RBR Rural Business Research

Newcastle University

Farm Business Survey

2013/2014

Organic Farming in England

Charles Scott

July 2015

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independent research, data and analysis

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Foreword to the Ninth Series

As 2015 gets into swing the agricultural and horticultural sectors are met with both certainty and uncertainty at the same time. With respect to the revised Common Agricultural Policy (CAP) certainty, to some extent, now exists where it was previously lacking. For the most part, the process of implementation of the revised CAP is now available for farmers and their advisors to work with ahead of ensuring they submit their claims under the new Basic Payment Scheme (BPS) by the 15 May 2015 deadline. While this provides an element of certainty it also represents an evolution of policy that places increased emphasis on the management of the environment to attract the full BPS funding available per farm. Greening and Ecological Focus Areas (EFAs) represent new concepts and definitions to the industry, however, the rules of engagement are, by and large, now known.

However, while certainty exists with respect to policy, the wider agricultural and general economy continues to exhibit considerable uncertainty. The prices of many products, notably combinable crops and milk have been on a (largely downward) rollercoaster over the previous 12 months, while input costs driven in part by the falling cost of energy are exhibiting some considerable 'stickiness'. The wider political economy within Europe will also have an impact on the fortunes of agriculture and horticulture in the UK. As the European Central Bank has initiated a programme of Quantitative Easing (QE), the likely direction of travel for the Euro against Sterling will be downward – making UK exports more expensive to our European trading neighbours, decreasing the value of the BPS funding to UK farmers, but conversely reducing input costs from Europe. Within the UK, the economic recovery continues to hold on set against mixed signals, with many commentators now moving out any predictions of an interest rate rise to 2016 (at the earliest) as inflationary pressures have dissipated.

Against this wider background Rural Business Research (RBR) are proud to produce the ninth series of reports that focus on the economics of agriculture and horticulture. Our data are drawn from the 2013/14 financial year and hence relate to the 2013 harvest /

production calendar. In the foreword to the eight series I noted the climatically atypical 2012/13 production year; the 2013 harvest was not immune to the knock-on impacts from '12/13 and the outcomes presented in these reports must be considered against this backdrop. In particular the impact on Cereal farms which have witnessed a fall in Farm Business Income (FBI) of 27% from 2012/13 to 2013/14 reflects a combination of lower yields and an increased area of spring cropping. Similar falls in FBI were witnessed in General Cropping (-24%), Less Favoured Area Grazing Livestock (-22%) and Mixed farms (-20%). Conversely the dairy sector witnessed a strong improvement in FBI during 2013/14 (+67%), flowing largely from increased milk prices - albeit that these price improvements have now gone into reverse. Horticulture witnessed an improved FBI of 31%, while Specialist Pigs and Specialist Poultry also saw increased income levels, flowing largely from improvements in output.

While certainty and uncertainty both exist, we continue to observe large variation between performance within and across farm types. Businesses seeking to position themselves for the future will need to closely examine the costs of production and benchmark their performance to identify areas for continued business success. RBR hopes that this ninth series of reports provides the basis for such analysis. I particularly thank all the FBS research programme co-operators in providing us with the opportunity to collect, analyse and present these data for the benefit of the industry as a whole.

Dr Paul Wilson
Chief Executive Officer, Rural Business Research
January 2015
www.ruralbusinessresearch.co.uk

Executive Summary

Total land in organic food production increased in the late 2000s to a peak in 2009 though this area has subsequently reduced largely due to the effects of the 2007/08 financial crisis and the associated fall in consumer spending on organic food. In fact, Defra (2015) reports that the area in England under full organic production in 2014 was at a six year low of 296,683 ha - a reduction of 2.2% on 2013. However, the number of producers in England has actually increased by 0.8% to 4454 over the period 2013 to 2014.

This report uses data from the Farm Business Survey of 1889 farms of which 162 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, 2013/14. Gross margin data for individual organic crop and livestock enterprises is also presented.

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 LFA grazing farms.

Organic cropping farms were typically smaller than their non-organic counterparts by an average of 42 hectares. Organic cropping farms made an FBI of £42,516, about £12,000 less than similar non-organic farms. This was principally due to the greater output from agriculture (£227,256) that non-organic farms received compared to organic farms (£125,579). Organic cropping farms saw a decrease in FBI of £1,058 year-on-year.

The FBI for organic horticulture farms was less than half of that of the non-organics. Non-organic horticulture farms operated a much more intense operation than organic horticulture farms; FBO was £387,493 for non-organics versus £49,372 for organic farms and total costs for non-organics were £351,942 but just £34,862 for organic farms.

Organic dairy farms generated an increase in FBO of over £30,000 compared to the previous year. Total costs rose by £20,338 leading to an increase in FBI of £10,965. However, organic dairy farms had a lower FBI than their non-organic counterparts by £27,153; the greater output of non-organic farms was outweighed by their larger costs. Organic dairy farms were typically smaller with an average of 174.7 GLU, 78.8 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 FBI of £34,291, £20,223 more than similar non-organic farms. This was principally due to the greater output of organic farms in all output sources except diversification. However, organic LFA grazing farms experienced a reduction in FBI year-on-year of £14,154. Organic farms of this type were also typically larger than their non-organic equivalents both on an area level and GLU level.

Organic lowland grazing farms experienced a reduction in FBI year-on-year, falling from £15,972 in 2012/13 to £11,353 in 2013/14. While the FBO increased by £5,601 total costs also increased, by £11,050, hence the fall in FBI. In 2013/14 organic lowland grazing farms had an FBI of £11,541 compared to their non-organic counterparts' FBI of £15,300. Non-organic farms earned a greater FBO by £10,429, primarily due to a greater output from agriculture, though organic farms had lower costs by £6,519.

Organic mixed farms had a lower FBI than their non-organic equivalents by £8,627. Non-organic mixed farms had greater total costs, though this was more than compensated by the difference in FBO of £126,748. However, organic mixed farms did experience an increase in FBI from 2012/13 (£11,185) to 2013/14 (£23,115) due to a rise in FBO of £21,850 from increases in output across all cost centres except the single payment.

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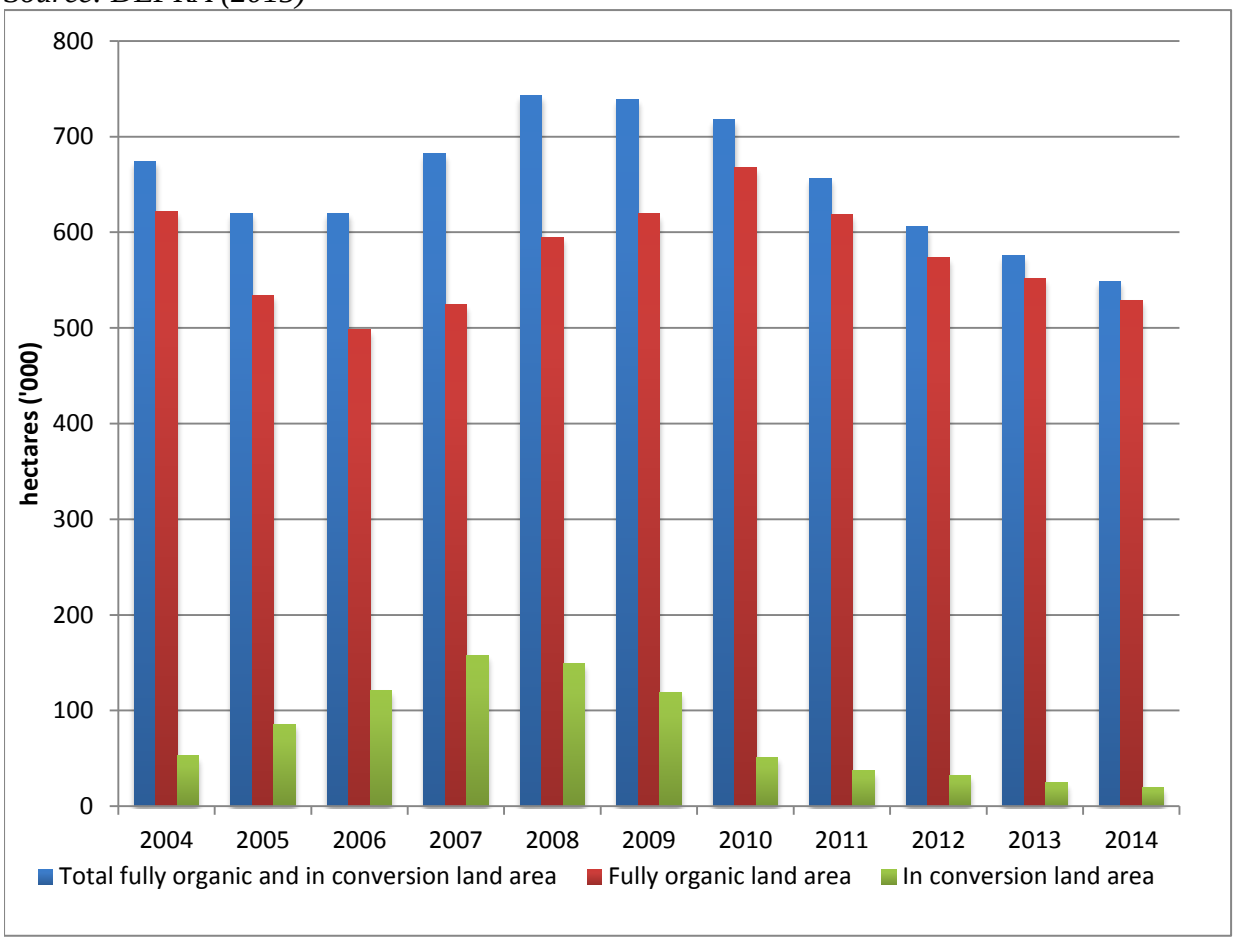
1 ORGANIC FARMING IN THE UK

1.1 Area

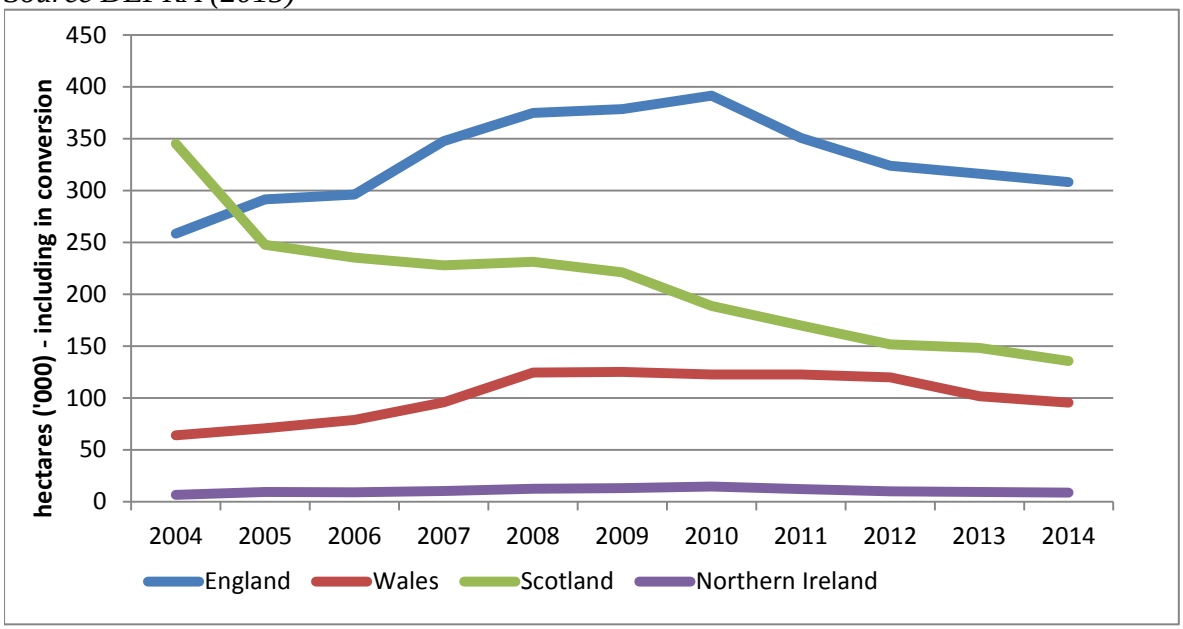
The total organic agricultural area consists of land certified as organic and land in the conversion stage to organic. Total UK land in organic food production peaked in 2008/09 and declined thereafter (Figure 1.1). The area in conversion peaked in 2007/08 and has since decreased to just 19,675 hectares in 2014.

Figure 1.1 UK land in organic food production 2004-2014
Source: DEFRA (2015)



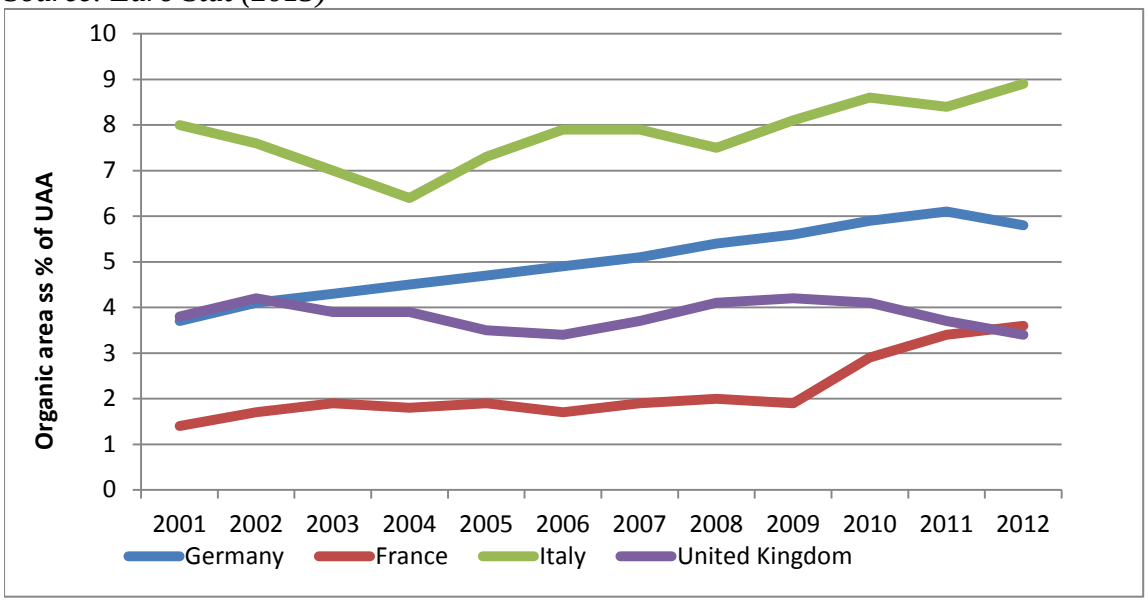
The area of organic land in England has followed a similar trend to that of the UK as a whole (Figure 1.2) with 308,149 ha classified as organic and in conversion in 2014 (Defra 2015). Scotland, now with 135,812 ha, has seen a steady long-term decline in the area of organic land since 2005. Organic land areas in Wales and Northern Ireland have also been reducing over the past few years.

Figure 1.2 Distribution of organic land within the UK 2006-2014
Source DEFRA (2015)



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).

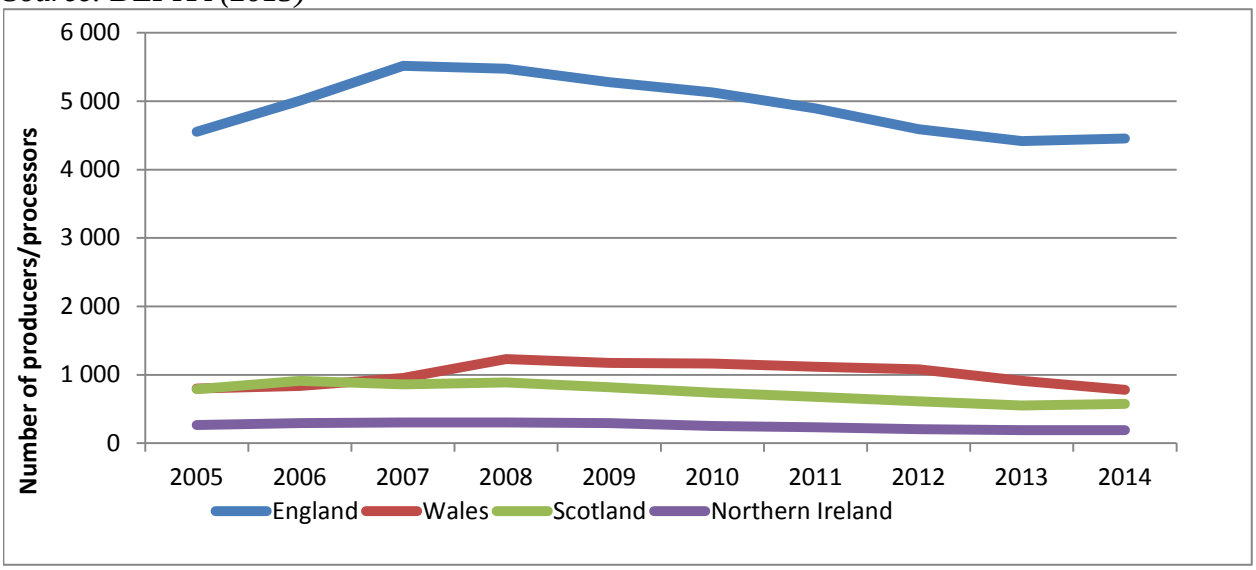
Figure 1.3 Share of Total Utilised Agricultural Area (UAA) occupied by organic farming in Germany, France, Italy and the UK
Source: Euro Stat (2015)



1.2 Producers

The number of organic producers and processors peaked earlier (2007/08) than the area of organic land (2008/09) in all countries of the UK. Producer and processor numbers have been steadily declining throughout the UK over the past six years (Figure 1.4) but there has been a slight resurgence in both Scotland and Northern Ireland in 2014. England has considerably greater numbers of organic producers and processors than other countries in the UK. Further, while Scotland has more land in organic production than Wales (Figure 1.2), it has fewer producers and processors; this is due to a greater proportion of Scottish organic farms being large upland hill farms.

Figure 1.4 Number of organic producers and processors in the UK
Source: DEFRA (2015)

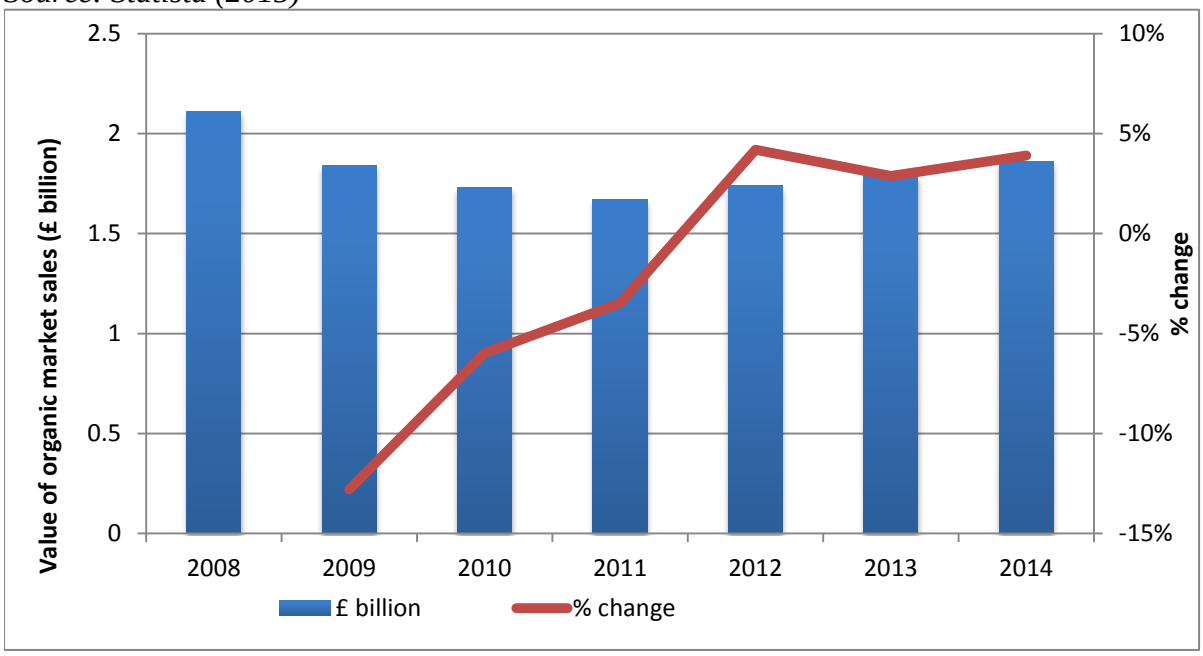


1.3 Output and sales

Sales of organic food and drink increased by 4% from 2013 to 2014 to hit a four year high in sales value at £1.86bn – quite an achievement when overall food spending fell by 1.1% (Soil Association, 2015). Prior to this there had been a steady decline from a high of £2.1bn in 2008 (Bawden, 2013) to a post recession low of £1.67bn in 2011 (Figure 1.5). The 2008 recession caused consumers to turn away from organic products and their typically higher prices and instead, opt for cheaper alternatives.

The general trend of increasing sales can be seen in the 2013/14 figures for supermarket sales of organic food products. Milk and Yogurt sales, both with supermarket shares of over 11%, grew by 2.9% and 13.8% respectively. Fruit sales grew by 6.4% and poultry and eggs by 8.2% and 15.8% respectively. All red meat categories saw reductions in market sales value; beef -3.6%, lamb -9.2% and pork -6.8%.

Figure 1.5 UK retail sales of organic food
Source: Statista (2015)



Changes in agricultural output varied between different food products for 2013/14. Poultry, egg and milk outputs grew by +1.2%, +2.5% and +6.2% respectively but all other sectors contracted with the red meat sector shrinking the most; beef -2.4%, lamb -13.3% and pork -12.9% (Table 1.1).

Table 1.1 UK organic agricultural output and supermarket sales 2013/14 (Soil Association, 2015)

Product	2013/14 % change in output	2013/14 % Change in sales value
Arable crops	-6.8	N/A
Cereals	N/A	+4.2
Vegetables	-5.6	-2.0
Fruit	-3.2	+6.4
Beef	-2.4	-3.6
Lamb	-13.3	-9.2
Pork	-12.9	-6.8
Poultry	+1.2	+8.2
Eggs	+2.5	+15.8
Milk	+6.2	+2.9
Yogurt	N/A	+13.8
Fresh Fish	0	N/A

2 METHODS

This report presents financial and physical farm data for the 2012/13 and 2013/14 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 2013/14. 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 2013 and 5th April 2014 and consequently reflect the 2013 lamb crops and the 2013 arable harvest.

