in 2013 and 34 per cent below the five year average. Although the organic potato area, at 800 hectares, was similar in 2014 to 2013, this was 22 per cent lower than the five year average. These development explain the two per cent reduction in sales of organic vegetables between 2013 and 2014.

The Sample of Organic Farms

The sample of the grouped organic Cereals and General Cropping arable farms in the Farm Business Survey amounted to 22 farms (also 22 in 2013/2014). In comparison with the previous year, these farms were about 20 per cent smaller, and carried less livestock.
We report results if there are at least ten farms in a sample. We advise caution when comparing results from smaller groupings of farms, of less than about 15 farms.

Organic Business Performance

Given the small sample size and variability between farms, the reported annual change in farm performance should be treated as indicative only. At -£91 per hectare the contribution of agriculture to the Farm Business Income (FBI) or organic arable farms was similar to the -£84 per hectare recorded in 2013/2014.

The reduced crop output resulted from lower crop prices, partially mitigated by higher yields and, although seed costs were lower, organic farmers spent more on permitted fertilisers and crop protection products.

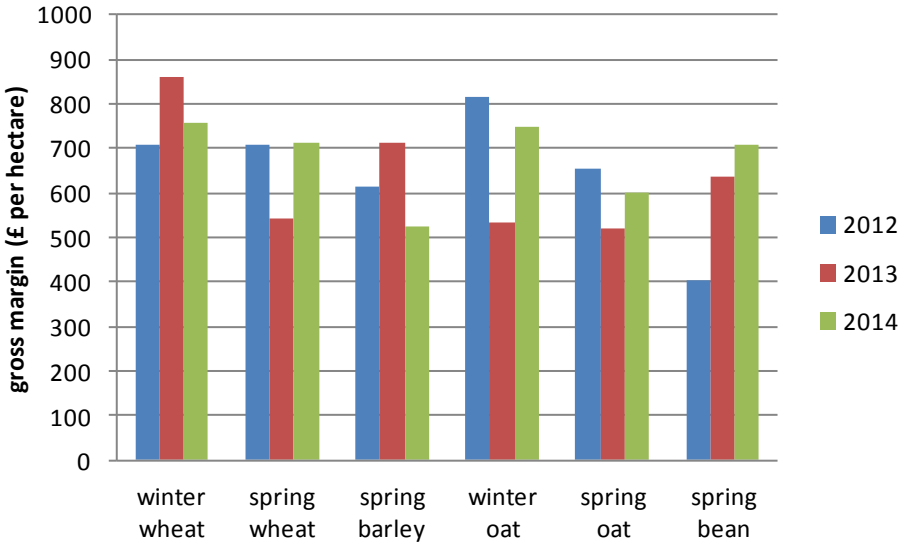
Within the sample of arable businesses in the FBS, about 12 per cent of the area of combinable crops comprised pulses and 84 per cent were cereals. About 35 per cent of this area of cereals was used to cultivate crops other than wheat or barley, of which oats were the most popular.

Organic Crop Performance

In common with non organic businesses, organic produces grew high yielding crops in 2014; these were often of good quality. However, production economics were dominated by reduced crop base prices. Demand for high quality cereals for human consumption ensured relatively high organic premiums for spring wheat and spring oats. The net effect was that the output and gross margin of spring barley and winter wheat crops were considerably below average, whilst the output and gross margin of other crops were above average. These results are shown in figure 6.2.

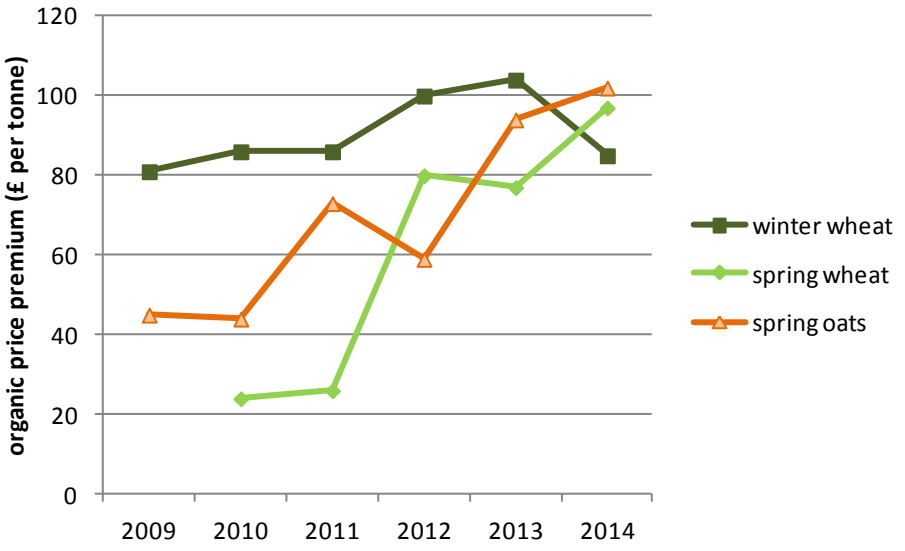
For most crops, variable costs exceeded the five year average although, seed costs generally reduced from the exceptional prices paid in 2013.

Figure 6.2 Organic Gross Margins 2012 to 2014



Increased demand for high quality cereals for human consumption appears to have translated into improved organic premiums for spring wheat and spring oats, as shown in figure 6.3 alongside the more consistent organic price premium for winter wheat.

Figure 6.3 Organic Price Premium, Wheat and Oats, 2009 to 2014



Winter Wheat

At £757 per hectare, the organic winter wheat gross margin was 13 per cent below the five year average, but still the highest gross margin in comparison with the other organic combinable crops. Although the yield of 4.0 tonnes per hectare was equivalent to the five year average, the price, of £215 per tonne, was ten per cent lower. However, this was £85 per tonne higher than the average price for non organic wheat.

