RBR Rural Business Research

Newcastle University

Farm Business Survey 2011/2012 Organic Farming in England

Charles Scott and Liz Jackson

July 2013

RBR Rural Business Research

independent research, data and analysis

Farm Business Survey

2011/2012

Organic Farming in England

Charles Scott and Liz Jackson

July 2013

ISBN: 978-0-903698-57-3

RBR at Newcastle University
School of Agriculture, Food & Rural Development
Newcastle University
Newcastle upon Tyne, NE1 7RU, England, UK
Tel: 0191-222-6902
Fax: 0191-222-6720
E mail: farm.business.survey@ncl.ac.uk
Web site: http://www.ncl.ac.uk/afrd/business/FarmBusinessSurvey.htm

Acknowledgements

The Rural Business Research (RBR) Consortium thanks sincerely all the farmers who have voluntarily provided records and information on which the annual Farm Business Survey, and this report, is based.

The basic information on which this report is based was collected on behalf of, and largely financed by, the Department for Environment, Food and Rural Affairs and is Crown Copyright. The views expressed in this report are those of the authors and are not necessarily shared by other members of RBR or by the Department for Environment, Food and Rural Affairs.

FOREWORD TO THE SEVENTH SERIES

After months of negotiations Europe's leaders and finance ministers have finally agreed a finance package for the EU for the period up to 2020. To many people and businesses this may be of minor interest to their daily lives, but to those engaged in agriculture and horticulture such news carries more weight. Crucially, there are many farm businesses which rely heavily on the Single Farm Payment (SFP). Of course, not all sectors are equally reliant upon the SFP, in particular those in the pig, poultry and horticultural sectors for which the SFP is often a minor or non-existent revenue source. However, as Europe's leaders have now agreed the budget deal, the focus now turns to looking for clarity over the future of the Common Agricultural Policy (CAP). As noted in the foreword to the Sixth series of these reports, the only realistic direction of the value of the SFP is downwards; focusing upon the market, reducing business inefficiencies and dealing with risk and volatility are key areas for business development and growth.

Having witnessed one of the wettest summers on record during 2012, many businesses have observed first-hand the extreme production and price volatility that can result from operating within the natural environment. While the 2011 cropping and production year, upon which the results presented in this series are based, represented a more benign agricultural and horticultural environment, the variation in business and enterprise performance remains a strong feature of the analyses we present. Set against an environment of increased volatility, farmers and growers need to be aware of the strengths and weaknesses of their business and of their comparative position within their particular sector; having the data to undertake this analysis is therefore a key business requirement.

Rural Business Research's (RBR) series of enterprise and farm type reports based upon independent analysis from the Defra-funded Farm Business Survey (FBS) for England is now in its seventh series. It has, over a short space of time, become increasingly recognised as a key independent information source for businesses, business advisors and government to turn to for their data needs. In business standing still often equates to moving backwards as those around you grow and develop. In the competitive sectors in which agriculture and horticulture operates, knowledge and information remain key business tools for success.

As our series of reports has grown in popularity, I thank all the farmers and growers who take part in the FBS research programme which allows us to produce these valued information sources. I trust that the independent data produced within these reports continues to offer value to all the reports' readers.

Dr Paul Wilson

Chief Executive Officer, Rural Business Research

Spring 2013

www.ruralbusinessresearch.co.uk

Executive summary

The organic area in England increased steadily in the late 2000s, peaking in 2011, but has reduced slightly since then. The number of organic producers in the UK has been declining since 2007. The decline can be attributed to a clear decrease in consumer spending across most organic food types.

This report draws on the full English Farm Business Survey of 1950 farms; of these 171 are organic. Farm Business Income (FBI) is the main measure of performance for comparison and is presented across four cost centres; Agriculture, Agri-environment, Diversification and Single Farm Payment. Organic and Non-organic farms are analysed by robust farm type group and an identical Organic sample is compared across cropping years 2010/11 and 2011/12. Enterprise analysis and comparison to Gross Margin level is possible on data from 149 of these farms.

Across most farm type groups Organic farms record a lower Farm Business Income (FBI) than their Non-organic counterparts. The clear exception is the Organic Less Favoured Area (LFA) Grazing farm group, which significantly outperforms the Non-organic LFA farms. Organic farms are usually smaller than the Non-organics of the same type. Organics usually earn considerably less from Agricultural output, more from Agri-environmental payments, and about the same from Diversification and Single Farm payment revenues. Organics spend considerably less on Agricultural inputs and about the same on the other cost centre inputs.

Organic LFA grazing farms are, atypically, slightly larger than their Non-organic neighbours with an average of 10 more grazing livestock units (GLU) at 103.1. The typical Organic LFA grazing farm earns on average £49,167, £20,866 more than the Non-organics and achieved by spending £10,145 less on livestock and crop inputs and earning £7,991 more in Agri-environment payments (the remainder from a slightly larger Single Farm Payment). LFA grazing farms saw a £11,692 increase in FBI from 2010/11 to 2011/12; despite farm output falling by £14,358 but with their total costs falling by £26,153.

The average Organic Cropping farm (Cereal and General Cropping farms combined) received an FBI of £68,772, £28,161 less than their Non-organic counterparts. The organic group spent £62,624 less on inputs (£182,841) but earned £90,143 less in outputs (£250,398) due almost entirely to a reduced crop output. Organic Cropping farms saw an increase in FBI of £12,422 between 2010/11 and 2011/12 – largely due to a £13,742 increase in crop output.

A typical Organic Horticulture farm earned an FBI of £21,594 - this was £35,967 less than their Non-organic peers. Farm Business Output (FBO) for Organic Horticulture farms is £293,044 less than the Non-organics at £128,189. An Organic Horticultural farm spends £106,597 on average on inputs in comparison to £363,890 for a Non-organic. Organic Horticultural farms saw their FBI increase by a modest 4% from 2010/11 to 2011/12 due to some major savings in costs (-£16,392) offsetting a slight decrease in output of -£15,370.

Organic Dairy farms typically earned an FBI of £63,391, £24,560 less than Non-organic Dairy farms. This is due to a Farm Business Output of £348,905 with total costs of £285,798, versus the Non-organic output of £462,996 and costs of £375,816. Organic Dairy units saw a 7.3% increase in FBI over the period 2010/11 to 2011/12 – due to a £13,106 increase in output but offset by a £8,905 increase in costs.

Organic Lowland grazing farms earn on average £29,383, £3,016 less than their Non-organic peers. The Organics are able to spend £25,702 less on inputs (at £64,821) but generate £28,243 less output (of £94,026). Average Organic agricultural output is £36,191 less than the Non-organics, offset by £6,007 more in Agri-environmental payments. Organic Lowland grazing farms saw a 35% (£8,022) increase in FBI from 2010/11 to 2011/12 – due to a £12,000 increase in output offset by a £4,173

increase in inputs.

Organic Mixed farms earn on average an FBI of £15,458, some £53,640 less than the Non-organic Mixed farms. This is due to lower output from all cost centres except Agri-environment. Importantly Organics only earn £112,459 from Agriculture against £228,817 for the Non-organics. Total costs are £85,381 less for the Organics at £146,595. Organic Mixed farms are the only type group to see a fall in FBI, of £20,629 or 59%, from 2010/11 to 2011/12 – this almost exclusively down to a fall in Agriculture (crop) output across those two years.

Contents

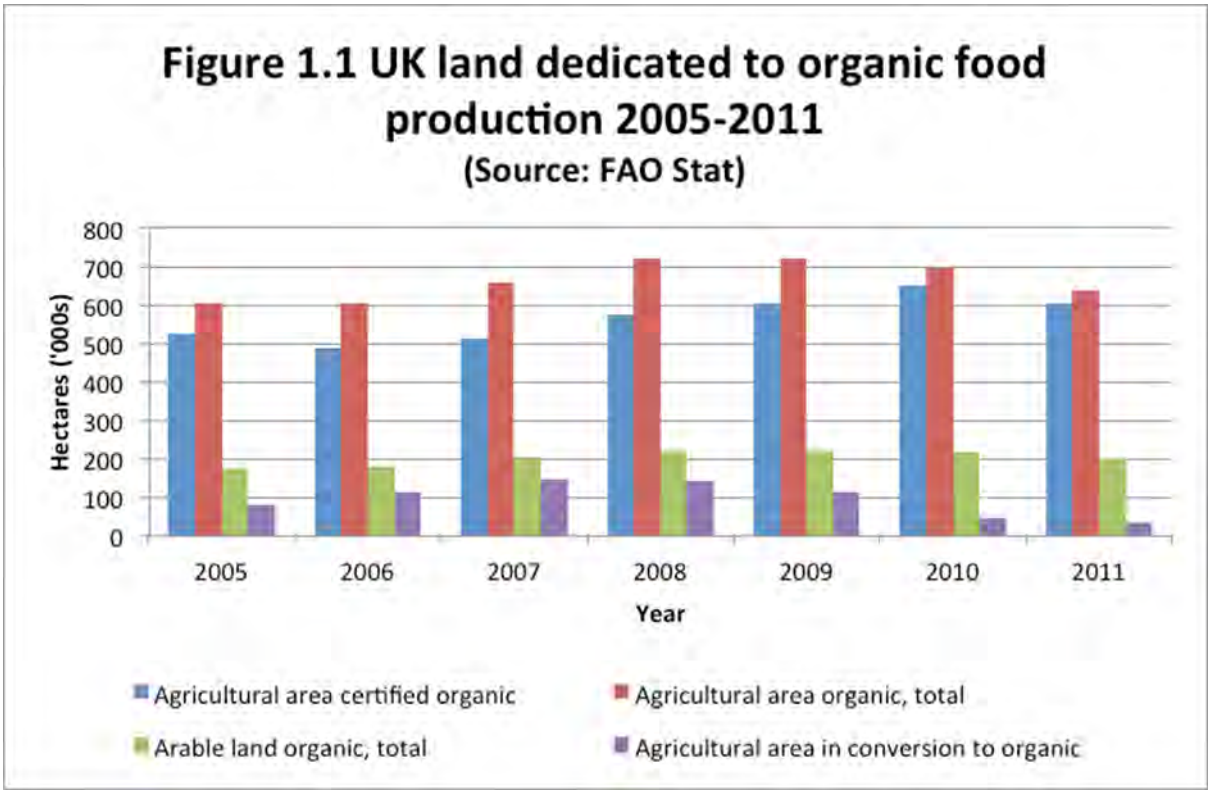
Tables

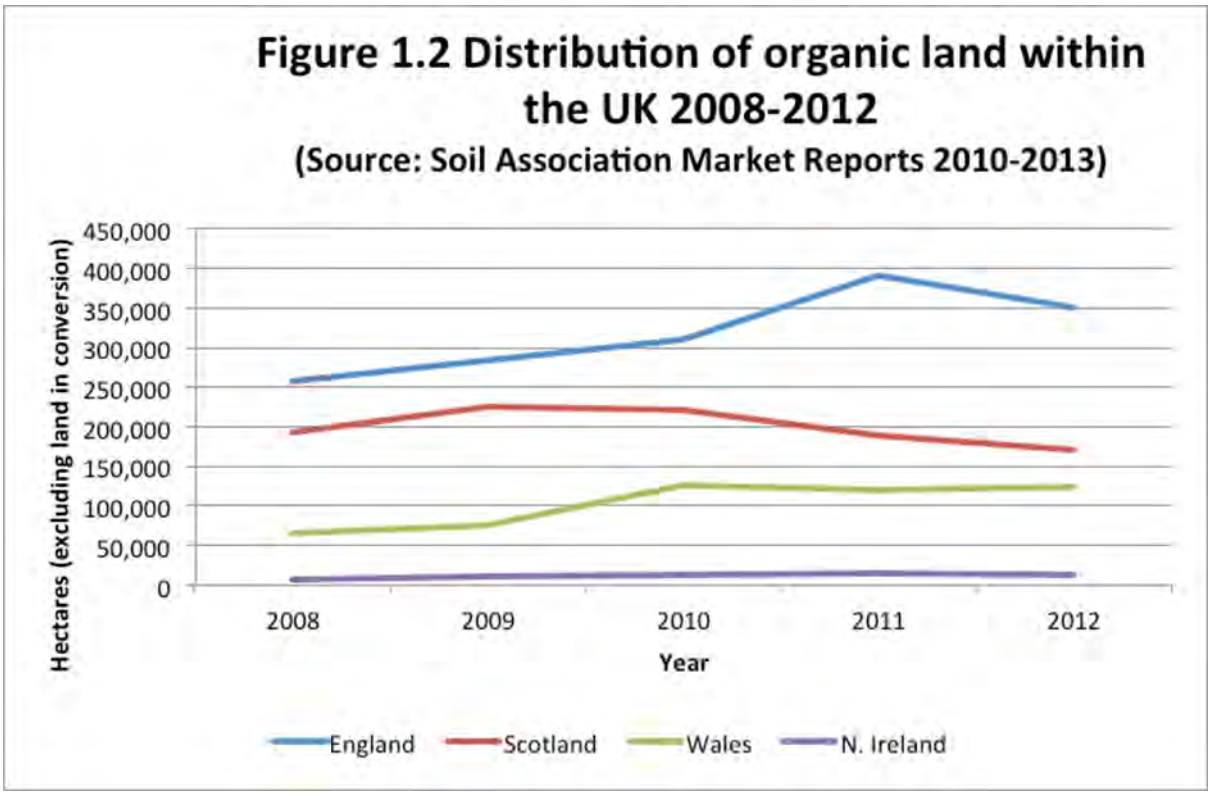
Figures

1 ORGANIC FARMING IN THE UK

1.1 Area

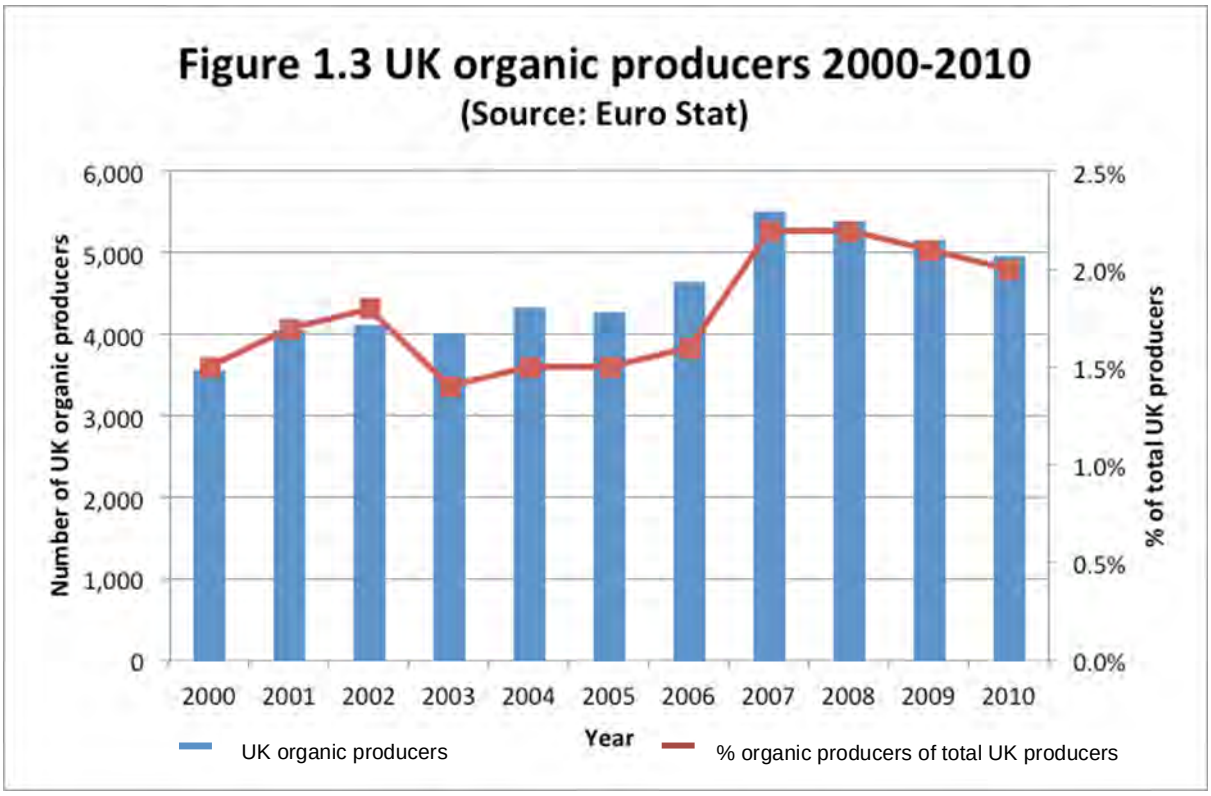
The area of land dedicated to organic farming can be understood in a number of ways: the agricultural area certified as organic, the agricultural area dedicated to organic (but not necessarily certified), the arable organic area, or the land in conversion to organic farming. No matter which perspective is taken on understanding the area of organic farming in the UK, analysis of results show that it peaked in 2008-2010 and is now in decline (Figure 1.1). The same can be said for the area of organic farms in England and Scotland. However the areas have remained static in Wales and Northern Island since 2010 (Figure 1.2).





1.2 Number of producers

The latest figures on the number of organic producers in the UK are only available up until 2010. Figure 1.3 shows a variable rise in the number of UK organic producers until 2007 when numbers started to decline. The same pattern can be observed for the percentage of organic producers in the UK. While both figures are in decline, as of 2010, the number of organic producers in the UK had not dropped below the 2007 figure.



1.3 Output

The Soil Association (2013) published a summary of how supermarket sales and output have changed in the UK organic market between 2011and 2012 (Table 1.1). The only products to realise a growth in sales, albeit marginal, were bread (increase in sales of 1.5%) and fresh fish (an increase in sales of 1.4%) while supermarket sales of organic pork, poultry and eggs decreased by nearly 30%. Output, on the other hand, has been more variable. While sales of organic lamb fell by 2.2%, of all the products considered, it experienced the highest growth in output (18.4%). Pork output also increased substantially despite a major fall in supermarket sales. These differences imply a substantial increase in sales outside the supermarket system for these two products. Poultry sales and output fell in approximately equal measure (-29.9% and -26.7% respectively); there was a similar pattern with eggs (-29.7% and -21.0% respectively). The Soil Association attributes this to the consumer spending rationalisation and increased production expenses. Fresh fish was the only product to experience an increase in sales and output (1.4% and 10.0% respectively). It seems that sales could have been higher if feed prices (which can account for up to 70% of production costs) did not inhibit production quantities. The increase in output is accounted for by recent industry investment in improved welfare standards, feeding systems and disease control among other things.

Table 1.1 UK organic production: Supermarket sales and agricultural output 2011-2012

Product	2011-2012 change in sales	2011-2012 change in output
Cereals: All	N/A	-7.7%
Cereals: Bread	+1.5%	N/A
Horticulture	-7.7%	-10.0%
Beef	-1.1%	-4.4%
Lamb	-2.2%	+18.4%

Pork	-29.7%	+11.1%
Poultry	-29.9%	-26.7%
Eggs	-29.7%	-21.0%
Milk	-4.4%	-15.0%
Fresh fish	+1.4%	+10.0%

Source: Soil Association Market Report 2013, p. 15

2 METHODS

This report presents financial and physical farm data for the 2010/2011 and 2011/12 financial years. Data are presented for organic farms, non-organic farms and between-year comparisons. Where applicable, data from full and identical samples are also presented. 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 2011 and 5th April 2012 and consequently reflect the 2011 lamb crop and the 2011 arable harvest.

2.1 Data sample

The data analysed for this report were collected for the English Farm Business Survey by the Rural Business Research (RBR) Units in England; Newcastle University, Askham Bryan College, University of Nottingham, University of Cambridge, University of Reading and Duchy College). The standard Farm Business Survey methodology was used for all farms[1].

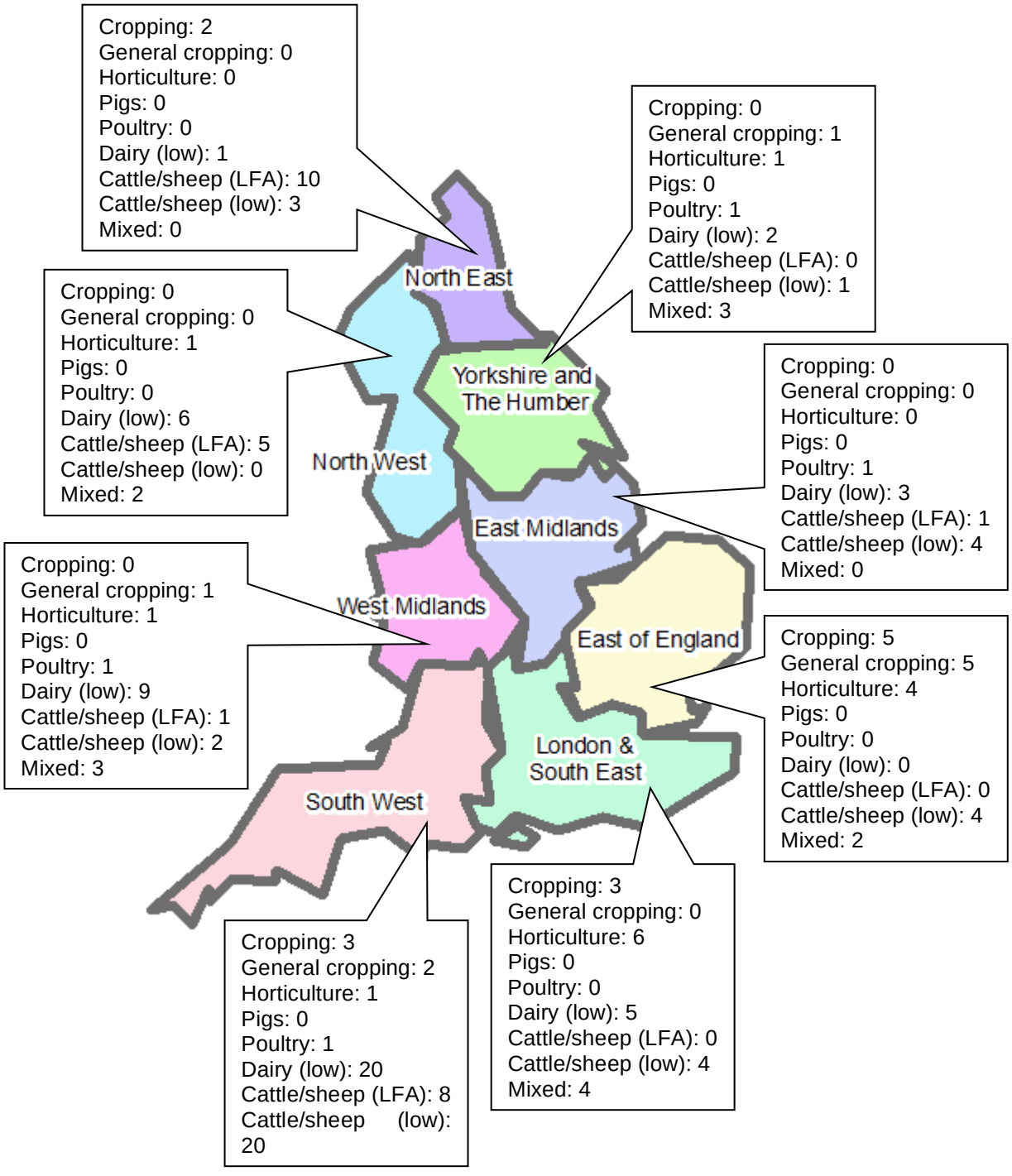
For the purposes of this report, an organic farm is defined as a farm business that has at least 70% of the Utilisable Agricultural Area (UAA) certified as organic 2011/12. The 2011/12 Data set has 171 farm records that meet this criterion, of which 149 farms have identifiable organic enterprises recorded to gross margin level. The distribution of useable surveyed organic farms by type and region are presented in Table 2.1 and Figure 2.1.