2.1 Data sample: farm type and region

This report uses data from the Farm Business Survey of 1889 farms, 162 of which are organic. 138 of the 162 organic farms are entirely organic; the remaining 24 farms have some non-organic enterprises or land area. A further 24 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 2.1 and Table 2.2.

[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 2.1 The distribution of surveyed organic farms by farm type, 2013/14

Robust farm type	No
Cereals	13
General cropping	9
Horticulture	12
Pigs	1
Poultry	3
Dairy	36
LFA Grazing	23
Lowland Grazing	36
Mixed	29
All farms	**162**

Table 2.2 The distribution of surveyed organic farms by GOR, 2013/14

GOR	No
North East	13
North West	9
Yorkshire & Humber	12
East Midlands	1
West Midlands	3
East of England	36
South East	23
South West	36
All farms	**162**

2.2 Data sample: farm type and size

The distribution of the sample by farm size and farm type is shown in Table 2.3. The farm size categories are based on the 2010SO (Standard Output) used by DEFRA, see Appendix 7 for more information. For year-on-year comparisons the 2012/13 data have been reclassified on a 2010SO basis. Farm area, unless specified as Utilisable Agricultural Area (UAA) is the total adjusted area (TAA) including shared grazing and short term rentals (less than 1 year).

The 2013/14 dataset was very evenly distributed across the size bands with each band contributing approximately one third each. Dairy and lowland grazing farm types made up the largest proportion of the data sample with 22% apiece.

Table 2.3 Sample distribution by robust farm type and size (2010SO)

Robust farm type	Small (€2,500-100,000)	Medium (€100,000-250,000	Large (>€250,000)	Average size (2010SO)	All	% by type
Cereals	5	4	4	216,384	13	8
General cropping	3	3	3	351,615	9	6
Horticulture	9	2	1	91,865	12	7
Pigs	0	0	1	370,958	1	1
Poultry	0	1	2	801,987	3	2
Dairy	0	12	24	398,582	36	22
LFA Grazing	8	8	7	174,972	23	14
Lowland Grazing	19	12	5	135,432	36	22
Mixed	11	10	8	165,168	29	18
All	**55**	**52**	**55**	**233,923**	**162**	**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 insufficient organic pig (1) and poultry (3) farms to present their data. The reclassification of the 2012 horticulture sample on to the 2010SO basis reduces the sample size from 13 to 9 farms and, because the sample is now below 10 farms, makes a year on year comparison impossible.

In the organic horticulture group some care must be taken in interpreting the results. The sample of 12 farms is composed of 3 subgroups: 3 specialist fruit, 5 specialist glass and 4 other horticulture, i.e. not a uniform group of producers. Furthermore the non-organic sample (176) has as subgroup composition of: 44 specialist fruit, 66 specialist glass, 33 specialist

hardy nursery stock and 33 other horticulture, clearly not perfectly comparable to the organic sample and hence the degree of caution advised above.

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 late 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.

Alternative measures of income, namely Farm Corporate Income (FCI), Farm Investment Income (FII) are presented in Appendix 1. FCI and FII allow for easier calculations of financial ratios such as return on capital employed. Further, the measures allow for more accurate comparisons with incorporated businesses and thus help when comparing businesses at different levels of the supply chain. A further measure of Management and Investment Income (MII) has also been included in the farm type tables (Table 3.12 to Table 3.23). 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 7.

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 7.

3.2 Farm size

Figure 3.1 Average farm size by farm area (ha) of organic and non-organic farms by farm type 2013/14

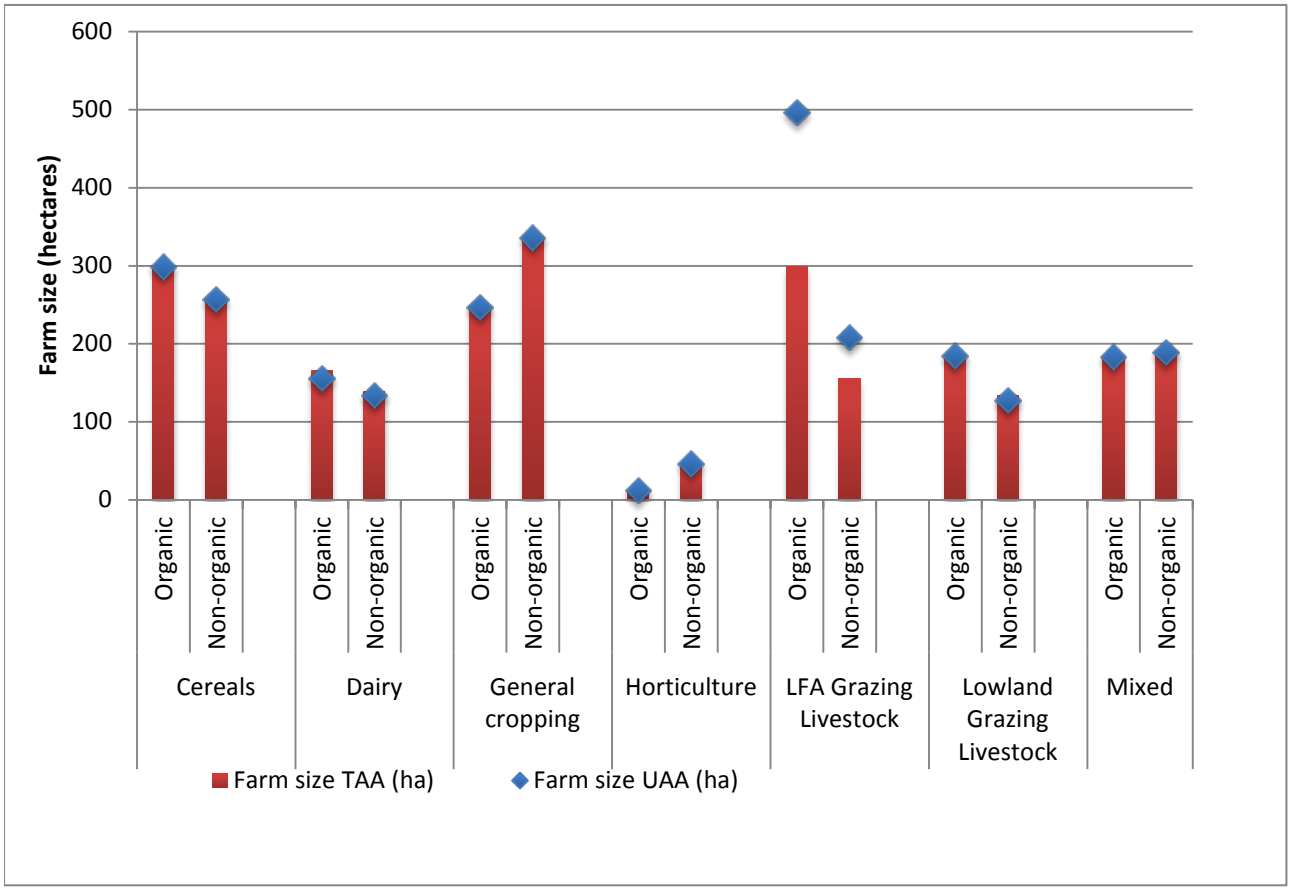


Figure 3.1 shows farm size for the 2013/14 sample measured by farm area measured as Utilisable Agricultural Area (UAA) and total adjusted area (TAA). There is little difference between UAA and TAA in all groups except LFA grazing farms where there is a marked difference. The choice of area measurement is critical when benchmarking and making comparisons across farm types.

3.3 Farm Business Output

Figure 3.2 Composition of Farm Business Output by cost centre and farm type for organic and non-organic farms 2013/14

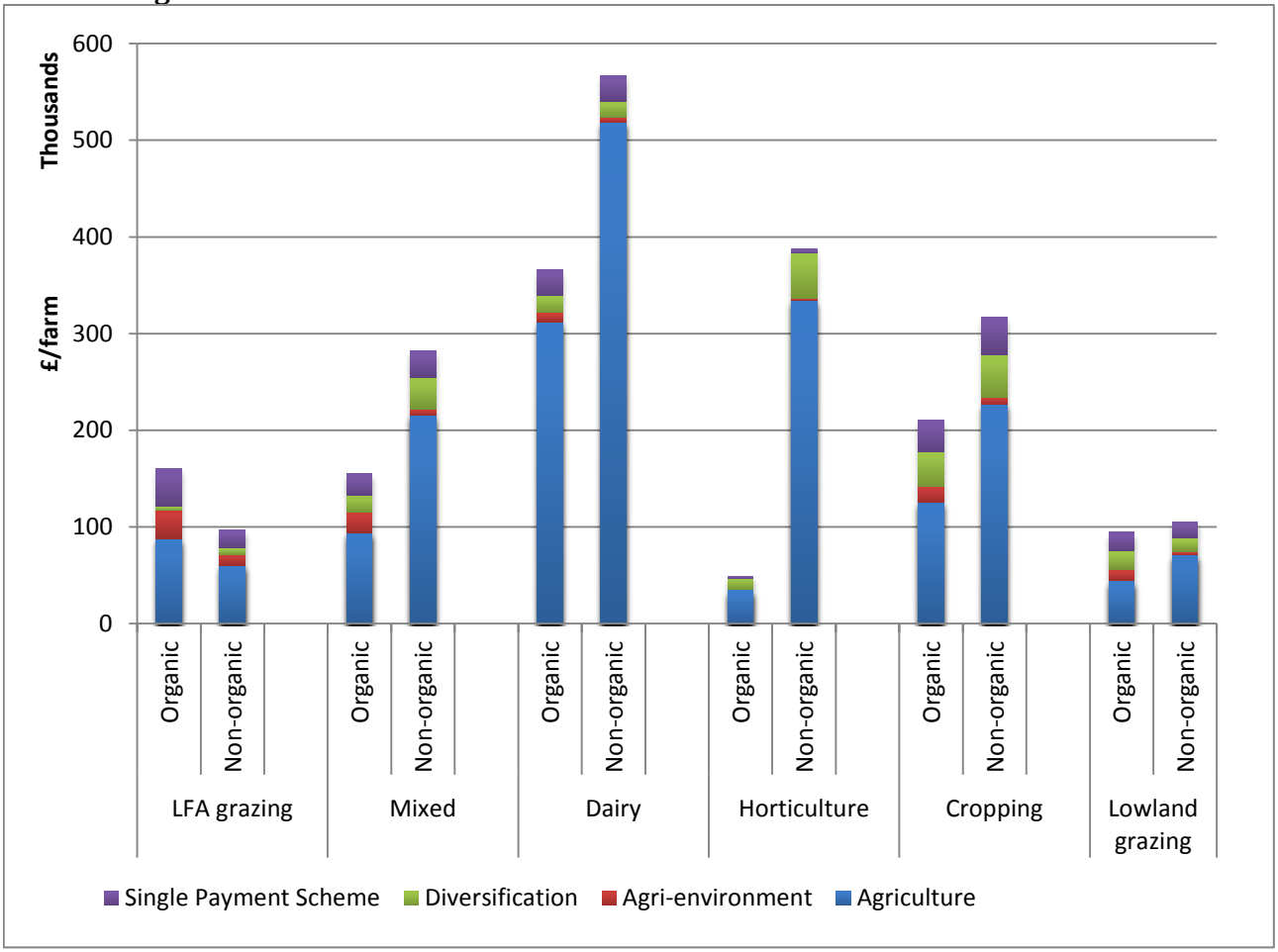
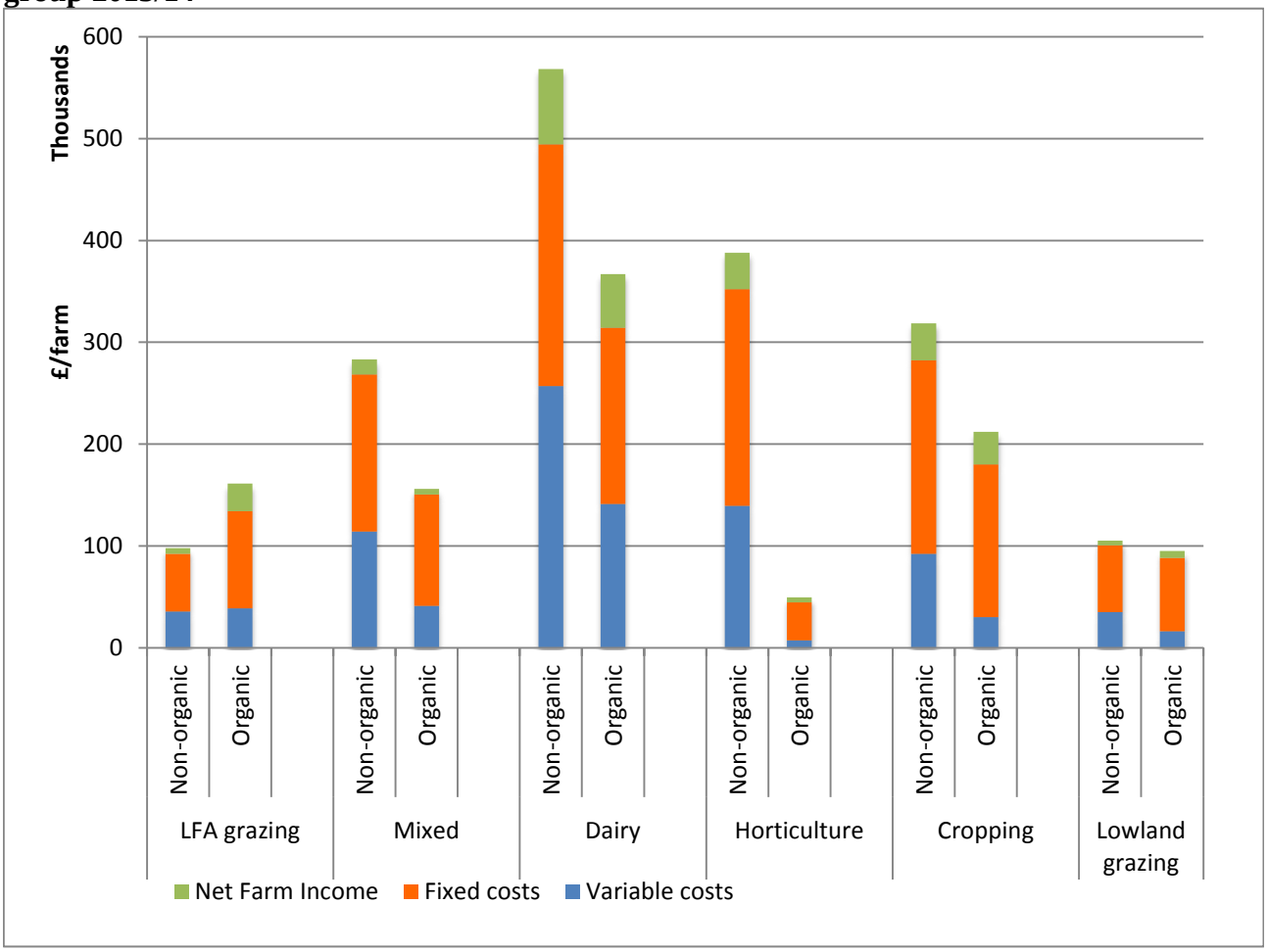


Figure 3.2 shows the composition of Farm Business Output for organic and non-organic farms by farm type for the 2013/14 sample. With the exception of LFA grazing, non-organic farms achieved greater Farm Business Output than their organic equivalents. Agriculture remained the largest component of Farm Business Output for all farm types both organic and non-organic. However, organic farms earned consistently more through agri-environmental schemes than non-organic farms. There were less consistent findings for the remaining components of output, diversification and the Single Payment Scheme.

3.4 Costs

Figure 3.3 Average variable and fixed costs for organic and non-organic farms by farm type group 2013/14



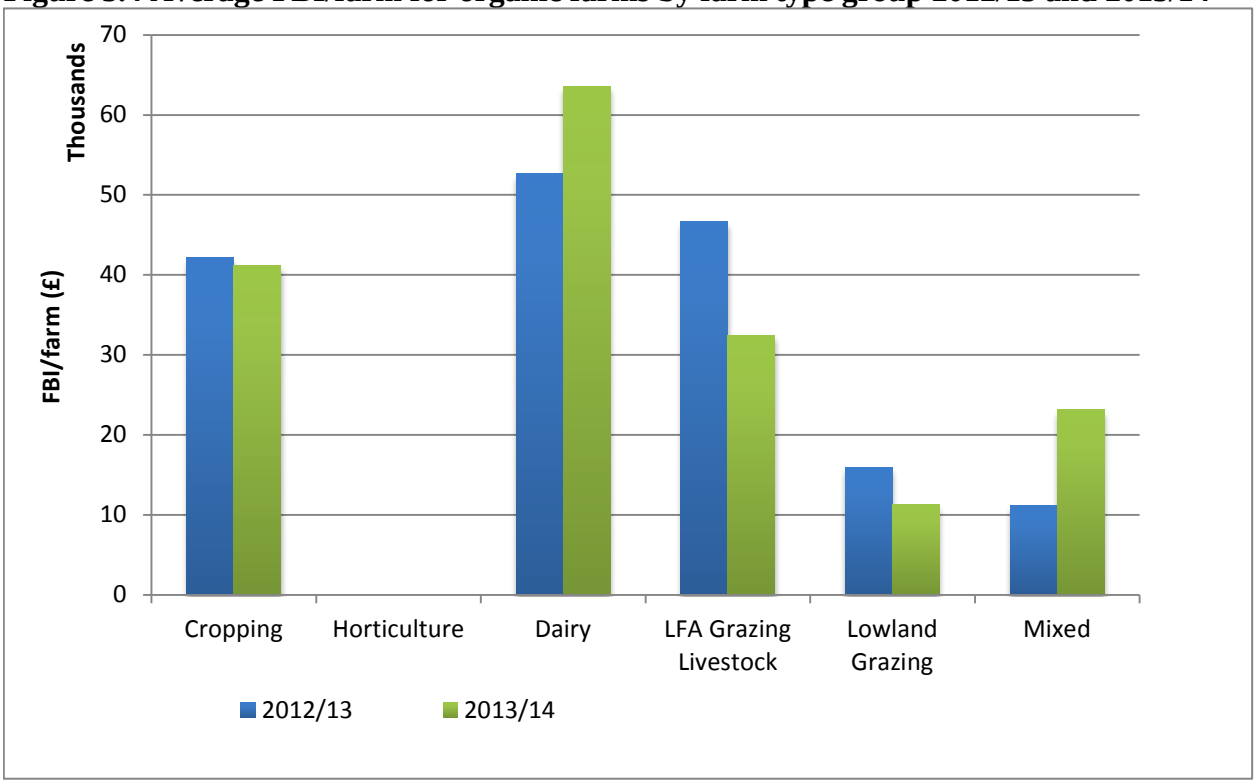
For all farm types except LFA grazing, variable costs were greater for non-organic farms than organic farms. Fixed costs were also typically larger, albeit much less so (except for horticulture) for the non-organic farms than the organic farms, again with the exception of LFA grazing farms (Figure 3.3).

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 7. Hence NFI plus costs equals total farm output (net of profit or loss on the sale of fixed assets).

3.5 Farm Business Income

3.5.1 Year-on-year (identical sample)

Figure 3.4 Average FBI/farm for organic farms by farm type group 2012/13 and 2013/14



Note: there are insufficient Horticulture farms to present the results

Table 3.1 Average FBI for organic farms by farm type 2012/13 and 2013/14

	2012/13 (identical sample)				2013/14 (identical sample)			
	No farms in sample	No farms weighted	FBI - £/farm	FBI - £/ha (UAA)	No farms in sample	No farms weighted	FBI - £/farm	FBI - £/ha (UAA)
Cropping	20	362	42121	299	20	327	41159	282
Horticulture	8	-	-	-	8	-	-	-
Dairy	33	245	52629	386	33	237	63594	459
LFA Grazing	21	126	46625	154	21	132	32471	105
Lowland Grazing	27	674	15972	165	27	679	11353	117
Mixed	18	250	11185	99	18	270	23115	219

Table 3.2 Year-on-year differences in average FBI for organic farms by farm type 2012/13 and 2013/14 - per farm (identical sample)

FBI/Farm (£)	2012/13 Mean	2013/14 Mean	Difference	Significance
Cropping	42121	41159	-963	-
Dairy	52629	63594	10965	-
LFA Grazing	46625	32471	-14154	-
Lowland Grazing	15972	11353	-4620	-
Mixed	11185	23115	11930	*
(- not significant, * significant at 10% (slight), ** at 5% (moderate), *** at 1% (strong))				

Table 3.3 Year-on-year differences in average FBI for organic farms by farm type 2012/13 and 2013/14 - per ha (UAA) (identical sample)

FBI/ha UAA (£)	2012/13 Mean	2013/14 Mean	Difference	Significance
Cropping	299	282	-17	-
Dairy	386	459	73	-
LFA Grazing	154	105	-49	-
Lowland Grazing	165	117	-47	*
Mixed	99	219	121	*
(- not significant, * significant at 10% (slight), ** at 5% (moderate), *** at 1% (strong))				

Table 3.4 Year-on-year differences in average FBI for organic farms by farm type 2012/13 and 2013/14 - per ha (TAA) (identical sample)

FBI/ha TAA (£)	2012/13 Mean	2013/14 Mean	Difference	Significance
Cropping	298	281	-17	-
Dairy	351	429	78	-
LFA Grazing	264	178	-86	*
Lowland Grazing	167	116	-52	*
Mixed	100	222	122	*
(- not significant, * significant at 10% (slight), ** at 5% (moderate), *** at 1% (strong))				

Figure 3.4 and Table 3.1 show FBI/farm and FBI/ha (UAA) for organic farm types using an identical sample for 2012/13 and 2013/14. While there appear to be some increases and decreases in FBI across the groups, these changes are either not significant (using t tests throughout) or only slightly significant as shown by the analysis in Table 3.2 and Table 3.3. Table 3.4 presents FBI per ha TAA for an identical sample across 2012/13 and 2013/14 – only three of the farm groups show any significant, and then only slight, changes in FBI/ha across the years.