Table 6.1 Agriculture Output and Costs

Agriculture Output & Costs - Organic farms in England - (Cereals and General Cropping)				
	2013/14		**2014/15**	
Farms in Sample	22		22	
Area of farm (hectares)	166.9		130.3	
Owner occupied area (%)	62.8		64.0	
AGRICULTURAL OUTPUT (£)	**Per farm**	**Per hectare**	**Per farm**	**Per hectare**
Crop output (excluding subsidies)	117,619	705	85,564	657
Livestock output (excluding subsidies)	7,733	46	2,993	23
Subsidies to agriculture	227	1		
Other agricultural output (inc work on other farms)	11,277	68	5,717	44
TOTAL AGRICULTURAL OUTPUT	136,856	820	94,274	724
AGRICULTURAL COSTS				
VARIABLE COSTS (£)				
Crop specific costs	27,065	162	21,192	163
Livestock specific costs	2,670	16	857	7
Miscellaneous variable costs (inc work on other farms)	671	4	32	0
TOTAL VARIABLE COSTS	30,406	182	22,081	169
GROSS MARGIN (£)	106,449	638	72,193	554
FIXED COSTS (£)				
Regular labour	20,557	123	13,872	106
Casual labour	5,701	34	4,581	35
Machinery fuel and oil	9,828	59	6,263	48
Other machinery costs (excl. fuel, oil, depreciation)	8,070	48	5,526	42
Machinery, glasshouse and other depreciation	15,360	92	11,760	90
Contract costs	17,268	103	12,912	99
Bank charges and professional fees	4,074	24	3,135	24
Water, electricity, & general	10,289	62	7,979	61
Net interest	1,995	12	868	7
Write-off of bad debts			5	0
Rent paid	16,526	99	11,741	90
Property maintenance	527	3	376	3
Depreciation of buildings and works	3,078	18	2,405	18
Miscellaneous fixed costs (inc work on other farms)	8,413	50	3,205	25
TOTAL FIXED COSTS (£)	121,685	729	84,627	650
Profit/ (Loss) on sale of assets	1,180	7	566	4
FARM BUSINESS INCOME (Agriculture - £)	-14,056	-84	-11,868	-91
CROPPING (mean area (hectares))	ha		ha	
Wheat	23.4		16.7	
Barley	14.5		8.4	
Other cereals crops	17.1		13.6	
Peas or beans harvested dry	11.6		5.6	
Oilseeds	0.7		1.9	
Potatoes	1.6		1.7	
Sugar beet	-		-	
Horticultural crops	4.6		3.5	

In June 2014, organic winter wheat, for harvest movement, was £210 per tonne, but by August, the price had reduced to £194 per tonne in the context of a large overall cereal harvest. This set the scene for the rest of the calendar year as October prices dipped to £188 per tonne, rallying to £202 per tonne in December, before slipping to £198 per tonne in March[5]. Organic feed wheat traded at about £196 in April[6].

Then following detection of pesticides in imported Ukrainian wheat that had been marketed as organic, UK organic poultry producers were forced to look at alternative and more local sources of supply of feed[7]. This led to a sharp increase in the prices of all organic feed crops, led by a £19 per tonne price increase for wheat to £215 per tonne[8]. As the 2015 harvest approached, Saxon Agriculture reported significant quantities of unsold 2014 crop on farm[9].

Organic milling wheat tended to have low protein levels so generous premiums were available for crops with protein levels exceeding 10.5 per cent. In March, this premium was about £30 per tonne.

5 Saxon Organic Briefing, March 2015

6 Saxon Organic Briefing, April 2015

7 Farmers Weekly Interactive, www.fwi.co.uk , 20 April 2015

8 Saxon Organic Briefing, May 2015

9 Saxon Organic Briefing, July 2015

Table 6.2 Winter wheat gross margin

Gross Margin - Winter Wheat - Organic				
	2013/14		**2014/15**	
Farms in Sample	22		26	
	Per farm	Per hectare	Per farm	Per hectare
Area per farm (hectares)	31.50		17.96	
Yield (tonnes and tonnes per hectare)	117.7	3.7	72.1	4.0
Price (£ per tonne)	266		215	
OUTPUT (£)				
Crop sold	30,071	955	13,639	759
Feed used on-farm	1,186	38	1,827	102
Straw and by-products	1,281	41	1,052	59
TOTAL OUTPUT	32,538	1,033	16,517	920
VARIABLE COSTS (£)				
Seeds (including homegrown)	4,102	130	1,847	103
Fertilisers	869	28	555	31
Crop protection	164	5	201	11
Other crop costs	204	6	276	15
Drying and heating costs	67	2	36	2
TOTAL VARIABLE COSTS	5,406	172	2,916	162
GROSS MARGIN (£)	27,132	861	13,601	757

Spring Wheat

The organic spring wheat gross margin was £714 per hectare, the best performance for this crop since it achieved £725 per hectare in 2010, at an identical average high yield of 3.3 tonnes per hectare.

In comparison with 2013, the price was lower at £241 per tonne. However, as shown in figure 6.3, this still represented a considerable organic price premium of £97 per tonne and was £26 higher than the organic winter wheat price.

Variable cost expenditure reduced from £218 to £714 per hectare following a £68 per hectare reduction in the seed price to £91 per hectare.

Table 6.3 Spring wheat gross margin

Gross Margin - Spring Wheat - Organic				
	2013/14		2014/15	
Farms in Sample	20		15	
	Per farm	Per hectare	Per farm	Per hectare
Area per farm (hectares)	13.25		27.45	
Yield (tonnes and tonnes per hectare)	37.8	2.8	91.4	3.3
Price (£ per tonne)	252		241	
OUTPUT (£)				
Crop sold	9,328	704	21,175	772
Feed used on-farm	181	14	883	32
Straw and by-products	538	41	2,004	73
TOTAL OUTPUT	10,046	758	24,063	877
VARIABLE COSTS (£)				
Seeds (including homegrown)	2,106	159	2,505	91
Fertilisers	408	31	973	35
Crop protection	22	2	45	2
Other crop costs	333	25	846	31
Drying and heating costs	14	1	109	4
TOTAL VARIABLE COSTS	2,884	218	4,478	163
GROSS MARGIN (£)	7,163	541	19,584	714

Spring Barley

Spring barley was the most commonly grown organic arable crop, probably because it has a role on both predominantly arable, as well as mixed businesses. Some 19 per cent of organic spring barley production was fed to livestock on the farm.

