

ORGANIC FARM INCOMES IN ENGLAND AND WALES 1995/96 - 1997/98

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Report of work for the
Ministry of Agriculture, Fisheries and Food
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Executive Summary

This report presents results from research work carried out for the Ministry of Agriculture, Fisheries and Food (MAFF) on the financial performance of organic farms over the years 1995/96 to 1997/98. The aim of the research was to assess the financial performance of organic farms differentiated by farm type, in order to inform MAFF policy-making with respect to organic farming, and to provide a basis for assessments by farmers, advisers and other interested parties of the farm-level implications of conversion to, and continued organic farming.

The specific objectives were the provision of information on different organic farm types. This was achieved through the collation of financial data collected under three different MAFF-funded research projects supplemented by data collected on other farm types, including data on dairy farms in the process of converting to organic production. Organic farm data is presented for LFA cattle and sheep farms for 1997/98 only. The samples of organic farms are small because of the limited number of organic holdings over 8 European Size Units with identifiable holding numbers in 1996 and farms with more than 50% of their land under organic management in 1997/98.

Although the organic sample is small, it represents nearly 14% of organic farms with identifiable holding numbers registered with UKROFS in 1996, and this work gives an indication of the relative profitability of different organic and conventional farms of different types in the late 1990s.

Detailed financial input, output, income, liabilities and assets and some physical performance measures are presented for each of the years studied.

Outputs on organic dairy, horticulture and mixed farms increased each year. Outputs on organic lowland cattle and sheep farms were stable, but increasing inputs reduced Net Farm Income (NFI) each year in the study period. Outputs from organic cropping farms increased in 1996/97 and decreased in 1997/98, but results from this group are affected by the high levels of conventional cropping (25% of land area on average) and reduced conventional prices.

To provide an indication of the likely performance of the organic farms if they were under conventional production, data from conventional farms are given. Conventional farms were selected by cluster analysis from the Farm Business Survey (FBS) (MAFF, 1999)¹.

In 1997/98 the average NFI (£/farm) of the organic farms exceeded that of the conventional farms for all farm types except cattle and sheep farms.

¹ Ministry of Agriculture, Fisheries and Food Economic (Farm Business) Division, Welsh Office, *Farm Business Survey, 1997-1998* [computer file]. Colchester, Essex: The Data Archive [distributor] 21 July 1999. SN: 4002.

1. Introduction

This report presents results from research work carried out for the Ministry of Agriculture, Fisheries and Food (MAFF) on the financial performance of organic farms over the years 1995/96 to 1997/98.

The aim of the research reported here was to assess the financial performance of organic farms, differentiated by farm type, in order to:

- inform MAFF policy-making with respect to organic farming, arable and livestock commodity support programmes and agri-environmental policy, and
- provide a basis for assessments by farmers, advisers and other interested parties of the farm-level implications of conversion to and continued organic farming.

The specific contract objectives included the collation of financial data collected under three different MAFF-funded research projects from 1995/96 to 1997/98. These projects covered: organic dairy (IGER, Trawsgoed), hill livestock (ADAS, Redesdale) and arable (ADAS, Terrington) farms. Additionally, financial data were collected on 19 organic farms of types selected to complement the farms above (lowland cattle and sheep, mixed, and horticultural holdings) (see Table 1).

Data from appropriate conventional farms from the Farm Business Survey (FBS) (MAFF, 1999)² were selected to provide comparisons with the organic farm data.

² Ministry of Agriculture, Fisheries and Food Economic (Farm Business) Division, Welsh Office, *Farm Business Survey, 1997-1998* [computer file]. Colchester, Essex: The Data Archive [distributor] 21 July 1999. SN: 4002.

2. Methods

Organic farm data sources and collection methods

The following tables present results from organic farm businesses in England and Wales with account years ending between July and the following April; all (except four) falling between December to April. In three cases artificial year-ends were used to avoid year-ends occurring during the growing season.

The data were gathered using a variety of methods, depending on the source (see below), but processed according to standardised Farm Business Survey guidelines set down by the Ministry of Agriculture, Fisheries & Food, Economics (Farm Business) Division (Farm Business Survey, February 1996). Some farms recruited for specific conversion studies (the pre-cursors to ADAS and IGER studies detailed below), were, due to their enterprise mix, categorised differently from their original study group (see Table 1), so that a farm recruited for the Hill Livestock Production study was classified as a mixed farm according to the FBS farm classification system (see Appendix 2). In a few cases, where it was not possible to standardise whole farm figures, only gross margin information for specific enterprises has been used. Where farms dropped out of the survey in later years, only their gross margin data have been included in the report, so that the tables of whole farm data are from identical samples.

Four different MAFF-funded projects contributed data to this report (see Table 1):

1. Organic Hill Livestock Production (ADAS Redesdale)

This project aims to evaluate the effects of converting to and continued management of a hill/upland livestock system to organic farming. To help interpret the physical and financial performance of the organic unit at Redesdale, a network of linked farms was established to support the main research project. The gross margin and farm income data for 1997/98 from six linked farms were supplied by ADAS to WIRS for the compilation of the following tables. All were costed using the ADAS Business Recording Service. Gross margin costings only were supplied for a further three farms, and for the three systems being operated by ADAS at Redesdale.