3.5.2 Organic versus non-organic (full sample)

Figure 3.5 Average FBI/farm for organic and non-organic farms by farm type 2013/14

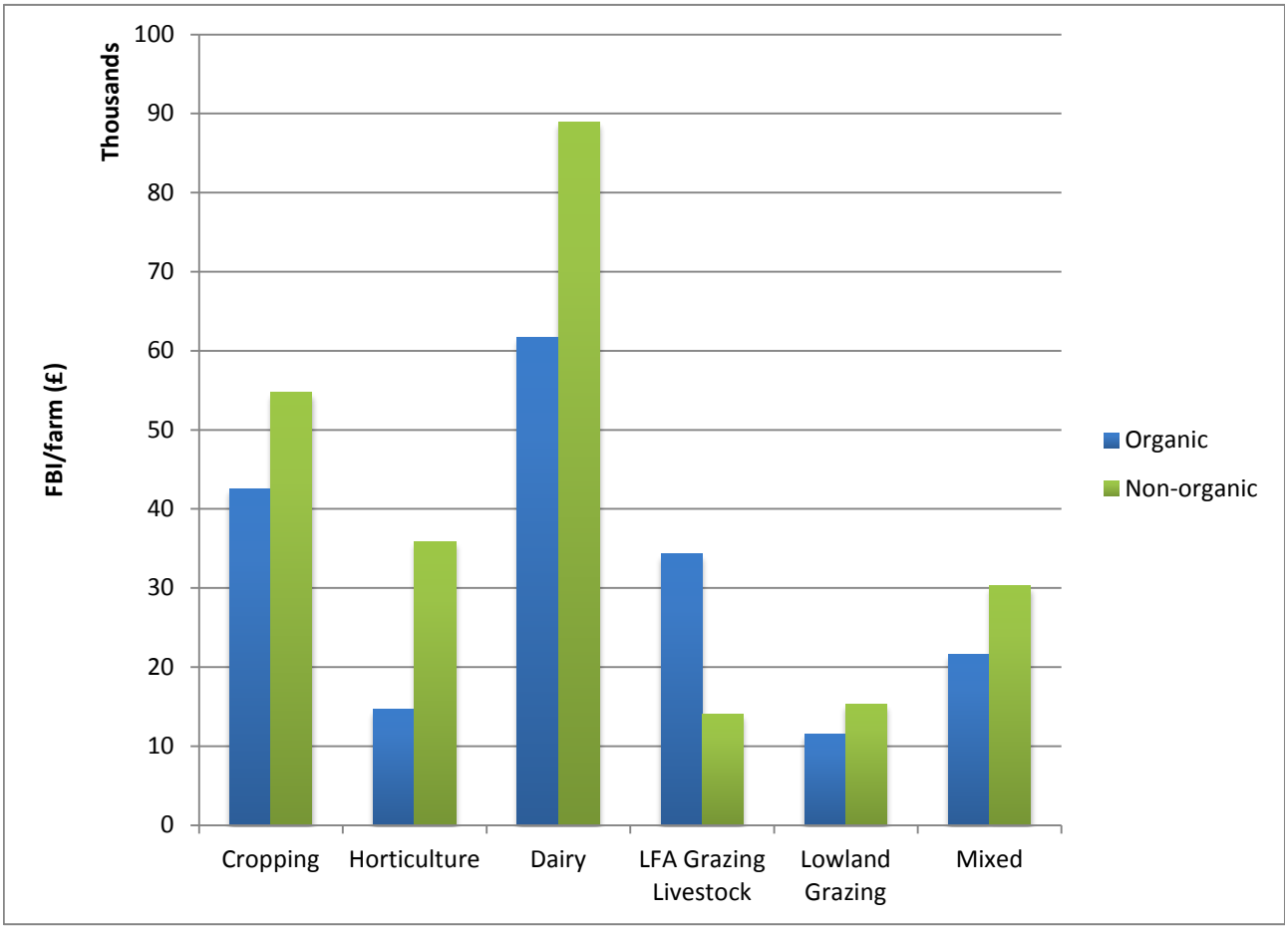


Table 3.5 Average FBI for organic and non-organic farms by farm type 2013/14

2013/14 (full sample)		Number of farms (sample)	Number of farms (weighted)	FBI - £/farm	FBI – £/ha (UAA)	FBI – £/ha (TAA)
Cropping	Organic	22	345	42516	272	271
	Non-organic	481	18598	54697	276	275
Horticulture	Organic	12	305	14604	1048	1048
	Non-organic	176	3016	35876	1187	1187
Dairy	Organic	36	257	61717	443	417
	Non-organic	267	6319	88870	605	580
LFA Grazing	Organic	23	140	34291	112	185
	Non-organic	220	6692	14068	100	122
Lowland Grazing	Organic	36	856	11541	122	122
	Non-organic	264	12996	15300	162	156
Mixed	Organic	29	428	21607	188	188
	Non-organic	164	5698	30234	201	197

Table 3.6 Differences in average FBI between organic and non-organic farms 2013/14 - per farm

FBI/Farm (£) 2013/14	Organic Mean	Non-organic Mean	Difference	Significance
Cropping	42516	54697	-12182	-
Horticulture	14604	35876	-21272	***
Dairy	61717	88870	-27153	**
LFA Grazing	34291	14068	20222	**
Lowland Grazing	11541	15300	-3760	*
Mixed	21607	30234	-8626	*
(- not significant, * significant at 10% (slight), ** at 5% (moderate), *** at 1% (strong))				

Note: please see notes regarding sample sizes and group composition on page 8

Table 3.7 Differences in average FBI between organic and non-organic farms 2013/14 - per ha (UAA)

FBI/ha UAA (£) 2013/14	Organic Mean	Non-organic Mean	Difference	Significance
Cropping	272	276	-4	-
Horticulture	1048	1187	-139	-
Dairy	443	605	-162	**
LFA Grazing	112	100	11	-
Lowland Grazing	122	162	-40	*
Mixed	188	201	-13	-
(- not significant, * significant at 10% (slight), ** at 5% (moderate), *** at 1% (strong))				

Table 3.8 Differences in average FBI between organic and non-organic farms 2013/14 - per ha (TAA)

FBI/ha TAA (£) 2013/14	Organic Mean	Non-organic Mean	Difference	Significance
Cropping	271	275	-4	-
Horticulture	1048	1187	-139	-
Dairy	417	580	-163	**
LFA Grazing	185	122	62	*
Lowland Grazing	122	156	-35	*
Mixed	188	197	-8	-
(- not significant, * significant at 10% (slight), ** at 5% (moderate), *** at 1% (strong))				

Figure 3.5 and Table 3.5 show FBI/farm and FBI/ha for organic and non-organic farms by farm type for 2013/14 using the full sample. The data suggests that FBI was greater for non-organic farms for all groups except LFA grazing farms at both per farm and per hectare level. Table 3.6 illustrates that these differences in FBI/farm are actually significant, to varying degrees, in all groups except Cropping. Table 3.7 and Table 3.8 show that the differences in FBI at the per hectare level (by either measure) are less marked. It is only Dairy and Lowland grazing farms that show a real difference in FBI/ha on either measure of area. LFA grazing does however show a slight statistical difference in FBI/ha TAA.

3.6 Net Farm Income

Figure 3.6 Average NFI/farm for organic and non-organic farms by farm type 2013/14

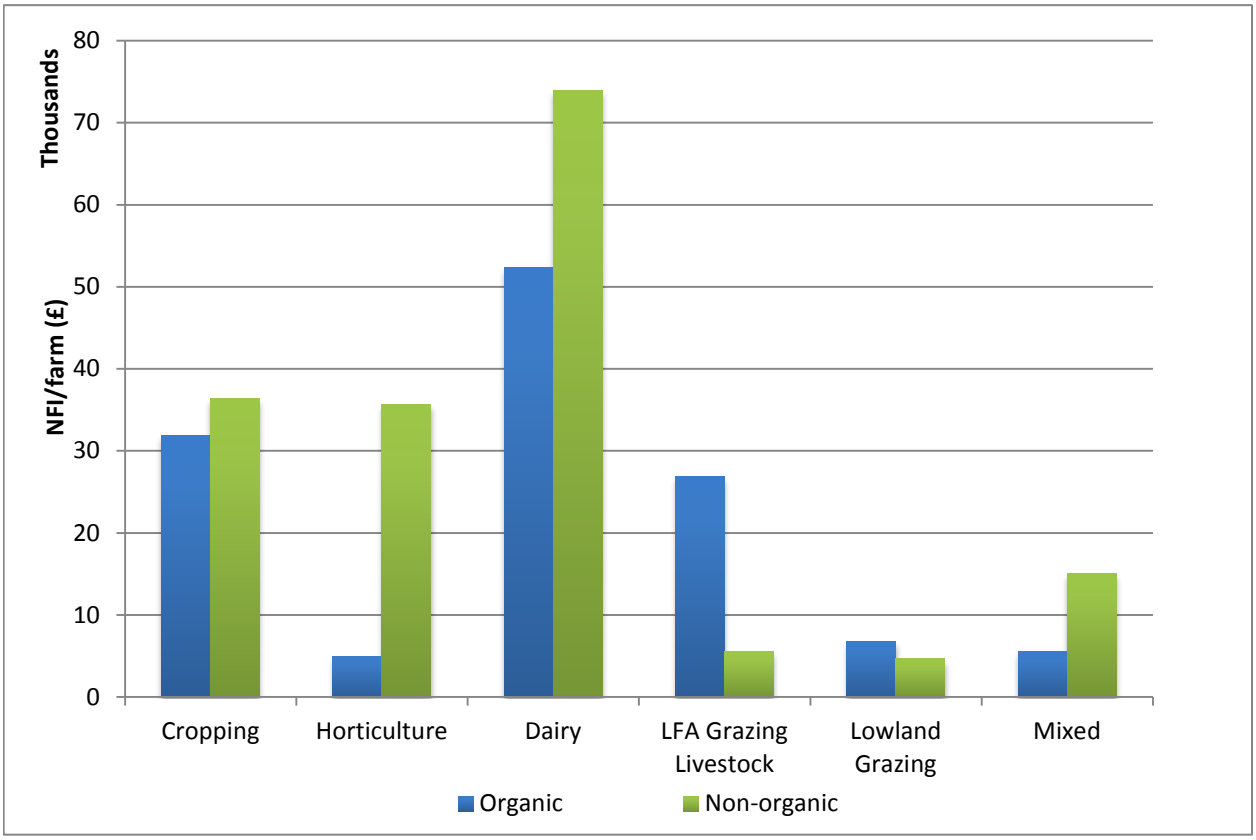


Table 3.9 Differences in average NFI between organic and non-organic farms 2013/14 - per farm

NFI/Farm (£) 2013/14	Organic Mean	Non-Organic Mean	Difference	Significance
Cropping	31940	36385	-4444	-
Horticulture	5001	35645	-30644	***
Dairy	52401	73931	-21530	**
LFA Grazing	26889	5567	21322	**
Lowland Grazing	6760	4667	2093	-
Mixed	5517	15054	-9537	**
(- not significant, * significant at 10% (slight), ** at 5% (moderate), *** at 1% (strong))				

Note: please see notes regarding sample sizes and group composition on page 8

Figure 3.6 and Table 3.9 show NFI/farm for organic and non-organic farms for 2013/14. The data shows that non-organic Cropping, Horticulture, Dairy and Mixed farms all had a greater NFI/farm; indeed the differences were all statistically significant for all groups except Cropping. Organic LFA grazing and Lowland grazing farms had a greater NFI/farm than

their non-organic counterparts, although this was only statistically significant for the LFA grazing farms.

Table 3.10 Differences in average NFI between organic and non-organic farms 2013/14 - per ha UAA

NFI/ha UAA (£) 2013/14	Organic Mean	Non-Organic Mean	Difference	Significance
Cropping	204	184	20	-
Horticulture	359	1180	-821	-
Dairy	376	503	-127	**
LFA Grazing	88	40	48	*
Lowland Grazing	72	49	22	-
Mixed	48	100	-52	*
(- not significant, * significant at 10% (slight), ** at 5% (moderate), *** at 1% (strong))				

Table 3.11 Differences in average NFI between organic and non-organic farms 2013/14 - per ha TAA

NFI/ha TAA (£) 2013/14	Organic Mean	Non-Organic Mean	Difference	Significance
Cropping	271	275	-4	-
Horticulture	1048	1187	-139	-
Dairy	417	580	-163	**
LFA Grazing	185	122	62	*
Lowland Grazing	122	156	-35	*
Mixed	188	197	-8	-
(- not significant, * significant at 10% (slight), ** at 5% (moderate), *** at 1% (strong))				

Table 3.10 and Table 3.11 show that the differences in NFI are less significant on a unit area basis. It is only the Dairy and LFA grazing groups that show a significant difference in NFI at both the farm level the per hectare measures. Horticulture farms, while showing a strong significant difference in NFI/farm, show no such difference at the per hectare level. Lowland grazing farms, while showing no significant difference in NFI/farm or NFI/ha UAA, do show a slight significant difference in NFI/ha TAA. Mixed farms do show a difference in NFI/farm and NFI/ha UAA but show no significant difference at the NFI/ha TAA level.

3.7 Farm Types

The following section provides breakdowns of farm types into output sources, cost centres and farm income measures for both organic farms year-on-year (2012/13 - 2013/14) using an identical sample and for organic and non-organic farms for 2013/14 using a full sample.

3.7.1 Cropping farms

The organic cropping sample contains farms from both cereal and general cropping farm types; 1 of which has shifted between cereal and general cropping farm types year-on-year.

Year-on-Year

Farm Business Output per hectare increased by 4% for organic cropping farms to £1381/ha. This was largely due to a 4% increase in output from agriculture. The increase in revenue from agriculture was in turn due to a 2% increase in crop output (94% of agricultural output). Despite a difficult drilling period (autumn 2012) and a cold spring of 2013, harvest conditions for the 2013 crop were kind and crop yields increased across the board. However, dramatic falls in cereal prices eroded much of the gain from increased yields. Total costs per hectare increased for organic cropping farms year-on-year by 7% to £1105/ha. Variable costs increased by 9% per ha but overhead costs; notably paid rents (up 17%, £15/ha) and other costs (up 23%, or £53/ha) were the main causes.

The cost increases outweighed the increase in farm output and Farm Business Income fell by 6% to £281/ha. Net Farm Income for organic cropping farms actually rose by 4% to £217/ha.

Organic vs Non-Organic

Table 3.13 shows that in 2013/14 organic cropping farms had a Farm Business Output of £1346/ha, 16% lower than their non-organic counterparts. Organic farms received £108/ha in agri-environment payments - nearly three times as much as the non-organics, but about 30% less from agriculture, at £802/ha, than the non-organic cropping farms.

Organic cropping farms incurred total costs of £1082/ha in 2013/14, 19% less than non-organic cropping farms. Crop variable costs for organic farms, of £175/ha, were only 40% of those for non-organic farms, but paid labour and contract costs per hectare were 23% and 25% higher. Organic farms reported a Farm Business Income of £271/ha in 2013/14, against an FBI for non-organic cropping farms of £275/ha.

Further detailed commentary on organic cropping farm performance is given in Appendix 2.

Table 3.12 Organic cropping farms identical sample 2012/13 and 2013/14

The average cropping farm	Organic identical sample 2012/13			2013/14		
Number (unweighted)	20			20		
Number (weighted)	362			327		
Farm size (2010SO)	122,529			120,943		
Farm area (adjusted ha)	141.4			146.4		
Grazing livestock units	10.7			12.7		
	£/farm	£/ha		£/farm	£/ha	
Agriculture:	116,972	827	63%	125,837	859	62%
Livestock component	5,636	40	*5%*	7,767	53	*6%*
Crop component	111,336	788	*95%*	118,070	806	*94%*
Agri-environment and other payments	14,691	104	8%	14,906	102	7%
Diversification & miscellaneous	26,484	187	14%	30,851	211	15%
Single Payment Scheme	28,715	203	15%	30,581	209	15%
Farm Business Output (a)	**186,862**	**1322**	100%	**202,175**	**1381**	**100%**
Livestock variable costs:	2,032	14	1%	2,278	16	1%
Feed	909	6	*45%*	1,137	8	*50%*
Vet & medicine	236	2	*12%*	303	2	*13%*
Other livestock costs	887	6	*44%*	838	6	*37%*
Crop variable costs:	24,482	173	17%	26,564	181	16%
Seed	13,102	93	*54%*	14,817	101	*56%*
Fertiliser	3,446	24	*14%*	3,292	22	*12%*
Crop protection	1,104	8	*5%*	1,048	7	*4%*
Other crop costs	6,830	48	*28%*	7,407	51	*28%*
Contract	19,453	138	13%	18,783	128	12%
Paid Labour	20,880	148	14%	22,268	152	14%
Machinery:	33,587	238	23%	35,235	241	22%
Fuel & oil	9,366	66	*28%*	10,818	74	*31%*
Repairs	8,167	58	*24%*	8,297	57	*24%*
Depreciation	16,055	114	*48%*	16,120	110	*46%*
Paid Rents	12,458	88	9%	15,157	104	9%
Other costs	32,635	231	22%	41,584	284	26%
Total Costs (b)	**145,528**	**1029**	100%	**161,868**	**1105**	**100%**
Profit/(loss) on sale of fixed assets	788			852		
Farm Business Income (c=a-b)	**42,121**	**298**		**41,159**	**281**	
Unpaid manual labour excl. farmer & spouse (d)	777	5		848	6	
Interest payments (e)	1,041	7		1,587	11	
Imputed rents (f)	20,247	143		21,394	146	
Director's remuneration (g)	2,447	17		6,159	42	
Ownership costs (h)	4,917	35		5,072	35	
Net Farm Income (i=c-d+e-f+g+h)	**29,502**	**209**		**31,735**	**217**	
Farmer & Spouse unpaid labour (j)	20,176	143		22,390	153	
Paid managerial labour (k)	854	6		1,194	8	
Management and Investment Income (l=i-j+k)	**10,180**	**72**		**10,539**	**72**	

Table 3.13 Organic and non-organic cropping farms full sample 2013/14

The average cropping farm	Non-organic 2013/14			Organic 2013/14		
Number (unweighted)	481			22		
Number (weighted)	18,598			345		
Farm size (2010SO)	241,698			128,361		
Farm area (adjusted ha)	198.6			156.6		
Grazing livestock units	13.8			14.2		
	£/farm	£/ha		£/farm	£/ha	
Agriculture:	227,256	1144	72%	125,579	802	60%
Livestock	9,572	48	*4%*	7,960	51	*6%*
Crops	217,684	1096	*96%*	117,619	751	*94%*
Agri-environment and other payments	7,217	36	2%	16,921	108	8%
Diversification & miscellaneous	43,761	220	14%	35,883	229	17%
Single Payment Scheme	38,766	195	12%	32,415	207	15%
Farm Business Output (a)	**317,000**	**1596**	**100%**	**210,798**	**1346**	**100%**
Livestock variable costs:	5,423	27	2%	2,670	17	2%
Feed	3,282	17	*61%*	1,337	9	*50%*
Vet & medicine	535	3	*10%*	375	2	*14%*
Other livestock costs	1,606	8	*30%*	958	6	*36%*
Crop variable costs:	86,716	437	33%	27,408	175	16%
Seed	16,887	85	*19%*	15,177	97	*55%*
Fertiliser	32,955	166	*38%*	3,641	23	*13%*
Crop protection	27,839	140	*32%*	1,472	9	*5%*
Other crop costs	9,035	45	*10%*	7,119	45	*26%*
Contract	18,193	92	7%	18,083	115	11%
Paid Labour	25,770	130	10%	25,012	160	15%
Machinery:	60,170	303	23%	36,744	235	22%
Fuel & oil	16,585	84	*28%*	11,019	70	*30%*
Repairs	14,739	74	*24%*	8,961	57	*24%*
Depreciation	28,847	145	*48%*	16,765	107	*46%*
Paid Rents	18,940	95	7%	15,170	97	9%
Other costs	48,743	245	18%	44,374	283	26%
Total Costs (b)	**263,956**	**1329**	**100%**	**169,462**	**1082**	**100%**
Profit/(loss) on sale of fixed assets	1,653			1,180		
Farm Business Income (c=a-b)	**54,697**	**275**		**42,516**	**271**	
Unpaid manual labour excl. farmer & spouse (d)	5,470	28		805	5	
Interest payments (e)	4,982	25		2,116	14	
Imputed rents (f)	28,626	144		23,019	147	
Director's remuneration (g)	2,680	13		5,841	37	
Ownership costs (h)	8,122	41		5,291	34	
Net Farm Income (i=c-d+e-f+g+h)	**36,385**	**183**		**31,940**	**204**	
Farmer & Spouse unpaid labour (j)	16,848	85		21,798	139	
Paid managerial labour (k)	290	1		1,132	7	
Management and Investment Income (l=i-j+k)	**19,827**	**100**		**11,274**	**72**	

3.7.2 Horticulture

As with previous years, the sample of horticulture organic farms was low with only 12 farms. Furthermore, under the 2010SO classification only 9 farms in the 2012 dataset classify as horticulture (as opposed to 13 under the 2007SO classification) - the remaining 4 reclassify as cereal, mixed and general cropping farms. Due to this small sample size this report is unable to present organic horticulture data across 2012/13 and 2013/14. Caution must be taken when making conclusions about the horticulture sample due to the very diverse nature of enterprises contained within the sample, see Section 2.3 Data sample: Limitations.

Organic vs Non-Organic

The full sample shows substantial differences between non-organic and organic horticulture farms. The average farm area for organic farms is about half that of the non-organic farms but the output/ha, of £3543, is 28% of the output from the non-organics. Organic farms do have a slightly larger livestock output per hectare which suggests a more integrated farming regime than their non-organic, more specialist, counterparts. Crop output, at £11,024/ha, is 450% greater for non-organic farms than organic farms in 2013/14. Diversification and Agri-environmental outputs were also larger for non-organic farms.

Total costs for organic horticulture farms, of £2502/ha, were about a fifth of that spent on non-organic farms. Crop variable costs on organic farms (£498/ha) are about a tenth of that spent on non-organic farms. Paid labour on organic farms, of £509/ha, is 13% of that spent on non-organic farms but unpaid labour excluding farmer and spouse, typically other family members, of £533/ha, is nearly three times as much as that on non-organic farms. Contract costs and machinery are also higher on non-organic farms.

Farm Business Income on organic horticulture farms was £1048/ha, almost 90% of that achieved on non-organic farms (£1187/ha). The difference in Net Farm Income, £359/ha organic versus £1180/ha non-organic, was unsurprisingly more pronounced given the levels of unpaid labour used by the organic farms.