The organic spring barley gross margin, of £525 per hectare, was 23 per cent lower than the five year average. This lower performance was due mainly to the low price of £185 per tonne, which was £59 per tonne higher than the non organic price.

At 3.3 tonnes per hectare, the average spring barley yield was similar to both the previous year and to the five year average.

Variable cost expenditure was eight per cent below the five year average at £146 per hectare, but seed expenditure reduced by six per cent relative to the high costs incurred in 2013.

In June 2014, the harvest price of organic spring barley was £204 per tonne. In early 2015, barley traded at a premium to wheat, but by March, the price had fallen back to around £195 per tonne and characteristically lower than the wheat price[10]. With little demand in April, the organic feed barley price was £190 per tonne[11]. The price of organic barley increased to £210 per tonne in May due to reduced availability of imported crop[12]. In April, the premium for organic malting barley was around £20 per tonne.

Table 6.4 Spring barley gross margin

Gross Margin - Spring Barley - Organic				
	2013/14		2014/15	
Farms in Sample	37		41	
	Per farm	Per hectare	Per farm	Per hectare
Area per farm (hectares)	19.10		14.68	
Yield (tonnes and tonnes per hectare)	63.8	3.3	48.7	3.3
Price (£ per tonne)	239		185	
OUTPUT (£)				
Crop sold	12,346	646	7,115	485
Feed used on-farm	2,891	151	1,898	129
Straw and by-products	1,434	75	840	57
TOTAL OUTPUT	16,671	873	9,854	671
VARIABLE COSTS (£)				
Seeds (including homegrown)	2,002	105	1,457	99
Fertilisers	517	27	397	27
Crop protection	42	2	24	2
Other crop costs	359	19	215	15
Drying and heating costs	95	5	50	3
TOTAL VARIABLE COSTS	3,016	158	2,143	146
GROSS MARGIN (£)	13,656	715	7,711	525

Winter and Spring Oats

The organic winter oat crop generated a gross margin of £749 per hectare, eight per cent higher than the five year average. It yielded 4.4 tonnes per hectare, which was 26 per cent higher than the five year average. The price, of £188 per tonne, was 17 per cent below the five year average but £67 per tonne higher than the non organic price. Of all combinable organic crops, winter oats produced the highest value of straw, which at £84 per hectare, accounted for nine per cent of the output of the crop. Variable costs averaged £155 per hectare of which the seed cost accounted for £108 per hectare.

The organic spring oat gross margin was £599 per hectare, four per cent above the five year average. Unusually for the season, the yield and price, of 3.1 tonnes per hectare and £214 per hectare respectively, were near to five year average levels. In this case, the price was double

[10] Saxon Organic Briefing, March 2015

[11] Saxon Organic Briefing, April 2015

[12] Saxon Organic Briefing, May 2015

the average price received for non organic spring oats representing an exceptional level of premium of £102 per tonne.

In October, feed oats traded for £165 per tonne, rising to £174 in December, but remaining at around £175 per tonne in March and dipping to £172 per tonne in April[13]. The premium for organic milling oats was around £25 per tonne in December, reducing to £20 per tonne in April[14].

Reflecting strong demand for organic oats, seed was in demand and, as an exception to the trend of reducing seed costs; expenditure was almost unchanged on the previous year at £85 per hectare.

13 Saxon Organic Briefing, April 2015

14 Saxon Organic Briefing, April 2015

Table 6.5 Winter oats gross margin

Gross Margin - Winter Oats - Organic				
	2013/14		**2014/15**	
Farms in Sample	17		17	
	Per farm	Per hectare	Per farm	Per hectare
Area per farm (hectares)	9.91		13.50	
Yield (tonnes and tonnes per hectare)	26.1	2.6	58.9	4.4
Price (£ per tonne)	237		188	
OUTPUT (£)				
Crop sold	5,488	554	10,113	749
Feed used on-farm	701	71	951	70
Straw and by-products	774	78	1,136	84
TOTAL OUTPUT	6,963	703	12,199	904
VARIABLE COSTS (£)				
Seeds (including homegrown)	1,149	116	1,460	108
Fertilisers	230	23	264	20
Crop protection	4	0	59	4
Other crop costs	235	24	301	22
Drying and heating costs	53	5	11	1
TOTAL VARIABLE COSTS	1,670	169	2,095	155
GROSS MARGIN (£)	5,293	534	10,104	749

Table 6.6 Spring oats gross margin

Gross Margin - Spring Oats - Organic				
	2013/14		**2014/15**	
Farms in Sample	30		34	
	Per farm	Per hectare	Per farm	Per hectare
Area per farm (hectares)	13.35		12.67	
Yield (tonnes and tonnes per hectare)	35.6	2.7	39.4	3.1
Price (£ per tonne)	225		214	
OUTPUT (£)				
Crop sold	7,485	561	7,686	607
Feed used on-farm	534	40	757	60
Straw and by-products	658	49	981	77
TOTAL OUTPUT	8,677	650	9,423	744
VARIABLE COSTS (£)				
Seeds (including homegrown)	1,117	84	1,081	85
Fertilisers	221	17	294	23
Crop protection	17	1	14	1
Other crop costs	340	25	423	33
Drying and heating costs	29	2	31	2
TOTAL VARIABLE COSTS	1,722	129	1,842	145
GROSS MARGIN (£)	6,955	521	7,581	599

Spring Beans

To provide more detailed information about bean gross margins ahead of the 2015 CAP reform, we calculated gross margins for spring beans in the 2014/2015 Farm Business Survey rather than reporting the gross margin for 'beans for stockfeed, whether they were winter or spring crops. Results from our sample of only ten farms should be treated with caution this year.

The organic spring bean gross margin was £710 per hectare, achieved with a yield of 3.2 tonnes per hectare and an average price of £271 per tonne. The non organic bean price averaged £207 per tonne in 2014.

Variable costs averaged £151 per hectare of which seed accounted for £100 per hectare.
In October, the bean price was £260 per tonne, rising to £265 per tonne in December and £275 per tonne in March[15]. By April the price was £270 per tonne[16].