Table 2.1 Distribution of useable surveyed organic farms by type and region, 2011/12

	North East	North West	Yorks./ Humb.	East Mids.	West Mids.	East of England	South East	South West	All
Robust farm type	NE	NW	Y&H	EM	WM	EE	SE	SW	All
Cereals	2	0	0	0	0	5	3	3	13
General cropping	0	0	1	0	1	5	0	2	9
Horticulture	0	1	1	0	1	4	6	1	14
Pigs	0	0	0	0	0	0	0	0	0
Poultry	0	0	1	1	1	0	0	1	4
Dairy (low)	1	6	2	3	9	0	5	20	46
LFA grazing	10	5	0	1	1	0	0	8	25
Lowland grazing	3	0	1	4	2	4	4	20	38
Mixed	0	2	3	3	3	2	4	5	22
All farms	16	14	9	12	18	20	22	60	171

[1] The details of the data collection methodology for the farm accounting method used in England and Wales by the Defra Economics Division, are available from: http://www.defra.gov.uk/statistics/foodfarm/farmmanage/fbs/aboutfbs/datacollection/

Figure 2.1 Distribution of useable surveyed organic farms by type and region, 2011/12 (> 70% UAA certified organic)



2.2 Farm Types

Table 2.2 shows the distribution of the sample by farm size and farm type. As noted above, there were 171 farm businesses in the sample that met the minimum criterion of 70% UAA certified organic. It should be noted that farm size categories are based on the 2007SO (Standard Output) used by Defra (see Appendix 6).

There is a fairly even spread between medium (~30%) and large farm businesses (~30%) that contribute to the data but it is small farm businesses that are the majority (~40%). The largest proportion of data is from organic dairy farms (~27%) while there are no data available to represent organic pig production. The data available on organic poultry production is extremely limited.

Table 2.2 Sample distribution by robust farm type and size (2007SO)

	Small (€2,500-100,000)	Medium (€100,000-250,000)	Large (>€250,000)	All
Cereals	6	3	4	13
General cropping	3	4	2	9
Horticulture	6	4	4	14
Pigs	0	0	0	0
Poultry	2	1	1	4
Dairy	1	15	30	46
LFA grazing	12	9	4	25
Lowland grazing	29	7	2	38
Mixed	9	7	6	22
All	68	50	53	171

3 WHOLE-FARM RESULTS

3.1 Presentation of results

Due to the small sample size (<10) of Organic General Cropping farms this farm type group is merged with Organic Cereals for the purposes of this report. There are insufficient Organic Pig and Poultry farms to present their data.

3.2 Summary of whole-farm Farm Business Income results

Figure 3.1 shows Farm Business Incomes (FBI) per farm for an identical sample of Organic farms for 2010/11 and 2011/12. Table 3.1 summaries this information, showing sample sizes (both actual and for a weighted population) and FBI on a per hectare basis of Utilisable Agricultural Area (UAA). Figure 3.2 shows Farm Business Incomes (FBI) per farm for Organic and Non-organic farms from the full sample for 2011/12 across farm type group. Table 3.2 summaries this information alongside sample sizes and FBI on a per hectare UAA basis. Tables 3.3 and 3.4 show statistical differences between the Organic and Non-organic Farm Business Incomes where they occur by farm type; per farm and per hectare.

Figure 3.1 Organic Farm Business Income per farm by farm type group 2010/11 and 2011/12

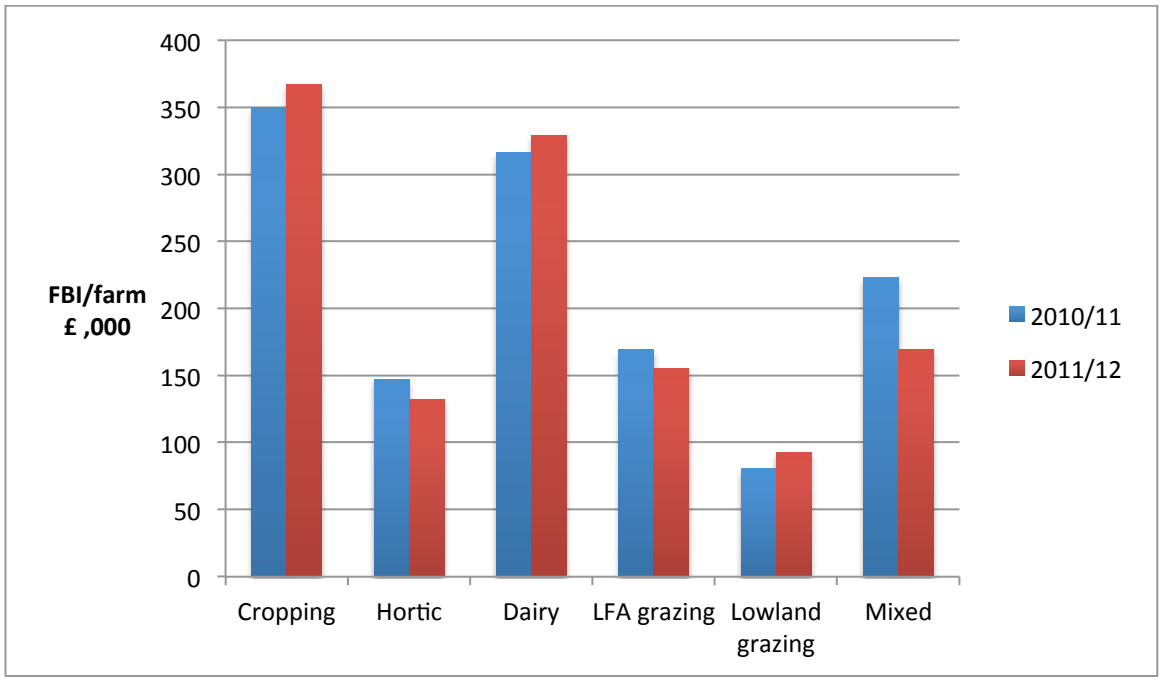


Table 3.1 Organic Farm Business Income (FBI) by farm type 2010/11 and 2011/12

	2010/11 (identical sample)				2011/12 (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	13	166	85,789	403	13	155	98,211	432
Horticulture	13	168	19,767	606	13	167	20,487	605
Dairy	42	385	49,775	376	42	339	55,931	414
LFA grazing	21	198	46,539	138	21	162	57,712	242
Lowland grazing	29	709	24,456	247	29	714	29,017	307
Mixed farms	19	264	35,525	297	19	242	24,289	199

Figure 3.2 Farm Business Income (FBI) for Organic and Non-organic farms by farm type 2011/12

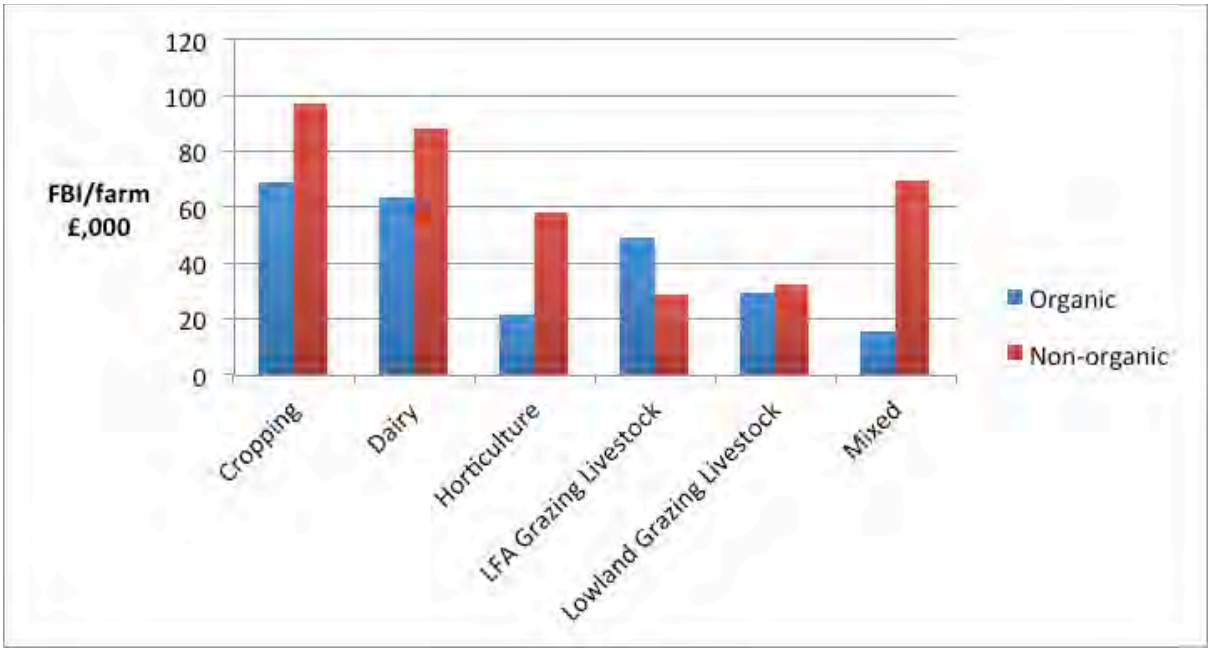


Table 3.2 Farm Business Income (FBI) for Organic and Non-organic farms by farm type 2011/12

		2011/12 (full sample)			
		No farms in sample	No farms weighted	FBI - £/farm	FBI - £/ha (UAA)
Cropping	Organic	22	336	68,772	401
	Non-organic	466	18,593	96,933	489
Horticulture	Organic	14	208	21,594	749
	Non-organic	202	3,041	58,140	1,293
Dairy	Organic	46	375	63,391	468
	Non-organic	274	6,850	87,952	633
LFA grazing	Organic	25	269	49,167	275
	Non-organic	222	5,879	28,300	215
Lowland grazing	Organic	38	918	29,383	315
	Non-organic	237	11,063	32,398	314
Mixed farms	Organic	22	323	15,458	139
	Non-organic	174	5,363	69,098	422

Table 3.3 Differences in Farm Business Income by farm type and between Organic and Non-organic farms – per farm

FBI/farm (£)	Organic	Non-organic	Organic minus Non-organic	
2011/12	Mean	Mean	Difference	significance
Cropping	68,772	96,933	-28,161	*
Horticulture	21,594	58,661	-37,067	***
Dairy	63,391	87,952	-24,560	**
LFA Grazing Livestock	49,167	28,300	20,866	**
Lowland Grazing Livestock	29,383	32,398	-3,016	*
Mixed	15,458	69,098	-53,640	***

(- not significant, * significant at 10%, ** at 5%, *** at 1%)

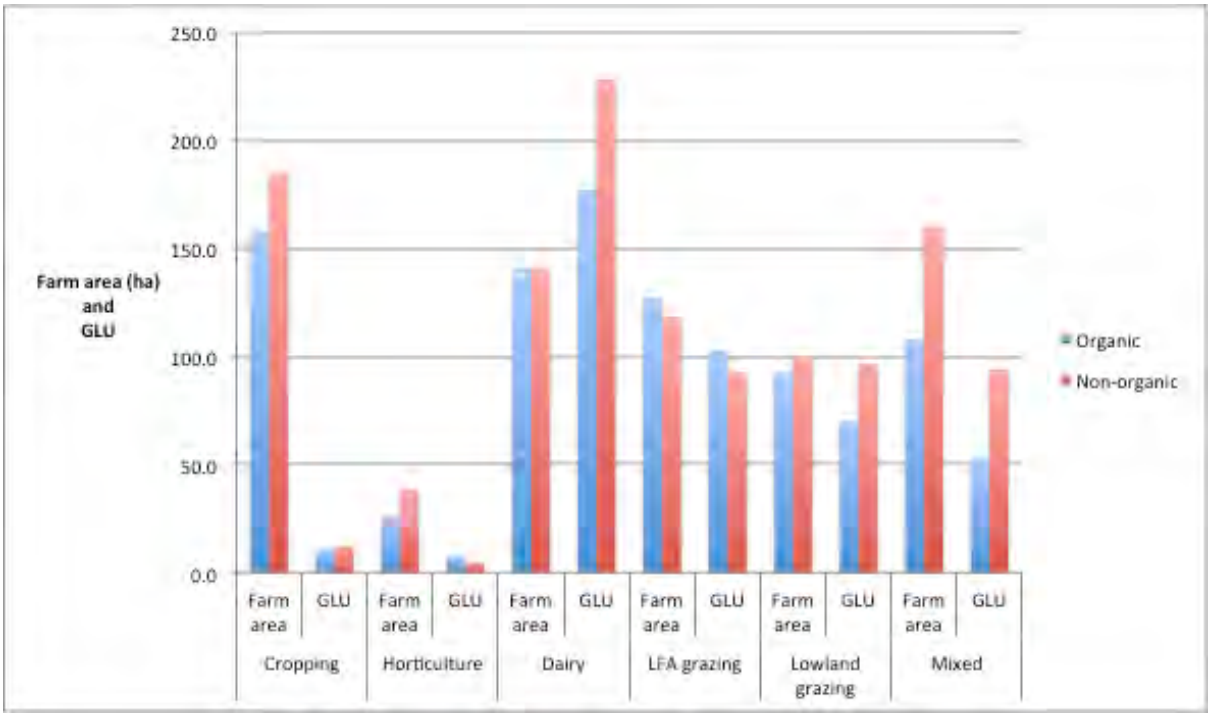
Table 3.4 Differences in Farm Business Income by farm type and between Organic and Non-organic farms – per hectare UAA

FBI/ha (£) 2011/12	Organic	Non-organic	Organic minus Non-organic	
	Mean	Mean	Difference	significance
Cropping	486	495	-9	-
Horticulture	1,961	12,522	-10,561	***
Dairy	534	686	-151	**
LFA Grazing Livestock	439	226	212	***
Lowland Grazing Livestock	311	332	-20	-
Mixed	64	376	-312	**

(- not significant, * significant at 10%, ** at 5%, *** at 1%)

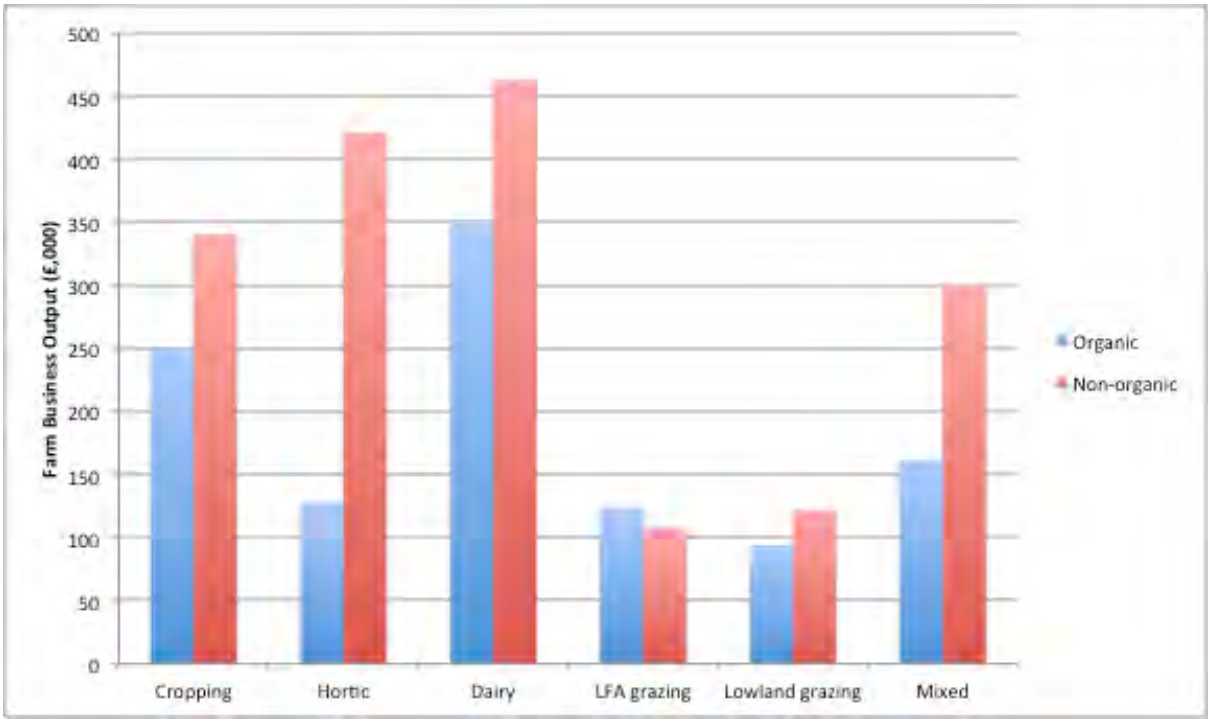
Organic farms are typically slightly smaller than their Non-organic counterparts; while the measure of size used is 2007 Standard Output (see Appendix 6) this translates to being slightly smaller in area and having slightly less stock, the one exception being LFA grazing farms where the Organics are slightly larger on both counts. The differences in FBI per ha UAA indicate that the differences in profitability between the two production systems are not solely due to differences in size. Figure 3.3 illustrates the size position across farm types.

Figure 3.3 Relative sizes of Organic and Non-organic farms by farm type



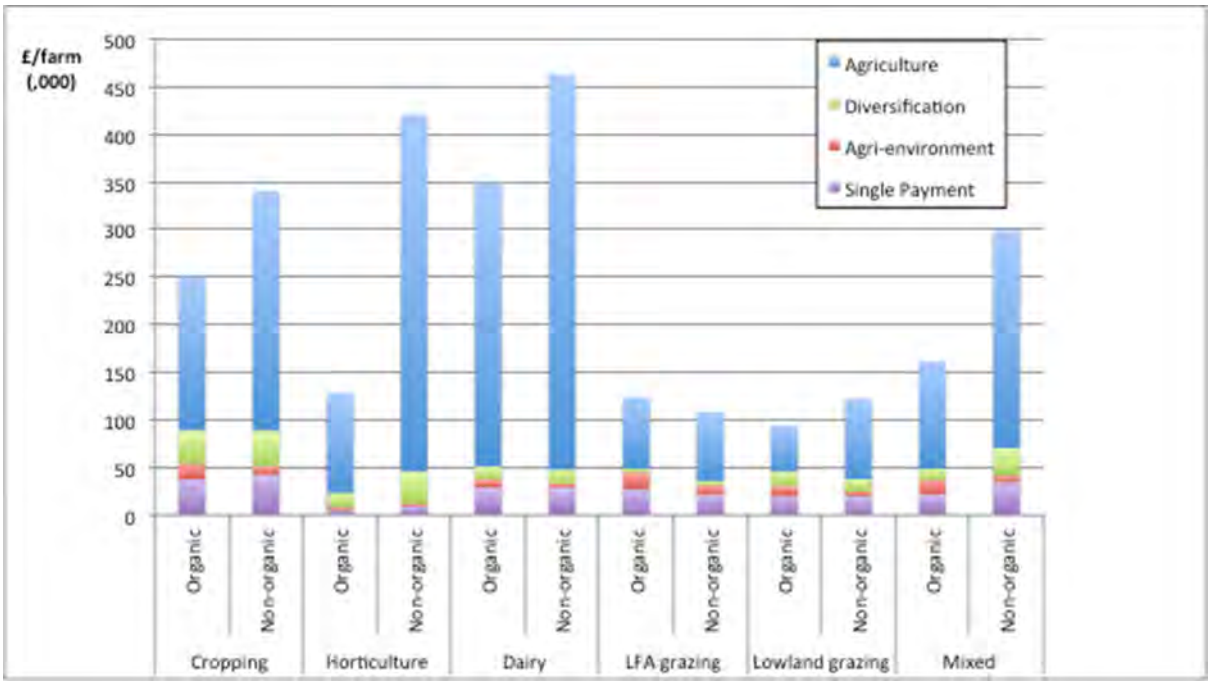
As shown above, Non-organics outperform Organics at the FBI/farm level for all farm types except LFA grazing farms. On the output side Non-organics all have higher Farm Business Output (FBO) than Organics again with the exception of the LFA grazing group, see Figure 3.4.

Figure 3.4 Farm Business output by farm type group



The composition of overall Farm Business Output follows a similar pattern with Agricultural output universally being the most important component, where Non-organic farms consistently achieve a higher output. Organic farms however gain consistently higher revenues through Agri-environmental schemes than the Non-organics. The other components of output; Diversification and Single Farm Payment are quite closely matched across the groups with the slightly larger farms in terms of area achieving higher Single payment revenues. Figure 3.5 demonstrates the relative importance of cost centre revenues by farm type group.

Figure 3.5 Composition of Farm Business Output by Cost Centre by farm type and between Organic and Non-organic farms – £ per farm



3.3 Cropping farms

As shown in Table 3.5, organic cropping farms that were surveyed in both 2010/11 and 2011/12 exhibit similar outputs in terms of £/farm and £/ha mainly due to the unchanged nature of the crop component of earnings. However the comparison between the Non-organic and Organic full sample in 2011/12 shows a marked difference in output with Non-organic cropping farms producing substantially more in terms of both £/farm and £/ha. Non-organic cropping farms generate a much greater percentage of their total output from Agriculture (74%) than Organic cropping farms (64%). On the other hand, Agri-environment payments contribute 7% to Organic cropping farms' output in comparison to the 2% of output gained by Non-organic cropping farms.