Table 3.14 Organic and non-organic horticulture farms full sample 2013/14

The average horticulture farm	Non-organic 2013/14			Organic 2013/14		
Number (unweighted)	176			12		
Number (weighted)	3,016			305		
Farm size (2010SO)	367,715			67,950		
Farm area (adjusted ha)	30.2			13.9		
Grazing livestock units	1.9			1.4		
	£/farm	**£/ha**		**£/farm**	**£/ha**	
Agriculture:	334,809	11081	86%	35,190	2525	71%
Livestock	1,751	58	*1%*	1,072	77	*3%*
Crops	333,059	11024	*99%*	34,118	2448	*97%*
Agri-environment and other payments	1,750	58	<1%	315	23	1%
Diversification & miscellaneous	46,768	1548	12%	11,408	819	23%
Single Payment Scheme	4,165	138	1%	2,458	176	5%
Farm Business Output (a)	**387,493**	**12825**	**100%**	**49,372**	**3543**	**100%**
Livestock variable costs:	1,049	35	0%	272	20	1%
Feed	643	21	*61%*	218	16	*80%*
Vet & medicine	66	2	*6%*	23	2	*9%*
Other livestock costs	339	11	*32%*	31	2	*11%*
Crop variable costs:	138,383	4580	39%	6,943	498	20%
Seed	61,675	2041	*45%*	3,542	254	*51%*
Fertiliser	11,846	392	*9%*	409	29	*6%*
Crop protection	8,335	276	*6%*	0	0	*0%*
Other crop costs	56,526	1871	*41%*	2,991	215	*43%*
Contract	6,685	221	2%	703	50	2%
Paid Labour	115,729	3830	33%	7,093	509	20%
Machinery:	30,495	1009	9%	6,712	482	19%
Fuel & oil	9,345	309	*31%*	2,277	163	*34%*
Repairs	9,498	314	*31%*	1,959	141	*29%*
Depreciation	11,652	386	*38%*	2,476	178	*37%*
Paid Rents	8,546	283	2%	2,483	178	7%
Other costs	51,056	1690	15%	10,656	765	31%
Total Costs (b)	**351,942**	**11649**	**100%**	**34,862**	**2502**	**100%**
Profit/(loss) on sale of fixed assets	326			93		
Farm Business Income (c=a-b)	**35,876**	**1187**		**14,604**	**1048**	
Unpaid manual labour excl. farmer & spouse (d)	5,838	193		7,430	533	
Interest payments (e)	3,137	104		215	15	
Imputed rents (f)	8,370	277		3,690	265	
Director's remuneration (g)	6,107	202		0	0	
Ownership costs (h)	4,732	157		1,302	93	
Net Farm Income (i=c-d+e-f+g+h)	**35,645**	**1180**		**5,001**	**359**	
Farmer & Spouse unpaid labour (j)	22,200	735		29,241	2098	
Paid managerial labour (k)	932	31		0	0	
Management and Investment Income (l=i-j+k)	**14,377**	**476**		**-24,240**	**-1739**	

3.7.3 Dairy

Year-on-Year

Table 3.16 shows that Farm Business Output for organic Dairy farms increased by 10% to £2,539/ha in 2013/14. Output from agriculture, diversification and the Single Payment Scheme all increased but earnings from agri-environmental payments decreased slightly. Output from agriculture was up 11% to £2,172/ha, this in turn due to a 14% increase in livestock output to £2,135/ha.

Total costs increased for organic farms year-on-year by 8%. Variable costs, and in particular feed costs (up 15%) and crop costs (including seed, up 21%) were responsible for the majority of the increase. All other fixed costs, with the exception of contract (which fell by 3%) all increased by between 6% and 8%. The 10% increase in Farm Business Output, offset by the 8% increase in costs meant an increase in Farm Business Income for organic farms of 22% to £429/ha.

Organic vs Non-Organic

The full sample shows that despite similar farm areas, non-organic farms had 45% more grazing livestock units compared to their organic equivalents (Table 3.17). This suggests that, rather as expected, non-organic farms operated a more intensive production system.

Organic farms obtain twice the revenues from agri-environment payments (at £64/ha) than the non-organic farms but then derive 38% less output from agriculture (at £2,111/ha). Diversification revenues and the Single Payment were roughly equal and overall the Farm Business Output, of £2472/ha for organic farms was 67% of that for non-organic farms in 2013/14.

The full sample also shows that organic dairy farms incurred total costs of £2062/ha (66% of that spent on non-organic farms). The main reasons for this were higher livestock variable costs (by 59%) principally feed, and higher crop variable costs (by 475%) mainly fertiliser. Contract, paid labour, machinery and other costs are all higher on non-organic dairy farms.

Farm Business Income (£417/ha) Net Farm Income (£354/ha) and Management and Investment Income (£157/ha) were all lower for organic farms than non-organic farms in 2013/14; a reversal of the results of 2012/13.

Further detailed commentary on organic dairy farm performance is given in Appendix 5.

Table 3.15 Organic dairy farms identical sample 2012/13 and 2013/14

The average dairy farm	Organic identical sample 2012/13			2013/14		
Number (unweighted)	33			33		
Number (weighted)	245			237		
Farm size (2010SO)	371,703			372,951		
Farm area (adjusted ha)	149.8			148.1		
Grazing livestock units	170.7			176.8		
	£/farm	**£/ha**		**£/farm**	**£/ha**	
Agriculture:	294,136	1964	85%	321,539	2172	86%
Livestock component	280,936	1876	*96%*	316,125	2135	*98%*
Crop component	13,200	88	*4%*	5,414	37	*2%*
Agri-environment and other payments	10,047	67	3%	9,810	66	3%
Diversification & miscellaneous	15,919	106	5%	18,370	124	5%
Single Payment Scheme	25,516	170	7%	26,203	177	7%
Farm Business Output (a)	**345,618**	**2308**	**100%**	**375,921**	**2539**	**100%**
Livestock variable costs:	126,510	845	43%	138,000	932	44%
Feed	86,508	578	*68%*	97,965	662	*71%*
Vet & medicine	7,871	53	*6%*	7,958	54	*6%*
Other livestock costs	32,131	215	*25%*	32,076	217	*23%*
Crop variable costs:	6,300	42	2%	7,551	51	2%
Seed	3,530	24	*56%*	5,024	34	*67%*
Fertiliser	838	6	*13%*	899	6	*12%*
Crop protection	298	2	*5%*	20	0	*0%*
Other crop costs	1,634	11	*26%*	1,608	11	*21%*
Contract	17,498	117	6%	16,703	113	5%
Paid Labour	37,820	253	13%	40,075	271	13%
Machinery:	41,176	275	14%	43,236	292	14%
Fuel & oil	9,125	61	*22%*	9,676	65	*22%*
Repairs	12,279	82	*30%*	12,991	88	*30%*
Depreciation	19,772	132	*48%*	20,569	139	*48%*
Paid Rents	15,586	104	5%	16,602	112	5%
Other costs	48,263	322	16%	51,326	347	16%
Total Costs (b)	**293,154**	**1957**	**100%**	**313,492**	**2117**	**100%**
Profit/(loss) on sale of fixed assets	165			1,166		
Farm Business Income (c=a-b)	**52,629**	**351**		**63,594**	**429**	
Unpaid manual labour excl. farmer & spouse (d)	5,408	36		5,518	37	
Interest payments (e)	4,942	33		6,218	42	
Imputed rents (f)	19,358	129		20,371	138	
Director's remuneration (g)	1,619	11		1,558	11	
Ownership costs (h)	8,504	57		9,377	63	
Net Farm Income (i=c-d+e-f+g+h)	**42,928**	**287**		**54,859**	**370**	
Farmer & Spouse unpaid labour (j)	27,611	184		27,569	186	
Paid managerial labour (k)	346	2		422	3	
Management and Investment Income (l=i-j+k)	**15,664**	**105**		**27,712**	**187**	

Table 3.16 Organic and non-organic dairy farms full sample 2013/14

The average dairy farm	Non-organic 2013/14			Organic 2013/14		
Number (unweighted)	267			36		
Number (weighted)	6,319			257		
Farm size (2010SO)	529,732			365,832		
Farm area (adjusted ha)	153.2			148.0		
Grazing livestock units	253.5			174.7		
	£/farm	**£/ha**		**£/farm**	**£/ha**	
Agriculture:	519,001	3388	92%	312,380	2111	85%
Livestock	491,229	3207	*95%*	305,605	2066	*98%*
Crops	27,773	181	*5%*	6,775	46	*2%*
Agri-environment and other payments	4,929	32	1%	9,527	64	3%
Diversification & miscellaneous	16,442	107	3%	18,201	123	5%
Single Payment Scheme	26,432	173	5%	25,622	173	7%
Farm Business Output (a)	**566,804**	**3700**	**100%**	**365,731**	**2472**	**100%**
Livestock variable costs:	220,677	1441	46%	133,754	904	44%
Feed	166,026	1084	*75%*	94,186	637	*70%*
Vet & medicine	15,892	104	*7%*	7,723	52	*6%*
Other livestock costs	38,759	253	*18%*	31,845	215	*24%*
Crop variable costs:	36,250	237	8%	7,373	50	2%
Seed	6,338	41	*17%*	4,977	34	*67%*
Fertiliser	21,444	140	*59%*	828	6	*11%*
Crop protection	5,085	33	*14%*	19	0	*0%*
Other crop costs	3,384	22	*9%*	1,551	10	*21%*
Contract	26,123	171	5%	16,286	110	5%
Paid Labour	45,117	295	9%	38,151	258	13%
Machinery:	64,331	420	13%	42,444	287	14%
Fuel & oil	16,040	105	*25%*	9,656	65	*23%*
Repairs	18,318	120	*28%*	12,868	87	*30%*
Depreciation	29,973	196	*47%*	19,921	135	*47%*
Paid Rents	17,019	111	4%	16,644	112	5%
Other costs	69,799	456	15%	50,435	341	17%
Total Costs (b)	**479,317**	**3129**	**100%**	**305,087**	**2062**	**100%**
Profit/(loss) on sale of fixed assets	1,383			1,074		
Farm Business Income (c=a-b)	**88,870**	**580**		**61,717**	**417**	
Unpaid manual labour excl. farmer & spouse (d)	12,805	84		5,572	38	
Interest payments (e)	9,727	64		6,168	42	
Imputed rents (f)	27,588	180		20,248	137	
Director's remuneration (g)	1,010	7		1,435	10	
Ownership costs (h)	14,718	96		8,900	60	
Net Farm Income (i=c-d+e-f+g+h)	**73,931**	**483**		**52,401**	**354**	
Farmer & Spouse unpaid labour (j)	29,676	194		29,517	200	
Paid managerial labour (k)	72	0		389	3	
Management and Investment Income (l=i-j+k)	**44,327**	**289**		**23,273**	**157**	

3.7.4 LFA grazing

Year-on-Year

Farm Business Output decreased by 2% to £851/ha for an identical sample of LFA grazing organic farms from 2012/13 to 2013/14 (Table 3.18). The breakdown of Farm Business Output shows that output from agriculture decreased by 12% (livestock output down 11% to £424/ha) while incomes from diversification and agri-environment payments increased (by 39% and 25% respectively).

Total costs for organic LFA grazing farms increased by 11% (to £676/ha) from 2012/13 to 2013/14. Livestock variable costs increased by 2%; feed up by 14%, vet costs up by 8% but offset by a 16% reduction in livestock costs (including bedding). There were also significant increases, of between 16% and 34%, in costs of: paid labour, contract, paid rents and other costs. Machinery costs actually fell by 6% to £123/ha.

Overall profitability decreased year-on-year for organic farms both in terms of Farm Business Income (to £178/ha) Net Farm Income (to £141/ha) and Management and Investment Income (to £46/ha).

Organic vs Non-Organic

Organic LFA grazing farms had a 2% higher Farm Business Output than non-organic farms for 2013/14 (Table 3.19). Agriculture output, at £475/ha, is 10% lower on organic farms than on non-organic farms. Diversification output on organic farms is also lower but agri-environment payments and the Single Payment are both larger on organic LFA grazing farms.

Organic farms had lower total costs than non-organic farms at £682/ha (versus £727/ha). While livestock variable costs and crop variable costs are greater for non-organic farms, contract costs and paid labour costs were considerably greater for organic farms. Machinery costs at £129/ha were 18% lower on organic farms.

The combination of a slightly higher output and lower costs meant that overall profitability was significantly greater (see Table 3.8 and Table 3.11) for organic farms than their non-organic equivalents both in terms of Farm Business Income (£185/ha versus £122/ha) and Net Farm Income (£145/ha versus £48/ha).

Further detailed commentary on organic LFA grazing farm performance is given in Appendix 4.

Table 3.17 Organic LFA grazing farms identical sample 2012/13 and 2013/14

The average LFA grazing farm	Organic identical sample 2012/13			2013/14		
Number (unweighted)	21			21		
Number (weighted)	126			132		
Farm size (2010SO)	108,949			108,651		
Farm area (adjusted ha)	176.9			182.8		
Grazing livestock units	123.4			124.4		
	£/farm	**£/ha**		**£/farm**	**£/ha**	
Agriculture:	93,543	529	61%	84,916	465	55%
Livestock component	84,268	476	*90%*	77,499	424	*91%*
Crop component	9,274	52	*10%*	7,416	41	*9%*
Agri-environment and other payments	21,706	123	14%	28,236	154	18%
Diversification & miscellaneous	3,247	18	2%	4,519	25	3%
Single Payment Scheme	35,930	203	23%	37,906	207	24%
Farm Business Output (a)	**154,426**	**873**	**100%**	**155,577**	**851**	**100%**
Livestock variable costs:	29,994	170	28%	31,518	172	26%
Feed	14,166	80	*47%*	16,664	91	*53%*
Vet & medicine	4,554	26	*15%*	5,098	28	*16%*
Other livestock costs	11,274	64	*38%*	9,756	53	*31%*
Crop variable costs:	5,834	33	5%	6,175	34	5%
Seed	1,768	10	*30%*	2,432	13	*39%*
Fertiliser	2,730	15	*47%*	2,578	14	*42%*
Crop protection	403	2	*7%*	356	2	*6%*
Other crop costs	933	5	*16%*	809	4	*13%*
Contract	8,543	48	8%	10,862	59	9%
Paid Labour	10,130	57	9%	14,021	77	11%
Machinery:	23,007	130	21%	22,436	123	18%
Fuel & oil	6,868	39	*30%*	6,686	37	*30%*
Repairs	5,246	30	*23%*	5,441	30	*24%*
Depreciation	10,894	62	*47%*	10,309	56	*46%*
Paid Rents	8,437	48	8%	10,146	56	8%
Other costs	22,166	125	21%	28,400	155	23%
Total Costs (b)	**108,112**	**611**	**100%**	**123,557**	**676**	**100%**
Profit/(loss) on sale of fixed assets	311			451		
Farm Business Income (c=a-b)	**46,625**	**264**		**32,471**	**178**	
Unpaid manual labour excl. farmer & spouse (d)	4,654	26		3,698	20	
Interest payments (e)	1,032	6		1,799	10	
Imputed rents (f)	12,835	73		14,191	78	
Director's remuneration (g)	0	0		2,415	13	
Ownership costs (h)	3,876	22		6,926	38	
Net Farm Income (i=c-d+e-f+g+h)	**34,045**	**192**		**25,721**	**141**	
Farmer & Spouse unpaid labour (j)	19,163	108		17,360	95	
Paid managerial labour (k)	43	0		41	0	
Management and Investment Income (l=i-j+k)	**14,925**	**84**		**8,402**	**46**	

Table 3.18 Organic and non-organic LFA grazing farms full sample 2013/14

The average LFA grazing farm	Non-organic 2013/14			Organic 2013/14		
Number (unweighted)	220			23		
Number (weighted)	6,692			140		
Farm size (2010SO)	78,670			110,878		
Farm area (adjusted ha)	115.0			185.8		
Grazing livestock units	85.4			128.8		
	£/farm	**£/ha**		**£/farm**	**£/ha**	
Agriculture:	60,593	527	62%	88,299	475	55%
Livestock	57,676	501	*95%*	81,150	437	*92%*
Crops	2,917	25	*5%*	7,149	38	*8%*
Agri-environment and other payments	11,013	96	11%	28,705	154	18%
Diversification & miscellaneous	6,810	59	7%	4,976	27	3%
Single Payment Scheme	18,905	164	19%	38,686	208	24%
Farm Business Output (a)	**97,322**	**846**	**100%**	**160,666**	**865**	**100%**
Livestock variable costs:	29,425	256	35%	32,322	174	25%
Feed	18,432	160	*63%*	16,579	89	*51%*
Vet & medicine	3,538	31	*12%*	5,439	29	*17%*
Other livestock costs	7,456	65	*25%*	10,304	55	*32%*
Crop variable costs:	6,064	53	7%	6,268	34	5%
Seed	399	3	*7%*	2,493	13	*40%*
Fertiliser	4,760	41	*79%*	2,507	13	*40%*
Crop protection	325	3	*5%*	336	2	*5%*
Other crop costs	580	5	*10%*	932	5	*15%*
Contract	3,030	26	4%	10,776	58	8%
Paid Labour	3,979	35	5%	13,837	74	11%
Machinery:	18,060	157	22%	23,943	129	19%
Fuel & oil	4,932	43	*27%*	6,890	37	*29%*
Repairs	3,983	35	*22%*	5,598	30	*23%*
Depreciation	9,146	80	*51%*	11,455	62	*48%*
Paid Rents	5,962	52	7%	10,581	57	8%
Other costs	17,137	149	20%	29,074	156	23%
Total Costs (b)	**83,658**	**727**	**100%**	**126,800**	**682**	**100%**
Profit/(loss) on sale of fixed assets	403			425		
Farm Business Income (c=a-b)	**14,068**	**122**		**34,291**	**185**	
Unpaid manual labour excl. farmer & spouse (d)	4,347	38		4,470	24	
Interest payments (e)	1,978	17		2,347	13	
Imputed rents (f)	9,003	78		14,172	76	
Director's remuneration (g)	163	1		2,275	12	
Ownership costs (h)	2,708	24		6,619	36	
Net Farm Income (i=c-d+e-f+g+h)	**5,567**	**48**		**26,889**	**145**	
Farmer & Spouse unpaid labour (j)	21,798	189		17,507	94	
Paid managerial labour (k)	21	0		38	0	
Management and Investment Income (l=i-j+k)	**-16,210**	**-141**		**9,421**	**51**	

3.7.5 Lowland grazing

Year-on-Year

Farm Business Output increased by 3% to £973/ha for organic farms from 2012/13 to 2013/14 (Table 3.20). Output from agriculture decreased by 12% (to £429/ha) but diversification and agri-environment payments both increased (by 34%/ha and 40%/ha respectively).

The identical sample shows that total costs increased for organic farms by 12% year-on-year. Livestock variable costs fell by 7%, but crop costs rose by 21% between 2012/13 and 2013/14. Contract, machinery, paid rents and other costs all rose between the two years but paid labour decreased by 14% to £53/ha. The increase in costs outpaced the slight increase in Farm Business Output with the effect of a reduction in Farm Business Income by 31% to £116/ha. Further, Net Farm Income fell by 26% to £65/ha and Management and Investment Income fell by 21% to -£127/ha.

Organic vs Non-Organic

The full sample shows that organic lowland grazing farms are about 3% smaller in area and carry 24% less stock than the non-organic farms.

Farm Business Output on organic lowland grazing farms (of £995/ha) was 93% of that of their non-organic equivalents (Table 3.21). The 55% higher income from agriculture for non-organic farms more than offsetting the greater earnings from agri-environment payments, diversification and the Single Payment Scheme received by organic farms.

However, the total costs were 4% higher for non-organic farms than the organic farms; livestock variable costs were higher by 195%, mainly feed, and crop variable costs higher by 265%, mainly fertiliser. Both the size and input data clearly point to a far more intensive system being employed on the non-organic farms in relation to their organic counterparts. Paid labour and contract are similar across the groups but machinery, paid rents and other costs are all higher for organic lowland grazing farms.

The Farm Business Income on organic farms was £122/ha, £34/ha less than the non-organics but Net Farm Income was greater for organic farms at £71/ha versus £48/ha.

Further detailed commentary on organic lowland grazing farm performance is given in Appendix 3.

Table 3.19 Organic lowland grazing farms identical sample 2012/13 and 2013/14

The average lowland grazing farm	Organic identical sample 2012/13			2013/14		
Number (unweighted)	27			27		
Number (weighted)	674			679		
Farm size (2010SO)	65,825			64,463		
Farm area (adjusted ha)	95.5			98.2		
Grazing livestock units	68.6			70.6		
	£/farm	**£/ha**		**£/farm**	**£/ha**	
Agriculture:	46,302	485	51%	42,141	429	44%
Livestock component	38,418	402	*83%*	36,774	375	*87%*
Crop component	7,883	83	*17%*	5,367	55	*13%*
Agri-environment and other payments	8,744	92	10%	12,588	128	13%
Diversification & miscellaneous	15,392	161	17%	21,192	216	22%
Single Payment Scheme	19,496	204	22%	19,614	200	21%
Farm Business Output (a)	**89,934**	**942**	**100%**	**95,535**	**973**	**100%**
Livestock variable costs:	12,138	127	16%	11,665	119	14%
Feed	5,005	52	*41%*	4,433	45	*38%*
Vet & medicine	1,547	16	*13%*	1,533	16	*13%*
Other livestock costs	5,585	59	*46%*	5,699	58	*49%*
Crop variable costs:	2,582	27	4%	3,222	33	4%
Seed	1,634	17	*63%*	2,091	21	*65%*
Fertiliser	122	1	*5%*	421	4	*13%*
Crop protection	59	1	*2%*	44	0	*1%*
Other crop costs	767	8	*30%*	666	7	*21%*
Contract	4,729	50	6%	5,155	53	6%
Paid Labour	5,837	61	8%	5,157	53	6%
Machinery:	20,382	214	28%	23,626	241	28%
Fuel & oil	4,250	45	*21%*	4,392	45	*19%*
Repairs	5,010	52	*25%*	5,220	53	*22%*
Depreciation	11,121	117	*55%*	14,013	143	*59%*
Paid Rents	5,787	61	8%	6,214	63	7%
Other costs	22,289	233	30%	29,756	303	35%
Total Costs (b)	**73,744**	**773**	**100%**	**84,794**	**864**	**100%**
Profit/(loss) on sale of fixed assets	-217			612		
Farm Business Income (c=a-b)	**15,972**	**167**		**11,353**	**116**	
Unpaid manual labour excl. farmer & spouse (d)	4,020	42		4,360	44	
Interest payments (e)	2,367	25		3,322	34	
Imputed rents (f)	10,242	107		10,981	112	
Director's remuneration (g)	1,435	15		3,813	39	
Ownership costs (h)	2,783	29		3,198	33	
Net Farm Income (i=c-d+e-f+g+h)	**8,295**	**87**		**6,346**	**65**	
Farmer & Spouse unpaid labour (j)	18,374	192		18,873	192	
Paid managerial labour (k)	57	1		63	1	
Management and Investment Income (l=i-j+k)	**-10,021**	**-105**		**-12,464**	**-127**	

Table 3.20 Organic and non-organic Lowland grazing farms full sample 2013/14

The average lowland grazing farm	Non-organic 2013/14			Organic 2013/14		
Number (unweighted)	264			36		
Number (weighted)	12,996			856		
Farm size (2010SO)	82,883			65,270		
Farm area (adjusted ha)	98.0			94.9		
Grazing livestock units	87.0			70.0		
	£/farm	**£/ha**		**£/farm**	**£/ha**	
Agriculture:	70,960	724	68%	44,356	467	47%
Livestock	58,631	598	*83%*	37,489	395	*85%*
Crops	12,329	126	*17%*	6,867	72	*15%*
Agri-environment and other payments	3,979	41	4%	11,942	126	13%
Diversification & miscellaneous	13,396	137	13%	19,060	201	20%
Single Payment Scheme	16,583	169	16%	19,130	202	20%
Farm Business Output (a)	**104,917**	**1070**	**100%**	**94,488**	**995**	**100%**
Livestock variable costs:	25,992	265	29%	12,933	136	16%
Feed	16,072	164	*62%*	5,580	59	*43%*
Vet & medicine	2,783	28	*11%*	1,592	17	*12%*
Other livestock costs	7,137	73	*27%*	5,761	61	*45%*
Crop variable costs:	9,018	92	10%	3,297	35	4%
Seed	1,355	14	*15%*	1,984	21	*60%*
Fertiliser	5,497	56	*61%*	584	6	*18%*
Crop protection	1,139	12	*13%*	35	0	*1%*
Other crop costs	1,027	10	*11%*	694	7	*21%*
Contract	5,369	55	6%	5,343	56	6%
Paid Labour	5,184	53	6%	4,909	52	6%
Machinery:	18,954	193	21%	22,466	237	27%
Fuel & oil	5,047	51	*27%*	4,351	46	*19%*
Repairs	4,447	45	*23%*	4,938	52	*22%*
Depreciation	9,461	97	*50%*	13,177	139	*59%*
Paid Rents	4,835	49	5%	6,555	69	8%
Other costs	20,598	210	23%	27,930	294	33%
Total Costs (b)	**89,951**	**918**	**100%**	**83,432**	**879**	**100%**
Profit/(loss) on sale of fixed assets	334			485		
Farm Business Income (c=a-b)	**15,300**	**156**		**11,541**	**122**	
Unpaid manual labour excl. farmer & spouse (d)	4,400	45		3,821	40	
Interest payments (e)	2,434	25		3,303	35	
Imputed rents (f)	12,334	126		10,279	108	
Director's remuneration (g)	85	1		3,024	32	
Ownership costs (h)	3,582	37		2,993	32	
Net Farm Income (i=c-d+e-f+g+h)	**4,667**	**48**		**6,760**	**71**	
Farmer & Spouse unpaid labour (j)	21,842	223		19,942	210	
Paid managerial labour (k)	11	0		50	1	
Management and Investment Income (l=i-j+k)	**-17,164**	**-175**		**-13,132**	**-138**	

3.7.6 Mixed

Year-on-Year

Farm Business Output increased by 24% for organic mixed farms year-on-year (Table 3.22) to £1,556/ha with all cost centres showing increases in output per hectare.