Table 6.7 Beans gross margin

Gross Margin - Spring Beans Harvested Dry - Organic				
	2013/14		2014/15	
Farms in Sample			10	
	Per farm	Per hectare	Per farm	Per hectare
Area per farm (hectares)			20.10	
Yield (tonnes and tonnes per hectare)			63.8	3.2
Price (£ per tonne)			271	
OUTPUT (£)				
Crop sold			15,644	778
Feed used on-farm			1,654	82
TOTAL OUTPUT			17,298	861
VARIABLE COSTS (£)				
Seeds (including homegrown)			2,020	100
Fertilisers			349	17
Crop protection			237	12
Other crop costs			365	18
Drying and heating costs			55	3
TOTAL VARIABLE COSTS			3,027	151
GROSS MARGIN (£)			14,271	710

15 Saxon Organic Briefing, March 2015

16 Saxon Organic Briefing, April 2015

7 APPENDIX 2 – ORGANIC LOWLAND CATTLE AND SHEEP

Organic Lowland Grazing Producers

Within the total Farm Business Survey sample there is a group of organic farms, and Table 7.1 compares the organic lowland grazing livestock farms with the conventional producers. The organic farms are broadly similar in size to their conventional counterparts as is the percentage of the land they own.

Output from the organic farms is lower when compared to conventional equivalents but the difference is not statistically significant. However, there are important differences in how this output is achieved; organic farms tend to get more than their conventional counterparts from agri-environment schemes and less from livestock and crops. The output from the agri-environment type schemes is approaching two and a half times higher for the organic producers reflecting the extra support they receive as Organic Aid or Organic Entry Level Stewardship.

Table 7.1 Farm Business Income for Conventional and Organic farms, 2014/15

Type of Production for	Conventional	Organic
Number of farms in group	244	45
Average farmed area (hectares)	98.6	90.2
Average proportion of owned total farmed area	60%	67%
	£ per farm	
Output		
Livestock and crops	70,510	44,483
Agri-environment type schemes	5,197	13,172
Single Payment Scheme	16,140	16,842
Other	16,827	16,299
TOTAL FARM OUTPUT	108,674	90,796
Variable costs		
Livestock specific costs	24,048	11,029
Crop specific costs	8,250	2,530
TOTAL VARIABLE COSTS	32,298	13,559
TOTAL GROSS MARGIN	**76,376**	**77,237**
Fixed costs		
Labour	6,070	6,986
Machinery	24,758	24,843
General farming costs	11,728	11,540
Land & Property	12,554	12,523
Interest paid	2,774	3,099
TOTAL FIXED COSTS	57,884	58,991
FARM BUSINESS INCOME	**18,492**	**18,246**

With the lower 'farming' output, organic farms tend to have lower variable costs; being less than half the level of conventional producers. The resulting total gross margin per farm for the organic farmers is similar to the conventional level. Fixed costs for the organic farms are also similar to the conventional producers. Thus the Farm Business Income per farm for the organic producers is similar to that of their conventional counterparts.

Table 7.2 illustrates the sources of output and costs for the differing types of production relative to the level of output achieved. The organic producers have higher environmental type payments, Single Payment Scheme and Other output relative to total output, and less 'livestock & crops' which now amounts to less than a half of the output. This makes organic production potentially more vulnerable to changes to the support given to farming in the form of the Single Payment Scheme and the agri-environmental schemes, or depending on the AES they could have a more reliable, constant income stream. The Conventional producers are more reliant on the 'market place', compared to Organic producers, so are therefore less affected by any changes to the support mechanisms.

For the organic producers the lower variable costs, but higher fixed costs in comparison to output of the conventional producers result in very similar Farm Business Income per £100 output.

Both types of production have very 'strong' end of year balance sheets. Their balance sheet ratios are very similar which is not unexpected with almost identical land owning structures.

Table 7.2 Type of Production- Income and Costs illustrated 'Per £100 Output', 2014/15

Type of Production	Conventional	Organic
Number of farms in group	244	45
Average farmed area (hectares)	98.6	90.2
Average proportion of owned total farmed area	60%	67%
	£ per £100 output	
Output		
Livestock and crops	65	49
Agri- environment type schemes	5	15
Single Payment Scheme	15	19
Other	15	18
TOTAL FARM OUTPUT	100	100
Variable costs		
Livestock specific costs	22	12
Crop specific costs	8	3
TOTAL VARIABLE COSTS	30	15
TOTAL GROSS MARGIN	**70**	**85**
Fixed costs		
Labour	6	8
Machinery	23	27
General farming costs	11	13
Land & Property	12	14
Interest paid	3	3
TOTAL FIXED COSTS	53	65
FARM BUSINESS INCOME	**17**	**20**

Table 7.3 illustrates some of the physical differences between the types of production; on average, organic producers keep 77 fewer ewes and 20 fewer 'Other cattle', slightly more than three quarters the level of the conventional total livestock units. Stocking rates on organic farms are 87% of the conventional level, which in itself is not very high at 1.01 Livestock Units per hectare.

Organic producers tend to reseed their grassland more frequently so they have more temporary grassland than conventional producers.

Table 7.3 Land and Livestock Details- Organic and Conventional Production, 2014/15

	Conventional	Organic
Number of farms in group	244	45
Farmed area (ha)	98.6	90.2
Crops (ha)	5.8	5.7
Temporary grass (ha)	12.7	18.1
Permanent grass (ha)	68.4	60.9
Rough grazing (ha)	5.4	3.6
Average No. of Beef cows	22	27
Average No. of Other Cattle	84	64
Average No. of Ewes	173	96
Total Livestock Units	92	72
GLU's per adjusted Ha	1.0	0.9

Table 7.4 Grazing Livestock (Lowland) farms in England

Gross Output, Variable Costs and Farm Gross Margin, 2014/2015		
	Type of Production	
	Conventional	Organic
Number of farms in group	244	45
Average farmed area (hectares)	98.56	90.23
Average proportion of owned total farmed area	60%	67%
	£ per farm	
Output		
Cattle	38,778	28,528
Sheep	19,605	8,462
Other livestock	705	514
Crops	5,124	4,380
Forage	6,298	2,599
Environmentally Sensitive Area	19	0
Countryside Stewardship	491	41
Higher and Entry Level Stewardship	4,575	7,058
Organic Aid/ Organic Entry Level Stewardship	2	5,928
Other management/ agri- environment schemes	110	146
Single Payment Scheme	16,140	16,842
Rental income	5,292	2,991
Contract work	4,721	3,444
Miscellaneous output	6,784	9,838
Interest received	30	26
TOTAL FARM OUTPUT	108,674	90,796
Variable costs		
Concentrates	12,483	3,649
Purchased fodder	1,145	856
Veterinary and medicines	2,865	1,594
Other livestock costs	7,555	4,931
Seeds	1,146	1,440
Fertilisers	5,073	326
Crop protection	1,140	54
Other crop costs	891	710
TOTAL VARIABLE COSTS	32,298	13,559
TOTAL GROSS MARGIN	**76,376**	**77,237**