Organic farm total costs increased in terms of £/farm but fell slightly in terms of £/ha. The greatest contributors to total costs in both years were crop variable costs and machinery; both of which remained relatively steady over the two years. While output of the full sample is lower for Organic cropping farms than Non-organic cropping farms, total costs were also lower in terms of both £/farm and £/ha. The same holds true for Farm Business Income and Net Farm Income. This is principally due to the large costs incurred by Non-organic crop farms from 'Crop variable costs'.

Table 3.5 Organic Cropping farms identical sample (£/farm and £/ha) 2010/11 and 2011/12

	Organic identical sample			
	2010/11		2011/12	
Number (unweighted)	13		13	
Number (weighted)	166		155	
Farm size (07SO)	199,736		214,032	
Farm area (ha)	197.0		212.5	
Grazing livestock units	18.5		20.2	
	£/farm	£/ha	£/farm	£/ha
Agriculture	250,226	1,270	265,613	1,250
Livestock component	*8,812*	*45*	*10,457*	*49*
Crops component	*241,414*	*1,226*	*255,156*	*1,201*
Agri-environment and other payments	21,912	111	17,459	82
Diversification & miscellaneous	33,754	171	34,621	163
Single Payment Scheme	44,024	224	49,369	232
Farm Business Output	**349,915**	**1,777**	**367,062**	**1,728**
Livestock variable costs	4,597	23	4,334	20
Crop variable costs	52,284	265	53,409	251
Contract	22,119	112	23,199	109
Paid Labour	44,970	228	43,819	206
Machinery	67,903	345	67,568	318
Paid Rents	24,059	122	25,589	120
Other costs	48,684	247	53,334	251
Total Costs	**264,616**	**1,344**	**271,251**	**1,277**
Profit/(loss) on sale of fixed assets	489		2,400	
Farm Business Income	**85,789**	**436**	**98,211**	**462**
Unpaid Labour (excl Farmer and Spouse)	2,601	13	3,753	18
Imputed Rents	24,357	124	26,618	125
Interest and ownership charges	11,533	59	11,570	54
Net Farm Income	**72,090**	**366**	**81,501**	**384**

Table 3.6 Organic and Non-organic Cropping farms (£/farm and £/ha) 2011/12

	Non-organic (full sample)			Organic (full sample)		
	2011/12			2011/12		
Number (unweighted)	466			22		
Number (weighted)	18,593			336		
Farm size (07SO)	220,898			140,087		
Farm area (ha)	185.0			157.9		
Grazing livestock units	12.4			10.6		
	£/farm	£/ha	% total	£/farm	£/ha	% of total
Agriculture	251,538	1,360	74%	161,201	1,021	64%
Livestock component	*9,165*	*50*	*4%*	*5,027*	*32*	*3%*
Crops component	*242,373*	*1,310*	*96%*	*156,174*	*989*	*97%*
Agri-environment and other payments	8,452	46	2%	16,521	105	7%
Diversification & miscellaneous	37,510	203	11%	34,837	221	14%
Single Payment Scheme	43,040	233	13%	37,839	240	15%
Farm Business Output	**340,541**	**1,841**	**100%**	**250,398**	**1,586**	**100%**
Livestock variable costs	4,806	26	2%	2,038	13	1%
Crop variable costs	78,730	426	32%	30,082	191	16%
Contract	18,685	101	8%	22,043	140	12%
Paid Labour	23,401	126	10%	25,279	160	14%
Machinery	55,453	300	23%	42,872	272	23%
Paid Rents	17,461	94	7%	14,671	93	8%
Other costs	46,928	254	19%	45,857	290	25%
Total Costs	**245,465**	**1,327**	**100%**	**182,841**	**1,158**	**100%**
Profit/(loss) on sale of fixed assets	1,857			1,216		
Farm Business Income	**96,933**	**524**		**68,772**	**436**	
Unpaid Labour (excl Farmer and Spouse)	4,983	27		1,951	12	
Imputed Rents	26,233	142		24,655	156	
Interest and ownership charges	11,189	60		7,480	47	
Net Farm Income	**79,244**	**428**		**53,842**	**341**	

Further detailed commentary on Organic Cropping farm performance is given in Appendix 1.

3.4 Horticulture

The sample of horticulture organic holdings has been historically low; the years 2010-2012 are no exception with data only available from 13 farms for the identical sample (Table 3.7) and data from 14 organic farms in the full sample (Table 3.8). The horticultural sample also contains a very diverse range of enterprise so some care must be taken in interpreting the group results.

The identical sample results from 2010/11 to 2011/12 show a year-on-year fall in farm business output. This reflects the dominance of cropping and the reduction in crop earnings per farm. In addition, earnings from both 'Agri-environmental and other payments' and 'Diversification and miscellaneous' also decreased from 2010/11 to 2011/12. The difference in Farm Business Output between Organic and Non-organic in the full sample for 2011/12 was substantial. Non-organic farms earn substantially more than Organic farms in crop payments, payments from 'Diversification and miscellaneous' and from the Single Payment Scheme. The only areas from which Organic farms are generating higher earnings (other than the marginal livestock enterprises on these farms) are 'Agri-environmental and other payments'.

In terms of production costs, total costs for the identical sample of horticultural organic farms decreased from 2010/11 to 2011/12. The main cost areas that fell were crop variable costs, paid labour, paid rents and 'other costs'. Despite these reductions, machinery costs increased, as did the contract costs. The data from the full sample of Horticultural farms showed that costs per farm and per hectare are lower for Organic farms than Non-organic farms. While livestock variable costs are higher for Organics, all other costs are higher for the Non-organics; particularly crop variable costs which make up 40% of Non-organic farm costs as opposed to 26% of Organic farm costs.

There was a marginal increase of both Farm Business Income and Net Farm Income of the identical sample year-on-year. However, due to the comparatively high earnings of the Non-organic crop output, their Farm Business Income and Net Farm Income were substantially higher than Organic farms (despite the high crop variable costs).

Table 3.7 Organic Horticulture farms identical sample (£/farm and £/ha) 2010/11 and 2011/12

	Organic identical sample			
The average horticulture farm	2010/11		2011/12	
Number (unweighted)	13		13	
Number (weighted)	168		167	
Farm size (07SO)	143,081		130,136	
Farm area (ha)	29.9		30.6	
Grazing livestock units	8.0		9.4	
	£/farm	£/ha	£/farm	£/ha
Agriculture	120,975	4,041	107,987	3,530
Livestock component	*4,383*	*146*	*6,810*	*223*
Crops component	*116,592*	*3,894*	*101,177*	*3,308*
Agri-environment and other payments	4,508	151	3,601	118
Diversification & miscellaneous	16,328	545	14,092	461
Single Payment Scheme	5,601	187	6,362	208
Farm Business Output	**147,412**	**4,924**	**132,043**	**4,317**
Livestock variable costs	2,323	78	2,700	88
Crop variable costs	37,604	1,256	32,510	1,063
Contract	3,166	106	3,485	114
Paid Labour	33,221	1,110	26,189	856
Machinery	15,516	518	16,431	537
Paid Rents	997	33	775	25
Other costs	35,123	1,173	29,469	963
Total Costs	**127,950**	**4,274**	**111,558**	**3,647**
Profit/(loss) on sale of fixed assets	306		3	
Farm Business Income	**19,767**	**660**	**20,487**	**670**
Unpaid Labour (excl Farmer and Spouse)	1,760	59	1,321	43
Imputed Rents	17,924	599	14,074	460
Interest and ownership charges	11,837	395	8,173	267
Net Farm Income	**13,354**	**446**	**14,418**	**471**

Table 3.8 Organic and Non-organic Horticulture farms (£/farm and £/ha) 2011/12

	Non-organic			Organic		
The average horticulture farm	2011/12			2011/12		
Number (unweighted)	203			14		
Number (weighted)	3,084			208		
Farm size (07SO)	328,446			119,174		
Farm area (ha)	38.9			26.2		
Grazing livestock units	4.8			7.6		
	£/farm	£/ha	% total	£/farm	£/ha	% total
Agriculture	375,489	9,652	89%	104,766	3,998	82%
Livestock component	*3,690*	*95*	*1%*	*5,468*	*209*	*5%*
Crops component	*371,799*	*9,557*	*99%*	*99,298*	*3,789*	*95%*
Agri-environment and other payments	2,413	62	1%	2,891	110	2%
Diversification & miscellaneous	33,929	872	8%	15,101	576	12%
Single Payment Scheme	9,402	242	2%	5,432	207	4%
Farm Business Output	**421,234**	**10,828**	**100%**	**128,189**	**4,892**	**100%**
Livestock variable costs	1,879	48	1%	2,168	83	2%
Crop variable costs	147,092	3,781	40%	27,237	1,039	26%
Contract	5,777	148	2%	3,201	122	3%
Paid Labour	109,800	2,822	30%	27,567	1,052	26%
Machinery	33,244	855	9%	16,203	618	15%
Paid Rents	6,983	179	2%	3,461	132	3%
Other costs	59,116	1520	16%	26,761	1,021	25%
Total Costs	**363,890**	**9,354**	**100%**	**106,597**	**4,068**	**100%**
Profit/(loss) on sale of fixed assets	217			2		
Farm Business Income	**57,561**	**1,480**		**21,594**	**824**	
Unpaid Labour (excl Farmer and Spouse)	5,256	135		4,866	186	
Imputed Rents	11,287	290		11,404	435	
Interest and ownership charges	8,576	220		6,751	258	
Net Farm Income	**57,673**	**1,482**		**13,001**	**496**	

3.5 Dairy

Table 3.9 summarises the Organic identical sample of Dairy farms between 2010/11 and 2011/12 and Table 3.10 profiles the full sample of Organic and Non-Organic Dairy farms for 2011/12.

Farm Business Output rose for the identical sample of year-on-year organic dairy producers by £13,000/farm but only by about £70/ha. All payments decreased except for income from both the livestock and crop components of 'Agriculture'. In terms of the full sample for 2011/12, output from Non-organic farms was considerably higher than Organic farms; principally due to the livestock component of output from the Non-organic farms. Interestingly, while the livestock component of 'Agriculture' outputs is higher for Non-organic farms than for Organic farms, 95% of 'Agriculture' outputs come from livestock in Organic farms as opposed to 92% for Non-organic farms.

Farm Business Output increased year-on-year for the identical sample as did total costs for this group, largely due to livestock variable costs (other costs remained relatively steady). As with other farm types, Non-organic producers incurred higher total costs than Organic producers. Both Non-organic and Organic total costs were dominated by livestock variable costs (43%) however it was the crop variable costs that were far higher for Non-organic than Organic producers (8% and 2% respectively).

Year-on-year, Farm Business Income and Net Farm Income increased for the identical sample of Organic farms. As with other farm types, Non-organic farms performed better in both Farm Business Income and Net Farm Income than Organic farms. A noticeable difference for dairy farms is that Non-organic producers are subject to substantially higher Imputed Rents and unpaid labour charges than Organic producers.

Table 3.9 Organic Dairy farms identical sample (£/farm and £/ha) 2010/11 and 2011/12

	Organic identical sample			
The average Dairy farm	2010/11		2011/12	
Number (unweighted)	45		42	
Number (weighted)	410		339	
Farm size (07SO)	336,848		326,619	
Farm area (ha)	139.4		140.8	
Grazing livestock units	175.4		170.7	
	£/farm	£/ha	£/farm	£/ha
Agriculture	264,863	1,900	280,706	1,994
Livestock component	*254,459*	*1,825*	*266,258*	*1,892*
Crop component	*10,405*	*75*	*14,448*	*103*
Agri-environment and other payments	9,759	70	8,589	61
Diversification & miscellaneous	13,031	93	12,262	87
Single Payment Scheme	28,364	203	27,567	196
Farm Business Output	**316,018**	**2,266**	**329,124**	**2,338**
Livestock variable costs	111,474	799	117,193	833
Crop variable costs	6,034	43	5,925	42
Contract	17,279	124	17,193	122
Paid Labour	34,376	247	33,664	239
Machinery	37,817	271	39,105	278
Paid Rents	14,725	106	14,748	105
Other costs	42,886	308	45,669	324
Total Costs	264,592	1,898	273,497	1,943
Profit/(loss) on sale of fixed assets	663		304	
Farm Business Income	**52,089**	**374**	**55,931**	**397**
Unpaid Labour (excl Farmer and Spouse)	5,267	38	4,477	32
Imputed Rents	14,334	103	15,470	110
Interest and ownership charges	11,570	83	12,145	86
Net Farm Income	**44,730**	**321**	**49,220**	**350**

Table 3.10 Organic and Non-organic Dairy farms (£/farm and £/ha) 2011/12

	Non-organic			Organic		
The average Dairy farm	2011/12			2011/12		
Number (unweighted)	274			46		
Number (weighted)	6,850			375		
Farm size (07SO)	434,898			338,454		
Farm area (ha)	141.4			141.0		
Grazing livestock units	228.3			177.2		
	£/farm	£/ha	% total	£/farm	£/ha	% total
Agriculture	414,979	2,934	90%	297,794	2,113	85%
Livestock component	*381,065*	*2,694*	*92%*	*284,010*	*2,015*	*95%*
Crop component	*33,915*	*240*	*8%*	*13,784*	*98*	*5%*
Agri-environment and other payments	4,005	28	1%	8,565	61	2%
Diversification & miscellaneous	15,152	107	3%	13,532	96	4%
Single Payment Scheme	28,859	204	6%	29,013	206	8%
Farm Business Output	**462,996**	**3,273**	**100%**	**348,905**	**2,475**	**100%**
Livestock variable costs	163,031	1,153	43%	124,221	881	43%
Crop variable costs	30,141	213	8%	5,866	42	2%
Contract	21,024	149	6%	18,117	129	6%
Paid Labour	36,497	258	10%	36,379	258	13%
Machinery	53,839	381	14%	39,687	282	14%
Paid Rents	13,382	95	4%	15,317	109	5%
Other costs	57,901	409	15%	46,212	328	16%
Total Costs	375,816	2,657	100%	285,798	2,027	100%
Profit/(loss) on sale of fixed assets	771			285		
Farm Business Income	**87,952**	**622**		**63,391**	**450**	
Unpaid Labour (excl Farmer and Spouse)	13,098	93		4,094	29	
Imputed Rents	23,621	167		15,514	110	
Interest and ownership charges	18,590	131		12,037	85	
Net Farm Income	**70,504**	**498**		**57,076**	**405**	

Further detailed commentary on Organic Dairy farm performance is given in Appendix 4.

3.6 LFA grazing

As shown in Table 3.11 year-on-year Farm Business Output decreased for the identical sample of LFA Organic farms from 2010/11 to 2011/12. While there was an overall increase in the outputs from 'Agriculture', only the livestock component of this payment increased. All other elements that contribute to Farm Business Output decreased. Unlike other farm types, Organic LFA grazing farms had a higher Farm Business Output than Non-organic farms, attributed to the substantially higher 'Agri-environmental and other payments' (which contribute 14% to Organic Farm Business Output) and earnings from the 'Single Payment Scheme' (which contribute 22% to Organic Farm Business Output).

Total costs for the identical sample of LFA Organic farms from 2010/11 to 2011/12 fell by approximately £26,000 per farm (or £10 per hectare). Savings were made in all cost centres but the most notable cost reductions were in livestock variable costs, paid labour, machinery and 'other costs'. Similar to other farm types, Organic farm costs were generally lower for Organic farms than Non-organic farms in the full sample. Livestock variable costs are substantially lower for Organic farms and also make a smaller contribution to Total Costs than Non-organic farms (26% compared to 33% respectively). Other costs between the two types of LFA grazing farms are comparable except for crop variable costs, which are naturally lower for Organic farms, and contract labour, which is higher for Organic farms.

The combination of higher Farm Business Output and lower Total Costs for Organic farms means that overall profitability is better for Organic LFA grazing farms than their Non-organic counterparts. Farm Business Income and Net Farm Income increased year-on-year for the identical sample and profitability is significantly higher for Organic farms than it is for Non-organic farms.

Table 3.11 Organic LFA grazing farms identical sample (£/farm and £/ha) 2010/11 and 2011/12

	Organic identical sample			
The average LFA grazing farm	2010/11		2011/12	
Number (unweighted)	21		21	
Number (weighted)	210		162	
Farm size (07SO)	119,125		99,346	
Farm area (ha)	192.6		154.2	
Grazing livestock units	151.1		130.6	
	£/farm	£/ha	£/farm	£/ha
Agriculture	94,171	489	96,298	624
Livestock component	*81,761*	*424*	*88,877*	*576*
Crop component	*12,409*	*64*	*7,421*	*48*
Agri-environment and other payments	28,384	147	20,655	134
Diversification & miscellaneous	5,299	28	3,138	20
Single Payment Scheme	41,467	215	34,872	226
Farm Business Output	**169,321**	**879**	**154,964**	**1,005**
Livestock variable costs	32,062	166	25,193	163
Crop variable costs	6,596	34	5,366	35
Contract	7,949	41	7,872	51
Paid Labour	12,309	64	8,828	57
Machinery	25,744	134	20,649	134
Paid Rents	9,064	47	6,140	40
Other costs	29,525	153	23,049	149
Total Costs	123,250	640	97,097	630
Profit/(loss) on sale of fixed assets	-51		-155	
Farm Business Income	**46,021**	**239**	**57,712**	**374**
Unpaid Labour (excl Farmer and Spouse)	2,548	13	1,867	12
Imputed Rents	17,081	89	15,219	99
Interest and ownership charges	8,935	46	7,349	48
Net Farm Income	**35,326**	**183**	**47,975**	**311**

Table 3.12 Organic and Non-organic LFA grazing farms (£/farm and £/ha) 2011/12

	Non-organic			Organic		
The average LFA grazing farm	2011/12			2011/12		
Number (unweighted)	222			25		
Number (weighted)	5,879			269		
Farm size (07SO)	71,783			77,464		
Farm area (ha)	118.6			127.3		
Grazing livestock units	92.8			103.1		
	£/farm	£/ha	% total	£/farm	£/ha	% total
Agriculture	72,275	609	67%	75,258	591	61%
Livestock component	*68,564*	*578*	*95%*	*69,863*	*549*	*93%*
Crop component	*3,711*	*31*	*5%*	*5,395*	*42*	*7%*
Agri-environment and other payments	9,631	81	9%	17,622	138	14%
Diversification & miscellaneous	4,684	39	4%	3,706	29	3%
Single Payment Scheme	21,682	183	20%	27,528	216	22%
Farm Business Output	**108,272**	**913**	**100%**	**124,113**	**975**	**100%**
Livestock variable costs	26,663	225	33%	19,381	152	26%
Crop variable costs	6,634	56	8%	3,772	30	5%
Contract	3,067	26	4%	5,682	45	8%
Paid Labour	4,026	34	5%	6,100	48	8%
Machinery	17,154	145	21%	17,648	139	24%
Paid Rents	5,915	50	7%	4,717	37	6%
Other costs	17,101	144	21%	17,558	138	23%
Total Costs	80,560	679	100%	74,858	588	100%
Profit/(loss) on sale of fixed assets	588			-89		
Farm Business Income	**28,300**	**239**		**49,167**	**386**	
Unpaid Labour (excl Farmer and Spouse)	4,311	36		1,128	9	
Imputed Rents	7,965	67		13,355	105	
Interest and ownership charges	4,477	38		5,018	39	
Net Farm Income	**20,501**	**173**		**39,701**	**312**	

Further detailed commentary on Organic LFA grazing farm performance is given in Appendix 3.

3.7 Lowland grazing

Year-on-year Farm Business Output for the identical sample of organic farms was well up for 2011/12 (Table 3.13) mainly due to substantial increases in earnings from the livestock component of 'Agriculture' earnings and income from 'Diversification & miscellaneous' output. Farm Business Output for Non-organic farms was higher than Organic farms. Non-organic farms earned considerably more from the 'Agriculture' component of their income that Organic farms; conversely, Organic farms earned more than Non-organic farms from 'Agri-environmental and other payments' (11% vs 4% respectively), 'Diversification' (16% vs 11% respectively) and Single Payment Scheme' (21% vs 17% respectively).

Total costs increased year-on-year for the Organic identical sample; Crop variable costs and Other costs were the only elements to decrease from 2010/11 to 2011/12. As with Farm Business Output and most other farm types considered in this survey, Non-organic total costs were higher than those of Organic farms. Livestock variable costs, machinery and other costs were the largest contributors to both types of farm costs although livestock variable costs dominated the Non-organic farm businesses while Other costs dominated the Organic farm businesses.

Overall, 2011/12 was a more profitable year for the identical sample of Lowland Grazing Farms however, in terms of comparing Non-organic to Organic Farms, Net Farm Income and Farm Business Income were very similar for 2011/12.