Total costs rose by 16% to £1337/ha for organic mixed farms year-on-year. Livestock variable costs were up by 62% to £357/ha, of which feed costs rose by 88% to £269/ha. Crop variable costs increased by 8% to £111/ha. Contract costs fell by 5% but paid labour and machinery costs rose by 8% and 10% respectively. Paid rents and other costs also rose slightly.

The Farm Business Income on mixed farms rose by 123% to £222/ha for 2013/14. Net Farm Income rose to £71/ha and Management and Investment Income, despite a 25% improvement still recorded a negative value of -£178/ha.

Organic vs Non-Organic

The organic mixed farms are typically smaller in area (at 114.7 adjusted ha) and carry 36% less stock (at 55.3 grazing livestock units) than their non-organic peers.

The Farm Business Output of £1357/ha on organic mixed farms was 26% lower than their non-organic equivalents (Table 3.23). Output from agriculture on organic farms was £818/ha, 42% lower than that on non-organic farms. Non-organic farms also had a greater output from diversification but the organic farms earned more from agri-environmental schemes (£186/ha) and the Single Payment Scheme.

However, the organic farms had about 30% lower costs than non-organic farms. Livestock variable costs for organic mixed farms were 57% of those on non-organic farms, and organic crop variable costs were just 33% of that spent by the non-organic group. Contract and machinery costs were lower on organic farms by 19% and 28% respectively, but paid labour was 5% higher, than on the non-organic farms.

The Farm Business Income for organic mixed farms in 2013/14 was £188/ha, some £9/ha lower than the non-organic farms. The Net Farm Income for organic farms was £48/ha, and the Management and Investment Income -£168/ha, both lower by £50/ha and £114/ha respectively than the non-organic mixed farms.

Table 3.21 Organic mixed farms identical sample 2012/13 and 2013/14

The average mixed farm	Organic identical sample 2012/13			2013/14		
Number (unweighted)	18			18		
Number (weighted)	250			270		
Farm size (2010SO)	114,943			113,108		
Farm area (adjusted ha)	112.2			104.2		
Grazing livestock units	59.5			55.5		
	£/farm	**£/ha**		**£/farm**	**£/ha**	
Agriculture:	86,105	767	61%	101,599	975	63%
Livestock component	54,273	484	*63%*	71,188	683	*70%*
Crop component	31,832	284	*37%*	30,411	292	*30%*
Agri-environment and other payments	16,184	144	12%	20,016	192	12%
Diversification & miscellaneous	17,164	153	12%	20,281	195	13%
Single Payment Scheme	20,782	185	15%	20,188	194	12%
Farm Business Output (a)	**140,234**	**1250**	**100%**	**162,084**	**1556**	**100%**
Livestock variable costs:	24,695	220	19%	37,186	357	27%
Feed	16,092	143	*65%*	28,029	269	*75%*
Vet & medicine	1,546	14	*6%*	1,697	16	*5%*
Other livestock costs	7,058	63	*29%*	7,460	72	*20%*
Crop variable costs:	11,508	103	9%	11,518	111	8%
Seed	6,750	60	*59%*	7,362	71	*64%*
Fertiliser	1,303	12	*11%*	1,277	12	*11%*
Crop protection	296	3	*3%*	541	5	*5%*
Other crop costs	3,158	28	*27%*	2,339	22	*20%*
Contract	7,967	71	6%	7,031	67	5%
Paid Labour	16,942	151	13%	16,993	163	12%
Machinery:	26,856	239	21%	27,361	263	20%
Fuel & oil	6,048	54	*23%*	5,946	57	*22%*
Repairs	6,541	58	*24%*	6,171	59	*23%*
Depreciation	14,268	127	*53%*	15,243	146	*56%*
Paid Rents	6,199	55	5%	5,804	56	4%
Other costs	35,301	315	27%	33,458	321	24%
Total Costs (b)	**129,468**	**1154**	**100%**	**139,350**	**1337**	**100%**
Profit/(loss) on sale of fixed assets	419			381		
Farm Business Income (c=a-b)	**11,185**	**100**		**23,115**	**222**	
Unpaid manual labour excl. farmer & spouse (d)	3,173	28		4,923	47	
Interest payments (e)	2,511	22		1,813	17	
Imputed rents (f)	19,670	175		19,962	192	
Director's remuneration (g)	0	0		722	7	
Ownership costs (h)	6,214	55		6,650	64	
Net Farm Income (i=c-d+e-f+g+h)	**-2,933**	**-26**		**7,415**	**71**	
Farmer & Spouse unpaid labour (j)	23,939	213		26,041	250	
Paid managerial labour (k)	123	1		112	1	
Management and Investment Income (l=i-j+k)	**-26,749**	**-238**		**-18,514**	**-178**	

Table 3.22 Organic and non-organic mixed farms full sample 2013/14

The average mixed farm	Non-organic 2013/14			Organic 2013/14		
Number (unweighted)	164			29		
Number (weighted)	5,698			428		
Farm size (2010SO)	230,104			108,163		
Farm area (adjusted ha)	153.8			114.7		
Grazing livestock units	85.8			55.3		
	£/farm	**£/ha**		**£/farm**	**£/ha**	
Agriculture:	215,462	1401	76%	93,802	818	60%
Livestock	124,417	809	*58%*	62,183	542	*66%*
Crops	91,045	592	*42%*	31,619	276	*34%*
Agri-environment and other payments	6,914	45	2%	21,327	186	14%
Diversification & miscellaneous	31,834	207	11%	17,640	154	11%
Single Payment Scheme	28,210	183	10%	22,903	200	15%
Farm Business Output (a)	**282,420**	**1837**	**100%**	**155,672**	**1357**	**100%**
Livestock variable costs:	71,968	468	28%	30,792	268	23%
Feed	55,673	362	*77%*	22,471	196	*73%*
Vet & medicine	3,891	25	*5%*	1,598	14	*5%*
Other livestock costs	12,405	81	*17%*	6,722	59	*22%*
Crop variable costs:	42,188	274	17%	10,363	90	8%
Seed	8,197	53	*19%*	6,843	60	*66%*
Fertiliser	18,612	121	*44%*	1,211	11	*12%*
Crop protection	12,073	79	*29%*	395	3	*4%*
Other crop costs	3,306	22	*8%*	1,914	17	*18%*
Contract	12,621	82	5%	7,912	69	6%
Paid Labour	20,685	135	8%	16,274	142	12%
Machinery:	48,440	315	19%	28,224	246	21%
Fuel & oil	12,827	83	*26%*	5,964	52	*21%*
Repairs	11,981	78	*25%*	7,183	63	*25%*
Depreciation	23,632	154	*49%*	15,077	131	*53%*
Paid Rents	13,066	85	5%	7,213	63	5%
Other costs	44,087	287	17%	33,683	294	25%
Total Costs (b)	**253,056**	**1646**	**100%**	**134,461**	**1172**	**100%**
Profit/(loss) on sale of fixed assets	869			396		
Farm Business Income (c=a-b)	**30,234**	**197**		**21,607**	**188**	
Unpaid manual labour excl. farmer & spouse (d)	8,694	57		4,537	40	
Interest payments (e)	5,482	36		2,445	21	
Imputed rents (f)	20,992	137		20,256	177	
Director's remuneration (g)	1,131	7		456	4	
Ownership costs (h)	7,893	51		5,803	51	
Net Farm Income (i=c-d+e-f+g+h)	**15,054**	**98**		**5,517**	**48**	
Farmer & Spouse unpaid labour (j)	23,447	152		24,844	217	
Paid managerial labour (k)	104	1		70	1	
Management and Investment Income (l=i-j+k)	**-8,289**	**-54**		**-19,257**	**-168**	

4 ENTERPRISE GROSS MARGINS

4.1 Data sample

The distribution of available crop and livestock margin data by robust farm type and size for organic farms are shown in Table 4.1 and Table 4.13.

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 4.2 and Table 4.14 show the sample size of organic crop and livestock enterprises that have been analysed to gross margin level. Where sample numbers allow (>10 farms), analyses for a premium group (top third by GM/ha or GM/head) are presented.

There are 14 poultry enterprises recorded to gross margin level but they are a mix of: layers (6) broilers (5) and other poultry (3) 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 7 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 38 enterprises comprises of 4 LFA and 34 lowland dairy farms. Further, of these farms, 95% are milk wholesalers and 5% are retailers.

Table 4.3 to Table 4.12 show gross margins for crop enterprises. Table 4.15 to Table 4.23 show gross margins for livestock enterprises.

4.2 Organic Cropping enterprises

Table 4.1 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	14	39
General cropping	8	6	9	23
Horticulture	14	2	0	16
Pigs	0	0	1	1
Poultry	0	0	1	1
Dairy	0	3	14	17
LFA Grazing	5	0	9	14
Lowland Grazing	9	11	9	29
Mixed	10	21	18	49
All	**58**	**56**	**75**	**189**

Table 4.2 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	22	191	31.5	-	-	-
Spring wheat	20	315	13.3	-	-	-
Spring barley	37	361	19.1	12	150	12.7
Winter oats	17	274	9.9	-	-	-
Spring oats	30	558	13.3	10	105	15.3
Beans	20	192	24.6	-	-	-
Fertility crop	12	179	24.1	-	-	-
Field vegetables	10	133	13.0	-	-	-
Flowers etc	11	391	2.8	-	-	-
Protected vegetables	10	352	0.2	-	-	-

Table 4.3 Winter wheat gross margin

2013 harvest year	Sample	22	crops	
	Sample weighted	191	crops	
	Average crop area	31.5	hectares	
Crop Yield and Output		**per crop**	**per ha**	**std dev**
Yield (tonnes and tonnes/ha)		117.71	3.74	1.22
Price of crop sold (£/t)		274		40
Crop output		31,257	992	347
By product output		1,281	41	82
Area payment (Protein or energy crop supplements)		0	0	0
Total		**32,538**	**1,033**	
Variable Costs		**per crop**	**per ha**	
Seed		4,102	130	54
Fertiliser (incl. lime, purchased FYM, trace elements, etc.)		869	28	41
Crop protection materials		164	5	13
Other crop costs (including levies and commission)		204	6	13
Fuel for heating & drying		67	2	11
Total		**5,406**	**172**	**74**
Gross Margin		**27,132**	**861**	**351**

Table 4.4 Spring wheat gross margin

2013 harvest year	Sample	20	crops	
	Sample weighted	315	crops	
	Average crop area	13.3	hectares	
Crop Yield and Output		**per crop**	**per ha**	**std dev**
Yield (tonnes and tonnes/ha)		37.76	2.85	1.01
Price of crop sold (£/t)		274		45
Crop output		9,509	718	248
By product output		538	41	61
Area payment (Protein or energy crop supplements)		0	0	0
Total		**10,046**	**758**	
Variable Costs		**per crop**	**per ha**	
Seed		2,106	159	40
Fertiliser (incl. lime, purchased FYM, trace elements, etc.)		408	31	32
Crop protection materials		22	2	3
Other crop costs (including levies and commission)		333	25	25
Fuel for heating & drying		14	1	2
Total		**2,884**	**218**	**42**
Gross Margin		**7,163**	**541**	**255**

Table 4.5 Spring barley gross margin

2013 harvest year	Sample	37	crops		Top third	12	crops	
	Sample weighted	361	crops		Top third weighted	150	crops	
	Average crop area	19.1	hectares		Average crop area	12.7	hectares	
Crop Yield and Output		**per crop**	**per ha**	**std dev**		**per crop**	**per ha**	**std dev**
Yield (tonnes and tonnes/ha)		63.80	3.34	1.35		61.65	4.84	1.79
Price of crop sold (£/t)		217		80		239		42
Crop output		15,237	798	271		15,211	1,195	331
By product output		1,434	75	124		1,340	105	176
Area payment (Protein or energy crop supplements)		0	0	0		0	0	0
Total		**16,671**	**873**			**16,551**	**1,300**	
Variable Costs		**per crop**	**per ha**			**per crop**	**per ha**	
Seed		2,002	105	55		1,229	97	71
Fertiliser (incl. lime, purchased FYM, trace elements, etc.)		517	27	42		598	47	46
Crop protection materials		42	2	8		102	8	12
Other crop costs (including levies and commission)		359	19	24		160	13	19
Fuel for heating & drying		95	5	9		91	7	10
Total		**3,016**	**158**	**88**		**2,180**	**171**	**115**
Gross Margin		**13,656**	**715**	**305**		**14,371**	**1,129**	**414**

Table 4.6 Winter oats gross margin

2013 harvest year	Sample	17	crops	
	Sample weighted	274	crops	
	Average crop area	9.9	hectares	
Crop Yield and Output		**per crop**	**per ha**	**std dev**
Yield (tonnes and tonnes/ha)		26.08	2.63	1.51
Price of crop sold (£/t)		244		43
Crop output		6,189	625	313
By product output		774	78	75
Area payment (Protein or energy crop supplements)		0	0	0
Total		**6,963**	**703**	
Variable Costs		**per crop**	**per ha**	
Seed		1,149	116	86
Fertiliser (incl. lime, purchased FYM, trace elements, etc.)		230	23	34
Crop protection materials		4	0	4
Other crop costs (including levies and commission)		235	24	93
Fuel for heating & drying		53	5	8
Total		**1,670**	**169**	**130**
Gross Margin		**5,293**	**534**	**337**

Table 4.7 Spring oats gross margin

2013 harvest year	Sample	30	crops		Sample	10	crops	
	Sample weighted	558	crops		Sample weighted	105	crops	
	Average crop area	13.3	hectares		Average crop area	15.3	hectares	
Crop Yield and Output		**per crop**	**per ha**	**std dev**		**per crop**	**per ha**	**std dev**
Yield (tonnes and tonnes/ha)		35.56	2.66	1.49		61.63	4.02	1.87
Price of crop sold (£/t)		247		40		257		30
Crop output		8,019	601	363		15,449	1,008	487
By product output		658	49	73		650	42	81
Area payment (Protein or energy crop supplements)		0	0	0		0	0	0
Total		**8,677**	**650**			**16,100**	**1,051**	
Variable Costs		**per crop**	**per ha**			**per crop**	**per ha**	
Seed		1,117	84	56		2,067	135	84
Fertiliser (incl. lime, purchased FYM, trace elements, etc.)		221	17	22		371	24	33
Crop protection materials		17	1	1		0	0	1
Other crop costs (including levies and commission)		340	25	24		324	21	21
Fuel for heating & drying		29	2	4		88	6	6
Total		**1,722**	**129**	**64**		**2,851**	**186**	**72**
Gross Margin		**6,955**	**521**	**310**		**13,249**	**865**	**450**

Table 4.8 Beans gross margin

2013 harvest year	Sample	20	crops	
	Sample weighted	192	crops	
	Average crop area	24.6	hectares	
Crop Yield and Output		**per crop**	**per ha**	**std dev**
Yield (tonnes and tonnes/ha)		58.36	2.37	0.87
Price of crop sold (£/t)		321		24
Crop output		18,849	766	304
By product output		593	24	226
Area payment (Protein or energy crop supplements)		0	0	0
Total		**19,442**	**790**	
Variable Costs		**per crop**	**per ha**	
Seed		2,828	115	57
Fertiliser (incl. lime, purchased FYM, trace elements, etc.)		343	14	25
Crop protection materials		46	2	8
Other crop costs (including levies and commission)		545	22	29
Fuel for heating & drying		51	2	7
Total		**3,812**	**155**	**70**
Gross Margin		**15,630**	**635**	**389**

Table 4.9 Fertility crop gross margin

2013 harvest year	Sample	12	crops	
	Sample weighted	179	crops	
	Average crop area	24.1	hectares	
Crop Yield and Output		**per crop**	**per ha**	**std dev**
Yield (tonnes and tonnes/ha)		0.00	0.00	0.00
Price of crop sold (£/t)		-		-
Crop output		0	0	0
By product output		0	0	0
Area payment (Protein or energy crop supplements)		0	0	0
Total		**0**	**0**	
Variable Costs		**per crop**	**per ha**	
Seed		1,096	46	51
Fertiliser (incl. lime, purchased FYM, trace elements, etc.)		0	0	0
Crop protection materials		10	0	1
Other crop costs (including levies and commission)		60	2	3
Fuel for heating & drying		0	0	0
Total		**1,166**	**48**	**49**
Gross Margin		**-1,166**	**-48**	**49**

Table 4.10 Field vegetable gross margin

2013 harvest year	Sample	10	crops	
	Sample weighted	133	crops	
	Average crop area	13.0	hectares	
Crop Yield and Output		**per crop**	**per ha**	**std dev**
Yield (tonnes and tonnes/ha)		49.50	3.81	3.52
Price of crop sold (£/t)		-		-
Crop output		67,097	5,166	3,573
By product output		0	0	0
Area payment (Protein or energy crop supplements)		0	0	0
Total		**67,097**	**5,166**	
Variable Costs		**per crop**	**per ha**	
Seed		12,345	950	560
Fertiliser (incl. lime, purchased FYM, trace elements, etc.)		962	74	76
Crop protection materials		212	16	18
Other crop costs (including levies and commission)		7,551	581	540
Fuel for heating & drying		0	0	0
Total		**21,069**	**1,622**	**1,144**
Gross Margin		**46,028**	**3,544**	**2,759**

Table 4.11 Flowers gross margin

2013 harvest year	Sample	11	crops	
	Sample weighted	391	crops	
	Average crop area	2.8	hectares	
Crop Yield and Output		**per crop**	**per ha**	**std dev**
Yield (tonnes and tonnes/ha)		0.06	0.02	0.23
Price of crop sold (£/t)		-		-
Crop output		17,771	6,390	3,818
By product output		0	0	0
Area payment (Protein or energy crop supplements)		0	0	0
Total		**17,771**	**6,390**	
Variable Costs		**per crop**	**per ha**	
Seed		2,454	883	708
Fertiliser (incl. lime, purchased FYM, trace elements, etc.)		346	125	140
Crop protection materials		5	2	39
Other crop costs (including levies and commission)		1,607	578	397
Fuel for heating & drying		78	28	44
Total		**4,490**	**1,615**	**955**
Gross Margin		**13,281**	**4,775**	**3,285**

Table 4.12 Protected vegetables gross margin

2013 harvest year	Sample	10	crops	
	Sample weighted	352	crops	
	Average crop area	0.2	hectares	
Crop Yield and Output		**per crop**	**per ha**	**std dev**
Yield (tonnes and tonnes/ha)		0.04	0.19	0.85
Price of crop sold (£/t)		-		-
Crop output		7,279	32,541	17,177
By product output		0	0	0
Area payment (Protein or energy crop supplements)		0	0	0
Total		**7,279**	**32,541**	
Variable Costs		**per crop**	**per ha**	
Seed		532	2,378	2,713
Fertiliser (incl. lime, purchased FYM, trace elements, etc.)		52	232	529
Crop protection materials		5	22	78
Other crop costs (including levies and commission)		307	1,374	1,695
Fuel for heating & drying		73	326	406
Total		**969**	**4,332**	**3,342**
Gross Margin		**6,310**	**28,209**	**14,709**

4.3 Organic Livestock enterprises

Table 4.13 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	0	4	8	12
General cropping	2	2	2	6
Horticulture	2	0	0	2
Pigs	0	0	2	2
Poultry	0	1	2	3
Dairy	0	23	46	69
LFA Grazing	15	14	20	49
Lowland Grazing	44	33	13	90
Mixed	16	21	15	52
All	**79**	**98**	**108**	**285**

Table 4.14 Sample size for organic livestock gross margin analysis

Enterprise	Sample		Premium	
	Sample size	Weighted sample size	Sample size	Weighted sample size
Dairy cows	38	321	13	105
LFA sucklers	17	123	-	-
Lowland sucklers	65	1118	22	486
Dairy followers	29	269	10	123
Fat cattle from suckler bred calves or stores	49	654	16	207
Store cattle from suckler bred calves or stores	30	622	10	221
Lowland sheep	42	649	14	196
LFA sheep (upland)	15	92	-	-