Table 7.5 Fixed Costs, Farm Business Income, Farm Corporate Income and Farm Investment Income 2014/15

	Type of Production	
	Conventional	Organic
	£ per farm	
TOTAL GROSS MARGIN	**76,376**	**77,237**
Fixed costs		
Paid regular labour	4,863	3,540
Directors remuneration	20	2,951
Casual labour	1,187	495
Contract	6,084	4,492
Machinery repairs	4,552	4,411
Machinery fuel	4,833	3,807
Machinery depreciation	9,289	12,132
Other depreciation	0	1
Electricity	1,140	997
Other fuel	280	218
Water	1,038	874
Insurance	3,673	2,966
Professional fees	2,261	2,903
Other general costs	3,336	3,582
Property maintenance	4,388	4,545
Rent, hired in keep and bare land	4,791	4,904
Rates	127	67
Buildings depreciation	3,247	3,008
Long-term interest	1,885	2,392
Short-term interest	889	707
TOTAL FIXED COSTS	57,883	58,990
FARM BUSINESS INCOME	**18,493**	**18,247**
Less - All unpaid labour	26,455	24,376
***Equals* - FARM CORPORATE INCOME**	**-7,962**	**-6,130**
Plus - Net Interest	2,743	3,073
***Equals* - FARM INVESTMENT INCOME**	**-5,219**	**-3,057**

Table 7.6 Alternative income measures 2014/15

Reconciliation between Net Farm Income and Farm Business Profit			
		Type of Production	
		Conventional	**Organic**
	FARM BUSINESS INCOME	**18,493**	**18,247**
Plus-	Directors remuneration	20	2,951
Less-	Net income from assets associated with the farm business	0	0
Plus-	Buildings and works depreciation	3,247	3,008
Plus-	Landlord type expenses	465	404
Plus-	Imputed rental income	227	161
Less-	Imputed rent and rental value	13,502	13,141
Plus-	Net Interest	2,743	3,073
Less-	Unpaid labour of partners	4,438	3,798
Equals-	**NET FARM INCOME****	**7,255**	**10,904**
** Excluding Breeding Livestock Stock Appreciation			

Table 7.7 Land use and indicators of technical efficiency 2014/15

	Type of Production	
	Conventional	**Organic**
Number of farms in group	244	45
Average farmed area (hectares)	98.56	90.23
Average proportion of owned total farmed area (%)	60%	67%
Land use		
Area of crops	5.8	5.7
Temporary grass	12.7	18.1
Permanent grass	68.4	60.9
Fodder crops	1.6	0.5
Rough grazing	5.4	3.6
Uncropped, fallow and turf	0.6	0.4
Forage hired in	4.1	1.1
Stocking		
Average number of dairy cows	1	0
Average number of beef cows	22	27
Average number of other cattle	84	64
Average number of ewes	173	96
Average number of other sheep	182	97
Grazing livestock units	GLU's per farm	
Dairy cows	0.6	0.0
Beef cows	11.2	13.5
Other cattle	51.4	41.8
Sheep	27.2	15.1
Other livestock	1.5	1.3
Total	**91.8**	**71.8**
GLUs per ha	1.00	0.85
GLUs per adjusted ha	1.01	0.88

Table 7.8 Balance Sheet 2014/15 (end of year)

	Type of Production	
	Conventional	Organic
Number of farms in group	244	45
Average farmed area (hectares)	98.56	90.23
Average proportion of owned total farmed area (%)	60%	67%
	£ per farm	
End of year assets & liabilities		
Land & buildings	1,080,727	1,177,669
Milk quota	0	0
Single Payment Scheme	21,394	22,637
Machinery	55,439	70,900
Tenant's other assets	226	288
Breeding livestock	44,370	38,622
Total fixed assets	**1,202,155**	**1,310,115**
Trading livestock	49,737	33,029
Crops	1,532	1,139
Forage and cultivations	6,239	3,425
Stores	5,647	1,717
Debtors and loans	8,495	8,367
Bank credit and cash	23,132	16,939
Other current assets	0	0
Total current assets	**94,783**	**64,616**
Total Assets	**1,296,938**	**1,374,732**
Financed by		
AMC	16,380	15,187
Bank loans	34,981	44,799
Other long term	8,438	6,696
Total long term	**59,800**	**66,683**
HP and lease	4,748	5,030
Creditors	9,279	7,044
Bank overdraft	16,063	13,841
Other short term	121	39
Total current liabilities	**30,211**	**25,954**
Total Liabilities	**90,011**	**92,637**
Net worth	**1,206,927**	**1,282,094**
Balance sheet ratios		
% Owner equity (net worth v.total assets)	93%	93%
% Fixed assets vs. total assets	93%	95%
Gearing (long-term loans v.total assets)	5%	5%
Total debt (external liabilities v.net worth)	7%	7%

Table 7.9 Fund flows 2014/15

	Conventional	Organic
Number of farms in group	244	45
Average farmed area (hectares)	98.56	90.23
Average proportion of owned total farmed area(%)	60%	67%
	£ per farm	
Funds available from trading		
Farm Business Income	18,493	18,247
Buildings and works depreciation	3,247	3,008
Machinery depreciation	9,289	12,133
Change in valuation *	121	-2,254
Trading net fund flow surplus	**31,150**	**31,134**
Funds used for farm investments		
Net property and quota purchases	-7,203	2,887
Net landlord capital purchases	4,406	5,052
Net machinery and equipment purchases	10,144	10,743
Capital net fund flow	7,348	18,682
Total farm fund flow surplus	**23,802**	**12,452**
Funds used for private expenditure		
Private drawings	22,788	22,139
Net private funds introduced	-659	2,890
Private fund outflow	-23,447	-19,249
Total net fund flow surplus	**355**	**-6,797**
Increase in loans and deposits	4,933	4,067
Increase in bank balance	5,271	721
Increase in cash in hand	-27	0
Increase in debtors	129	-1,130
Increase in creditors	85	2,320
Net change in funding	**-355**	**6,797**
* An increase in valuation is represented by a negative, with funds being used to increase the live and deadstock valuation.		