Not all the commercial farms studied in the Redesdale project were classified as cattle and sheep farms, so their data are presented with other farm types. Further, results from some linked farms were not available for all three years; this meant that an identical sample of organic LFA cattle and sheep farms over the three years would consist of two farms only. For this reason only data for five farms for 1997/98 are presented for upland cattle and sheep (Appendix 1 Table 6A).

2. Organic Arable Farming (ADAS Terrington)

A similar network of linked farms was associated with this project, which aimed to evaluate the effects of converting and the continued organic management of specialist arable farms. Gross margins and farm income data from seven linked predominantly cropping farms were provided by ADAS to WIRS for this study. Of these, two farms have been categorised with the mixed farms in this report, although whole-farm data from one of the farms have been omitted from this report because the conventional sample of farms for comparison became too small in the third year.

Two of the farms were costed using the ADAS Business Recording Service and five farms used an ADAS in-house method based on cashbook records. One of these farms is not

included in the whole farm results due to the small proportion of land area in conversion and in organic production.

3. Organic Milk Production (IGER, WIRS, ADAS)

A MAFF funded project to study the conversion of Ty Gwyn dairy unit to organic milk production also used the linked farms approach. Seven of these farms, now in full organic production, were used to provide data for the report (see Table 1). The data were collected by WIRS from five of these using the Integrated Accounts System used by Farm Business Survey Centres. Data from two other farms were collected by ADAS using the ADAS Business Recording Service. Only gross margin data from the Ty Gwyn farm are included. One of the farms is categorised as a cattle and sheep farm, and a further dairy farm is categorised as a mixed farm, leaving five in the predominantly dairy section.

Five further dairy farms in the process of converting to organic dairy farming were studied by WIRS using the Integrated Accounts System (IAS), and are presented as Dairy – in conversion. The first year's data are from the year spanning the end of conventional management; for four of the farms this was 1995/96. In 1996/97 three of the five farms had all their land in conversion, the other two farms were undergoing a staged conversion over a longer period.

4. Economics of organic farming (WIRS)

Data on 19 additional commercial organic farms in England and Wales were collected under this project to complement the farm types under consideration in the above studies. The main types selected were mixed, cropping, horticulture and lowland cattle and sheep. Farms were randomly selected within robust farm type categories from 1996 UK Register of Organic Food Standards (UKROFS) registered holdings with identifiable holding numbers over 8 European Size Units (ESU) (for definition, see Appendix 2). Of about 800 UKROFS registered holdings at the beginning of 1996, 640 had identifiable numbers of which only 445 were usable, primarily due to significant numbers of duplicates. Of the 445 usable numbers, 147 were for holdings of less than 8 ESU, leaving a group of 298 from which farms could be selected. Farms with less than 50% of land with organic status were excluded. The data were collected by WIRS using the Aberystwyth Farm Business Survey (FBS) Automated Accounts System (See Table 1). Horticultural data were collected by HDRA on sub-contract from WIRS, using the IAS approach.

The Welsh Institute of Rural Studies (WIRS) at the University of Wales, Aberystwyth was responsible for collating the data from the different sources.

Due to the constraints of confidentiality guaranteed to farmers participating in these surveys, no data are presented for groups of less than five farms. At the time of recruiting for this work, there were too few organic farms in particular categories from which to sample (i.e. farm types 'pigs and poultry' and 'other' (Tables 1 and 2), and it was difficult recruiting sufficient participants for other types (particularly horticultural holdings). Samples are small, therefore, and this affects the extent to which results may be extrapolated to the wider population of organic farms. A further complicating factor is that the economic climate for farming generally has changed dramatically since the start of this survey, and the characteristics of farms converting to organic production have changed.

Table 1 Distribution of organic and converting farms by type and source of data

<i>Data source</i>	<i>ADAS Redesdale Hill livestock</i>	<i>ADAS Terrington Arable</i>	<i>WIRS</i>		<i>HDRA Horti- culture</i>	<i>Total</i>	<i>UKROFS*</i>
<i>Farm type</i>			<i>Dairy</i>	<i>Other</i>			
Cereals & general cropping		3 + 2 GM		2		5 + 2 GM	66
Horticulture					5	5	43
Pigs and poultry						0	8
Dairy			5			5	42
Dairy converters			5			5	
Cattle and sheep							
LFA	5 + 3 GM					5 + 3 GM	17
Lowland			1	7		8	55
Mixed	1	1	1	5		8	66
Other						0	1
Total	6 + 3 GM	4 + 2 GM	12	14	5	41 + 5 GM	298
Target	10	10	16	15	5	56	

GM – Gross margin data only

*UKROFS 1996 certified holdings >8 ESU with identifiable holding numbers.

The shortfall in the target is due in part to the exclusion of farms where three years data were not available.