Table 4.15 Dairy cows gross margin - sample

Sample size	38			
No farms in population	321			
Production information				
Average cow numbers	93			
Enterprise grazing livestock units	94			
Total milk produced (litres)	582379			
Total milk produced per cow (lt/cow)	6239			
Average price of milk sold (pence/lt)	36.65			
Calves per cow (sold or transferred)	0.84			
Herd replacement rate (%)	24%			
Adjusted forage area (including commons)	73.82			
Stocking rate (cows per adj. forage ha.)	1.26			
Stocking rate (GLUs per adj. forage ha.)	1.27			
Enterprise Output	**Total**	**per cow**	**per litre**	**per adj for ha**
	(£)	**(£)**	**(pence)**	**(£)**
Milk	213443	2287	36.7	2891
Calves and other dairy related output	9563	102	1.6	130
Less Herd Depreciation	18573	199	3.2	252
Total Gross Output (A)	**204433**	**2190**	**35.1**	**2769**
Variable Costs				
Concentrates	58787	630	10.1	796
Coarse fodder	3986	43	0.7	54
Vet and Medicines	5439	58	0.9	74
Other livestock costs	19703	211	3.4	267
Total Variable Costs (B)	**87914**	**942**	**15.1**	**1191**
Gross Margin before forage (A-B) = (C)	**116519**	**1248**	**20.0**	**1578**
Forage Variable Costs (D)	1933	21	0.3	26
Gross Margin after forage (C-D) = (E)	**114586**	**1227**	**19.7**	**1552**
Prices				
Average quota leasing in price (pence/lt)	na			
Calf price (£/calf)	121			
Cull cow price (£/cow)	969			
Replacement heifer/cow price (£/head)	1452			
Forage Costs				
Fertilizer (£/ha)	4			
Seed (£/ha)	16			
Spray (£/ha)	0			
Other crop costs (£/ha)	6			
Total (£/ha)	26			
Unadjusted forage area excluding commons	72.39			

Table 4.16 Dairy cows gross margin - premium

Premium sample size	13			
No farms in population	105			
Production information				
Average cow numbers	126			
Enterprise grazing livestock units	126			
Total milk produced (litres)	809151			
Total milk produced per cow (lt/cow)	6438			
Average price of milk sold (pence/lt)	38.23			
Calves per cow (sold or transferred)	0.90			
Herd replacement rate (%)	28%			
Adjusted forage area (including commons)	82.92			
Stocking rate (cows per adj. forage ha.)	1.52			
Stocking rate (GLUs per adj. forage ha.)	1.53			
Enterprise Output	**Total**	**per cow**	**per litre**	**per adj for ha**
	(£)	**(£)**	**(pence)**	**(£)**
Milk	309362	2461	38.2	3731
Calves and other dairy related output	14935	119	1.9	180
Less Herd Depreciation	29135	232	3.6	351
Total Gross Output (A)	**295162**	**2348**	**36.5**	**3560**
Variable Costs				
Concentrates	77926	620	9.6	940
Coarse fodder	3420	27	0.4	41
Vet and Medicines	7556	60	0.9	91
Other livestock costs	24763	197	3.1	299
Total Variable Costs (B)	**113666**	**904**	**14.0**	**1371**
Gross Margin before forage (A-B) = (C)	**181496**	**1444**	**22.4**	**2189**
Forage Variable Costs (D)	3051	24	0.4	37
Gross Margin after forage (C-D) = (E)	**178445**	**1420**	**22.1**	**2152**
Prices				
Average quota leasing in price (pence/lt)	na			
Calf price (£/calf)	132			
Cull cow price (£/cow)	664			
Replacement heifer/cow price (£/head)	1438			
Forage Costs				
Fertilizer (£/ha)	6			
Seed (£/ha)	22			
Spray (£/ha)	0			
Other crop costs (£/ha)	9			
Total (£/ha)	37			
Unadjusted forage area excluding commons	83.15			

Table 4.17 Dairy followers gross margin – sample and premium

	Sample		Premium	
No farms in sample	29		10	
No farms	269		123	
Production information				
Enterprise grazing livestock units *	42		48	
Adjusted forage area (including commons)	29.91		28.06	
Stocking rate (GLUs per adj. forage ha.)	1.41		1.71	
Enterprise Output	**Total**	**per adj for ha**	**Total**	**per adj for ha**
	(£)	**(£)**	**(£)**	**(£)**
Cattle output	35578	1190	43368	1545
Total Output (A)	**35578**	**1190**	**43368**	**1545**
Variable Costs				
Concentrates	12304	411	11528	411
Coarse fodder	2322	78	1170	42
Vet and Medicines	730	24	840	30
Other livestock costs	4794	160	5497	196
Total Variable Costs (B)	**20150**	**673**	**19035**	**679**
Gross Margin before forage (A-B) = (C)	**15428**	**517**	**24333**	**866**
Forage Variable Costs (D)	382	13	395	14
Gross Margin after forage (C-D) = (E)	**15047**	**504**	**23938**	**852**
Prices				
Dairy heifer transfer or sale price £	1397		1413	
Finished cattle price £	1162		1172	
Store cattle price £	825		970	
Forage Costs				
Fertilizer (£/ha)	1		0	
Seed (£/ha)	8		9	
Spray (£/ha)	0		0	
Other crop costs (£/ha)	3		4	
Total (£/ha)	13		14	
Unadjusted forage area excluding commons	29.40		27.26	
* excludes stock away on agistment				

Table 4.18 LFA sucklers gross margin - sample

	Sample		
No farms in sample	17		
No farms in population	123		
Production information			
Average cow numbers	43		
Enterprise grazing livestock units *	41		
Calves per cow	0.89		
Herd replacement rate (%)	18%		
Adjusted forage area (including commons)	54.22		
Stocking rate (cows per adj. forage ha.)	0.79		
Stocking rate (GLUs per adj. forage ha.)	0.76		
Enterprise Output	**Total**	**per cow**	**per adj for ha**
	(£)	**(£)**	**(£)**
Suckler calves †	20535	478	379
Less Herd Depreciation	3481	81	64
Total Output (A)	**17054**	**397**	**315**
Variable Costs			
Concentrates	1283	30	24
Coarse fodder	534	12	10
Vet and Medicines	1060	25	20
Other livestock costs	2810	65	52
Total Variable Costs (B)	**5688**	**132**	**106**
Gross Margin before forage (A-B) = (C)	**11366**	**265**	**209**
Forage Variable Costs	359	8	7
Gross Margin after forage (A-B) = (C)	**11007**	**257**	**202**
Prices			
Calf price (£/calf) *	457		
Cull cow price (£/cow)	826		
Replacement heifer/cow price (£/head)	1078		
Forage Costs			
Fertilizer (£/ha)	1		
Seed (£/ha)	3		
Spray (£/ha)	0		
Other crop costs (£/ha)	2		
Total (£/ha)	7		
Unadjusted forage area excluding commons	94.72		
* excludes stock away on agistment			
† Calf price is as sold off the cow or a transfer value at weaning			

Table 4.19 Lowland sucklers gross margin - sample and premium

	Sample			Premium		
No farms in sample	65			22		
No farms in population	1118			486		
Production information						
Average cow numbers	31			39		
Enterprise grazing livestock units *	31			39		
Calves per cow	0.92			0.95		
Herd replacement rate (%)	18%			16%		
Adjusted forage area (including commons)	38.69			42.96		
Stocking rate (cows per adj. forage ha.)	0.81			0.91		
Stocking rate (GLUs per adj. forage ha.)	0.80			0.91		
Enterprise Output	**Total**	**per cow**	**per adj for ha**	**Total**	**per cow**	**per adj for ha**
	(£)	**(£)**	**(£)**	**(£)**	**(£)**	**(£)**
Suckler calves †	14487	464	374	20108	516	468
Less Herd Depreciation	2543	82	66	2616	67	61
Total Output (A)	**11944**	**382**	**308**	**17492**	**449**	**407**
Variable Costs						
Concentrates	978	31	25	789	20	18
Coarse fodder	333	11	9	199	5	5
Vet and Medicines	718	23	19	803	21	19
Other livestock costs	1943	62	50	2140	55	50
Total Variable Costs (B)	**3973**	**127**	**103**	**3931**	**101**	**92**
Gross Margin before forage (A-B) = (C)	**7971**	**255**	**205**	**13561**	**348**	**315**
Forage Variable Costs	512	16	13	411	11	10
Gross Margin after forage (A-B) = (C)	**7459**	**239**	**192**	**13150**	**337**	**305**
Prices						
Calf price (£/calf) *	526			594		
Cull cow price (£/cow)	791			773		
Replacement heifer/cow price (£/head)	1022			948		
Forage Costs						
Fertilizer (£/ha)	2			1		
Seed (£/ha)	8			5		
Spray (£/ha)	0			0		
Other crop costs (£/ha)	3			3		
Total (£/ha)	13			10		
Unadjusted forage area excluding commons	40.60			45.29		
* excludes stock away on agistment						
† Calf price is as sold off the cow or a transfer value at weaning						

Table 4.20 Fat cattle from suckler bred calves or stores gross margin - sample and premium

	Sample		Premium	
No farms in sample	49		16	
No farms in population	654		207	
Production information				
Enterprise grazing livestock units *	36		52	
Adjusted forage area (including commons)	45.16		56.64	
Stocking rate (GLUs per adj. forage ha.)	0.79		0.91	
Enterprise Output	**Total**	**per adj for ha**	**Total**	**per adj for ha**
	(£)	**(£)**	**(£)**	**(£)**
Cattle output	26036	577	48062	849
Total Output (A)	**26036**	**577**	**48062**	**849**
Variable Costs				
Concentrates	3586	79	4204	74
Coarse fodder	378	8	318	6
Vet and Medicines	529	12	804	14
Other livestock costs	3626	80	5968	105
Total Variable Costs (B)	**8119**	**179**	**11295**	**199**
Gross Margin before forage (A-B) = (C)	**17917**	**398**	**36767**	**650**
Forage Variable Costs (D)	578	13	1218	22
Gross Margin after forage (C-D) = (E)	**17339**	**385**	**35549**	**628**
Prices				
Dairy heifer transfer or sale price £	1369		na	
Finished cattle price £	1339		1372	
Store cattle price £	831		752	
Forage Costs				
Fertilizer (£/ha)	4		11	
Seed (£/ha)	6		7	
Spray (£/ha)	0		0	
Other crop costs (£/ha)	2		4	
Total (£/ha)	13		22	
Unadjusted forage area excluding commons	54.79		58.17	
* excludes stock away on agistment				

Table 4.21 Store cattle from suckler bred calves or stores gross margin - sample and premium

	Sample		Premium	
No farms in sample	30		10	
No farms in population	622		221	
Production information				
Enterprise grazing livestock units *	15		18	
Adjusted forage area (including commons)	20.24		23.72	
Stocking rate (GLUs per adj. forage ha.)	0.74		0.76	
Enterprise Output	**Total**	**per adj for ha**	**Total**	**per adj for ha**
	(£)	**(£)**	**(£)**	**(£)**
Cattle output	7488	370	11793	497
Total Output (A)	**7488**	**370**	**11793**	**497**
Variable Costs				
Concentrates	887	44	552	23
Coarse fodder	80	4	39	2
Vet and Medicines	190	9	195	8
Other livestock costs	1212	60	1117	47
Total Variable Costs (B)	**2369**	**117**	**1903**	**80**
Gross Margin before forage (A-B) = (C)	**5120**	**253**	**9890**	**417**
Forage Variable Costs (D)	244	12	245	10
Gross Margin after forage (C-D) = (E)	**4876**	**241**	**9645**	**407**
Prices				
Dairy heifer transfer or sale price £	na		na	
Finished cattle price £	1403		1553	
Store cattle price £	706		879	
Forage Costs				
Fertilizer (£/ha)	1		0	
Seed (£/ha)	7		8	
Spray (£/ha)	0		0	
Other crop costs (£/ha)	3		2	
Total (£/ha)	12		10	
Unadjusted forage area excluding commons	22.81		27.43	
* excludes stock away on agistment				

Table 4.22 Lowland sheep (2013 lamb crop) gross margin - sample and premium

	Sample			Premium		
No farms in sample	42			14		
No farms in population	649			196		
Production information						
Average ewe numbers	174			316		
Enterprise grazing livestock units *	27			50		
Lambs reared per ewe	1.28			1.36		
Flock replacement rate (%)	27%			24%		
Adjusted forage area (including commons)	32.79			55.75		
Stocking rate (ewes per adj. forage ha.)	5.30			5.67		
Stocking rate (GLUs per adj. forage ha.)	0.83			0.89		
Enterprise Output	**Total**	**per ewe**	**per adj for ha**	**Total**	**per ewe**	**per adj for ha**
	(£)	**(£)**	**(£)**	**(£)**	**(£)**	**(£)**
Lambs †	17259	99	526	34588	109	620
Wool	403	2	12	792	3	14
Less Flock Depreciation	2240	13	68	3903	12	70
Total Output (A)	**15422**	**88**	**470**	**31477**	**100**	**564**
Variable Costs						
Concentrates	2307	13	70	4479	14	80
Coarse fodder	318	2	10	913	3	16
Vet and Medicines	1173	7	36	2235	7	40
Other livestock costs	1884	11	57	2972	9	53
Total Variable Costs (B)	**5682**	**33**	**173**	**10599**	**33**	**189**
Gross Margin before forage (A-B) = (C)	**9741**	**55**	**297**	**20878**	**67**	**375**
Forage Variable Costs (D)	313	2	10	887	3	16
Gross Margin after forage (C-D) = (E)	**9428**	**53**	**287**	**19991**	**64**	**359**
Prices	**£/hd**	**% sales**		**£/hd**	**% sales**	
Fat Lamb price	76	91		77	91	
Store Lamb price	47	8		39	8	
Ewe Lamb price	98	1		94	2	
Draft ewe price	92			500		
Cull ewe price (£/ewe)	59			61		
Wool price (£/kg)	0.92			0.89		
Replacement price (£/head)	94			100		
Forage Costs						
Fertilizer (£/ha)	2			4		
Seed (£/ha)	6			8		
Spray (£/ha)	0			1		
Other crop costs (£/ha)	2			3		
Total (£/ha)	10			16		
Unadjusted forage area excluding commons	34.60			56.65		
* excludes stock away on agistment						
† includes all enterprise output except wool						

Table 4.23 LFA sheep (upland) (2013 lamb crop) gross margin - sample

	Sample		
No farms in sample	15		
No farms in population	92		
Production information			
Average ewe numbers	425		
Enterprise grazing livestock units *	64		
Lambs reared per ewe	1.34		
Flock replacement rate (%)	30%		
Adjusted forage area (including commons)	82.27		
Stocking rate (ewes per adj. forage ha.)	5.17		
Stocking rate (GLUs per adj. forage ha.)	0.77		
Enterprise Output	**Total**	**per ewe**	**per adj for ha**
	(£)	**(£)**	**(£)**
Lambs †	46328	109	563
Wool	954	2	12
Less Flock Depreciation	5090	12	62
Total Output (A)	**42192**	**99**	**513**
Variable Costs			
Concentrates	8873	21	108
Coarse fodder	1103	3	13
Vet and Medicines	3270	8	40
Other livestock costs	4147	10	50
Total Variable Costs (B)	**17392**	**42**	**211**
Gross Margin before forage (A-B) = (C)	**24799**	**57**	**302**
Forage Variable Costs (D)	558	1	7
Gross Margin after forage (C-D) = (E)	**24242**	**56**	**295**
Prices	**£/hd**	**% sales**	
Fat Lamb price	76	92	
Store Lamb price	49	5	
Ewe Lamb price	96	2	
Draft ewe price	112		
Cull ewe price (£/ewe)	49		
Wool price (£/kg)	0.89		
Replacement price (£/head)	96		
Forage Costs			
Fertilizer (£/ha)	1		
Seed (£/ha)	3		
Spray (£/ha)	0		
Other crop costs (£/ha)	2		
Total (£/ha)	7		
Unadjusted forage area excluding commons	93.10		
* excludes stock away on agistment			
† includes all enterprise output except wool			

APPENDIX 1 – ALTERNATIVE FARM INCOME MEASURES

Farm Corporate Income

FCI is calculated by subtracting the value of unpaid manual and managerial labour from FBI; see Appendix 7 for more detail. A comparison of Table 5.1 with Table 3.6 shows the considerable difference between the two profitability measures and demonstrates how care must be taken in choosing and using farm income measures.

Figure 5.1 FCI/farm for organic and non-organic farms by farm type 2013/14

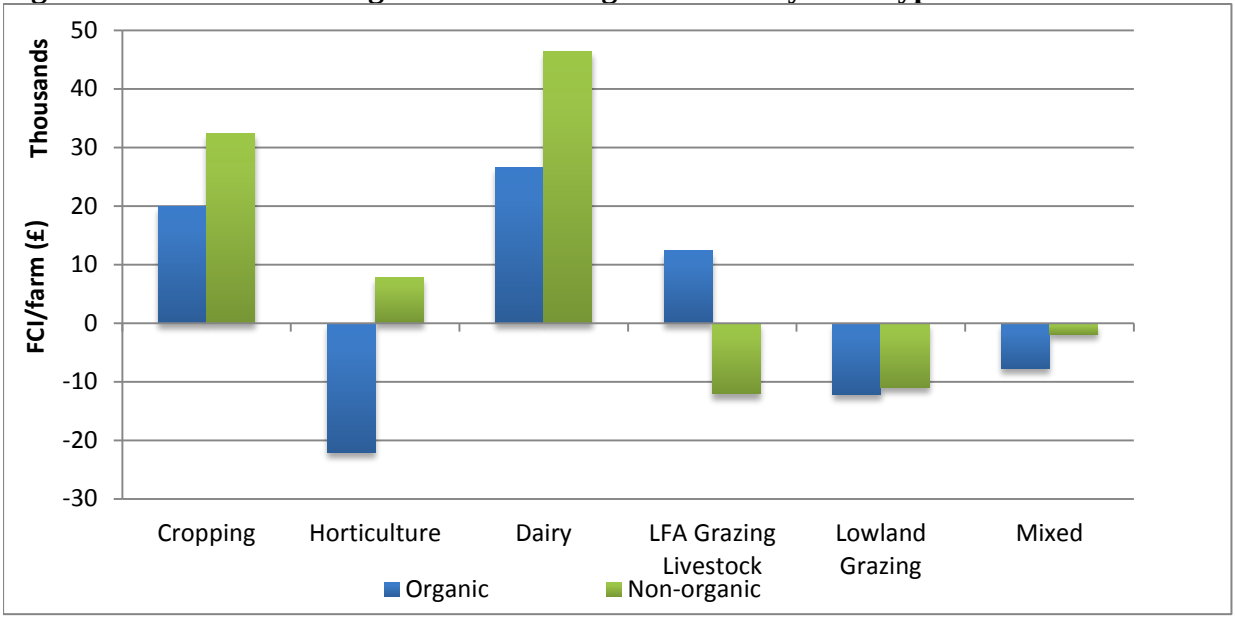


Table 5.1 Differences in FCI between organic and non-organic farms 2013/14 - per farm

FCI/Farm (£) 2013/14	Organic Mean	Non-Organic Mean	Difference	Significance
Cropping	19912	32380	-12467	-
Horticulture	-22067	7839	-29906	***
Dairy	26628	46389	-19760	**
LFA Grazing	12314	-12077	24391	**
Lowland Grazing	-12223	-10942	-1281	-
Mixed	-7774	-1907	-5867	-
(- not significant, * significant at 10% (slight), ** at 5% (moderate), *** at 1% (strong))				

Figure 5.1 and Table 5.1 show FCI/farm for organic and non-organic farms for 2013/14. The data shows that FCI was significantly lower for organic Horticulture and Dairy farms compared to their non-organic counterparts. However, FCI for non-organic farms was significantly lower than organic farms for LFA grazing farms.

Farm Investment Income

FII is calculated by adding net interest payments to Farm Corporate Income; see Appendix 7 for more detail.

Figure 5.2 FII/farm for organic and non-organic farms by farm type 2013/14

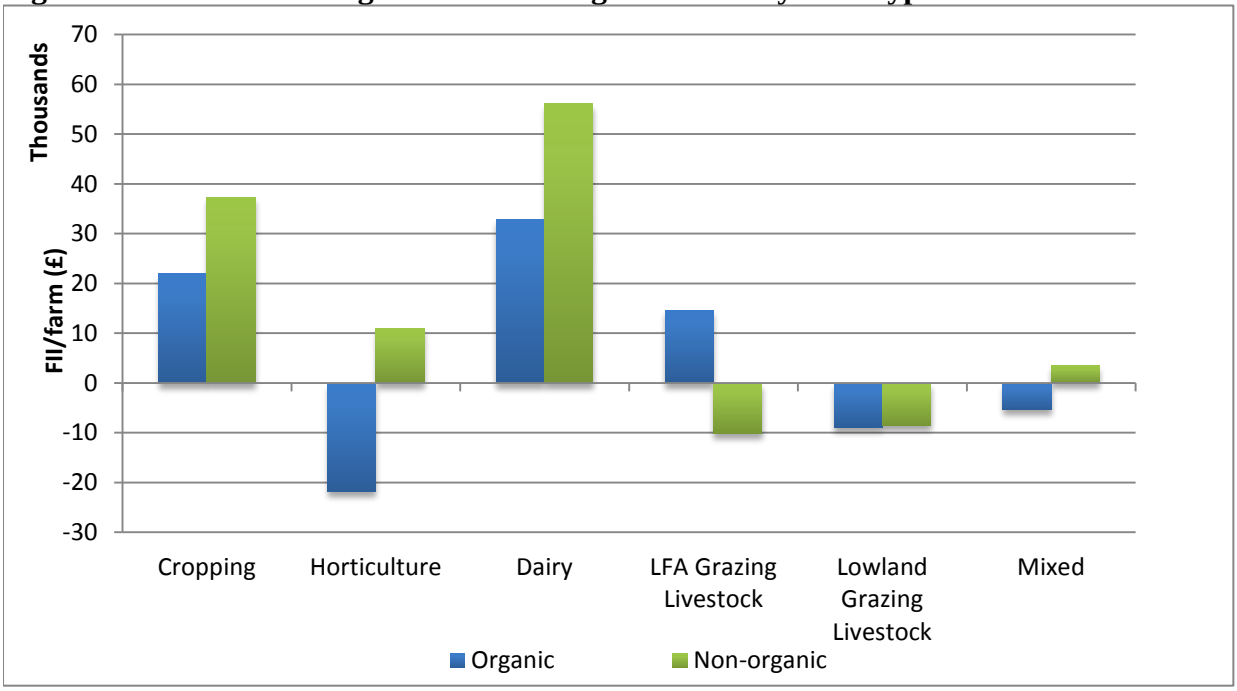


Table 5.2 Differences in FII between organic and non-organic farms 2013/14 - per farm

FII/Farm (£) 2013/14	Organic Mean	Non-Organic Mean	Difference	Significance
Cropping	22029	37361	-15333	-
Horticulture	-21852	10976	-32828	***
Dairy	32797	56115	-23319	**
LFA Grazing	14662	-10099	24760	**
Lowland Grazing	-8920	-8508	-412	-
Mixed	-5329	3575	-8905	*
(- not significant, * significant at 10% (slight), ** at 5% (moderate), *** at 1% (strong))				

Figure 5.2 and Table 5.2 show FII/farm for organic and non-organic farms for 2013/14. The data shows very similar results to that of FCI with the only exception being that FII for the Mixed farms was statistically greater for non-organic farms than organic farms.