8 APPENDIX 3 – ORGANIC LFA CATTLE AND SHEEP

The 2014/15 FBS sample contains 237 English LFA grazing farms of which 23 are fully organic farms. Within this there are 18 organic suckler herds, 13 organic upland flocks and 6 organic hill flocks.

Table 8.1 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 £73/cow more than the non-organic output and with £46/cow less spent on variable costs (particularly concentrates) the gross margin for organic sucklers is £119/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 £75/cow higher than the non-organics, but despite this, the organic farms have a £44/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 -£289/cow and -£383/cow for organic and non-organic respectively. The stocking rate for the organic farms, of 0.75 GLU/total adjusted area (including commons and all land rented in) is 6% less than that of the non-organics.

Table 8.1 LFA Suckler Herd Performance Non-organic and Organic (£/cow)

2014/15	All Suckler herds	
	Non-organics	Organics
Number of farms	150	18
Number of farms (weighted)	3924	105
Herd size (no. cows)	38	53
	£ per cow	
Enterprise Output (excluding BLSA)	**387**	**460**
BLSA	7	2
Total Variable costs	**196**	**150**
Concentrates	48	26
Purchased fodder and keep	21	13
Veterinary and medicines	23	28
Other livestock costs	49	49
Forage costs	55	33
Gross Margin (excluding BLSA)	**191**	**310**
Gross Margin range	-1149 to 563	41 to 468
Total Fixed costs	**400**	**475**
Total costs	**596**	**624**
Enterprise Net Margin (excluding BLSA)	-209	-165
Enterprise NM after F&S labour (excl. BLSA)	**-383**	**-289**
Stocking rate (GLUs/total adj ha)	0.80	0.75

Table 8.2 compares organic and non-organic Upland LFA flocks to the GM and NM level. Organic enterprise output is £12/ewe higher than non-organic output at £109/ewe. Variable costs per ewe are £9/head lower for the organics resulting in a gross margin of £69/ewe for organic flocks and £48/ewe for the non-organic flocks. Fixed costs are £90/ewe for organic flocks and £66/ewe for non-organics – this results in net margins (after farmer and spouse labour) of -£38/ewe and -£51/ewe for organic and non-organic flocks respectively.

Table 8.2 SDA Flock Performance Non-organic and Organic

2014 lamb crop	SDA flocks	
	Non-organics	Organics
Number of farms	110	13
Number of farms (weighted)	2894	74
Flock size (no. ewes)	476	522
	£ per ewe	
Enterprise Output (excluding BLSA)	**97.3**	**109.0**
BLSA	5.3	5.2
Total Variable costs	**49.2**	**40.2**
Concentrates	20.2	13.9
Purchased fodder and keep	3.1	3.0
Veterinary and medicines	7.0	9.6
Other livestock costs	10.5	10.2
Forage costs	8.4	3.4
Gross Margin (excluding BLSA)/Ewe	**48.2**	**68.8**
Gross Margin range	-37 to 125	7 to 137
Total Fixed costs	**66.3**	**89.7**
Total costs	**115.5**	**129.9**
Enterprise Net Margin (excluding BLSA)	-18.1	-21
Enterprise NM after F&S labour (excl. BLSA)	**-51.1**	**-38.4**
Stocking rate (GLUs/total adj ha)	0.74	0.74
Lambing rate (born and reared/average no. ewes)	1.42	1.43

Table 8.3 compares whole farm profitability across all four cost centres between the 22 fully organic farms and the 215 non-organics in the sample. This table shows that the overall difference in profit favours the organic farms by about £24,000 in Farm Business Income and about £28,000 in Farm Corporate Income and Farm Investment Income. This greater profitability is down to the higher profitability of the Agri-environmental cost centre (by over £15,000) and the Single Farm payment cost centre (by £14,679) and despite the organic Agriculture cost centre faring worse than the non-organics by £5,604. Clearly the large area advantage that the organic farms enjoy goes some way to explain the difference in the Single farm payment revenues – see Table 8.4. Organic farms also earn £375 less from Diversification activities than the non-organic LFA farms. Table 8.4 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 314.5ha organic farms are over twice the size, in area terms, of the non-organics (137ha) and while a large portion of this is rough grazing none of this is on common land. Organic LFA farms are 36% owner occupied, against 49% for the non-organics, and use 20% more labour (at 1.8 annual labour units) than the non-organic average.

Table 8.3 Farm Income measures by cost centre, Organic vs. Non-organic
2014 lamb year