Table 3.13 Organic Lowland grazing farms identical sample (£/farm and £/ha) 2010/11 and 2011/12

	Organic identical sample			
The average Lowland grazing farm	2010/11		2011/12	
Number (unweighted)	28		30	
Number (weighted)	702		758	
Farm size (07SO)	53,157		49,923	
Farm area (ha)	94.9		93.9	
Grazing livestock units	74.1		68.2	
	£/farm	£/ha	£/farm	£/ha
Agriculture	36,828	388	44,993	479
Livestock component	*31,628*	*333*	*38,017*	*405*
Crop component	*5,200*	*55*	*6,975*	*74*
Agri-environment and other payments	12,548	132	11,268	120
Diversification & miscellaneous	10,934	115	16,196	172
Single Payment Scheme	20,232	213	20,085	214
Farm Business Output	**80,542**	**849**	**92,543**	**985**
Livestock variable costs	8,790	93	9,114	97
Crop variable costs	2,124	22	2,074	22
Contract	4,492	47	4,953	53
Paid Labour	3,174	33	4,372	47
Machinery	15,399	162	16,946	180
Paid Rents	2,702	28	3,404	36
Other costs	21,006	221	20,996	224
Total Costs	57,687	608	61,860	659
Profit/(loss) on sale of fixed assets	107		302	
Farm Business Income	**22,963**	**242**	**30,985**	**330**
Unpaid Labour (excl Farmer and Spouse)	2,551	27	2,508	27
Imputed Rents	11,835	125	12,296	131
Interest and ownership charges	4,317	46	4,369	47
Net Farm Income	**13,810**	**146**	**21,549**	**229**

Table 3.14 Organic and Non-organic Lowland grazing farms (£/farm and £/ha) 2011/12

	Non-organic			Organic		
The average Lowland grazing farm	2011/12			2011/12		
Number (unweighted)	237			38		
Number (weighted)	11,063			918		
Farm size (07SO)	76,857			54,016		
Farm area (ha)	100.4			92.6		
Grazing livestock units	96.5			70.3		
	£/farm	£/ha	% total	£/farm	£/ha	% total
Agriculture	84,484	842	69%	48,292	521	51%
Livestock component	*69,486*	*692*	*82%*	*40,809*	*441*	*85%*
Crop component	*14,998*	*149*	*18%*	*7,483*	*81*	*15%*
Agri-environment and other payments	4,559	45	4%	10,566	114	11%
Diversification & miscellaneous	12,964	129	11%	15,253	165	16%
Single Payment Scheme	20,262	202	17%	19,915	215	21%
Farm Business Output	**122,269**	**1,218**	**100%**	**94,026**	**1,015**	**100%**
Livestock variable costs	26,291	262	29%	10,867	117	17%
Crop variable costs	9,019	90	10%	2,367	26	4%
Contract	5,460	54	6%	4,959	54	8%
Paid Labour	6,171	61	7%	4,485	48	7%
Machinery	18,612	185	21%	17,682	191	27%
Paid Rents	5,313	53	6%	3,657	39	6%
Other costs	19,658	196	22%	20,804	225	32%
Total Costs	90,523	902	100%	64,821	700	100%
Profit/(loss) on sale of fixed assets	652			178		
Farm Business Income	**32,398**	**323**		**29,383**	**317**	
Unpaid Labour (excl Farmer and Spouse)	3,871	39		2,484	27	
Imputed Rents	11,299	113		12,262	132	
Interest and ownership charges	4,747	47		4,546	49	
Net Farm Income	**22,101**	**220**		**20,008**	**216**	

Further detailed commentary on Organic Lowland grazing farm performance is given in Appendix 2.

3.8 Mixed

As shown in Table 3.15, Farm Business Output decreased year-on-year for the identical sample of Organic Mixed farms. Data presented Table 3.15 indicates that this is principally due to the fall in 'Agriculture' output (both the livestock and crop components). 'Agri-environment and other payments' increased slightly but earnings from 'Diversification and miscellaneous' and 'Single Payment Scheme' both decreased. For the full sample of Mixed farms, output was substantially higher for Non-organic farms than Organic farms. Earnings from the 'Agriculture' component of output are more equally balanced for Non-organic farms (47% livestock and 53% crop) than Organic farms (62% livestock and 38% crop). With substantial earnings coming from the crop component of 'Agriculture' for Non-organic farms (i.e. £752/ha), compared to £393/ha from Organic farms, it is clear from the data that Non-organic farms are making higher earnings than Organic farms due to the larger proportion of the crop component of their operations.

As with Farm Business Output, Total Costs decreased year-on-year for the identical sample of Organic Mixed farms. While Non-organic farms had higher output than Organic farms in the full sample, their Total Costs were substantially higher. Notable costs for the Non-organic farms from the full sample are the livestock and crop variable costs and the cost of machinery; all of which are substantially lower for the Organic farms in the sample.

Between 2010/11 and 2011/12, Organic farms from the identical sample experienced a substantial drop in profits. As can be expected from the analysis of Farm Business Output and Total Costs, Non-organic farms from the full sample were substantially more profitable than Organic farms.

Table 3.15 Organic Mixed farms identical sample (£/farm and £/ha) 2010/11 and 2011/12

	Organic identical sample			
The average Mixed farm	2010/11		2011/12	
Number (unweighted)	20		20	
Number (weighted)	273		280	
Farm size (07SO)	192,729		134,947	
Farm area (ha)	121.8		108.1	
Grazing livestock units	59.2		52.3	
	£/farm	£/ha	£/farm	£/ha
Agriculture	167,296	1,373	119,405	1,104
Livestock component	*102,983*	*845*	*72,583*	*671*
Crop component	*64,313*	*528*	*46,822*	*433*
Agri-environment and other payments	14,281	117	15,075	139
Diversification & miscellaneous	16,845	138	13,415	124
Single Payment Scheme	24,616	202	21,831	202
Farm Business Output	**223,039**	**1,830**	**169,727**	**1,570**
Livestock variable costs	63,667	523	44,857	415
Crop variable costs	12,233	100	12,278	114
Contract	15,242	125	13,745	127
Paid Labour	29,049	238	21,022	194
Machinery	24,143	198	24,580	227
Paid Rents	10,330	85	9,004	83
Other costs	34,470	283	30,523	282
Total Costs	189,135	1,552	156,010	1,443
Profit/(loss) on sale of fixed assets	1,066		624	
Farm Business Income	**34,970**	**287**	**14,341**	**133**
Unpaid Labour (excl Farmer and Spouse)	4,349	36	3,122	29
Imputed Rents	14,515	119	14,737	136
Interest and ownership charges	8,108	67	10,147	94
Net Farm Income	**24,215**	**199**	**6,629**	**61**

Table 3.16 Organic and Non-organic Mixed farms (£/farm and £/ha) 2011/12

	Non-organic			Organic		
The average Mixed farm	2011/12			2011/12		
Number (unweighted)	174			22		
Number (weighted)	5,363			323		
Farm size (07SO)	199,636			129,476		
Farm area (ha)	160.4			108.2		
Grazing livestock units	93.9			53.1		
	£/farm	£/ha	% total	£/farm	£/ha	% total
Agriculture	228,817	1,427	76%	112,459	1,040	70%
Livestock component	*108,252*	*675*	*47%*	*69,969*	*647*	*62%*
Crop component	*120,565*	*752*	*53%*	*42,490*	*393*	*38%*
Agri-environment and other payments	6,629	41	2%	15,190	140	9%
Diversification & miscellaneous	29,295	183	10%	11,801	109	7%
Single Payment Scheme	34,673	216	12%	21,985	203	14%
Farm Business Output	**299,414**	**1,867**	**100%**	**161,435**	**1,492**	**100%**
Livestock variable costs	56,461	352	24%	40,333	373	28%
Crop variable costs	43,317	270	19%	11,071	102	8%
Contract	13,388	83	6%	12,437	115	8%
Paid Labour	19,998	125	9%	20,574	190	14%
Machinery	46,596	291	20%	24,518	227	17%
Paid Rents	12,089	75	5%	8,575	79	6%
Other costs	40,128	250	17%	29,087	269	20%
Total Costs	231,976	1,446	100%	146,595	1,355	100%
Profit/(loss) on sale of fixed assets	1,661			619		
Farm Business Income	**69,098**	**431**		**15,458**	**143**	
Unpaid Labour (excl Farmer and Spouse)	8,299	52		2,700	25	
Imputed Rents	19,531	122		14,426	133	
Interest and ownership charges	10,787	67		9,622	89	
Net Farm Income	**53,190**	**332**		**7,953**	**74**	

4 ENTERPRISE GROSS AND NET MARGINS

Table 4.1 shows the distribution of available margin data by farm across farm type group and size for the organic farms in the FBS sample. The table shows a reasonably even distribution with the smaller farms generating slightly more data. 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. Where Net margins are presented the allocation of non-variable costs is an automated procedure according to defined coefficients. Tables 4.2 and 4.3 show the crop and livestock enterprises that are analysed to gross margin level and summarises the number of farm businesses that contributed to the analyses. Where available average prices and forage costs are provided for the livestock enterprises. Where numbers allow (>10 farms) analyses for a premium group (top third by GM/ha) are provided. Poultry enterprises have been omitted because most of the sample is non-commercial (less than 100 birds). For livestock enterprises forage areas and stocking rates are calculated on the basis the total adjusted forage area including commons. This is to allow the inclusion at the appropriate rate of all sole occupier rough grazing and all grazed commonland. 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.

Tables 4.4 to 4.23 show gross margins for these enterprises.

Table 4.1 Sample distribution of Margin data by robust farm type and size (2007SO)

	Small (€2,500-100,000)	Medium (€100,000-250,000)	Large (>€250,000)	All
Cereals	5	3	3	11
General cropping	2	3	2	7
Horticulture	5	4	3	12
Poultry	2	0	1	3
Dairy	1	15	23	39
LFA grazing	12	9	3	24
Lowland grazing	27	6	1	34
Mixed	7	7	5	19
All	61	47	41	149

Table 4.2 Sample size for crop gross and net margin analysis

	Sample			Premium		
Enterprise	Sample size	Weighted sample size	Crop area (ha)	Sample size	Weighted sample size	Crop area (ha)
Winter wheat	40	558	26.1	13	185	18.5
Spring wheat	21	263	18.4	-	-	-
Triticale	12	125	12.2	-	-	-
Spring barley	43	448	22.4	14	161	21.1
Winter oats	19	342	8.7	-	-	-
Spring oats	23	311	8.8	-	-	-
Beans	29	296	26.5	10	75	39.4
Fertility crops	11	258	16.9	-	-	-
Field vegetables	11	143	19.5	-	-	-
Flowers	12	318	3.2	-	-	-
Protected vegetables	11	207	0.5	-	-	-
Top fruit	12	204	9.2	-	-	-

Table 4.3 Sample size for each livestock gross and net margin analysis

	Sample		Premium	
Enterprise	Sample size	Weighted sample size	Sample size	Weighted sample size
Lowland beef	17	171	-	-
Upland beef	67	1,115	22	202
Dairy	42	426	14	137
Dairy followers	32	273	11	100
Fat cattle from suckler bred calves or stores	55	768	18	302
Store cattle from suckler bred calves or stores	27	515	-	-
Lowland sheep	41	520	14	151
LFA sheep	18	174	-	-

Table 4.4 Winter Wheat gross and net margins

Sample	40 crops			Top third	13 crops	
Sample weighted	558 crops			Top third weighted	185 crops	
Average crop area	26.1 hectares			Average crop area	18.5 hectares	
Crop Yield and Output	**per crop**	**per ha**	**std dev**		**per crop**	**per ha**	**std dev**
Yield (tonnes and tonnes/ha)	119.94	4.60	1.06		106.76	5.76	1.39
Price of crop sold (£/t)	242		69		-		0
Crop output	29,072	1,115	296		27,218	1,468	356
By product output	1,713	66	89		3,253	175	128
Area payment (Protein or energy crop supplements)	0	0	0		0	0	0
Total	**30,785**	**1,181**			**30,471**	**1,643**	
Variable Costs	**per crop**	**per ha**			**per crop**	**per ha**	
Seed	2,355	90	27		1,567	84	24
Fertiliser (incl. lime, purchased FYM, trace elements, etc.)	479	18	26		392	21	23
Crop protection materials	100	4	5		17	1	4
Other crop costs (including levies and commission)	616	24	35		745	40	33
Fuel for heating & drying	84	3	6		132	7	6
Total	**3,634**	**139**	53		**2,853**	**154**	45
Gross Margin	**27,151**	**1,041**	343		**27,617**	**1,489**	460
Net Margin	**297**	**11**	432		**4,788**	**258**	347

Table 4.5 Spring Wheat gross and net margins

Sample	21	crops
Sample weighted	263	crops
Average crop area	18.4	hectares

Crop Yield and Output	**per crop**	**per ha**	**std dev**
Yield (tonnes and tonnes/ha)	59.61	3.24	1.31
Price of crop sold (£/t)	220		39
Crop output	14,835	807	343
By product output	654	36	42
Area payment (Protein or energy crop supplements)	0	0	0
Total	**15,489**	**842**	

Variable Costs	**per crop**	**per ha**	
Seed	1,949	106	45
Fertiliser (incl. lime, purchased FYM, trace elements, etc.)	391	21	28
Crop protection materials	19	1	3
Other crop costs (including levies and commission)	497	27	34
Fuel for heating & drying	75	4	6
Total	**2,931**	**159**	63
Gross Margin	**12,558**	**683**	355
Net Margin	**-2,007**	**-109**	230

Table 4.6 Triticale gross and net margins

Sample	12	crops
Sample weighted	125	crops
Average crop area	12.2	hectares

Crop Yield and Output	**per crop**	**per ha**	**std dev**
Yield (tonnes and tonnes/ha)	34.16	2.81	1.98
Price of crop sold (£/t)	-		0
Crop output	6,429	528	324
By product output	919	76	57
Area payment (Protein or energy crop supplements)	0	0	0
Total	**7,348**	**604**	

Variable Costs	**per crop**	**per ha**	
Seed	1,236	102	85
Fertiliser (incl. lime, purchased FYM, trace elements, etc.)	21	2	4
Crop protection materials	0	0	0
Other crop costs (including levies and commission)	143	12	24
Fuel for heating & drying	30	2	3
Total	**1,429**	**117**	102
Gross Margin	**5,918**	**486**	355
Net Margin	**-2,722**	**-224**	326

Table 4.7 Spring Barley gross and net margins

Sample	43 crops			Top third	14 crops	
Sample weighted	448 crops			Top third weighted	161 crops	
Average crop area	22.4 hectares			Average crop area	21.1 hectares	
Crop Yield and Output	**per crop**	**per ha**	**std dev**		**per crop**	**per ha**	**std dev**
Yield (tonnes and tonnes/ha)	87.96	3.93	1.30		103.47	4.91	1.41
Price of crop sold (£/t)	200		15		-		0
Crop output	20,708	925	331		25,380	1,205	378
By product output	1,395	62	60		2,298	109	71
Area payment (Protein or energy crop supplements)	0	0	0		0	0	0
Total	**22,103**	**987**			**27,677**	**1,314**	
Variable Costs	**per crop**	**per ha**			**per crop**	**per ha**	
Seed	1,929	86	45		1,955	93	55
Fertiliser (incl. lime, purchased FYM, trace elements, etc.)	464	21	29		214	10	18
Crop protection materials	23	1	3		0	0	1
Other crop costs (including levies and commission)	377	17	31		274	13	42
Fuel for heating & drying	108	5	7		92	4	7
Total	**2,901**	**130**	62		**2,535**	**120**	76
Gross Margin	**19,202**	**857**	320		**25,142**	**1,193**	397
Net Margin	**-2,155**	**-96**	344		**853**	**40**	273

Table 4.8 Winter Oats gross and net margins

Sample	19	crops
Sample weighted	342	crops
Average crop area	8.7	hectares

Crop Yield and Output	**per crop**	**per ha**	**std dev**
Yield (tonnes and tonnes/ha)	35.57	4.07	1.09
Price of crop sold (£/t)	-		0
Crop output	8,303	949	306
By product output	614	70	69
Area payment (Protein or energy crop supplements)	0	0	0
Total	**8,918**	**1,019**	

Variable Costs	**per crop**	**per ha**	
Seed	645	74	27
Fertiliser (incl. lime, purchased FYM, trace elements, etc.)	46	5	17
Crop protection materials	2	0	2
Other crop costs (including levies and commission)	86	10	15
Fuel for heating & drying	35	4	6
Total	**814**	**93**	36
Gross Margin	**8,104**	**926**	337
Net Margin	**-1,520**	**-174**	491

Table 4.9 Spring Oats gross and net margins

Sample	23	crops
Sample weighted	311	crops
Average crop area	8.8	hectares

Crop Yield and Output	**per crop**	**per ha**	**std dev**
Yield (tonnes and tonnes/ha)	27.76	3.17	1.49
Price of crop sold (£/t)	-		0
Crop output	6,883	786	423
By product output	293	33	53
Area payment (Protein or energy crop supplements)	0	0	0
Total	**7,176**	**819**	

Variable Costs	**per crop**	**per ha**	
Seed	787	90	48
Fertiliser (incl. lime, purchased FYM, trace elements, etc.)	177	20	29
Crop protection materials	14	2	2
Other crop costs (including levies and commission)	158	18	34
Fuel for heating & drying	38	4	5
Total	**1,174**	**134**	70
Gross Margin	**6,002**	**685**	406
Net Margin	**-1,192**	**-136**	407

Table 4.10 Beans gross and net margins

Sample	29 crops			Top third	10 crops	
Sample weighted	296 crops			Top third weighted	75 crops	
Average crop area	26.5 hectares			Average crop area	39.4 hectares	
Crop Yield and Output	**per crop**	**per ha**	**std dev**		**per crop**	**per ha**	**std dev**
Yield (tonnes and tonnes/ha)	70.04	2.64	1.05		143.74	3.65	1.53
Price of crop sold (£/t)	258		90		-		0
Crop output	19,740	744	298		41,610	1,056	463
By product output	158	6	48		540	14	94
Area payment (Protein or energy crop supplements)	973	37	16		1,490	38	7
Total	**20,871**	**786**			**43,641**	**1,107**	
Variable Costs	**per crop**	**per ha**			**per crop**	**per ha**	
Seed	2,355	89	50		3,545	90	39
Fertiliser (incl. lime, purchased FYM, trace elements, etc.)	308	12	24		829	21	31
Crop protection materials	11	0	2		42	1	3
Other crop costs (including levies and commission)	218	8	21		483	12	21
Fuel for heating & drying	25	1	6		93	2	8
Total	**2,916**	**110**	59		**4,993**	**127**	65
Gross Margin	**17,955**	**677**	323		**38,648**	**981**	410
Net Margin	**-1,128**	**-42**	298		**6,937**	**176**	386

Table 4.11 Fertility crop gross and net margins

Sample	11	crops
Sample weighted	258	crops
Average crop area	16.9	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)	-		0
Crop output	0	0	0
By product output	1,644	97	135
Area payment (Protein or energy crop supplements)	0	0	0
Total	**1,644**	**97**	

Variable Costs	**per crop**	**per ha**	
Seed	1,002	59	57
Fertiliser (incl. lime, purchased FYM, trace elements, etc.)	0	0	0
Crop protection materials	0	0	0
Other crop costs (including levies and commission)	38	2	15
Fuel for heating & drying	0	0	0
Total	**1,040**	**61**	66
Gross Margin	**604**	**36**	164
Net Margin	**-4,520**	**-267**	1,155

Table 4.12 Field vegetable gross and net margins

Sample	11	crops
Sample weighted	143	crops
Average crop area	19.5	hectares

Crop Yield and Output	**per crop**	**per ha**	**std dev**
Yield (tonnes and tonnes/ha)	3246	166	1555
Price of crop sold (£/t)	-		0
Crop output	158,449	8,112	6,363
By product output	0	0	0
Area payment (Protein or energy crop supplements)	0	0	0
Total	**158,449**	**8,112**	

Variable Costs	**per crop**	**per ha**	
Seed	16,847	863	442
Fertiliser (incl. lime, purchased FYM, trace elements, etc.)	1,929	99	98
Crop protection materials	1,629	83	90
Other crop costs (including levies and commission)	19,021	974	1,071
Fuel for heating & drying	0	0	0
Total	**39,426**	**2,019**	1,477
Gross Margin	**119,023**	**6,094**	5,045
Net Margin	**35,944**	**1,840**	3,660

Table 4.13 Flower enterprise gross and net margins

Sample	12	crops
Sample weighted	318	crops
Average crop area	3.2	hectares

Crop Yield and Output	**per crop**	**per ha**	**std dev**
Yield (tonnes and tonnes/ha)	0	0	0
Price of crop sold (£/t)	-		0
Crop output	28,064	8,693	7,300
By product output	0	0	0
Area payment (Protein or energy crop supplements)	0	0	0
Total	**28,064**	**8,693**	

Variable Costs	**per crop**	**per ha**	
Seed	4,048	1,254	1,340
Fertiliser (incl. lime, purchased FYM, trace elements, etc.)	609	189	1,106
Crop protection materials	113	35	54
Other crop costs (including levies and commission)	1,687	523	2,247
Fuel for heating & drying	0	0	0
Total	**6,456**	**2,000**	4,458
Gross Margin	**21,608**	**6,693**	7,361
Net Margin	**-3,696**	**-1,145**	4,709

Table 4.14 Protected fruit gross and net margins

Sample	11	crops
Sample weighted	207	crops
Average crop area	0.5	hectares

Crop Yield and Output	**per crop**	**per ha**	**std dev**
Yield (tonnes and tonnes/ha)	0.15	0.32	2.84
Price of crop sold (£/t)	-		0
Crop output	51,457	109,167	83,020
By product output	0	0	0
Area payment (Protein or energy crop supplements)	0	0	0
Total	**51,457**	**109,167**	

Variable Costs	**per crop**	**per ha**	
Seed	8,664	18,381	15,577
Fertiliser (incl. lime, purchased FYM, trace elements, etc.)	756	1,605	1,735
Crop protection materials	233	494	488
Other crop costs (including levies and commission)	6,839	14,509	12,867
Fuel for heating & drying	2,884	6,119	6,412
Total	**19,377**	**41,108**	36,044
Gross Margin	**32,080**	**68,059**	49,294
Net Margin	**-2,868**	**-6,084**	24,664

Table 4.15 Top fruit gross and net margins

Sample	12 crops		
Sample weighted	204 crops		
Average crop area	9.2 hectares		
Crop Yield and Output	**per crop**	**per ha**	**std dev**
Yield (tonnes and tonnes/ha)	28.62	3.10	3.20
Price of crop sold (£/t)	-		0
Crop output	69,616	7,545	6,537
By product output	0	0	0
Area payment (Protein or energy crop supplements)	0	0	0
Total	**69,616**	**7,545**	
Variable Costs	**per crop**	**per ha**	
Seed	585	63	138
Fertiliser (incl. lime, purchased FYM, trace elements, etc.)	1,307	142	134
Crop protection materials	2,222	241	233
Other crop costs (including levies and commission)	21,433	2,323	2,288
Fuel for heating & drying	0	0	0
Total	**25,547**	**2,769**	2,661
Gross Margin	**44,069**	**4,776**	3,952
Net Margin	**-6,941**	**-752**	1,276

Table 4.16a Dairy cows gross margin - sample

Dairy

	Sample
Sample size	42
No farms in population	426
Production information	
Average cow numbers	92
Enterprise grazing livestock units	93
Total milk produced (litres)	573398
Total milk produced per cow (lt/cow)	6217
Average price of milk sold (pence/lt)	31.85
Calves per cow (sold or transferred)	0.82
Herd replacement rate (%)	20%
Adjusted forage area (including commons)	69.11
Stocking rate (cows per adj. forage ha.)	1.33
Stocking rate (GLUs per adj. forage ha.)	1.34