APPENDIX 2 – ORGANIC CROPPING

Performance of Organic Arable Businesses

Market Overview and Organic Crop Areas

Following four years of contraction, the UK market for organic food increased by 2.8 per cent in 2013, exceeding the annual inflation rate of two per cent[1]. The value of sales of organic vegetables increased by 3.4 per cent in the year.

Sales through the multiples increased by 1.2 per cent but much stronger growth was achieved by independent retailers increasing organic sales by 6.9 per cent, including box schemes which increased sales by 11 per cent.

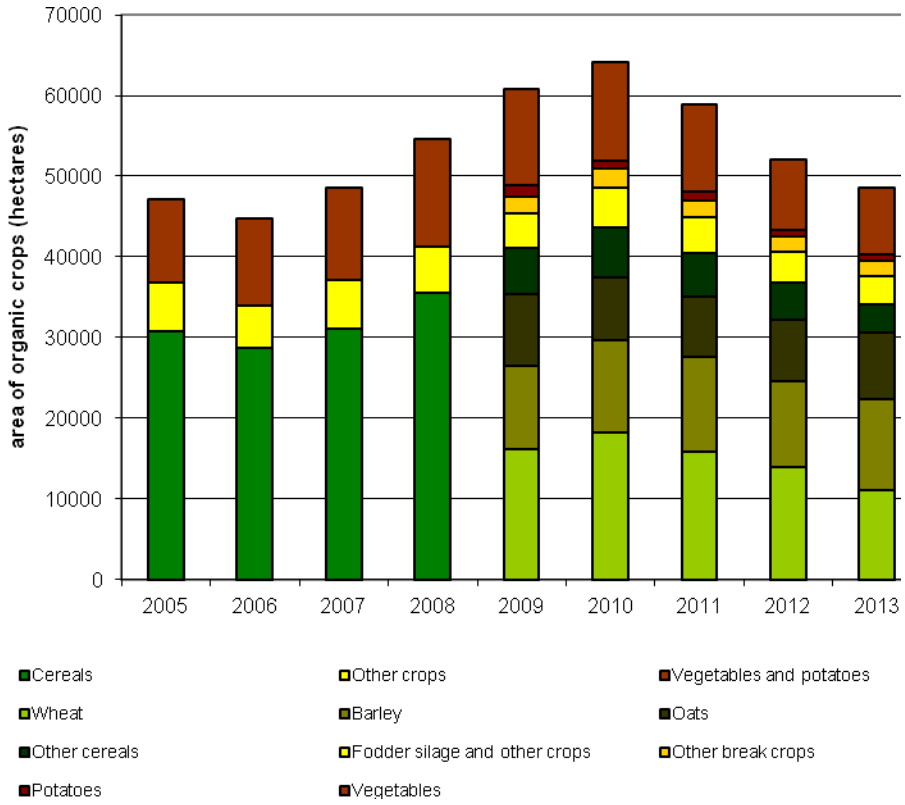
Despite the recovery in sales, organic farmers had experienced unfavourable financial performance in recent years. A survey of organic farmers in autumn 2013 revealed that three per cent of organic farmers intended to leave the industry within a year. Only 41 per cent intended to continue for at least a decade.

In 2013, the number of organic producers in England declined by a further seven per cent to 2,299 (2,457 in 2012)[2]. They grew organic crops on 48,555 hectares of land (52,000 hectares in 2012). As shown in Figure 6.1, they produced reduced areas of all arable crops.

[1] Organic Market Report 2014, Soli Association, www.soilassociation.org

[2] Organic Statistics 2013, Defra, www.gov.uk , 5 June 2014

Figure 6.1 Area of Organic Crops in England, 2005 to 2013



In common with non organic producers, organic farmers grew less wheat; the area of this crop reduced by 20 per cent. However, they grew increased areas of barley and oats. The area of organic potatoes increased by four per cent to 809 hectares; however, this was only a partial recovery in area and less than the area grown in 2011 and preceding years.

Table 6.1 Agriculture Output and Costs

Agriculture Output & Costs - Organic farms in England - (Cereals and General Cropping)				
	2012/13		2013/14	
Farms in Sample	26		22	
Area of farm (hectares)	165.5		166.9	
Owner occupied area (%)	70.1		62.8	
AGRICULTURAL OUTPUT (£)	**Per farm**	**Per hectare**	**Per farm**	**Per hectare**
Crop output (excluding subsidies)	105,472	637	117,619	705
Livestock output (excluding subsidies)	7,566	46	7,733	46
Coupled subsidies			227	1
Other agricultural output	5,479	33	11,277	68
TOTAL AGRICULTURAL OUTPUT	118,517	716	136,856	820
AGRICULTURAL COSTS				
VARIABLE COSTS (£)				
Crop specific costs	23,481	142	27,065	162
Livestock specific costs	2,948	18	2,670	16
Miscellaneous variable costs	427	3	671	4
TOTAL VARIABLE COSTS	26,856	162	30,406	182
GROSS MARGIN (£)	91,660	554	106,449	638
FIXED COSTS (£)				
Regular labour	15,319	93	20,557	123
Casual labour	5,465	33	5,701	34
Machinery fuel and oil	9,117	55	9,828	59
Other machinery costs (excl. fuel, oil, depreciatic	8,623	52	8,070	48
Machinery, glasshouse and other depreciation	15,166	92	15,360	92
Contract costs	17,251	104	17,268	103
Bank charges and professional fees	4,120	25	4,074	24
Water, electricity, & general	9,148	55	10,289	62
Net interest	1,892	11	1,995	12
Rent paid	11,257	68	16,526	99
Property maintenance	493	3	527	3
Depreciation of buildings and works	3,512	21	3,078	18
Miscellaneous fixed costs	4,393	27	8,413	50
TOTAL FIXED COSTS (£)	105,755	639	121,685	729
Profit/ (Loss) on sale of assets	503	3	1,180	7
FARM BUSINESS INCOME (Agriculture - £)	-13,592	-82	-14,056	-84
CROPPING (mean area (hectares))	ha		ha	
Winter wheat	20.9		12.4	
Winter barley	6.4		3.4	
Spring barley	11.3		9.6	
Beans for stockfeed	-		-	
Winter oilseed rape	-		0.7	
Maincrop potatoes	1.1		-	
Sugar beet	-		-	

The Sample of Organic Farms

The sample of the grouped organic Cereals and General Cropping arable farms in the Farm Business Survey reduced to 22 from 26 in 2012 /2013.

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

As set out in the table of Agriculture Output and Costs for farms with organic production on at least 70 per cent of their Utilised Agricultural Area, organic arable farms generated a Farm Business Income from the Agriculture cost centre of -£84 per hectare (-£82 per hectare in 2012 /2013). Overall, the output at £820 per hectare was higher than in the previous year, but, at £904 so were the fixed and variable costs.

Despite the greatly reduced average areas of wheat and barley, crop output increased to an average of £705 per hectare. Crop variable costs also increased to an average of £162 per hectare and this is likely to have been driven by the increased cost of seed. This observation contrasts with non organic farms that experienced increases in seed costs, but lower overall arable variable costs due to reduced cropping and static or reduced fertiliser and crop protection expenditure.

Livestock activity remained relatively important on these farms and at comparable levels to the previous year as livestock output averaged £46 per hectare and livestock variable costs averaged £16 per hectare. The coupled subsidies relate to compensation for animals culled to control TB; the Department for Environment Food and Rural Affairs (Defra) uses market prices to calculate compensation for cattle culled to control the spread of bovine tuberculosis (TB) and other specific diseases[3].

Other agricultural output, which includes activities such as agricultural contracting, increased to £68 per hectare.

The comparison of the share of fixed costs to agriculture for this small and heterogeneous group of farms should be carried out with caution. These summed to £729 (£639 in 2012

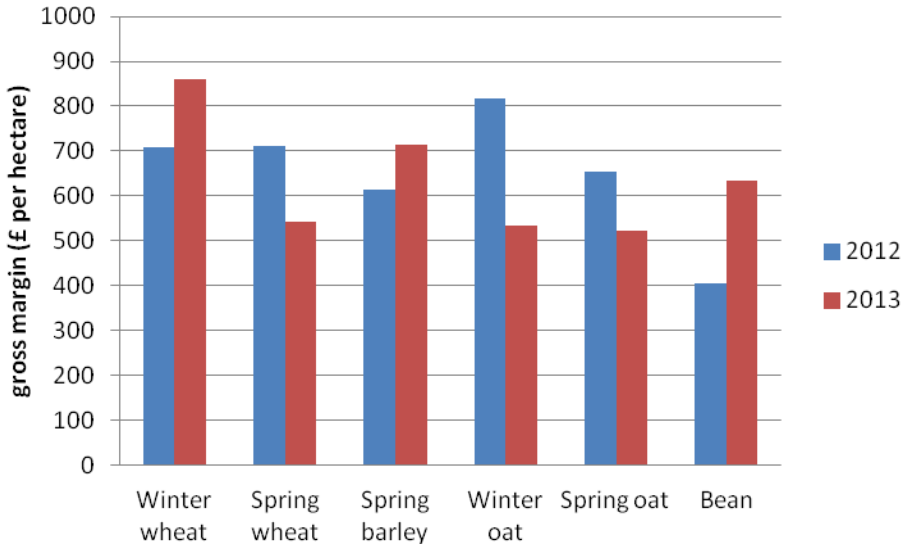
[3] Defra, www.gov.uk/compensation-for-animals-culled-to-control-animal-disease

/2013). Most fixed cost elements appear similar to the previous year. The apparent increases in regular labour and rent may relate partly to the sampling of farms.

Organic Crop Performance

As seen on non organic farms, wet conditions in the winter of 2012 led to a reduction in the area of winter crops established and there was a corresponding increase in spring cropping. The gross margins of organic crops are shown in Figure 6.2 below.

Figure 6.2 Organic Gross Margins 2012 and 2013



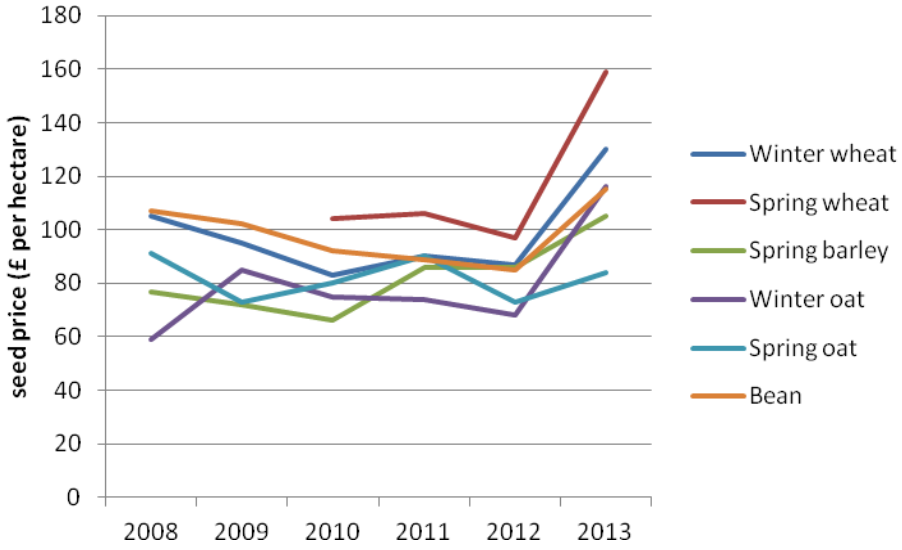
The organic crops with the highest gross margins were winter wheat, spring barley and beans at £861, £715 and £635 per hectare respectively. These were also the crops that showed an improved gross margin in 2013 in comparison with 2012, a year characterised by low yields but high prices.

For all organic crops, seed costs increased substantially in comparison with the previous year. Disease problems at the harvest of 2012 had led to rejection of harvested seed crops as they failed to meet the required quality standards. Organic farmers reported that organic seed for autumn 2012 was scarce[4]. Imported seed, from continental Europe, was available for prices of up to £1,000 per tonne. The price of spring barley seed (the most commonly grown organic crop) increased by 63 per cent in comparison with the previous year.

Seed prices for organic crops are shown in Figure 6.3 below.

[4] British Farmer and Grower, www.nfuonline.com , November 2012

Figure 6.3 Organic Seed Prices by Crop, 2008 to 2013



Organic cereal prices remained at levels that exceeded the five year average, but which were lower than for the 2012 harvest. The bean price in 2013 was higher than in 2012.

Premiums for organic production recovered in comparison with the previous three years. In 2013, this premium paid for organic crops over the average price of the equivalent non organic crop ranged from a 36 per cent premium over the feed price in the case of the spring wheat crop to a 71 per cent premium over the non organic price in the case of winter and spring oats.

Organic yields in 2013 were close to average levels for winter cereals, spring cereals and beans.

Winter Wheat

Table 6.2 Winter wheat gross margin

Gross Margin - Winter Wheat - Organic				
	2012/13		**2013/14**	
Farms in Sample	30		22	
	Per farm	Per hectare	Per farm	Per hectare
Area per farm (hectares)	29.61		31.50	
Yield (tonnes and tonnes per hectare)	86.2	2.9	117.7	3.7
Price (£ per tonne)	277		266	
OUTPUT (£)				
Crop sold	21,949	741	30,071	955
Feed used on-farm	1,974	67	1,186	38
Straw and by-products	1,498	51	1,281	41
TOTAL OUTPUT	25,421	859	32,538	1,033
VARIABLE COSTS (£)				
Seeds (including homegrown)	2,565	87	4,102	130
Fertilisers	930	31	869	28
Crop protection	278	9	164	5
Other crop costs	544	18	204	6
Drying and heating costs	122	4	67	2
TOTAL VARIABLE COSTS	4,440	150	5,406	172
GROSS MARGIN (£)	20,981	709	27,132	861

Organic winter wheat was grown on a reduced sample of 22 farms in 2013. The winter wheat crop yielded an average of 3.7 tonnes per hectare, representing 46 per cent of the yield of non organic winter wheat. At £861 per hectare, it remained as the crop with the highest gross margin.

The price averaged £266 per tonne. Milling wheat quality was generally good and there was strong demand for the crop which typically achieved a £20 per tonne premium over organic feed wheat. Feed wheat was of variable quality and specific weights typically fell below buyer's specifications. However, prices rose in the spring as buyers required wheat to meet customer requirements.

Spring Wheat

Organic spring wheat performed less well than organic winter wheat. The yield was 2.8 tonnes per hectare and the gross margin £541 per hectare. The price, of £252 was lower than the organic winter wheat price of £266 per hectare.

Table 6.3 Spring wheat gross margin

Gross Margin - Spring Wheat - Organic				
	2012/13		2013/14	
Farms in Sample	17		20	
	Per farm	Per hectare	Per farm	Per hectare
Area per farm (hectares)	13.54		13.25	
Yield (tonnes and tonnes per hectare)	36.7	2.7	37.8	2.8
Price (£ per tonne)	298		252	
OUTPUT (£)				
Crop sold	10,388	767	9,328	704
Feed used on-farm	548	40	181	14
Straw and by-products	712	53	538	41
TOTAL OUTPUT	11,648	860	10,046	758
VARIABLE COSTS (£)				
Seeds (including homegrown)	1,316	97	2,106	159
Fertilisers	299	22	408	31
Crop protection	60	4	22	2
Other crop costs	310	23	333	25
Drying and heating costs	47	3	14	1
TOTAL VARIABLE COSTS	2,033	150	2,884	218
GROSS MARGIN (£)	9,615	710	7,163	541

Spring Barley

Spring barley continued to be the most commonly grown organic arable crop. It generated a gross margin of £715 per hectare, the second highest after winter wheat. The crop yielded 3.3 tonnes per hectare; this is the five year average yield. The average price was £239 per tonne reflecting reasonable quality. Organic malting samples had excess nitrogen levels in some cases.

Table 6.4 Spring barley gross margin

Gross Margin - Spring Barley - Organic				
	2012/13		2013/14	
Farms in Sample	42		37	
	Per farm	Per hectare	Per farm	Per hectare
Area per farm (hectares)	20.76		19.10	
Yield (tonnes and tonnes per hectare)	55.5	2.7	63.8	3.3
Price (£ per tonne)	266		239	
OUTPUT (£)				
Crop sold	13,023	627	12,346	646
Feed used on-farm	1,734	84	2,891	151
Straw and by-products	1,394	67	1,434	75
TOTAL OUTPUT	16,152	778	16,671	873
VARIABLE COSTS (£)				
Seeds (including homegrown)	1,786	86	2,002	105
Fertilisers	838	40	517	27
Crop protection	59	3	42	2
Other crop costs	559	27	359	19
Drying and heating costs	134	6	95	5
TOTAL VARIABLE COSTS	3,376	163	3,016	158
GROSS MARGIN (£)	12,776	615	13,656	715

Winter and Spring Oats

Table 6.5 Winter oats gross margin

Gross Margin - Winter Oats - Organic				
	2012/13		2013/14	
Farms in Sample	16		17	
	Per farm	Per hectare	Per farm	Per hectare
Area per farm (hectares)	10.64		9.91	
Yield (tonnes and tonnes per hectare)	35.2	3.3	26.1	2.6
Price (£ per tonne)	257		237	
OUTPUT (£)				
Crop sold	7,957	748	5,488	554
Feed used on-farm	1,089	102	701	71
Straw and by-products	906	85	774	78
TOTAL OUTPUT	9,951	935	6,963	703
VARIABLE COSTS (£)				
Seeds (including homegrown)	722	68	1,149	116
Fertilisers	283	27	230	23
Crop protection	20	2	4	0
Other crop costs	157	15	235	24
Drying and heating costs	89	8	53	5
TOTAL VARIABLE COSTS	1,272	120	1,670	169
GROSS MARGIN (£)	8,680	816	5,293	534

Winter and spring oats achieved gross margins of £534 and £521 per hectare respectively. They yielded at similar levels with winter oats reaching 2.6 tonnes per hectare and spring oats some 2.7 tonnes per hectare.

Winter and spring oat prices were £237 and £225 per tonne respectively representing a 70 per cent premium over non organic crops. The trade reported good demand for organic milling oats, and supply was inevitably limited. Feed oats benefited from late season demand for organic feed crops.

Spring Oats

Table 6.6 Spring oats gross margin

Gross Margin - Spring Oats - Organic				
	2012/13		2013/14	
Farms in Sample	24		30	
	Per farm	Per hectare	Per farm	Per hectare
Area per farm (hectares)	13.66		13.35	
Yield (tonnes and tonnes per hectare)	41.0	3.0	35.6	2.7
Price (£ per tonne)	247		225	
OUTPUT (£)				
Crop sold	9,373	686	7,485	561
Feed used on-farm	775	57	534	40
Straw and by-products	900	66	658	49
TOTAL OUTPUT	11,048	809	8,677	650
VARIABLE COSTS (£)				
Seeds (including homegrown)	1,001	73	1,117	84
Fertilisers	545	40	221	17
Crop protection	141	10	17	1
Other crop costs	343	25	340	25
Drying and heating costs	97	7	29	2
TOTAL VARIABLE COSTS	2,127	156	1,722	129
GROSS MARGIN (£)	8,921	653	6,955	521

Beans

The bean gross margin was £635 per hectare. At 2.4 tonnes per hectare, the yield was five per cent below the five year average.

There was strong demand for the reduced supply of beans and the price increased from £318 per tonne in 2012 to £323 per tonne in 2013. The quality of the bean crop was favourable.

Table 6.7 Beans gross margin

Gross Margin - Beans Harvested Dry - Organic				
	2012/13		2013/14	
Farms in Sample	20		20	
	Per farm	Per hectare	Per farm	Per hectare
Area per farm (hectares)	29.69		24.61	
Yield (tonnes and tonnes per hectare)	49.9	1.7	58.4	2.4
Price (£ per tonne)	318		323	
OUTPUT (£)				
Crop sold	13,782	464	18,312	744
Feed used on-farm	2,093	70	537	22
Straw and by-products	70	2	593	24
TOTAL OUTPUT	15,945	537	19,442	790
VARIABLE COSTS (£)				
Seeds (including homegrown)	2,520	85	2,828	115
Fertilisers	790	27	343	14
Crop protection	63	2	46	2
Other crop costs	442	15	545	22
Drying and heating costs	89	3	51	2
TOTAL VARIABLE COSTS	3,903	131	3,812	155
GROSS MARGIN (£)	12,042	406	15,630	635

APPENDIX 3 – 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 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, 2013/2014

Type of Production	Conventional	Organic
Number of farms in group	257	43
Average farmed area (hectares)	94.0	93.6
Average proportion of owned total farmed area	59%	57%
	£ per farm	
Output		
Livestock and crops	70,870	46,849
Agri-environment type schemes	3,845	12,261
Single Payment Scheme	16,451	20,522
Other	13,576	19,036
TOTAL FARM OUTPUT	104,742	98,668
Variable costs		
Livestock specific costs	26,410	12,855
Crop specific costs	9,055	3,545
TOTAL VARIABLE COSTS	35,465	16,400
TOTAL GROSS MARGIN	**69,277**	**82,268**
Fixed costs		
Labour	5,189	8,636
Machinery	23,999	27,532
General farming costs	10,803	11,514
Land & Property	11,721	16,614
Interest paid	2,473	3,218
TOTAL FIXED COSTS	54,185	67,514
FARM BUSINESS INCOME	**15, 092**	**14,754**

With the lower 'farming' output, organic farms tend to have lower variable costs; being close to half the level of conventional producers. The resulting total gross margin per farm for the organic farmers is approximately 20% higher than the conventional level. Fixed costs for the organic farms are a quarter higher than for conventional producers, and relative to total output, are 16% higher than the conventional producers.

The Farm Business Income per farm for the organic producers is similar to that of their conventional counterparts. This level of income is less than the level of Single Payment Scheme received in the year.

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. The Conventional producers are more reliant on the 'market place', compared to Organic producers, so are therefore less affected by any changes.

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.