Derivation of farm income measures		Cost Centre (£ per farm)									
		Agriculture		**Agri-environment and other payments**		**Diversification out of agriculture**		**Single Payment Scheme**		**Farm Business Income**	
		Non-organic	Organic	Non-organic	Organic	Non-organic	Organic	Non-organic	Organic	Non-organic	Organic
% contribution of centre revenue to total:		66%	59%	11%	19%	4%	2%	19%	20%		
Total output (Revenue)	(a)	**62,230**	**99,903**	**10,791**	**31,594**	**4,077**	**3,629**	**17,810**	**33,932**	**94,908**	**169,058**
Variable costs	(b)	36,769	48,163	10	1,521	93	80	2	2	36,875	49,766
Total Gross margin	(**c**=a-b)	**25,460**	**51,741**	**10,781**	**30,073**	**3,984**	**3,549**	**17,807**	**33,930**	**58,033**	**119,292**
Fixed costs	(d)	37,385	69,250	2,278	5,933	1,776	1,716	2,610	4,052	44,049	80,952
Total Costs	(e=b+d)	**74,154**	**117,413**	**2,288**	**7,454**	**1,870**	**1,796**	**2,612**	**4,054**	**80,923**	**130,718**
Profit/(loss) on sale of fixed assets	(f)	211	192							211	192
Farm Business Income	(**g**=a-e+f)	**-11,714**	**-17,318**	**8,504**	**24,140**	**2,208**	**1,832**	**15,198**	**29,877**	**14,195**	**38,532**
Adjustment for unpaid manual labour	(h)	23,791	20,014	558	1,212	995	509	0	0	25,344	21,736
Farm Corporate Income	(**i**=g-h)	**-35,505**	**-37,332**	**7,946**	**22,928**	**1,213**	**1,323**	**15,198**	**29,877**	**-11,149**	**16,796**
Interest payments (net of interest received)	(j)	1,760	2,634	53	92	70	28	58	92	1,940	2,845
Farm Investment Income	(**k**=i+j)	**-33,745**	**-34,698**	**7,998**	**23,020**	**1,282**	**1,351**	**15,256**	**29,969**	**-9,208**	**19,641**
% contribution of centre total costs to total:		92%	90%	3%	6%	2%	1%	2%	3%		
								Imputed rent	(l)	8,969	16,107
								Ownership charges	(m)	2,848	5,688
								Director's remuneration	(n)	99	1,849
								Unpaid labour of principal farmer and spouse	(o)	21,230	18,075
								Net Farm Income	(**p**=k-l+m+n+o)	**6,001**	**29,145**
								Holding gains not included in farm income	(q)	29,669	41,784
								Breeding Livestock Appreciation (BLSA)	(r)	1,595	1,859
Non-organic Sample size (unweighted)	**215**							Revaluation of machinery, permanent crops, glasshouse, quota	(s)	374	529
Number (weighted)	**6,457**							Revaluation of land	(t)	27,699	39,396
Organic Sample size (unweighted)	**22**							Manager's paid managerial input	(u)	28	60
Number (weighted)	**120**							**Management and Investment Income**	(**v**=p-o+u)	**-15,202**	**11,130**

Table 8.4 Land use, Stocking, Outputs & Variable costs - Organic vs Non-organic

2014/15	The Average LFA Farm	
Land Use & Stocking	**Non-organic**	**Organic**
Number (unweighted)	215	22
Number (weighted)	6,457	120
Total Area (includes woodland and roads etc) (ha)	137.0	305.5
Area Farmed (ha)	136.1	314.5
Net Land Hired In (ha)	2.6	20.3
Utilised Agricultural Area (ha)	**133.5**	**294.2**
Of which Total main products (ha)	1.3	6.2
Grass, fodder crops and rough grazing (ha)	132.2	288.0
Of which: rough grazing (unadjusted) (ha)	44.1	163.6
Adjusted rough grazing (sole occupation)	15.2	36.1
Adjusted rough grazing (shared)	6.0	0.0
Total Adjusted Utilised Agriculture Area (ha)	104.6	166.7
Area owner occupied (ha)	67.3	113.4
Area tenanted (ha)	69.6	192.1
Average age of farmer (years)	58	56
Agricultural labour units (ALU)	1.5	1.8
Standard Output size units (2010SO)	76,850	117,596
Standard Output size group (2010SO)	7	8
Land Use		
Temporary Grassland Area (ha)	5.4	11.7
Permanent Grassland Area (ha)	84.8	127.9
Stocking		
Total Beef cows	26	49
Total Cattle	81	141
Ewes (LFA and lowland)	339	430
Total Sheep	679	882
Livestock Units		
Total Cattle LU	48	85
Total Sheep LU	37	46
Grazing LU (cattle, sheep, horses and others)	85	132
Outputs & Variable Costs		
Farm Business Output	94,908	169,058
of which: Output from agriculture	62,230	99,903
Agri environment payment	10,791	31,594
Diversified output	4,077	3,629
Single Farm Payment	17,810	33,932
Livestock Enterprise Output	57,602	89,681
of which: Cattle Enterprise Output	26,124	46,309
Sheep Enterprise Output	31,301	43,264
Crop Enterprise Output	2,855	6,264
Non agriculture, no other category output	1,768	3,950
Variable Costs		
Farm Business Variable Costs	36,875	49,766
Of which: Agriculture Variable Costs	36,769	48,163
Agriculture Crop Costs	5,835	6,797
Agriculture Livestock Costs	25,967	29,762
of which: Purchased Fodder Feed	14,741	11,448
Home Produced Fodder Feed	745	2,049
Veterinary and medicines	3,510	6,176
Other Livestock Costs	6,971	10,089
Agriculture Contract Costs	3,404	7,602
Agriculture Casual Labour	1,499	3,998

9 APPENDIX 4 – ORGANIC DAIRY PRODUCTION

Table 9.1: Outputs, Inputs and Margins for All Farms, Conventional and Organic

	All		Conventional		Organic	
	13/14	14/15	*13/14*	14/15	*13/14*	14/15
Number of farms	*303*	286	*267*	254	*36*	32
Area (ha)	*150*	152	*151*	152	*142*	141
	£/ha		**£/ha**		**£/ha**	
Output						
Milk	*2816*	2728	*2853*	2755	*2065*	2048
Calf	*126*	122	*128*	123	*88*	84
Lease Quota (net)	*0*	0	*0*	0	*0*	0
Other Dairy	*1*	1	*1*	1	*0*	0
Herd Replacement	*-250*	-238	*-254*	-241	*-192*	-177
Total Dairy Output	***2692***	**2613**	***2727***	**2639**	***1962***	**1955**
Other Livestock	*524*	494	*531*	501	*361*	319
Other	*504*	517	*507*	521	*419*	430
Total Farm Output	***3721***	**3625**	***3766***	**3661**	***2742***	**2704**
Variable Costs						
Home-grown Concentrates	*58*	60	*58*	59	*77*	85
Purchased Concentrates	*926*	853	*942*	866	*580*	533
Coarse Fodder	*92*	72	*94*	74	*69*	34
Other Livestock Concentrates	*9*	10	*9*	10	*1*	1
Vet and Medicine	*104*	104	*105*	106	*65*	55
Other Livestock Costs	*256*	257	*257*	259	*234*	225
Seed	*42*	37	*42*	38	*37*	29
Fertiliser	*137*	128	*142*	133	*19*	7
Crop Protection	*32*	39	*34*	40	*2*	0
Other Crop Costs	*22*	25	*22*	26	*12*	11
Total Variable Costs	***1678***	**1586**	***1705***	**1609**	***1096***	**980**
Fixed Costs						
Labour	*381*	387	*384*	389	*313*	319
Contract	*171*	183	*173*	185	*123*	133
Machinery Depreciation	*197*	195	*199*	197	*151*	142
Other Machinery	*223*	214	*225*	216	*165*	150
Miscellaneous	*286*	294	*289*	296	*241*	245
Rent and Rental Equivalent	*298*	311	*300*	313	*264*	276
Total Fixed Costs	***1556***	**1584**	***1570***	**1596**	***1257***	**1264**
Net Farm Income	***486***	**455**	***490***	**455**	***390***	**459**
Farmer / Spouse Labour	*197*	201	*197*	200	*205*	214
Management and Investment Income (MII)	***289***	**254**	***294***	**255**	***185***	**245**
Farm Business Income (FBI)	***584***	**552**	***590***	**553**	***447***	**529**