Enterprise Output	**Total (£)**	**per cow (£)**	**per litre (pence)**	**per adj for ha (£)**
Milk	18,2649	1,980	31.9	2,643
Calves and other dairy related output	8,814	96	1.5	128
Less Herd Depreciation	18,345	199	3.2	265
Total Gross Output (A)	**173,118**	**1,877**	**30.2**	**2,506**
Variable Costs				
Concentrates	51,041	553	8.9	739
Coarse fodder	3,404	37	0.6	49
Vet and Medicines	5,050	55	0.9	73
Other livestock costs	17,136	186	3.0	248
Total Variable Costs (B)	**76,631**	**831**	**13.4**	**1,109**
Gross Margin before forage (A-B) = (C)	**96,487**	**1,046**	**16.8**	**1,397**
Forage Variable Costs (D)	1,314	14	0.2	19
Gross Margin after forage (C-D) = (E)	**95,173**	**1,032**	**16.6**	**1,378**

Prices	
Average quota leasing in price (pence/lt)	na
Calf price (£/calf)	116
Cull cow price (£/cow)	669
Replacement heifer/cow price (£/head)	1,426
Forage Costs	
Fertilizer (£/ha)	4
Seed (£/ha)	10
Spray (£/ha)	0
Other crop costs (£/ha)	6
Total (£/ha)	19
Unadjusted forage area excluding commons	68.32

Table 4.16b Dairy cows gross margin - premium

Dairy

	Premium
Sample size	14
No farms in population	137
Production information	
Average cow numbers	105
Enterprise grazing livestock units	105
Total milk produced (litres)	750785
Total milk produced per cow (lt/cow)	7161
Average price of milk sold (pence/lt)	32.84
Calves per cow (sold or transferred)	0.86
Herd replacement rate (%)	25%
Adjusted forage area (including commons)	65.71
Stocking rate (cows per adj. forage ha.)	1.60
Stocking rate (GLUs per adj. forage ha.)	1.60

Enterprise Output	**Total (£)**	**per cow (£)**	**per litre (pence)**	**per adj for ha (£)**
Milk	246,560	2,352	32.8	3,752
Calves and other dairy related output	11,715	112	1.6	178
Less Herd Depreciation	20,996	200	2.8	320
Total Gross Output (A)	**237,279**	**2,264**	**31.6**	**3,610**
Variable Costs				
Concentrates	70,140	669	9.3	1,067
Coarse fodder	3,435	33	0.5	52
Vet and Medicines	6,039	58	0.8	92
Other livestock costs	20,805	198	2.8	317
Total Variable Costs (B)	**100,418**	**958**	**13.4**	**1,528**
Gross Margin before forage (A-B) = (C)	**136,861**	**1,306**	**18.2**	**2,082**
Forage Variable Costs (D)	1,991	19	0.3	30
Gross Margin after forage (C-D) = (E)	**134,870**	**1,287**	**18.0**	**2,052**

Prices	
Average quota leasing in price (pence/lt)	na
Calf price (£/calf)	129
Cull cow price (£/cow)	747
Replacement heifer/cow price (£/head)	1,439
Forage Costs	
Fertilizer (£/ha)	7
Seed (£/ha)	14
Spray (£/ha)	0
Other crop costs (£/ha)	9
Total (£/ha)	30
Unadjusted forage area excluding commons	65.56

Table 4.17 LFA Suckler Cows gross margin

No farms in sample	17
No farms in population	171
Production information	
Average cow numbers	34
Enterprise grazing livestock units *	32
Calves per cow	0.18
Herd replacement rate (%)	21%
Adjusted forage area (including commons)	43.41
Stocking rate (cows per adj. forage ha.)	0.78
Stocking rate (GLUs per adj. forage ha.)	0.74

Enterprise Output	**Total (£)**	**per cow (£)**	**per adj for ha (£)**
Suckler calves †	14,997	441	345
Less Herd Depreciation	4,979	146	115
Total Output (A)	**10,018**	**295**	**230**
Variable Costs			
Concentrates	816	24	19
Coarse fodder	399	12	9
Vet and Medicines	621	18	14
Other livestock costs	2,064	61	48
Total Variable Costs (B)	**3,899**	**115**	**90**
Gross Margin before forage (A-B) = (C)	**6,119**	**180**	**140**
Forage Variable Costs	234	7	5
Gross Margin after forage (A-B) = (C)	**5,885**	**173**	**135**
Prices			
Calf price (£/calf) *	502		
Cull cow price (£/cow)	671		
Replacement heifer/cow price (£/head)	1,054		
Forage Costs			
Fertilizer (£/ha)	2		
Seed (£/ha)	1		
Spray (£/ha)	0		
Other crop costs (£/ha)	2		
Total (£/ha)	5		
Unadjusted forage area excluding common	74.57		

* excludes stock away on agist

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

Table 4.18 Lowland Suckler Cow gross margin

	Sample	Premium
No farms in sample	67	22
No farms in population	1115	202
Production information		
Average cow numbers	30	45
Enterprise grazing livestock units *	30	45
Calves per cow	0.13	0.05
Herd replacement rate (%)	20%	19%
Adjusted forage area (including commons)	36.10	41.59
Stocking rate (cows per adj. forage ha.)	0.83	1.09
Stocking rate (GLUs per adj. forage ha.)	0.83	1.09

Enterprise Output	**Total (£)**	**per cow (£)**	**per adj for ha (£)**	**Total (£)**	**per cow (£)**	**per adj for ha (£)**
Suckler calves †	12,277	410	340	21,942	484	528
Less Herd Depreciation	1,806	60	50	2,208	49	53
Total Output (A)	**10,471**	**350**	**290**	**19,734**	**435**	**475**
Variable Costs						
Concentrates	726	24	20	718	16	17
Coarse fodder	288	10	8	472	10	11
Vet and Medicines	627	21	17	867	19	21
Other livestock costs	1,523	51	42	2,084	46	50
Total Variable Costs (B)	**3,163**	**106**	**87**	**4,141**	**91**	**99**
Gross Margin before forage (A-B) = (C)	**7,308**	**244**	**203**	**15,593**	**344**	**376**
Forage Variable Costs	390	13	11	376	8	9
Gross Margin after forage (A-B) = (C)	**6,918**	**231**	**192**	**15,216**	**336**	**367**
Prices						
Calf price (£/calf) *	558			355		
Cull cow price (£/cow)	759			858		
Replacement heifer/cow price (£/head)	874			970		
Forage Costs						
Fertilizer (£/ha)	2			1		
Seed (£/ha)	6			6		
Spray (£/ha)	0			0		
Other crop costs (£/ha)	3			2		
Total (£/ha)	11			9		
Unadjusted forage area excluding commons	38.60			43.13		

* excludes stock away on agist

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

Table 4.19 Dairy followers gross margin

No farms in sample	32		11	
No farms in population	273		100	
Production information				
Enterprise grazing livestock units *	45		38	
Adjusted forage area (including commons)	32.41		26.06	
Stocking rate (GLUs per adj. forage ha.)	1.39		1.45	
Enterprise Output		**per adj for ha (£)**		**per adj for ha (£)**
Cattle output	41,693	1,286	43,857	1,683
Total Output (A)	**41,693**	**1,286**	**43,857**	**1,683**
Variable Costs				
Concentrates	9,042	279	7,739	297
Coarse fodder	3,404	105	3,016	116
Vet and Medicines	787	24	786	30
Other livestock costs	4,960	153	3,230	124
Total Variable Costs (B)	**18,193**	**561**	**14,770**	**567**
Gross Margin before forage (A-B) = (C)	**23,500**	**725**	**29,087**	**1,116**
Forage Variable Costs (D)	284	9	220	8
Gross Margin after forage (C-D) = (E)	**23,216**	**716**	**28,867**	**1,108**
Prices				
Dairy heifer transfer or sale price £	1,383		1,454	
Finished cattle price £	852		na	
Store cattle price £	593		567	
Forage Costs				
Fertilizer (£/ha)	2		1	
Seed (£/ha)	4		5	
Spray (£/ha)	0		0	
Other crop costs (£/ha)	3		3	
Total (£/ha)	9		8	
Unadjusted forage area excluding commons	33.17		26.17	

* excludes stock away on agist

Table 4.20 Fat cattle from Suckler bred calves or stores gross margin

	Sample		Premium	
No farms in sample	55		18	
No farms in population	768		302	
Production information				
Enterprise grazing livestock units *	38		38	
Adjusted forage area (including commons)	43.91		37.45	
Stocking rate (GLUs per adj. forage ha.)	0.87		1.02	
Enterprise Output		**per adj for ha (£)**		**per adj for ha (£)**
Cattle output	27,827	634	34,577	923
Total Output (A)	**27,827**	**634**	**34,577**	**923**
Variable Costs				
Concentrates	3,278	75	3,000	80
Coarse fodder	272	6	250	7
Vet and Medicines	517	12	665	18
Other livestock costs	3,376	77	3,726	99
Total Variable Costs (B)	**7,443**	**170**	**7,641**	**204**
Gross Margin before forage (A-B) = (C)	**20,384**	**464**	**26,936**	**719**
Forage Variable Costs (D)	573	13	329	9
Gross Margin after forage (C-D) = (E)	**19,811**	**451**	**26,606**	**710**
Prices				
Dairy heifer transfer or sale price £	656		na	
Finished cattle price £	1,040		1,074	
Store cattle price £	651		779	
Forage Costs				
Fertilizer (£/ha)	2		0	
Seed (£/ha)	7		7	
Spray (£/ha)	0		0	
Other crop costs (£/ha)	4		2	
Total (£/ha)	13		9	
Unadjusted forage area excluding commons	49.13		36.26	

* excludes stock away on agist

Table 4.21 Store cattle from Suckler bred calves or stores gross margin

	Sample	
No farms in sample	27	
No farms in population	515	
Production information		
Enterprise grazing livestock units *	13	
Adjusted forage area (including commons)	21.24	
Stocking rate (GLUs per adj. forage ha.)	0.62	
Enterprise Output		**per adj for ha (£)**
Cattle output	6,940	327
Total Output (A)	**6,940**	**327**
Variable Costs		
Concentrates	555	26
Coarse fodder	131	6
Vet and Medicines	240	11
Other livestock costs	1,026	48
Total Variable Costs (B)	**1,952**	**91**
Gross Margin before forage (A-B) = (C)	**4,988**	**236**
Forage Variable Costs (D)	116	5
Gross Margin after forage (C-D) = (E)	**4,872**	**231**
Prices		
Dairy heifer transfer or sale price £	600	
Finished cattle price £	891	
Store cattle price £	608	
Forage Costs		
Fertilizer (£/ha)	1	
Seed (£/ha)	2	
Spray (£/ha)	0	
Other crop costs (£/ha)	3	
Total (£/ha)	5	
Unadjusted forage area excluding commons	26	

* excludes stock away on agist

Table 4.22 Lowland sheep (2011 lamb crop) gross margin

	Sample	Premium
No farms in sample	41	14
No farms in population	520	151
Production information		
Average ewe numbers	180	184
Enterprise grazing livestock units *	28	28
Lambs reared per ewe	1.35	1.46
Flock replacement rate (%)	19%	27%
Adjusted forage area (including commons)	30.18	23.52
Stocking rate (ewes per adj. forage ha.)	5.97	7.82
Stocking rate (GLUs per adj. forage ha.)	0.94	1.21

Enterprise Output	**Total (£)**	**per ewe (£)**	**per adj for ha (£)**	**Total (£)**	**per ewe (£)**	**per adj for ha (£)**
Lambs †	20,238	112	671	25,174	137	1,070
Wool	505	3	17	513	3	22
Less Flock Depreciation	1,829	10	61	1,992	11	85
Total Output (A)	**18,914**	**105**	**627**	**23,695**	**129**	**1,007**
Variable Costs						
Concentrates	2,221	12	74	1,168	6	50
Coarse fodder	412	2	14	588	3	25
Vet and Medicines	1,093	6	36	1,296	7	55
Other livestock costs	2,062	11	68	2,010	11	85
Total Variable Costs (B)	**5,789**	**31**	**192**	**5,062**	**27**	**215**
Gross Margin before forage (A-B) = (C)	**13,125**	**74**	**435**	**18,633**	**102**	**792**
Forage Variable Costs (D)	228	1	8	71	0	3
Gross Margin after forage (C-D) = (E)	**12,897**	**73**	**427**	**18,562**	**102**	**789**

Prices	**£/hd**	**% sales**	**£/hd**	**% sales**
Fat Lamb price	80	91	87	99
Store Lamb price	61	8	80	0
Ewe Lamb price	133	0	142	1
Draft ewe price	99		78	
Cull ewe price (£/ewe)	77		83	
Wool price (£/kg)	0.91		0.85	
Replacement price (£/head)	103		103	
Forage Costs				
Fertilizer (£/ha)	1		0	
Seed (£/ha)	6		2	
Spray (£/ha)	0		0	
Other crop costs (£/ha)	1		1	
Total (£/ha)	8		3	
Unadjusted forage area excluding commons	33.10		25.53	

* excludes stock away on agist

† includes all enterprise output except wool

Table 4.23 LFA sheep (2011 lamb crop) gross margin

	Sample
No farms in sample	18
No farms in population	174
Production information	
Average ewe numbers	316
Enterprise grazing livestock units *	44
Lambs reared per ewe	1.53
Flock replacement rate (%)	32%
Adjusted forage area (including commons)	57.60
Stocking rate (ewes per adj. forage ha.)	5.49
Stocking rate (GLUs per adj. forage ha.)	0.76

Enterprise Output	**Total (£)**	**per ewe (£)**	**per adj for ha (£)**
Lambs †	41,022	130	712
Wool	797	3	14
Less Flock Depreciation	2,987	9	52
Total Output (A)	**38,833**	**124**	**674**
Variable Costs			
Concentrates	3,708	12	64
Coarse fodder	897	3	16
Vet and Medicines	2,588	8	45
Other livestock costs	3,160	10	55
Total Variable Costs (B)	**10,354**	**33**	**180**
Gross Margin before forage (A-B) = (C)	**28,479**	**91**	**494**
Forage Variable Costs (D)	418	1	7
Gross Margin after forage (C-D) = (E)	**28,061**	**90**	**487**

Prices	**£/hd**	**% sales**
Fat Lamb price	80	74
Store Lamb price	58	22
Ewe Lamb price	98	4
Draft ewe price	118	
Cull ewe price (£/ewe)	73	
Wool price (£/kg)	1.01	
Replacement price (£/head)	94	

Forage Costs	
Fertilizer (£/ha)	3
Seed (£/ha)	2
Spray (£/ha)	0
Other crop costs (£/ha)	2
Total (£/ha)	7
Unadjusted forage area excluding commons	77.01

* excludes stock away on agist

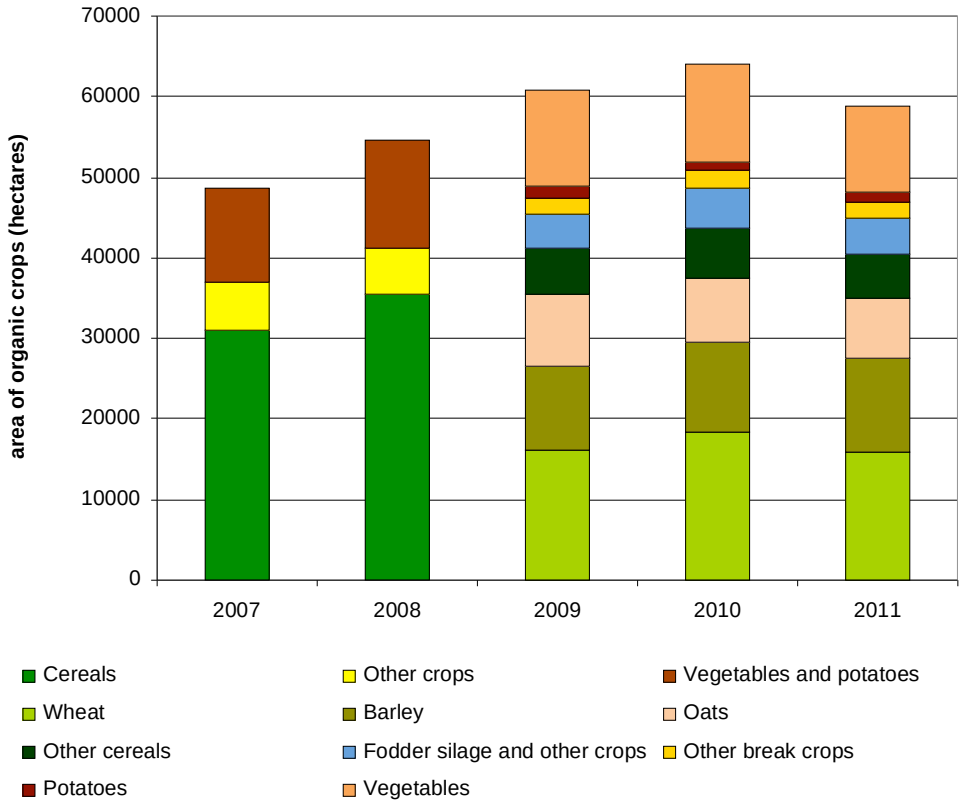
† includes all enterprise output except wool

5 APPENDIX 1 – ORGANIC CROPPING

5.1 Market overview and organic crop areas

The area of fully organic arable crops fell by eight per cent from 64,000 to 59,000 hectares in 2011 (see Figure C1.1). All crops, with the exception of barley reduced in area. Demand for organic feed declined in the same period as organic cattle, sheep and poultry numbers fell by six, two and ten per cent respectively, but organic pig numbers increased.

Figure C1.1 Area of organic crops in England, 2006 to 2011



Sustained low margins, and difficult weed burdens, from organic production relative to the performance of non-organic production have driven a number of organic producers to partially or wholly reconvert. These have typically been difficult and reluctant decisions, but necessary for business viability.

The expiry of individual farmers' Organic Entry Level Stewardship (OELS) schemes is not typically the primary reason for reconversion back to non-organic production. However, this event has often provided an opportunity to reconsider whether organic farming as feasible, as the change has been possible without financial penalty.

Agriculture Output & Costs - Organic farms in England - (Cereals and General Cropping)

	2010/11		2011/12	
Farms in Sample	17		22	
Area of farm (hectares)	230.4		182.9	
Owner occupied area (%)	52.7		64.0	
AGRICULTURAL OUTPUT (£)	**Per farm**	**Per hectare**	**Per farm**	**Per hectare**
Crop output (excluding subsidies)	212,393	922	155,531	850
Livestock output (excluding subsidies)	8,632	37	4,985	27
Coupled subsidies	701	3	686	4
Other agricultural output	15,428	67	7,928	43
TOTAL AGRICULTURAL OUTPUT	237,154	1,029	169,129	925
AGRICULTURAL COSTS				
VARIABLE COSTS (£)				
Crop specific costs	44,960	195	29,930	164
Livestock specific costs	4,851	21	2,038	11
Miscellaneous variable costs	929	4	539	3
TOTAL VARIABLE COSTS	50,739	220	32,507	178
GROSS MARGIN (£)	186,415	809	136,622	747
FIXED COSTS (£)				
Regular labour	23,010	100	16,092	88
Casual labour	13,598	59	7,728	42
Machinery fuel and oil	14,276	62	11,915	65
Other machinery costs (excl. fuel, oil, depreciatic	14,435	63	10,401	57
Machinery, glasshouse and other depreciation	25,799	112	17,923	98
Contract costs	18,993	82	21,002	115
Bank charges and professional fees	5,727	25	5,328	29
Water, electricity, & general	12,234	53	10,547	58
Net interest	2,838	12	1,519	8
Rent paid	22,940	100	16,996	93
Property maintenance	615	3	606	3
Depreciation of buildings and works	4,540	20	2,655	15
Miscellaneous fixed costs	12,535	54	7,673	42
TOTAL FIXED COSTS (£)	171,540	745	130,384	713
Profit/ (Loss) on sale of assets	397	2	1,216	7
FARM BUSINESS INCOME (Agriculture - £)	15,272	66	7,453	41
CROPPING (mean area (hectares))	ha		ha	
Winter wheat	21.8		24.7	
Winter barley	3.9		4.3	
Spring barley	7.4		16.5	
Beans for stockfeed	12.5		-	
Winter oilseed rape	-		-	
Maincrop potatoes	0.6		1.8	
Sugar beet	-		-	

5.2 The sample

The sample of organic arable farms in the Farm Business Survey was greater than in previous years, with 22 farms (17 in 2010 /2011), although farm size was reduced. Similarly, the sample of organic crops also increased, with for example, the number of examples of spring barley rising from 35 to 43 and the examples of winter wheat from 31 to 40. This ensures a sufficient sample size for analysis, but also signals that there may be small differences in the characteristics of the sample of farms between the two years.

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.

5.3 Organic business performance

Organic Cereal and General Cropping farms typically grow a wide range of crops, and performance varies considerably between farms, partly in relation to the market for individual crops. Although the average gross margins of the most commonly grown crop increased, arable farm gross margin reduced by eight per cent to £747 per hectare.

Arable fixed costs were similar to the fixed costs that would be expected from a mixture of non-organic Cereals and General Cropping farms.

The contribution to Farm Business Income (FBI) from agriculture averaged £41 per hectare (£66 in 2010 /2011).

5.4 Organic crop performance

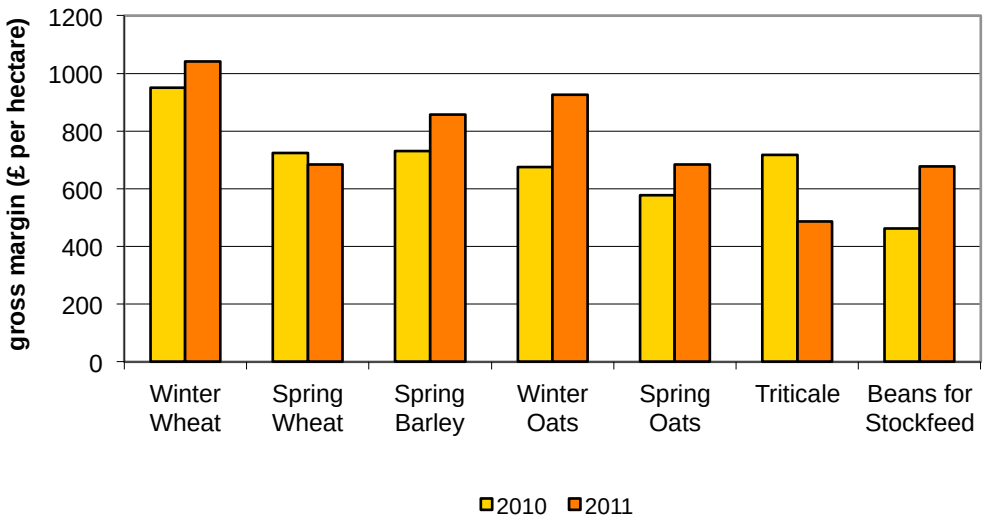
Organic arable crops include cereal crops for human consumption; mainly winter and spring wheat and winter and spring barley. In addition, livestock feed crops include winter and spring cereals, as well as feed beans. Arable fertility crops (green manure) were grown on about 25 per cent of farms with organic arable crops.