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', 2013/2014

Type of Production	Conventional	Organic
Number of farms in group	257	43
	£ per £100 output	
OUTPUT		
Livestock & crops	68	47
Agri-environmental type schemes	4	12
Single Payment Scheme	16	21
Other	13	19
TOTAL FARM OUTPUT	100	100
TOTAL VARIABLE COSTS	34	17
TOTAL GROSS MARGIN	**66**	**83**
FIXED COSTS		
Labour	5	9
Machinery	23	28
General farming costs	10	12
Land & Property	11	17
Interest	2	3
TOTAL FIXED COSTS	52	68
FARM BUSINESS INCOME	**14**	**15**

Table 7.3 illustrates some of the physical differences between the types of production; on average, organic producers keep 97 fewer ewes and 15 fewer 'Other cattle', slightly more than three quarters the level of the conventional total livestock units. Stocking rates on organic farms are 78% of the conventional level, which in itself is not very high at 1.02 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, 2013/2014

	Conventional	Organic
Number of farms in group	257	43
Farmed area (ha)	94.0	93.6
Crops (ha)	6.4	5.1
Temporary grass (ha)	12.8	18.2
Permanent grass (ha)	62.9	60.5
Rough grazing (ha)	5.4	4.5
Average No. of Beef cows	21	26
Average No. of Other Cattle	85	70
Average No. of Ewes	162	81
Total Livestock Units	87.0	71.4
GLU's per adjusted Ha	1.01	0.82

Analysis of English Grazing Livestock Farms (Lowland) – Organic and Conventional

Table 7.4 Grazing Livestock (Lowland) farms in England

Gross Output, Variable Costs and Farm Gross Margin, 2013/2014		
	Type of Production	
	Conventional	Organic
Number of farms in group	257	43
Average farmed area (hectares)	94.0	93.6
Average proportion of owned total farmed area	59%	57%
	£ per farm	
Output		
Cattle	42,228	30,376
Sheep	15,788	7,135
Other livestock	769	686
Crops	6,511	4,662
Forage	5,573	3,990
Environmentally Sensitive Area	180	0
Countryside Stewardship	428	863
Higher and Entry Level Stewardship	3,083	6,721
Organic Aid/ Organic Entry Level Stewardship	13	4,536
Other management/ agri- environment schemes	141	142
Single Payment Scheme	16,451	20,522
Rental income	4,230	7,411
Contract work	4,478	2,693
Miscellaneous output	4,841	8,746
Interest received	27	187
TOTAL FARM OUTPUT	104,742	98,668
Variable costs		
Concentrates	15,182	5,188
Purchased fodder	1,264	562
Veterinary and medicines	2,793	1,616
Other livestock costs	7,171	5,489
Seeds	1,338	2,115
Fertilisers	5,545	582
Crop protection	1,148	61
Other crop costs	1,023	787
TOTAL VARIABLE COSTS	35,465	16,400
TOTAL GROSS MARGIN	**69,277**	**82,268**

Table 7.5 Fixed Costs, Farm Business Income, Farm Corporate Income and Farm Investment Income 2013/14

	Type of Production	
	Conventional	**Organic**
	£ per farm	
TOTAL GROSS MARGIN	**69,277**	**82,268**
Fixed costs		
Paid regular labour	3,952	4,728
Directors remuneration	86	2,632
Casual labour	1,152	1,276
Contract	5,359	5,470
Machinery repairs	4,149	4,682
Machinery fuel	5,029	4,679
Machinery depreciation	9,460	12,700
Other depreciation	1	1
Electricity	948	1,002
Other fuel	259	236
Water	1,030	953
Insurance	3,539	3,545
Professional fees	2,066	2,083
Other general costs	2,961	3,695
Property maintenance	3,704	7,282
Rent, hired in keep and bare land	4,549	6,634
Rates	258	68
Buildings depreciation	3,211	2,630
Long-term interest	1,536	2,281
Short-term interest	937	936
TOTAL FIXED COSTS	54,185	67,514
FARM BUSINESS INCOME	**15,092**	**14,755**
Less - All unpaid labour	26,258	23,874
***Equals* - FARM CORPORATE INCOME**	**-11,166**	**-9,119**
Plus - Net Interest	2,446	3,031
***Equals* - FARM INVESTMENT INCOME**	**-8,720**	**-6,088**

Table 7.6 Alternative income measures 2013/14

Reconciliation between Net Farm Income and Farm Business Profit			
		Type of Production	
		Conventional	**Organic**
	FARM BUSINESS INCOME	**15,092**	**14,755**
Plus-	Directors remuneration	86	2,632
Less-	Net income from assets associated with the farm business	0	0
Plus-	Buildings and works depreciation	3,211	2,630
Plus-	Landlord type expenses	376	370
Plus-	Imputed rental income	252	441
Less-	Imputed rent and rental value	12,580	11,048
Plus-	Net Interest	2,446	3,031
Less-	Unpaid labour of partners	4,402	3,868
Equals-	**NET FARM INCOME****	**4,480**	**8,942**
** Excluding Breeding Livestock Stock Appreciation			

Table 7.7 Land use and indicators of technical efficiency 2013/14

	Type of Production	
	Conventional	**Organic**
Number of farms in group	257	43
Average farmed area (hectares)	94.0	93.6
Average proportion of owned total farmed area (%)	59%	57%
Land use		
Area of crops	6.4	5.1
Temporary grass	12.8	18.2
Permanent grass	62.9	60.5
Fodder crops	1.6	2.1
Rough grazing	5.4	4.5
Uncropped, fallow and turf	0.6	1.0
Forage hired in	4.4	2.1
Stocking		
Average number of dairy cows	1	1
Average number of beef cows	21	26
Average number of other cattle	79	67
Average number of ewes	162	81
Average number of other sheep	169	82
Grazing livestock units	GLU's per farm	
Dairy cows	0.8	1.0
Beef cows	10.3	13.2
Other cattle	48.5	42.9
Sheep	25.7	12.7
Other livestock	1.7	1.7
Total	**87.0**	**71.4**
GLUs per ha	1.00	0.82
GLUs per adjusted ha	1.01	0.82

Table 7.8 Balance Sheet 2013/14 (end of year)

	Type of Production	
	Conventional	**Organic**
Number of farms in group	257	43
Average farmed area (hectares)	94.0	93.6
Average proportion of owned total farmed area (%)	59%	57%
	£ per farm	
End of year assets & liabilities		
Land & buildings	927,538	991,001
Milk quota	19	41
Single Payment Scheme	21,837	27,318
Machinery	55,007	72,863
Tenant's other assets	247	328
Breeding livestock	41,111	34,594
Total fixed assets	**1,045,759**	**1,126,145**
Trading livestock	47,817	34,535
Crops	1,747	1,580
Forage and cultivations	6,267	4,398
Stores	5,992	2,060
Debtors and loans	7,644	14,427
Bank credit and cash	21,411	16,849
Other current assets	0	0
Total current assets	**90,878**	**73,847**
Total Assets	**1,136,636**	**1,199,992**
Financed by		
AMC	15,042	12,516
Bank loans	27,838	43,155
Other long term	7,589	7,454
Total long term	**50,469**	**63,124**
HP and lease	4,616	6,643
Creditors	8,907	5,846
Bank overdraft	19,898	14,633
Other short term	111	42
Total current liabilities	**33,532**	**27,164**
Total Liabilities	**84,001**	**90,289**
Net worth	**1,052,636**	**1,109,703**
Balance sheet ratios		
% Owner equity (net worth v.total assets)	93%	92%
% Fixed assets vs. total assets	92%	94%
Gearing (long-term loans v.total assets)	4%	5%
Total debt (external liabilities v.net worth)	8%	8%

Table 7.9 Fund flows 2013/14

	Conventional	Organic
Number of farms in group	257	43
Average farmed area (hectares)	94.0	93.6
Average proportion of owned total farmed area(%)	59%	57%
	£ per farm	
Funds available from trading		
Farm Business Income	15,092	14,755
Buildings and works depreciation	3,211	2,630
Machinery depreciation	9,461	12,701
Change in valuation *	-2,584	6,926
Trading net fund flow surplus	**25,180**	**37,011**
Funds used for farm investments		
Net property and quota purchases	2,584	-510
Net landlord capital purchases	4,540	5,334
Net machinery and equipment purchases	9,892	12,923
Capital net fund flow	17,016	17,746
Total farm fund flow surplus	**8,163**	**19,265**
Funds used for private expenditure		
Private drawings	23,014	35,222
Net private funds introduced	9,793	26,640
Private fund outflow	-13,221	-8,581
Total net fund flow surplus	**-5,058**	**10,684**
Increase in loans and deposits	5,256	456
Increase in bank balance	1,880	9,089
Increase in cash in hand	-8	-7
Increase in debtors	183	867
Increase in creditors	1,857	-1,191
Net change in funding	**5,058**	**-10,684**
* An increase in valuation is represented by a negative, with funds being used to increase the live and deadstock valuation.		

APPENDIX 4 – ORGANIC LFA CATTLE AND SHEEP

The current sample of 243 English LFA grazing farms includes 23 fully organic farms. Within this there are 15 organic suckler herds, 13 organic upland flocks and 5 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 non-organic suckler herd output is £19/cow more than the organic output but due to higher variable costs (particularly forage costs) the gross margin is £36/cow below the organic average. As can be seen from the spread of GMs there is considerable variation across farms. Organic fixed costs are £33/cow higher than the non-organics so that at the net margin level (excepting farmer and spouse labour) the non-organic farms have a £3/cow advantage. After allowing for the farmer and spouse labour the final net margins are -£379/cow and -£312/cow for non-organic and organic respectively. The stocking rate for the organic farms, of 0.72 GLU/total adjusted area (including commons and all land rented in) is 13% less than that of the non-organics.

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

2013/14	All Suckler herds	
	Non-organics	Organics
Number of farms	155	15
Number of farms (weighted)	3960	99
	£ per cow	
Enterprise Output (excluding BLSA)	**411**	**392**
BLSA	20	10
Total Variable costs	**216**	**161**
Concentrates	49	32
Purchased fodder and keep	29	13
Veterinary and medicines	25	25
Other livestock costs	57	67
Forage costs	55	24
Gross Margin (excluding BLSA)	**195**	**231**
Gross Margin range	-1055 to 1143	46 to 426
Total Fixed costs	**395**	**428**
Total costs	**611**	**589**
Enterprise Net Margin (excluding BLSA)	-200	-197
Enterprise NM after F&S labour (excl. BLSA)	**-379**	**-312**
Stocking rate (GLUs/total adj ha)	0.81	0.72

Table 8.2 compares organic and non-organic Upland LFA flocks to the GM and NM level. Organic enterprise output is £14/ewe higher than non-organic output at £99/ewe. Variable costs per ewe are £8/head lower for the organics resulting in a gross margin of £55/ewe for organic flocks and £33/ewe for the non-organic flocks. Fixed costs are £78/ewe for organic flocks and £59/ewe for non-organics – this results in net margins (after farmer and spouse labour) of -£38/ewe and -£57/ewe for organic and non-organic flocks

Table 8.2 LFA Upland Flock Performance Non-organic and Organic

2013 lamb crop	All LFA flocks	
	Non-organics	Organics
Number of farms	115	13
Number of farms (weighted)	3179	68
	£ per ewe	
Enterprise Output (excluding BLSA)	**85**	**99**
BLSA	0	0
Total Variable costs	**52**	**44**
Concentrates	24	21
Purchased fodder and keep	4	3
Veterinary and medicines	6	8
Other livestock costs	10	10
Forage costs	8	2
Gross Margin (excluding BLSA)/Ewe	**33**	**55**
Gross Margin range	-99 to 96	9 to 90
Total Fixed costs	**59**	**78**
Total costs	**111**	**123**
Enterprise Net Margin (excluding BLSA)	-27	-24
Enterprise NM after F&S labour (excl. BLSA)	**-57**	**-38**
Stocking rate (GLUs/total adj ha)	0.74	0.72
Lambing rate (born and reared/average no. ewes)	1.29	1.33

Table 8.3 compares whole farm profitability across all four cost centres between the 23 fully organic farms and the 220 non-organics in the sample. This table shows that the overall difference in profit favours the organic farms by about £20,000 in Farm Business Income and about £24,000 in Farm Corporate Income and Farm Investment Income. This greater profitability is down to the higher profitability of the Agri-environmental cost centre (by about £13,000) and the Single Farm payment cost centre (by about £10,000) and despite the organic Agriculture cost centre faring worse than the non-organics by about £9,000. Organic farms also earn about £1,500 less from Diversification activities than the non-organic LFA farms. Table 15 compares the Organic sample with the Non-organic sample through a series

of land use, stocking, outputs and variable costs and indicates that in the main the Organic sample is somewhat larger than the Non-organic sample.

Table 8.3 Farm Income measures by cost centre, LFA grazing farms, Organic vs. Non-organic

2013 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:	65%	57%	11%	18%	4%	1%	19%	24%		
Total output (Revenue)	**63,611**	**91,021**	**11,013**	**28,705**	**3,793**	**2,254**	**18,905**	**38,686**	**97,322**	**160,666**
Variable costs	39,926	51,025	66	1,483	106	319	2	10	40,099	52,838
Total Gross margin	**23,685**	**39,996**	**10,948**	**27,222**	**3,687**	**1,935**	**18,903**	**38,676**	**57,224**	**107,828**
Fixed costs	37,073	62,053	2,141	5,574	1,674	1,433	2,671	4,903	43,559	73,963
Total Costs	**76,999**	**113,078**	**2,206**	**7,057**	**1,780**	**1,752**	**2,673**	**4,913**	**83,658**	**126,800**
Profit/(loss) on sale of fixed assets	403	425							403	425
Farm Business Income	**-12,985**	**-21,632**	**8,807**	**21,648**	**2,013**	**502**	**16,233**	**33,772**	**14,068**	**34,291**
Adjustment for unpaid manual labour	24,433	20,994	551	826	1,161	156	0	0	26,145	21,976
Farm Corporate Income	**-37,418**	**-42,626**	**8,256**	**20,822**	**852**	**346**	**16,233**	**33,772**	**-12,077**	**12,314**
Interest payments (net of interest received)	1,788	2,210	70	43	58	24	63	71	1,978	2,347
Farm Investment Income	**-35,630**	**-40,416**	**8,326**	**20,864**	**910**	**370**	**16,295**	**33,843**	**-10,099**	**14,662**
% contribution of centre total costs to total:	92%	89%	3%	6%	2%	1%	2%	4%		
								Imputed rent	9,003	14,172
								Ownership charges	2,708	6,619
								Director's remuneration	163	2,275
								Unpaid labour of principal farmer and spouse	21,798	17,507
								Net Farm Income	**5,567**	**26,889**
								Holding gains not included in farm income	41,317	62,773
Non-organic Sample size (unweighted)	**220**							Breeding Livestock Appreciation (BLSA)	592	973
Number (weighted)	**6,692**							Revaluation of machinery, permananet crops, glasshouse, quota	1,459	1,745
Organic Sample size (unweighted)	**23**							Revalutation of land	39,266	60,055
Number (weighted)	**140**							**Management and Investment Income**	**-16,210**	**9,421**

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

Land Use & Stocking	The Average LFA Farm	
	Non-organic	Organic
Number (unweighted)	243	23
Number (weighted)	6,832	140
Total Area (includes woodland and roads etc) (ha)	147.2	318.4
Area Farmed (ha)	146.6	323.1
Net Land Hired In (ha)	3.2	16.1
Utilised Agricultural Area (ha)	143.4	307.0
Of which Total main products and set-aside (ha)	1.5	6.5
Grass, fodder crops and rough grazing (ha)	141.9	300.5
Of which rough grazing (unadjusted) (ha)	54.0	179.9
Adjusted rough grazing (sole occupation)	17.1	39.6
Adjusted rough grazing (shared)	4.6	2.4
Total Adjusted Utilised Agriculture Area (ha)	106.5	166.7
Area owner occupied (ha)	69.3	102.6
Area tenanted (ha)	77.9	215.8
Average age of farmer (years)	57	56
Agricultural labour units (ALU)	1.5	1.9
Standard Output size units (2010SO)	79,331	110,878
Standard Output size group (2010SO)	6.9	7.3
Land Use		
Tempory Grassland Area (ha)	5.5	18.6
Permanent Grassland Area (ha)	84.9	114.7
Stocking		
Total Beef cows	26	45
Total Cattle	82	130
Ewes (LFA and lowland)	363	420
Total Sheep	694	930
Livestock Units		
Total Cattle LU	48	79
Total Sheep LU	38	49
Grazing LU (cattle, sheep, horses and others)	86	129

Outputs & Variable Costs		
Output from agriculture	64,174	91,021
of which: Livestock Enterprise Output	58,158	81,150
of which: Cattle Enterprise Output	28,992	44,633
Sheep Enterprise Output	28,956	36,449
Crop Enterprise Output	3,013	7,495
of which: Main Crops	1,346	5,716
Forage & by-products	1,665	1,800
Variable Costs		
Agriculture Variable Costs	40,154	51,025
Agriculture Crop Costs	5,994	6,268
of which: Seed	440	2,493
Fertilizer	4,712	2,507
Crop Protection	322	336
Other Crop Costs	520	932
Agriculture Livestock Costs	29,485	32,322
of which: Purchased Fodder Feed	17,456	14,587
Home Produced Fodder	982	1,993
Veterinary and medicines	3,576	5,439
Other Livestock Costs	7,470	10,304
Agriculture Contract Costs	3,055	9,203
Agriculture Casual Labour	1,541	3,228

APPENDIX 5 – ORGANIC DAIRY PRODUCTION

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

	All		Conventional		Organic	
	12/13	*13/14*	*12/13*	*13/14*	*12/13*	*13/14*
Number of farms	310	303	272	267	38	36
Area (ha)	142	150	142	151	136	142
	£/ha		**£/ha**		**£/ha**	
Output						
Milk	2410	2816	2436	2853	1796	2065
Calf	122	126	123	128	91	88
Lease Quota (net)	0	0	0	0	0	0
Other Dairy	1	1	2	1	0	0
Herd Replacement	-255	-250	-259	-254	-161	-192
Total Dairy Output	***2278***	***2692***	***2301***	***2727***	***1725***	***1962***
Other Livestock	535	524	543	531	342	361
Other	505	504	507	507	460	419
Total Farm Output	***3317***	**3721**	***3350***	**3766**	***2528***	**2742**
Variable Costs						
Home-grown Concentrates	72	58	71	58	88	77
Purchased Concentrates	839	926	852	942	517	580
Coarse Fodder	70	92	71	94	49	69
Other Livestock Concentrates	11	9	11	9	2	1
Vet and Medicine	102	104	104	105	57	65
Other Livestock Costs	248	256	249	257	232	234
Seed	35	42	35	42	24	37
Fertiliser	137	137	142	142	6	19
Crop Protection	37	32	38	34	2	2
Other Crop Costs	22	22	22	22	11	12
Total Variable Costs	***1572***	**1678**	***1597***	**1705**	***988***	***1096***
Fixed Costs						
Labour	377	381	381	384	301	313
Contract	150	171	151	173	123	123
Machinery Depreciation	189	197	191	199	140	151
Other Machinery	211	223	213	225	150	165
Miscellaneous	283	286	285	289	235	241
Rent and Rental Equivalent	281	298	283	300	245	264
Total Fixed Costs	***1491***	**1556**	***1503***	**1570**	***1194***	***1257***
Net Farm Income	***254***	**486**	***250***	**490**	***345***	***390***
Farmer / Spouse Labour	206	197	206	197	201	205
Management and Investment Income (MII)	***48***	**289**	***44***	**294**	***144***	***185***
Farm Business Income (FBI)	***370***	**584**	***368***	**590**	***416***	***447***

Comparison of Conventional and Organic Farms

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

In 2013/14 conventional farm's FBI rose by 60% from £368/ha to £590/ha, whilst for organic farms, FBI rose by 7% to £447/ha. On a per farm basis, conventional farm FBI in 2013/14 equated to £89,090 compared to organic farm FBI of £63,474, in contrast to the previous year whereby conventional farm FBI was £52,256 and organic farm FBI was £56,576.

Conventional farm's total farm output increased by 12% from £3,350/ha to £3,766/ha; organic total farm output increased by 8.5%, from £2,528/ha to £2,742/ha.

On conventional farms, milk output rose by 17% from £2,436/ha to £2,853/ha., whereas for organic farms, milk output increased by 15% from £1,796/ha to £2,065/ha.

Variable costs increased by 7% from £1,597/ha to £1,705/ha on conventional farms compared to an increase of 11% from £988/ha to £1,096/ha on organic farms.

Fixed costs increased by around 5% on both conventional and organic farms resulting in an increase from £1,503/ha to £1570/ha on conventional farms compared to an increase from £1,194/ha to £1,257 on organic farms.

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

	All		Conventional		Organic	
	12/13	*13/14*	*12/13*	*13/14*	*12/13*	*13/14*
Number of farms	285	283	248	249	37	34
Average number cows	154	163	156	164	118	117
Average yield (litres)	7526	7898	7572	7948	6216	6211
Milk price (ppl)	29.0	32.5	28.9	32.4	33.6	37.0
	£/cow		**£/cow**		**£/cow**	
Output						
Milk	2184	2568	2187	2576	2088	2295
Calf	112	116	112	116	106	102
Lease Quota (net)	0	0	0	0	0	0
Other Dairy	1	1	2	1	0	0
Herd Replacement	-231	-230	-233	-231	-186	-196
Total Dairy Output	***2066***	**2455**	***2068***	**2462**	***2008***	**2201**
Variable costs						
Concentrates	688	765	691	769	595	620
Coarse Fodder	48	65	49	65	37	41
Vet and Medicine	79	80	80	81	59	57
Other Livestock Costs	175	181	174	180	213	203
Forage Costs	98	105	101	107	24	34
Total Variable Costs	***1089***	**1195**	***1094***	**1202**	***927***	**954**
Total Gross Margin	***977***	***1260***	***973***	***1260***	***1080***	***1247***

Table 9.2 shows the GM per cow performances for conventional and organic farms in 2013/14 and reveals that these were £1,260 and £1,247 per cow, respectively, compared to £973/ha and £1080/ha respectively in 2012/13.

Both systems received similar increases in average milk prices in 2013/14 of around 3.5ppl but the conventional herds increased their average yield by around 375 litres per cow, whereas the average yield from organic yields remained static.

Milk output (£) from conventional herds increased by 18% and for organic herds the increase was 10%.

There was a slight reduction in herd replacement costs for conventional herds but for organic herds the cost of replacements increased by about £10/cow

Although the increase in variable costs was greatest for conventional herds, this was offset by a greater increase from milk output for this system.

APPENDIX 6 – 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

APPENDIX 7 – 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[5] which allows farms of different business organisation, tenure and

[5] 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[6] 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).

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

[6] 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	This represents expenditure on feeds and feed additives, including charges for agistment.

and fodder

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 2007. SO's are based on a five-year average in order to lessen the impact of yearly fluctuations on calculated SOs.

The 2007 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 (DA) farmer*