Comparison of Conventional and Organic Farms

Table 9.1 also shows the performance of conventional and organic dairy farms.

In 2014/15 conventional farm's FBI fell by 6% from £590/ha to £553/ha, whilst for organic farms, FBI rose by 18% from £447/ha to £529/ha. On a per farm basis, conventional farm FBI in 2014/15 equated to £84,056 compared to organic farm FBI of £74,589; a difference of £9,467; in contrast to the previous year whereby conventional farm FBI was £89,090 and organic farm FBI was £63,474 which equates to a difference of £25,616.

Conventional farm's total farm output decreased by 3% from £3,766/ha to £3,661/ha; organic total farm output decreased by 1%, from £2,742/ha to £2,704/ha.

On conventional farms, milk output fell by 3% from £2,853/ha to £2,755/ha. On organic farms, milk output decreased by less than 1% from £2,065/ha to £2,048/ha.

Variable costs decreased by 6% from £1,705/ha to £1,609/ha on conventional farms compared to a decrease of 11% from £1,096/ha to £980/ha on organic farms and thus returning to levels comparable with the 2012/13 year.

Fixed costs increased by 2% on conventional and by less than 1% on organic farms resulting in an increase from £1,570/ha to £1,596/ha on conventional farms compared to an increase from £1,257/ha to £1,264/ha on organic farms.

Table 9.2: Gross Margin Results for All Farms, Conventional and Organic

	All		Conventional		Organic	
	13/14	14/15	*13/14*	14/15	*13/14*	14/15
Number of farms	*283*	268	*249*	236	*34*	32
Average number cows	*163*	169	*164*	171	*117*	119
Average yield (litres)	*7898*	7826	*7948*	7876	*6211*	6262
Milk price (ppl)	*32.5*	30.7	*32.4*	30.5	*37.0*	38.6
	£/cow		**£/cow**		**£/cow**	
Output						
Milk	*2568*	2405	*2576*	2404	*2295*	2420
Calf	*116*	107	*116*	107	*102*	99
Lease Quota (net)	*0*	0	*0*	0	*0*	0
Other Dairy	*1*	1	*1*	1	*0*	0
Herd Replacement	*-230*	-209	*-231*	-209	*-196*	-209
Total Dairy Output	***2455***	**2304**	***2462***	**2303**	***2201***	**2310**
Variable costs						
Concentrates	*765*	678	*769*	680	*620*	597
Coarse Fodder	*65*	50	*65*	50	*41*	28
Vet and Medicine	*80*	78	*81*	78	*57*	56
Other Livestock Costs	*181*	177	*180*	175	*203*	218
Forage Costs	*105*	101	*107*	103	*34*	32
Total Variable Costs	***1195***	**1083**	***1202***	**1088**	***954***	**931**
Total Gross Margin	***1260***	**1221**	***1260***	**1215**	***1247***	**1379**

Dairy Enterprise Results: Gross Margin for Conventional and Organic Farms

Studying the differences between conventional and organic farms in Table 9.2 shows that for the farms studied the average herd size in 2014/15 is 119 cows for organic farms compared to 171 cows for conventional farms.

In the previous year's edition of this report it was noted that in 2013/14 the combined increase in both milk output (yield) and price per litre for conventional herds, coupled with a static milk yield for organic farms has resulted in a widening of the difference in total dairy output for the two systems. That is, in 2012/13, the conventional herds achieved a total dairy output of £2,068/cow compared to £2008/cow for the organic herds, whilst in 2013/14 the conventional herds recorded a total dairy output of £2,462/cow compared to the organic herd's total dairy output of £2,201/cow. However, in 2014/15, the organic herds total dairy output increased by 5% to £2,310/cow compared to the fall in total dairy output for the conventional herd of 6% to £2,303/cow and thus the conventional herd total dairy output fell below the level achieved by the organic herd. This is predominantly a result of the fall in milk price from 32.4ppl to 30.5ppl for the conventional herd in contrast to the rise in milk price from 37.0ppl to 38.6ppl for the organic herd and the drop in yield of 72 litres to 7876 litres for conventional herds compared to the rise in yield of 51 litres to 6262 litres for organic herds.

The above figures equate to a rise in gross margin per cow for the organic herds and a fall in gross margin per cow for the conventional herds, with organic herds returning the higher total

gross margin. This is in contrast to the 2013/14 results whereby the organic herds returned a lower gross margin per cow but reflects the 2012/13 results whereby the organic herds returned a higher gross margin per cow. On a herd basis, conventional herds have a notably higher average total gross margin (influenced by herd size) of £207,765/herd compared to £164,101/herd for the organic farms.

10 APPENDIX 5 – 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

11 APPENDIX 6 – 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[17] which allows farms of different business organisation, tenure and

[17] 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

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[18] 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).

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for reasons of continuity, rather than to change the definition, pending the introduction of a wider measure to include all on-farm business activities.

[18] 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.

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.

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 which 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 2010. SO's are based on a five-year average in order to lessen the impact of yearly fluctuations on calculated SOs.

The 2010 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).

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Cover photo: *Courtesy of an anonymous LFA (SDA) farm*