In a historically fragmented market for organic feed crops, a recent development has been the establishment of a supply contract between a farmer-owned cooperative, Organic Arable and BQP for the supply of organic pig feed ingredients wheat, barley and beans[2]. To share profit and risk equally between the parties, the crop price is derived from the market price for the grain, the cost of production and the market price for the pigmeat. The arrangement ensures traceability, and allows production to be used close to its place of production.

The importance of home fed feed reduced as, for most crops, a lower value of crop was fed to livestock on the farm. Figure C1.2 compares organic gross margins achieved in the 2010 and 2011 harvests.

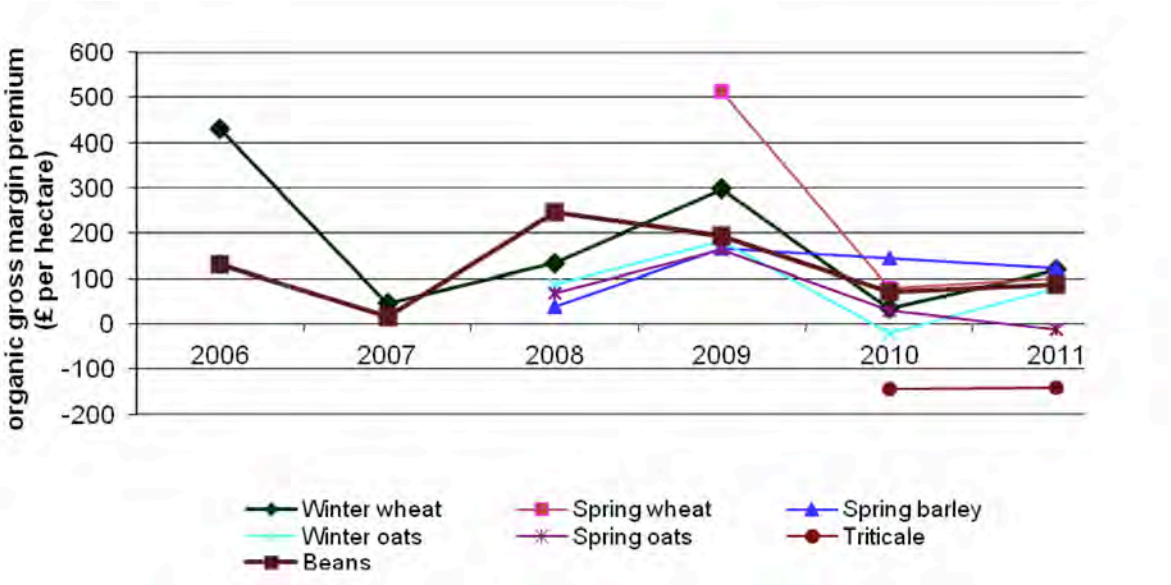
[2] Crops, 23 July 2011

Figure C1.2 Organic gross margins 2010 and 2011



Mirroring the situation for non-organic crops, all organic crops saw increased gross margins, with the exception of spring wheat and triticale. Figure C1.3 compares organic gross margin premiums relative to non-organic productions since 2006.

Figure C1.3 Gross margin premium for organic production over non-organic, 2007 to 2011

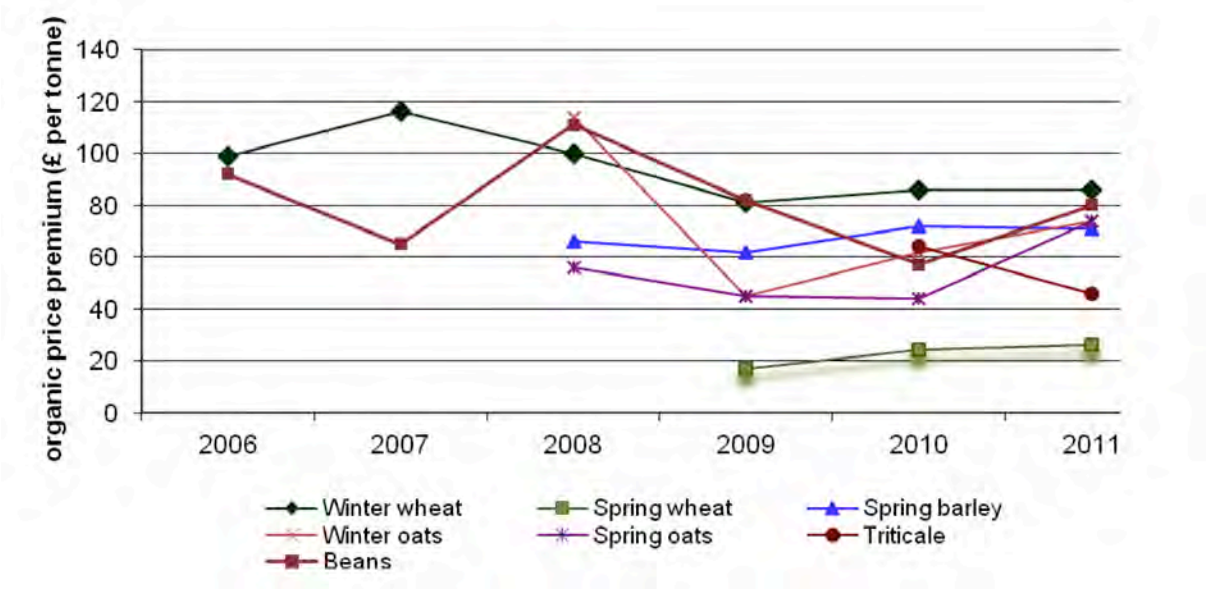


In 2011, all organic crops generated a premium over their equivalent non-organic crops, with the exception of spring barley and triticale. For triticale, this was the second year of poorer performance.

5.5 Crop price

Organic crop prices were subdued through the mild winter of 2012, due to reduced requirement for concentrate feed, but firmed in April following cooler weather. Feed wheat sold for around £220 at harvest reduced to around £205 per tonne, eventually rising to £240 per tonne later in the season. Figure C1.4 shows the organic price premium achieved between 2006 and 2011. This is the premium of all organic crops over all non-organic crops, including milling and malting crops.

Figure C1.4 Organic price premium 2007 to 2011

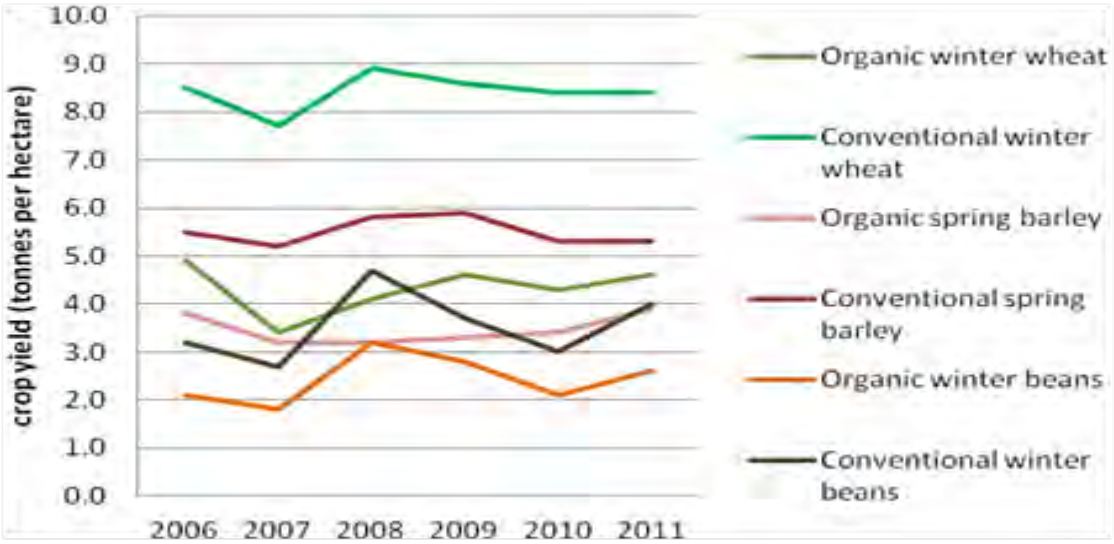


The organic premium paid for cereal crops has remained consistent in recent years, albeit that some crops, such as winter wheat, generate higher premia than others, such as spring wheat. The bean premium varies greatly from year to year.

5.6 Crop yield

Figure C1.5 compares the recent crop yields of the most commonly grown organic crops with their equivalent non-organic crops.

Figure C1.5 Organic and non-organic crop yield 2006 to 2011



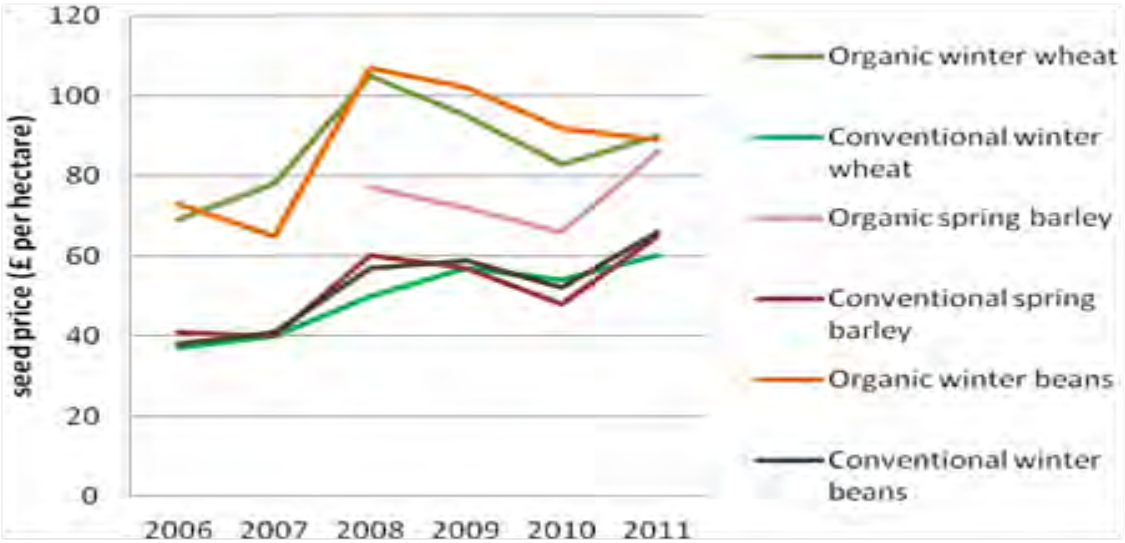
Despite the 2011 drought conditions, organic winter and spring wheat exceeded their five-year average yields by eight and 15 per cent respectively, despite the below average performance of their equivalent non-organic crops. Organic winter bean yields were eight per cent higher than average but non-organic bean yields were 16 per cent above average.

In terms of yield penalty, winter and spring wheat yields were 54 and 73 per cent of non-organic yields, organic beans yielded 65 per cent of the non-organic crop.

5.7 Variable cost performance

Accounting for between 65 and 80 per cent of all variable costs, seed costs are of great importance to organic producers. These costs are relatively high because of the lower organic yield in comparison with non-organic production. Seed costs for organic and non-organic production of winter wheat, spring wheat and bean production are shown in Table C1.6.

Figure C1.6 Seed costs for organic and non-organic production, 2006 to 2011



The trend has been towards higher seed costs, although prices were low in relative terms in 2010. Organic seed prices showed greater year on year variation than observed for non-organic production.

5.7.1 Winter wheat

The 2011 organic crop gave a gross margin of £1,041 per hectare (£950 in 2010). The crop yielded an above average 4.6 tonnes per hectare and sold for an average price of £242 per tonne including organic, and where applicable, milling premium. This was slightly higher than in 2010 reflecting scarcity of good quality crop. Organic milling wheat was generally of poor quality, but premiums were available for better quality samples.

Gross Margin - Winter Wheat - Organic

	2010/11		2011/12	
Farms in Sample	31		40	
	Per farm	Per hectare	Per farm	Per hectare
Area per farm (hectares)	33.14		26.08	
Yield (tonnes and tonnes per hectare)	142.6	4.3	119.9	4.6
Price (£ per tonne)	237		242	
OUTPUT (£)				
Crop sold	32,462	979	28,356	1,087
Feed used on-farm	1,329	40	716	27
Straw and by-products	1,916	58	1,713	66
TOTAL OUTPUT	35,706	1,077	30,785	1,181
VARIABLE COSTS (£)				
Seeds (including homegrown)	2,755	83	2,355	90
Fertilisers	403	12	479	18
Crop protection	130	4	100	4
Other crop costs	822	25	616	24
Drying and heating costs	98	3	84	3
TOTAL VARIABLE COSTS	4,208	127	3,634	139
GROSS MARGIN (£)	31,498	950	27,151	1,041

Gross Margin - Spring Wheat - Organic

	2010/11		2011/12	
Farms in Sample	20		21	
	Per farm	Per hectare	Per farm	Per hectare
Area per farm (hectares)	20.11		18.39	
Yield (tonnes and tonnes per hectare)	67.1	3.3	59.6	3.2
Price (£ per tonne)	244		249	
OUTPUT (£)				
Crop sold	15,557	774	14,366	781
Feed used on-farm	829	41	470	26
Straw and by-products	924	46	654	36
TOTAL OUTPUT	17,309	861	15,489	842
VARIABLE COSTS (£)				
Seeds (including homegrown)	2,085	104	1,949	106
Fertilisers	191	9	391	21
Crop protection	30	1	19	1
Other crop costs	289	14	497	27
Drying and heating costs	138	7	75	4
TOTAL VARIABLE COSTS	2,732	136	2,931	159
GROSS MARGIN (£)	14,578	725	12,558	683

Gross Margin - Winter Oats - Organic				
	2010/11		2011/12	
Farms in Sample	15		19	
	Per farm	Per hectare	Per farm	Per hectare
Area per farm (hectares)	11.88		8.75	
Yield (tonnes and tonnes per hectare)	42.7	3.6	35.6	4.1
Price (£ per tonne)	200		233	
OUTPUT (£)				
Crop sold	7,735	651	7,800	892
Feed used on-farm	789	66	504	58
Straw and by-products	662	56	614	70
TOTAL OUTPUT	9,186	773	8,918	1,019
VARIABLE COSTS (£)				
Seeds (including homegrown)	896	75	645	74
Fertilisers	44	4	46	5
Crop protection			2	0
Other crop costs	199	17	86	10
Drying and heating costs	12	1	35	4
TOTAL VARIABLE COSTS	1,151	97	814	93
GROSS MARGIN (£)	8,035	676	8,104	926

Gross Margin - Spring Oats - Organic				
	2010/11		2011/12	
Farms in Sample	16		23	
	Per farm	Per hectare	Per farm	Per hectare
Area per farm (hectares)	7.65		8.76	
Yield (tonnes and tonnes per hectare)	25.2	3.3	27.8	3.2
Price (£ per tonne)	185		248	
OUTPUT (£)				
Crop sold	3,899	510	6,036	689
Feed used on-farm	761	99	847	97
Straw and by-products	549	72	293	33
TOTAL OUTPUT	5,210	681	7,176	819
VARIABLE COSTS (£)				
Seeds (including homegrown)	610	80	787	90
Fertilisers	50	7	177	20
Crop protection			14	2
Other crop costs	111	15	158	18
Drying and heating costs	25	3	38	4
TOTAL VARIABLE COSTS	797	104	1,174	134
GROSS MARGIN (£)	4,412	577	6,002	685

5.7.2 Spring wheat

The organic spring wheat gross margin reduced (from £725 to £683 per hectare) as the average yield reduced to 3.2 tonnes per hectare (3.3 in 2010), although the price increased to £249 per hectare

(from £244 per hectare in 2010). Non-organic spring wheat also yielded less well in 2011 and generated a reduced gross margin.

5.7.3 Spring barley

This commonly grown organic crop achieved a gross margin of £857 per hectare. Organic malting barley was readily available and of good quality.

Despite the dry spring, the yield of organic spring barley increased from 3.4 to 3.9 tonnes per hectare.

5.7.4 Winter and spring oats

Winter oats achieved the second highest organic gross margin after winter wheat, of £926 per hectare; this was 36 higher than in the previous year. The gross margin of spring oats was £685 per hectare

Milling oat quality was good and crops were in demand following the poor oat harvest of 2010.

The winter oat price increased by 17 per cent; and it reached £233 per tonne. The spring oat price averaged £248 per tonne. The winter oat yield increased by 14 per cent to 4.1 tonnes per hectare

5.7.5 Triticale

Triticale is often grown for its drought tolerance, but as a result, it can be grown on the driest of sandy soils. This is the likely explanation of the yield reduction to only 2.8 tonnes per hectare, and correspondingly low gross margin of £486 per hectare.

Triticale was sold off the farm and fed on the farm in almost equal measure in 2011.

5.7.6 Beans

Beans showed the highest gross margin improvement of any organic crop, rising by 46 per cent to £677 per hectare.

Protein crops, important in organic ruminant rations, were in short supply, and the price averaged £282 per tonne.

Gross Margin - Beans Harvested Dry - Organic				
	2010/11		2011/12	
Farms in Sample	29		28	
	Per farm	Per hectare	Per farm	Per hectare
Area per farm (hectares)	17.67		26.54	
Yield (tonnes and tonnes per hectare)	37.9	2.1	70.0	2.6
Price (£ per tonne)	250		282	
OUTPUT (£)				
Crop sold	8,374	474	19,003	716
Feed used on-farm	1,081	61	737	28
Straw and by-products	35	2	158	6
Area payment	611	35	973	37
TOTAL OUTPUT	10,100	571	20,871	786
VARIABLE COSTS (£)				
Seeds (including homegrown)	1,620	92	2,355	89
Fertilisers	214	12	308	12
Crop protection			11	0
Other crop costs	87	5	218	8
Drying and heating costs	12	1	25	1
TOTAL VARIABLE COSTS	1,932	109	2,916	110
GROSS MARGIN (£)	8,168	462	17,955	677

5.7.7 Arable fertility crop

Arable fertility crops are commonly found in organic production systems with and without stock. In 2012, the variable costs of these averaged £61 per hectare, almost all attributable to seed costs.

6 APPENDIX 2 – ORGANIC LOWLAND CATTLE & SHEEP

6.1 Summary

This year's sample of organic producers' farm around 95% of the area that their non-organic contemporaries farm but their Farm Business Income is £2,558 per farm lower. The difference in Farm Business Income can be explained by the fact that relative to output although the organic group of farms have lower variable costs than non-organic producers, their fixed costs are higher.

6.2 Organic producers

Within the total Farm Business Survey sample of farms there are a group of organic farms, and Table C2.1 compares the organic farms with the non-organic producers[3].

The organic farms are smaller than their non-organic counterparts (95% of the size), but they own a greater percentage of the land they farm - 70% as compared to 58%.

Table C2.1 Farm business income for non-organic and organic farms, 2011/2012

Type of Production	Non-organic	Organic
Number of farms in group	235	40
Average farmed area (hectares)	101.5	96.0
Average proportion of owned total farmed area	58%	70%
	£ per farm	
Output		
Livestock and crops	84,249	48,878
Agri- environment type schemes	4,478	11,318
Single Payment Scheme	20,185	20,831
Other	13,375	15,325
TOTAL FARM OUTPUT	**122,287**	**96,352**
Variable costs		
Livestock specific costs	26,642	11,468
Crop specific costs	9,025	2,395
TOTAL VARIABLE COSTS	**35,667**	**13,863**
TOTAL GROSS MARGIN	**86,620**	**82,489**
Fixed costs		
Labour	6,241	5,988
Machinery	23,830	22,606
General farming costs	10,543	11,526
Land & Property	11,881	10,711
Interest paid	1,757	1,848
TOTAL FIXED COSTS	**54,252**	**52,679**
FARM BUSINESS INCOME	***32,368***	***29,810***

[3] Appendix 5 gives full details of Non-organic and Organic producers

Output from the organic farms is much lower when compared to non-organic equivalents; with the output from livestock and crops 58% of the non-organic level, and total output being 79% of the non-organic farms.

The output from the agri-environment type schemes is two and a half times higher for the organic producers. Output from the Single Payment Scheme is similar between types of production on a per farm basis but slightly higher per hectare for the organic producers. The 'Other' sources of output are higher for the organic farms.

With the lower ‘farming’ output, organic farms have lower variable costs; being only 38% of the level of non-organic producers. The resulting total gross margin per farm for the organic farmers is 95% of the non-organic level. Fixed costs for the organic farms are also lower per farm; 97% of the level of the non-organic producers, but relative to total output, is higher than the non-organic producers.

The Farm Business Income per farm for the organic producers is £2,558 lower than their non-organic counterparts but very similar when looked at on a per hectare basis.

Table C2.2 illustrates some of the physical differences between the types of production; organic producers keep 90 fewer ewes and 21 fewer ‘Other cattle’, three quarters the level of the non-organic total livestock units. Stocking rates on organic farms are three quarters of the non-organic level, which in itself is not very high at 1.05 Livestock Units per hectare. Organic producers tend to reseed their grassland more frequently so they have more temporary grassland than non-organic producers.

Table C2.2 Land and livestock details - organic and non-organic production, 2011/2012

	Non-organic	Organic
Farmed area (ha)	101.5	96.0
Crops (ha)	7.8	3.3
Temporary grass (ha)	15.0	23.9
Permanent grass (ha)	65.5	63.1
Rough grazing (ha)	6.3	1.1
Average No. of Beef cows	23	27
Average No. of Other Cattle	88	67
Average No. of Ewes	172	82
Total Livestock Units	96.4	72.1
GLU’s per adjusted Ha	1.05	0.79

Both types of production have very 'strong' end of year balance sheets but the non-organic producers have a marginally ‘weaker’ balance sheet, as they own much less land and therefore have lower total assets. Their total liabilities are 95% of the organic producers level.

Table C2.3 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 and Single Payment Scheme relative to total output, and less ‘livestock & crops’ and ‘other’ 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 Non-organic producers are more reliant on the 'market place', compared to Organic producers, so are therefore less likely to be vulnerable to these changes.

The lower variable costs, but higher fixed costs in comparison to output of the organic producers result in roughly similar Farm Business Income per £100 output albeit slightly in favour of the organic producers.

Table C2.3 Type of production- income and costs illustrated 'Per £100 Output', 2011/2012

	Non-organic	Organic
OUTPUT	£ per £100 output	
Livestock & crops	69	51
Agri- environmental type schemes	4	12
Single Payment Scheme	17	22
Other	11	16
TOTAL FARM OUTPUT	100	100
TOTAL VARIABLE COSTS	29	14
TOTAL GROSS MARGIN	71	86
FIXED COSTS		
Labour	5	6
Machinery	19	23
General farming costs	9	12
Land & Property	10	11
Interest	1	2
TOTAL FIXED COSTS	44	55

6.3 Gross Margin data from the Lowland Grazing Livestock farms

A number of the Lowland Grazing Livestock farms within the Farm Business Survey sample are able to calculate gross margins for their enterprises with the full details summarized in Table C2.4 – C2.6. Where the sample sizes allow, premium group figures are also produced and shown alongside the average figures.

Table C2.4 summarizes the gross margin from the beef cow enterprises for the non-organic and organic producers. Gross margin per cow is 16% higher for the organic producers as compared to non-organic producers, but with lower stocking rates the gross margin per hectare for the organic producers is lower than the non-organic producers.

The Premium producers' gross margins are 75% higher than that of the average, with the majority of the difference due to higher output, but also lower variable costs.

Table C2.4 Lowland beef cow gross margin data

Gross margins per cow, per LU and per hectare 2011/2012

(Weighted performance)

		NON-ORGANIC		ORGANIC
		Average	Premium*	Average
Cows per herd		39	48	30
Stocking rate:	LU/ha	1.04	1.11	0.77
		£ per cow		
Output		422	573	370
Variable Costs		201	187	114
Gross Margin per head		221	386	257
Gross Margin per LU		224	388	257
Gross Margin per Hectare		230	430	198

* Top third selected by level of gross margin per cow

Compared to the previous year the gross margin per beef cow is £94 higher for the Non-organic producers and £109 per head higher for the Organic producers. Output is higher per cow but the increase in variable costs has a smaller effect on the gross margin. The stocking rate for the Premium group of farms increased and is now higher than that of the Average group of farms, resulting in the gross margin increasing by £180 per hectare.

For the lowland beef bred finishing systems the lower variable costs per head for the organic producers more than compensates for their lower output, leaving the average non-organic beef bred finisher with lower gross margin per head. The stocking rates on the non-organic farms are higher than on the organic producers' farms so gross margin per hectare is closer but still favours the organic producers (see Table C2.5).

Table C2.5 Lowland beef finishing - beef bred finished cattle enterprise Gross Margin data 2011-2012

Gross margins per head, per LU and per hectare

	NON-ORGANIC		ORGANIC
	Average	Premium*	Average
Number of head per farm	94	92	57
Stocking rate: LU/Ha	1.66	1.58	1.57
	£ per head		
Output	548	632	467
Variable Costs	273	255	134
Gross Margin per head	275	377	333
Gross Margin per LU	457	595	525
Gross Margin per Hectare	759	939	826

* Top third selected by level of gross margin per head

The gross margin details for the lowland ewes are given in Table C2.6, showing an advantage in margin of less than £3 per ewe in favour of the non-organic producers when compared to the organic producers. On a per hectare basis this advantage is expanded by the higher stocking rates on the non-organic farms, however the stocking rates for both types of production are considered to be low. When comparing the previous year's organic lowland sheep production gross margin with the 2011/12 year, there was an increase of £17 per ewe; costs were similar, but there was an increase in sale value of the lambs by £7 per finished lamb.

Table C2.6 Lowland ewe gross margin data, 2011/2012

Gross margins per ewe and per hectare

	NON-ORGANIC		ORGANIC
	Average	Premium*	Average
Ewes per flock	325	317	335
Average lamb sale price - £/lamb	80.5	83.6	77.5
Stocking rate - ewes per hectare	5.57	7.68	5.35
	£ per head		
Output	114.8	159.1	99.8
Variable Costs	44.5	51.1	32.5
Gross Margin per head	70.3	107.9	67.4
Gross Margin per LU	446	649	429
Gross Margin per Hectare	391	829	360

*Top third selected by gross margin per ewe

The average sale price for finished lamb was higher for non-organic producers than their organic counterparts, as the marketplace for organic lamb did not follow, as closely, the bullish prices received by the non-organic producers whose average finished lamb increased by £9 per head. The increase in variable costs for the organic producers was less than for the non-organic producers, but with higher replacement costs and total output not rising as high, this resulted in the average organic lowland sheep producer’s gross margin being £2.90 per ewe lower.

Table C2.7 Business output, input costs and income (organic per farm)

	Cost Centre				
	Agriculture	**Agri-environment**	**Diversification**	**Single Payment**	**Farm Business**
	(j)	**and other**	**out of**	**Scheme**	
		Payments	**Agriculture**		
Farms In Sample					40
Total Output	51,425	11,323	12,753	20,831	96,331
Variable Costs (b)	20,373	37	282	4	20,696
Total Gross Margin	31,053	11,285	12,471	20,826	75,635
Fixed Costs	35,375	1,673	6,915	2,036	46,000
Total Costs	55,748	1,710	7,197	2,041	66,696
Profit/(loss) on sale of assets (d)					175
Farm Business Income (e)	-4,148	9,612	5,556	18,790	29,810
Adjustment for unpaid manual labour (f)	19,341	429	2,532		22,302
Farm Corporate Income (g)	-23,489	9,184	3,023	18,790	7,508
Interest payments on borrowing (net of interest received) (c)	1,663	54	60	51	1,828
Farm Investment Income (h)	-21,826	9,238	3,083	18,841	9,336
Holding gains not included in farm income:					57,686
Stock Appreciation (BLSA)					4528
Revaluation of machinery, permanent crops, glasshouses, quota					838
Revaluation of land					52,319
Derivation of Net Farm Income:					
(h) minus Imputed rent (i)					12,608
plus Directors remuneration					946
plus Ownership charges					2,762
minus Non-agricultural output historically not accounted for in Net Farm Income					0
plus Non-agricultural input costs historically not accounted for in Net Farm Income					0
plus Unpaid labour of principal farmer and spouse					19,857
equals Net Farm Income					20,294

Table C2.8 Business output, input costs and income (per hectare)

	Cost Centre				
	Agriculture	**Agri-environment**	**Diversification**	**Single Payment**	**Farm Business**
	(j)	**and other**	**out of**	**Scheme**	
		Payments	**Agriculture**		
Farms In Sample					40
Total Output	440	97	109	178	824
Variable Costs (b)	174	0	2	0	177
Total Gross Margin	266	97	107	178	647
Fixed Costs	303	14	59	17	394
Total Costs	477	15	62	17	571
Profit/(loss) on sale of assets (d)					1
Farm Business Income (e)	-35	82	48	161	255
Adjustment for unpaid manual labour (f)	166	4	22		191
Farm Corporate Income (g)	-201	79	26	161	64
Interest payments on borrowing (net of interest received) (c)	14	0	1	0	16
Farm Investment Income (h)	-187	79	26	161	80
Holding gains not included in farm income:					494
Stock Appreciation (BLSA)					39
Revaluation of machinery, permanent crops, glasshouses, quota					7
Revaluation of land					448
Derivation of Net Farm Income:					
(h) minus Imputed rent (i)					108
plus Directors remuneration					8
plus Ownership charges					24
minus Non-agricultural output historically not accounted for in Net Farm Income					0
plus Non-agricultural input costs historically not accounted for in Net Farm Income					0
plus Unpaid labour of principal farmer and spouse					170
equals Net Farm Income					174

6.4 Analysis of English Grazing Livestock Farms (Lowland) – Organic and Non-organic

Grazing Livestock (Lowland) farms in England		
Gross Output, Variable Costs and Farm Gross Margin, 2011/2012		
	Type of Production	
	Non-organic	**Organic**
Number of farms in group	235	40
Average farmed area (hectares)	101.5	96.0
Average proportion of owned total farmed area	58%	70%
	£ per farm	
Output		
Cattle	47,556	31,983
Sheep	20,778	8,848
Other livestock	1,107	975
Crops	9,074	3,564
Forage	5,734	3,508
Hill Payments (UELS/UTP)	20	0
Environmentally Sensitive Area	711	85
Countryside Stewardship	694	2,443
Higher and Entry Level Stewardship	2,945	5,004
Organic Aid/ Organic Entry Level Stewardship	0	3,599
Other management/ agri-environment schemes	108	187
Single Payment Scheme	20,185	20,831
Rental income	3,921	6,934
Contract work	4,240	1,951
Miscellaneous output	5,039	6,420
Interest received	174	20
TOTAL FARM OUTPUT	122,287	96,351
Variable costs		
Concentrates	14,739	4,268
Purchased fodder	1,417	622
Veterinary and medicines	2,624	1,447
Other livestock costs	7,862	5,131
Seeds	1,124	1,269
Fertilisers	5,387	291
Crop protection	1,084	19
Other crop costs	1,430	815
TOTAL VARIABLE COSTS	35,667	13,863
TOTAL GROSS MARGIN	86,620	82,488

Fixed Costs, Farm Business Income, Farm Corporate Income and Farm Investment Income, 2011/2012		
	Type of Production	
	Non-organic	**Organic**
	£ per farm	
TOTAL GROSS MARGIN	86,620	82,488
Fixed costs		
Paid regular labour	4,951	3,369
Directors remuneration	115	946
Casual labour	1,175	1,672
Contract	5,444	5,163
Machinery repairs	4,621	4,035
Machinery fuel	4,994	4,070
Machinery depreciation	8,771	9,336
Other depreciation	0	1
Electricity	844	803
Other fuel	349	343
Water	1,279	872
Insurance	3,140	3,246
Professional fees	1,914	2,320
Other general costs	3,017	3,943
Property maintenance	3,789	4,662
Rent, hired in keep and bare land	5,155	3,600
Rates	143	257
Buldings depreciation	2,794	2,192
Long-term interest	968	1,330
Short-term interest	789	518
TOTAL FIXED COSTS	54,253	52,678
FARM BUSINESS INCOME	**32,366**	**29,810**
Less - All unpaid labour	24,878	22,302
Equals - FARM CORPORATE INCOME	7,488	7,508
Plus - Net Interest	1,583	1,828
Equals - FARM INVESTMENT INCOME	9,071	9,336

Alternative Income Measures, 2011/2012			
		Type of Production	
		Non-organic	**Organic**
Reconciliation between Net Farm Income and Farm Business Profit			
	FARM BUSINESS INCOME	32,366	29,810
Plus-	Directors remuneration	115	946
Less-	Net income from assets associated with the farm business	0	0
Plus-	Buildings and works depreciation	2,794	2,192
Plus-	Landlord type expenses	366	571
Plus-	Imputed rental income	372	156
Less-	Imputed rent and rental value	11,641	12,764
Plus-	Net Interest	1,583	1,828
Less-	Unpaid labour of partners	3,876	2,445
Equals-	NET FARM INCOME**	22,080	20,294
** Excluding Breeding Livestock Stock Appreciation			

Land Use and Indicators of Technical Efficiency, 2011/2012		
	Type of Production	
	Non-organic	Organic
Number of farms in group	235	40
Average farmed area (hectares)	101.5	96.0
Average proportion of owned total farmed area(%)	58%	70%
Land use		
Area of crops	7.8	3.3
Temporary grass	15.0	23.9
Permanent grass	65.5	63.1
Fodder crops	2.5	1.6
Rough grazing	6.3	1.1
Uncropped, fallow and turf	0.6	1.2
Forage hired in	3.7	1.8
Stocking		
Average number of dairy cows	1	1
Average number of beef cows	23	27
Average number of other cattle	88	67
Average number of ewes	172	82
Average number of other sheep	187	91
Grazing livestock units	GLU's per farm	
Dairy cows	1.3	0.7
Beef cows	11.7	13.3
Other cattle	54.3	43.5
Sheep	27.4	13.1
Other livestock	1.8	1.5
Total	96.4	72.1
GLUs per ha	1.04	0.79
GLUs per adjusted ha	1.05	0.79

Balance Sheet, 2011/2012		
(end of year)	**Type of Production**	
	Non-organic	**Organic**
Number of farms in group	235	40
Average farmed area (hectares)	101.5	96.0
Average proportion of owned total farmed area	58%	70%
	£ per farm	
End of year assets & liabilities		
Land & buildings	768,361	1,031,961
Milk quota	45	29
Single Payment Scheme	26,907	27,710
Machinery	51,302	60,645
Tenant's other assets	530	225
Breeding livestock	43,757	34,010
Total fixed assets	**890,902**	**1,154,579**
Trading livestock	47,856	33,061
Crops	1,915	818
Forage and cultivations	7,223	4,881
Stores	5,981	2,083
Debtors and loans	9,800	14,601
Bank credit and cash	25,258	15,333
Other current assets	0	0
Total current assets	**98,032**	**70,778**
Total assets	**988,934**	**1,225,357**
Financed by		
AMC	9,990	4,838
Bank loans	21,266	36,402
Other long term	7,553	7,843
Total long term	**38,809**	**49,083**
HP and lease	3,969	2,222
Creditors	8,272	6,779
Bank overdraft	17,257	12,933
Other short term	111	42
Total current liabilities	**29,610**	**21,976**
Total Liabilities	**68,419**	**71,059**
Net worth	**920,515**	**1,154,298**
Balance sheet ratios		
% Owner equity (net worth v.total assets)	93%	94%
% Fixed assets vs. total assets	90%	94%
Gearing (long-term loans v.total assets)	4%	4%
Total debt (external liabilities v.net worth)	7%	6%

FUND FLOWS, 2011/2012		
	Non-organic	**Organic**
Number of farms in group	235	40
Average farmed area (hectares)	101.5	96.0
Average proportion of owned total farmed area(%)	58%	70%
	£ per farm	
Funds available from trading		
Farm Business Income	32,366	29,810
Buildings and works depreciation	2,794	2,192
Machinery depreciation	8,771	9,337
Change in valuation *	-7,564	-9,554
Trading net fund flow surplus	36,368	31,785
Funds used for farm investments		
Net property and quota purchases	3,074	9,054
Net landlord capital purchases	4,616	3,908
Net machinery and equipment purchases	11,237	23,694
Capital net fund flow	18,927	36,656
Total farm fund flow surplus	17,441	-4,871
Funds used for private expenditure		
Private drawings	23,151	30,045
Net private funds introduced	4,638	13,474
Private fund outflow	-18,513	-16,571
Total net fund flow surplus	**-1,071**	**-21,442**
Increase in loans and deposits	2,669	11,317
Increase in bank balance	1,744	-5,875
Increase in cash in hand	9	-2
Increase in debtors	929	-3,913
Increase in creditors	1,084	334
Net change in funding	**1,071**	**21,442**

* An increase in valuation is represented by a negative, with funds being used to increase the live and deadstock valuation

6.5 Gross Margin details for the Lowland Grazing Livestock Farms. Average Figures for Organic farms

Organic Lowland Beef Cows		
Gross margins per cow, per LU and per hectare		2011/12
(Weighted average performance)		
		Average
Number of farms		32
Cows per herd		30
Stocking rate:	LU/ha	0.77
	ha/LU	1.30
		£ per cow
Output -	calf output	423.4
	depreciation	-53.0
ENTERPRISE OUTPUT (excl. BLSA)		370.4
Concentrates		10.8
Coarse fodder		9.0
Veterinary and medicines		18.6
Other livestock costs		50.1
Forage †		25.3
TOTAL VARIABLE COSTS ‡		113.8
GROSS MARGIN per cow (excl. BLSA)		256.7
GROSS MARGIN per LU (excl.BLSA)		257
GROSS MARGIN per hectare (excl. BLSA)		198
Concentrates per £100 output		3
Averages - previous year		
Stocking rate:	LU/ha	0.82
Gross Margin: £/cow		148.1
Gross Margin: £/ha		121
* Top third in order of Gross Margin per cow.		
† Forage includes seeds, fertilisers, sprays and other crop costs		
‡ Restricted to concentrates, coarse fodder, veterinary and medicines, other livestock costs and forage.		

Organic Finished Cattle from beef bred calves or stores		
Gross margins per head, per LU and per hectare		2011/12
(Weighted average performance)		
		Average
Number of farms		23
Cattle per herd		57
Average finished animal sale price - £/head		1,002
Stocking rate:	LU/ha	1.57
	ha/LU	0.64
		£ per head
OUTPUT		467.0
Concentrates		47.1
Coarse fodder		4.2
Veterinary and medicines		6.8
Other livestock costs		58.5
Forage †		21.2
TOTAL VARIABLE COSTS ‡		133.6
GROSS MARGIN per head		333.4
GROSS MARGIN per LU		525
GROSS MARGIN per hectare		826
Concentrates per £100 output		10
Averages - previous year		
Stocking rate:	LU/ha	1.60
Gross Margin: £/head		154.9
Gross Margin: £/ha		396
Average finished sale price- £ /head		841
* Top third in order of Gross Margin per head.		
† Forage includes seeds, fertilisers, sprays and other crop costs		
‡ Restricted to concentrates, coarse fodder, veterinary and medicines, other livestock costs and forage.		

Organic Breeding Ewes- Lowland		**2011/12**
Gross margins per ewe and per hectare		
		Average
Number of flocks		16
Ewes per flock		335
Average lamb sale price - £/lamb		77.5
Stocking rate - ewes per hectare		5.35
		£ per head
Output -	lambs	107.1
	wool	3.4
	depreciation	-10.6
ENTERPRISE OUTPUT (excl. BLSA)		99.8
Concentrates		9.1
Coarse fodder		3.4
Veterinary and medicines		5.6
Other livestock costs		10.6
Forage †		3.8
TOTAL VARIABLE COSTS ‡		32.5
GROSS MARGIN per ewe (excl. BLSA)		67.4
GROSS MARGIN per LU (excl.BLSA)		429
GROSS MARGIN per hectare (excl. BLSA)		360
Concentrates per £100 of output		9
Averages - previous year		
Stocking rate:		5.69
Gross Margin: £/ewe		49.5
Gross Margin: £/ha		282
Average finished sale price- £ /head		70.3
* Top third in order of Gross Margin per ewe.		
† Forage includes seeds, fertilisers, sprays and other crop costs		
‡ Restricted to concentrates, coarse fodder, veterinary and medicines, other livestock costs and forage.		

7 APPENDIX 3 – ORGANIC LFA CATTLE & SHEEP PRODUCTION

For some years there has been a steady increase in the number of LFA farms converting to certified Organic production methods. The current sample of 247 English LFA grazing farms includes 25 fully organic farms. Within this there are 17 organic suckler herds and 17 organic upland flocks.

Table C3.1 compares suckler herd performance to the gross margin (GM) level across Organic and Conventional farms. Suckler herd output is some £80/cow less than the non-organic output but, mainly down to the lower feed costs, the gross margin is only £20/cow below that of the non-organic average. The difference between the two samples narrows to only £4/cow at the net margin (excepting farmer and spouse labour) level. After allowing for the farmer and spouse labour (of £130/cow) the final net margins sit at -£276 and -£292 for non-organic and organic respectively. The stocking rate for the organic farms is 15% less than that of the non-organics.

Table C3.1 LFA suckler herd performance (non-organic and organic)

2011/12	Non-organic	std dev	Organic	std dev
Number of farms	176		17	
Number of farms (weighted)	4,010		171	
(£ per cow)				
Enterprise Output (excl. BLSA)	373	150	294	153
BLSA	118	61	114	42
Total Variable costs	190	81	134	111
Concentrates	43	41	24	54
Purchased fodder and keep	20	31	12	29
Vet costs	21	15	18	25
Other livestock costs	51	37	61	33
Gross Margin (excl. BLSA)	183	159	161	171
Gross Margin range	*-557 to 722*		*-146 to 444*	
Total Fixed costs	341	133	323	118
Total costs	531	155	457	192
Enterprise NM (excl. BLSA)	-158	168	-162	177
Enterprise NM after F&S labour (excl. BLSA)	-276	187	-292	164
Stocking rate (GLUs/total adj ha)	0.83	0.34	0.72	0.26

Table C3.2 compares organic and non-organic upland flocks to the GM level. Organic enterprise output is £13/ewe higher than that of the non-organic sample. Variable costs per ewe are £8/head lower for the organics resulting in a gross margin of £87/ewe for organic flocks and £65/ewe for the non-organic flocks. Fixed costs are £74/ewe for organic flocks and £65/ewe for non-organics – this results in net margins (after farmer and spouse labour) of -£21/ewe and -£27/ewe for organic and non-organic flocks respectively.

Table C3.2 LFA upland flock performance (non-organic and organic)

2011/12	Non-organics	std dev	Organics	std dev
Number of farms	114		17	
Number of farms (weighted)	3,172		170	
(£ per ewe)				
Enterprise Output (excl. BLSA)	110	41.5	123	41.4
BLSA	12	5.9	14	4.7
Total Variable costs	44	19.0	36	13.0
Concentrates	17	13.8	12	6.4
Purchased fodder and keep	3	3.5	3	3.2
Vet costs	6	2.8	8	2.9
Other livestock costs	10	4.2	10	4.3
Gross Margin (excl. BLSA)	65	36.3	87	38.0
Gross Margin range	*-29 to 319*		*-23 to 168*	
Total Fixed costs	63	21.9	74	22.8
Total costs	107	30.9	110	29.8
Enterprise NM (excl. BLSA)	3	31.3	13	29.5
Enterprise NM after F&S labour (excl. BLSA)	-27	30.6	-21	33.4
Stocking rate (GLUs/total adj ha)	0.83	0.34	0.72	0.26
Lambing rate (born & reared/ewe)	1.17	0.46	1.32	0.40

Table C3.3 (overleaf) compares whole farm profitability across all four cost centres between the 25 fully organic farms and the remainder of the sample. This table shows that the overall difference in profit, which favours the organic farms, is down to the relative profitability of the Agriculture cost centre and greater revenues from Agri-environmental schemes.

Table C3.3 LFA grazing livestock farms: Business output, input costs and income (non-organic and organic)

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**	
	CONV	ORG	CONV	ORG	CONV	ORG	CONV	ORG	CONV	ORG
% contribution of centre revenue to total:	69%	62%	9%	15%	2%	1%	20%	22%		
Total output (Revenue)	**74,829**	**74,253**	**9,614**	**17,965**	**2,289**	**1,252**	**21,709**	**26,910**	**108,441**	**120,379**
Variable costs	37,431	27,768	146	792	152	56	2	6	37,730	28,621
Total Gross margin	**37,398**	**46,485**	**9,469**	**17,173**	**2,137**	**1,196**	**21,707**	**26,904**	**70,711**	**91,757**
Fixed costs	37,754	38,162	1,715	2,303	1,014	458	2,495	2,104	42,978	43,027
Total Costs	**75,185**	**65,929**	**1,860**	**3,094**	**1,166**	**514**	**2,497**	**2,110**	**80,708**	**71,648**
Profit/(loss) on sale of fixed assets	595	-224							595	-224
Farm Business Income	**238**	**8,100**	**7,754**	**14,870**	**1,123**	**738**	**19,212**	**24,800**	**28,328**	**48,507**
Adjustment for unpaid manual labour	23,576	18,754	492	737	585	64	0	0	24,653	19,556
Farm Corporate Income	**-23,337**	**-10,655**	**7,262**	**14,133**	**538**	**674**	**19,212**	**24,800**	**3,675**	**28,951**
Interest payments (net of interest received)	1,816	1,882	47	30	53	10	64	47	1,981	1,970
Farm Investment Income	**-21,521**	**-8,773**	**7,309**	**14,163**	**591**	**684**	**19,276**	**24,846**	**5,656**	**30,921**
% contribution of centre total costs to total:	93%	92%	2%	4%	1%	1%	3%	3%		

Profit/ (loss) on sale of assets	595	-224
Imputed rent	7,967	13,296
Ownership charges	2,499	2,997
Non-agricultural output historically not accounted for in Net Farm Income	0	0
Non-agricultural inputs costs historically not accounted for in Net Farm Income	0	0
Unpaid labour of principal farmer and spouse	20,331	18,658
Net Farm Income	**20,518**	**39,281**
Holding gains not included in farm income	45,244	56,010
Breeding Livestock Appreciation (BLSA)	7,488	7,079
Revaluation of machinery, permananet crops, glasshouse, quota	898	750
Revalutation of land	36,858	48,181
Management and Investment Income	**213**	**20,643**

Non-organic Sample size (unweighted)	**222**
Number (weighted)	**5,878**
Organic Sample size (unweighted)	**25**
Number (weighted)	**270**

8 APPENDIX 4 – ORGANIC DAIRY PRODUCTION

8.1 Background

Organic dairy and 'chilled convenience' products account for 31% of spending on organic food in the UK (Soil Association, 2013) and thus represent a major component of the total organic market. Recent estimates show increased sales of organic yoghurt (9.9%) and cream (14.1%), albeit that milk sales were down in volume by 4.4%, but price increases led to a 0.5% increase in sales by volume; these data are set against a background of organic milk production in the UK falling by 15% between 2011 and 2012 (Soil Association, 2013). The reduction in organic milk output is in contrast to the change in total (non-organic and organic) milk production which increased by 0.9% (McHoul et al., 2013) indicating that a number of organic producers have either exited dairy or converted their herds to non-organic production. While McHoul et al. (2013) note average milk yields (non-organic and organic combined) of 7,648 litres per cow (lpc) at an average price of 28.2 pence per litre (ppl) for the 2011/12 financial year, Kingshay Dairy Costings (2013) note average organic milk yields of 6,893 (October 2011) and 6,592 (October 2012) from their organic sample of dairy producers, receiving respective milk prices of 31.63 ppl and 32.28 ppl.

8.2 Data and Results

Data were taken from the 2011/12 FBS returns and analysed following the methodologies described in McHoul et al. (2013). McHoul et al. (2013) provide analyses of the non-organic and organic dairy farms combined to present results for English Dairy Farming. Results presented below are for non-organic and organic dairy production as separate analyses.

Table C4.1 provides the farm level returns for the overall sample of non-organic and organic farms combined, together with results presented separately for non-organic and organic producers. It is instructive to note that of the 320 dairy farms in the overall sample, 274 are non-organic dairy farms and 46 are organic dairy farms. Consequently the results for the overall sample of "All" farms are dominated by the results from the non-organic dairy farms contained within the FBS. Comparing between non-organic and organic dairy farms, it can be seen that organic dairy farms have a substantially greater farmed area (185 ha cf. 137 ha for non-organic) and, on a per hectare basis, achieve considerably lower value of output for milk, calf, other livestock and other output, but lower herd replacement costs, generating a total farm output per hectare approximately £900/ha lower than that produced from non-organic dairy farms. However, due to the greater average area on organic dairy farms, total farm output per farm are very similar at £440,000 on organic dairy farms in comparison to £446,000 for non-organic dairy farms.

Organic dairy farms incurred substantially lower total variable costs, with all individual cost elements being lower than for non-organic dairy farms with the exception of home-grown concentrates, where organic dairy farms incurred £81/ha in comparison to £63/ha on non-organic dairy farms. Substantially lower per hectare costs on organic dairy farms were noted for purchased concentrates, vet and medicine costs and other livestock costs, reflecting the differences in the production base

between non-organic and organic production combined with the more extensive nature typical of organic production. Note that, as expected a priori, fertiliser, crop protection and other crop costs were significantly lower on organic farms. It should also be noted that a small proportion of the farms operate both non-organic and organic dairy enterprises in parallel.

Variation in per hectare fixed costs between organic and non-organic production is also evident, with organic producers incurring £1,150/ha in comparison to £1,400/ha for non-organic producers. It is instructive to note that labour, machinery depreciation and other machinery costs are substantially lower on organic farms, while contract, miscellaneous and rental costs were marginally lower on organic dairy farms. Net farm income (NFI) on organic dairy farms averaged £350/ha (£65,500/farm) in comparison to £497/ha (£68,100/farm) on non-organic dairy farms. However, despite the more extensive nature of the organic farming system relative to the non-organic dairy farms, the value of farmer and spouse labour was only marginally lower on organic dairy farms (by £18/ha) producing returns to Management and Investment Income (MII) of £169/ha (£31,600/farm) for organic dairy farms, and £299/ha (£41,000/farm) on non-organic dairy farms. Farm Business Income (FBI) provides a profitability measure which does not include the costs of rental equivalence or farmer and spouse labour, but does account for costs of servicing borrowings. The FBI per hectare results are markedly different between the two systems, with organic and non-organic dairy producers respectively achieving £381/ha and £621/ha, equating to £71,200/farm and £85,100/farm respectively.

Table C4.2 presents gross margin (GM) results for all, non-organic and organic dairy enterprises, with respective sample sizes of 297, 257 and 40. Comparing non-organic and organic enterprises, it can be seen that the average herd size for organic enterprises is marginally lower (131 cows) than for non-organic dairy enterprises (144 cows). Average yields for organic enterprises are 6,322 litres per cow (lpc) which represent 82% of the average yields on non-organic dairy enterprises (7,700 lpc). By contrast, the average milk price for organic enterprises is 31.9 pence per litre (ppl), representing a 13.5% increase on the average milk price for non-organic enterprises (28.1ppl). The lower yield, but greater milk price on organic dairy enterprises combines to return a value of milk output at £2,016/cow, which is approximately 7% lower than the average milk output value generated on non-organic dairy enterprises. It is instructive to note that organic enterprises incurred lower herd replacement costs at £200/cow, representing a 15% decrease in herd replacement costs in comparison to non-organic enterprises, potentially due to lower replacement rates in organic herds or a lower value of replacements entering the herd.

Organic dairy enterprises incurred substantially lower concentrate, vet and medicine and forage costs per cow, but incurred greater other livestock costs. In total, variable costs on organic dairy enterprises were £867/cow, 11% lower than those incurred on non-organic dairy units. The combination of lower total dairy output on organic enterprises (£1,912/cow cf. £2,036/cow on non-organic units), and lower total variable costs, generated very similar GM results for non-organic and organic dairy enterprises of £1,057/cow and £1,045/cow respectively. Hence, with respect to GM

returns per cow, organic enterprises achieved average GMs per cow at 99% of the level achieved by non-organic dairy enterprises.

Table C4.1 Outputs, inputs and margins for all farms (non-organic and organic, 2011/12)

	All	Non-organic	Organic
Number of farms	320	274	46
Area (Ha)	142.68	137.03	185.26
Output	*£/ha*	*£/ha*	*£/ha*
Milk	2,248	2,284	1,615
Calf	102	103	73
Lease Quota (net)	0	0	0
Other Dairy	1	2	0
Herd Replacement	-238	-241	-175
Total Dairy Output	**2,113**	**2,148**	**1,513**
Other Livestock	522	530	388
Other	573	579	473
Total Farm Output	**3,209**	**3,258**	**2,374**
Variable Costs			
Home-grown Concentrates	64	63	81
Purchased Concentrates	689	703	448
Coarse Fodder	52	52	46
Other Livestock Concentrates	9	9	1
Vet and Medicine	94	96	56
Other Livestock Costs	224	226	193
Seed	32	32	26
Fertiliser	119	125	9
Crop Protection	31	33	2
Other Crop Costs	20	21	10
Total Variable Costs	**1,333**	**1,360**	**873**
Fixed Costs			
Labour	344	348	279
Contract	146	147	140
Machinery Depreciation	173	176	116
Other Machinery	197	200	149
Miscellaneous	265	267	233
Rent and Rental Equivalent	261	263	234
Total Fixed Costs	**1,386**	**1,400**	**1,151**
Net Farm Income	**489**	**497**	**350**
Farmer / Spouse Labour	198	199	181
Management & Investment Income	***292***	***299***	***169***
Farm Business Income (FBI)	***608***	***621***	***381***

Table C4.2 Gross margin results for all farms (non-organic and organic, 2011/12)

	All	Non-organic	Organic
Number of farms	*297*	*257*	*40*
Average number cows	*148.9*	143.8	131.2
Average yield (litres)	*7648*	7700	6322
Milk price (ppl)	28.2	28.1	31.9
	£/cow	£/cow	£/cow
Output			
Milk	2,159	2,165	2,016
Calf	98	98	96
Lease Quota (net)	0	0	0
Other Dairy	1	1	0
Herd Replacement	-228	-229	-200
Total Dairy Output	**2,031**	**2,036**	**1,912**
Variable Costs			
Concentrates	607	609	563
Coarse Fodder	35	35	37
Vet and Medicine	75	76	56
Other Livestock Costs	169	168	189
Forage Costs	88	91	22
Total Variable Costs	**974**	**978**	**867**
Total Gross Margin	***1,057***	***1,057***	***1,045***

8.3 Discussion

Farm level returns as measured by Farm Business Income (FBI) from the FBS 2011/12 data for English dairy farms are £381/ha and £621/ha for non-organic and organic producers respectively. Data for 2010/11 (2009/10), drawing upon English and Welsh lowland data combined return respective results of £415/ha (£530/ha) and £499/ha (£424/ha) (Moakes et al. 2012). The higher input-output systems of non-organic production noted in the results section of this chapter are also present in the data presented by Moakes et al. (2012). Hence, while the returns between non-organic and organic production differ substantially for the English dairy data for 2011/12, the difference in the average returns from previous years has been smaller. However, for 2009/10, when presented in terms of FBI per hectare, organic dairy farming outperformed non-organic dairy farming, while in 2010/11 and 2011/12, non-organic dairy production has returned greater FBI/ha than organic production.

With respect to gross margin (GM) analysis, Table C4.2 shows that GMs (£/cow) are comparable between organic and non-organic production in England, albeit that non-organic production returned a marginally greater GM than organic production. Data for England and Wales for 2010/11 (2009/10) returns organic GM returns at £1,012/cow and (£984/cow) and non-organic GMs at £935/cow (£859/cow) respectively (Moakes et al., 2012). The farm level and GM returns analyses over recent years indicate that while organic production was more profitable at farm level and returned a greater GM at enterprise level for 2009/10, the 2010/11 accounting year represented a less clear distinction

between the performances of the two production systems. With respect to 2011/12, both farm level and GM performance is greater on non-organic dairy farms, albeit that at GM level the difference between the two systems is marginal. Nevertheless, the data presented for organic dairy farming in England in 2011/12 in part provides explanation for the reduction in organic milk production observed in previous reports (Soil Association, 2013).

8.4 References

Kingshay Dairy Costings (2013). Available at:

http://www.dairyco.org.uk/market-information/farming-data/kingshay-dairy-costings/kingshay-dairy-costings-organic/ Accessed 8/04/13

Moakes, S., Lampkin, N. and Gerrard, C. (2012). Organic Farm Incomes in England and Wales 2010/11, University of Aberystwyth and The Organic Research Centre Elm Farm, Defra Contract reference OF 0373. Available at http://orgprints.org/21018/1/defra_organic_incomes_2010_11_FINAL.pdf

Accessed 8/04/13

McHoul, H., Robertson, P. and Wilson, P. (2013). Dairy Farming in England 2011/12. Available at http://www.ruralbusinessresearch.co.uk/

Soil Association (2013). Organic Market Report 2013. Avaiable at http://www.soilassociation.org/LinkClick.aspx?fileticket=whbpEnZUd7A%3d&tabid=1984

Accessed 8/04/13.

9 APPENDIX 5. REPORTS IN THIS SERIES:

Crop Production in England 2011/12
Dairy Farming in England 2011/12
Hill Farming in England 2011/12
Horticulture Production in England 2011/12 (Horticultural Business Data)
Lowland Grazing Livestock Production 2011/12
Pig Production in England 2011/12
Poultry Production in England 2011/12

Crop Production in England 2010/11
Dairy Farming in England 2010/11
Hill Farming in England 2010/11
Horticulture Production in England 2010/11 (Horticultural Business Data)
Lowland Grazing Livestock Production 2010/11
Pig Production in England 2010/11
Poultry Production in England 2010/11

Crop Production in England 2009/10
Dairy Farming in England 2009/10
Hill Farming in England 2009/10
Horticulture Production in England 2009/10 (Horticultural Business Data)
Lowland Grazing Livestock Production 2009/10
Pig Production in England 2009/10
Poultry Production in England 2009/10

Crop Production in England 2008/09
Dairy Farming in England 2008/09
Hill Farming in England 2008/09
Horticulture Production in England 2008/09 (Horticultural Business Data)
Lowland Grazing Livestock Production 2008/09
Pig Production in England 2008/09
Poultry Production in England 2008/09

Crop Production in England 2007/08
Dairy Farming in England 2007/08
Hill Farming in England 2007/08
Horticulture Production in England 2007/08 (Horticultural Business Data)
Lowland Grazing Livestock Production 2007/08
Pig Production in England 2007/08
Poultry Production in England 2007/08

Crop Production in England 2006/07
Dairy Farming in England 2006/07
Hill Farming in England 2006/07
Horticulture Production in England 2006/07 (Horticultural Business Data)
Lowland Grazing Livestock Production 2006/07
Pig Production in England 2006/07
Poultry Production in England 2006/07

Details available at www.ruralbusinessresearch.co.uk

10 APPENDIX 6. DEFINITION OF TERMS

I. BUSINESS OUTPUTS, INPUTS, COSTS AND INCOME

1. ***Farm business income*** for sole traders and partnerships represents the financial return to all unpaid labour (farmers and spouses, non-principal partners and directors and their spouses and family workers) and on all their capital invested in the farm business, including land and buildings. For corporate businesses it represents the financial return on the shareholders capital invested in the farm business. It is used when assessing the impact of new policies or regulations on the individual farm business. Although Farm Business Income is equivalent to financial Net Profit, in practice they are likely to differ because Net Profit is derived from financial accounting principles whereas Farm Business Income is derived from management accounting principles. For example in financial accounting output stocks are usually valued at cost of production, whereas in management accounting they are usually valued at market price. In financial accounting depreciation is usually calculated at historic cost whereas in management accounting it is often calculated at replacement cost.

2. ***Farm corporate income*** 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*** 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[4] which allows farms of different business organisation, tenure and indebtedness to be compared. It represents the return to the farmer and spouse alone for their manual and managerial labour and on the tenant-type capital[5] 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.

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

[5] 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.

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

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

II. CROPPING, STOCKING AND LABOUR TABLES

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

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

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

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

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

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

13. ***Total livestock units*** are used as an approximate measure of stocking intensity and are based on the estimated energy requirements of different species and ages of livestock. The factors used are set out in Appendix 2 of *'Farm Incomes in the United Kingdom 1999/00'.*

14. ***Annual labour units (ALU)*** are the estimated number of full time worker equivalents of persons working on the holding during the year. Part-time workers are converted to full-time equivalents in proportion to their actual working time related to that of a full-time worker. One ALU represents one person employed for 2,200 hours.
[Standard labour requirements (SLR) are theoretical measures of representative labour requirements under typical conditions for enterprises of average size and performance. Used in the classification of farms by type and size there are 6 SLR size groups measured in Full Time Equivalents (FTE) where 1 FTE equals 1900 hours per year. Farms considered “Spare time” SLR band 1, less than 0.5 FTE or less than 949 imputed hours are excluded from the Farm Business Survey. The 6 SLR size groups are:

SLR band	Descriptive	FTE	Hours/year
1	Very small, Spare time	<0.5	1 - 949
2	Very small, Part time	0.5 to <1	950 – 1899

3	Small, Full time	1 to <2	1900 – 3799
4	Medium, Full time	2 to <3	3800 – 5699
5	Large, Full time	3 to <5	5700 – 9499
6	Very large, Full time	>5	>9500

III. OUTPUTS, INPUTS AND FARM BUSINESS INCOME TABLES

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

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

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

(c) C***rop enterprise output***, which is the total value of crops produced by the farm (other than losses in the field and in store). It includes crops used for feed and seed by the farm business and those consumed in the farmhouse and by farm labour. Crop enterprise output is calculated on a "harvest year" as distinct from an "accounting year" basis; that is, it refers only to those crops (with the exception of certain horticultural crops) wholly or partly harvested during the accounting year and excludes any crop carried over from the previous year. Thus valuation changes (between the previous and current crops) are not relevant and the total harvested yield of the crop is valued at market prices (plus any subsidies). However, any difference between the opening valuation of any stocks of previous crops and their ultimate disposal value (sales, used on farm and any end-year stocks) is included in total farm output.

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

16. ***Agricultural costs*** comprise payments and the estimated value of non-cash inputs, including home-grown feed and seed, adjusted for changes in stocks and creditors between the beginning and end of the year.

Total variable costs	These are taken to be costs of feed, veterinary fees and medicines, other livestock costs, seeds, fertilisers, crop protection and other crop costs.
Purchased concentrate feed and fodder	This represents expenditure on feeds and feed additives, including charges for agistment.
Home-grown concentrate feed and fodder	This includes ex-farm value of all home produced cereals, beans, milk (excluding direct suckling), etc. fed on the farm both from the current and previous years' crops.

Veterinary fees and medicines	This consists of veterinary fees and the cost of all medicines.
Other livestock costs	This comprises straw bought specifically for costs bedding materials, breeding costs (including AI and stud fees), miscellaneous dairy expenses, disinfectants, marketing and storage costs of animal products, Milk Development Council levy and other livestock costs not separately identified.
Purchased and home-grown seeds	This comprises expenditure on purchased seeds, plants and trees adjusted for changes in stocks. Home-grown seed from the previous crop is included and charged at estimated market price: any seeds from current crops and sown for a succeeding crop are excluded, but are included in the closing valuation of the crop and hence in enterprise output. This enables the value of home-grown seed used in the production of the current crop to be identified.
Fertilizers	This includes lime, fertilisers and other manures, and is adjusted for changes in stock. Fertilisers sown for next year's crops are treated as if they were still in store and are included in the closing valuation.
Crop protection	This includes costs of pre-emergent sprays, fungicides, herbicides, dusts and insecticides and other crop sprays.
Other crop costs	These comprise all crop inputs not separately specified, e.g. marketing charges, packing materials, British Potato Council levy, baling twine and wire (though not fencing wire).
Total fixed costs	These are the costs of labour, machinery, contract work, land and buildings, other general farming costs and depreciation.
Labour (excluding farmer and spouse)	This comprises wages and employer's insurance contributions, payments in kind, and salaried management. To calculate net farm income an imputed charge for unpaid labour is made, excluding that of the farmer and spouse, valued at the rate of comparable paid labour. The value of the manual labour of the farmer and spouse is not charged as an input in calculating net farm income (i.e. it is a component of net farm income).
Contract costs	These costs include expenditure on work carried out by agricultural contractors, including the costs of materials employed, such as fertilisers, unless these can be allocated to the specific heading. Costs of hiring machines to be used by the farm's own labour are also included. Expenditure on contract labour is only included here if it is associated with the hiring of a machine. Otherwise it is entered under (casual) labour.
Machinery running costs	These represent the cost of machinery and equipment repairs, fuel and oil and car mileage expenses. It excludes depreciation.

Land and building inputs	For the calculation of farm business income these comprise any rent paid, insurance, rates and repairs to land and buildings incurred by the whole business. In the derivation of net farm income land and building costs also include an imputed rental charge for owner occupiers but exclude those costs associated with land ownership such as the insurance of farm buildings, and landlord-type repairs and upkeep.
Depreciation of machinery, glasshouses and permanent crops	Depreciation provisions in respect of machinery, glasshouses and permanent crops (e.g. orchards) are shown on a current cost basis. The rates of depreciation used (generally on a diminishing balance basis for machinery and straight line for glasshouses and permanent crops) are intended to reflect the degree of deterioration of the assets.
Other general farming costs	These consist of electricity, heating fuel, water for all farming purposes, insurance (excluding labour and farm buildings), bank charges, professional fees, vehicle licences, and other miscellaneous expenses not recorded elsewhere.
Interest payments	Interest charges on loans taken out for business purposes, net of interest receipts on monies invested temporarily outside the business, are deducted in the calculation of farm business income.
Depreciation of buildings and works	This is calculated on a current cost basis (generally on a straight line basis over 10 years) with an adjustment to allow for the effect of capital grants.

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

IV. BALANCE SHEET TABLES

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

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

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

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

V. IMPLIED OUTPUT PRICES

22. ***Implied output prices*** are average unit returns excluding direct subsidies. For crops they are calculated by dividing the value of sales, closing stocks, farm house consumption, benefits in kind and own-produced feed by total production. Sales are value at prices actually received at the farm gate before the deduction of marketing charges paid direct by the farmer such as drying and cleaning

costs. More detailed information about sales volumes is collected for livestock and, in this case, the unit returns refer to sales of livestock including casualties. In both cases, any compensation payments or insurance payouts for output produced in the current year and destroyed are included.

Source: DEFRA – Farm Accounts in England 2006/2007
http://www.defra.gov.uk/statistics/foodfarm/farmmanage/fbs/aboutfbs/datacollection

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://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://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 areas 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 including those with areas of common grazing.