Table 2 Distribution of organic and converting farms, by type and size (ESU)

<i>Farm type</i>	<i><8</i>	<i>8 - <15</i>	<i>15- <28</i>	<i>28 – <40</i>	<i>40 - <60</i>	<i>60 - <100</i>	<i>100 - <200</i>	<i>200 +</i>	<i>Total</i>
Cereals & general cropping					1	1	2	1	5
Horticulture		4	1						5
Pigs and poultry									0
Dairy					3	1		1	5
Dairy Converters					1	2	1	1	5
Cattle and sheep									
LFA		2	1		2				5
Lowland		4	1	1	1			1	8
Mixed	1	1	1	2			1	2	8
Other									0
Total	1	11	4	3	8	4	4	6	41
UKROFS *	155				74		35	34	298
Proportion of UKROFS list in study.	12.3%				16.2%		11.4%	17.6%	13.8%

*UKROFS 1996 certified holdings >8 ESU with identifiable holding numbers.

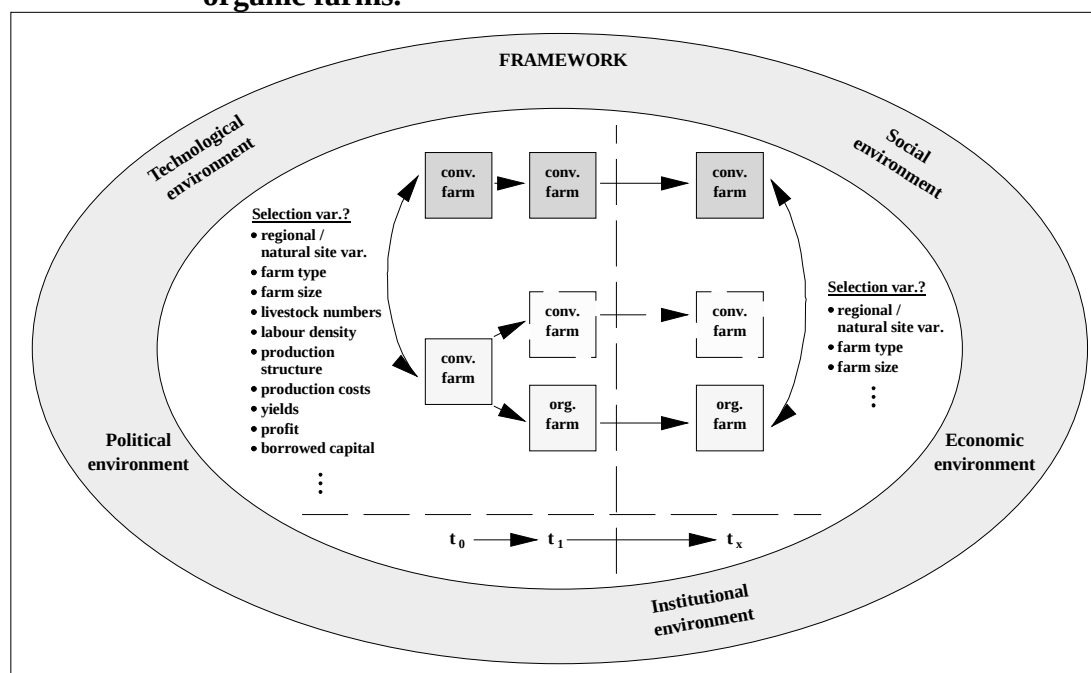
Farm comparisons

In order to provide an insight into the relative performance of organic farms, a comparison with similar conventional farms has been provided. The underlying purpose is to deduce what profit the farm would make if it were managed conventionally³.

Background

There are many methodological possibilities for comparing organic and conventional farms, ranging from individual comparisons with farms before conversion (in Figure 1, this is shown as comparing the organic farm at a point in time t_x with its conventional situation at a point in time t_0) to comparisons with hypothetical figures or using models. The former approach requires a period of years to follow a converting farm, and requires a paired farm to provide a reflection of the effects of externalities, such as climate and policy environment, which will affect results independent of the conversion. The latter approach depends greatly on the assumptions made.

Figure 1 Framework for selection variables for comparisons of conventional with organic farms.



Source: Offermann and Nieberg, (2000)³

An alternative method is to use the income of conventional farms in the year of observation as an indicator of the hypothetical 'conventional' income of the observed organic farm. The conventional farms selected need to be 'comparable'. The objective is to isolate the effect of the farming system on profits, so the choice of characteristics for comparison must be restricted to 'non-system determined' factors, i.e. location (climate, topography, soil, market distance), size and tenure. The use of clusters of similar conventional farms to compare with each organic farm has the advantage over paired farm comparisons in that specific circumstances of individual conventional farms do not distort the comparison. The average

³ Offermann, F. and H. Nieberg (2000). *Profitability of Organic Farming In Europe*. Paper presented at the Agricultural Economics Society Annual Conference, Manchester.

for a group of organic farms can then be compared with the average for the group of matched clusters with greater confidence that the farm size, type and location characteristics of the organic and conventional groups are similar.

For a fuller discussion on the complexities of comparing farming systems, see Appendix 3.

Conventional farm selection

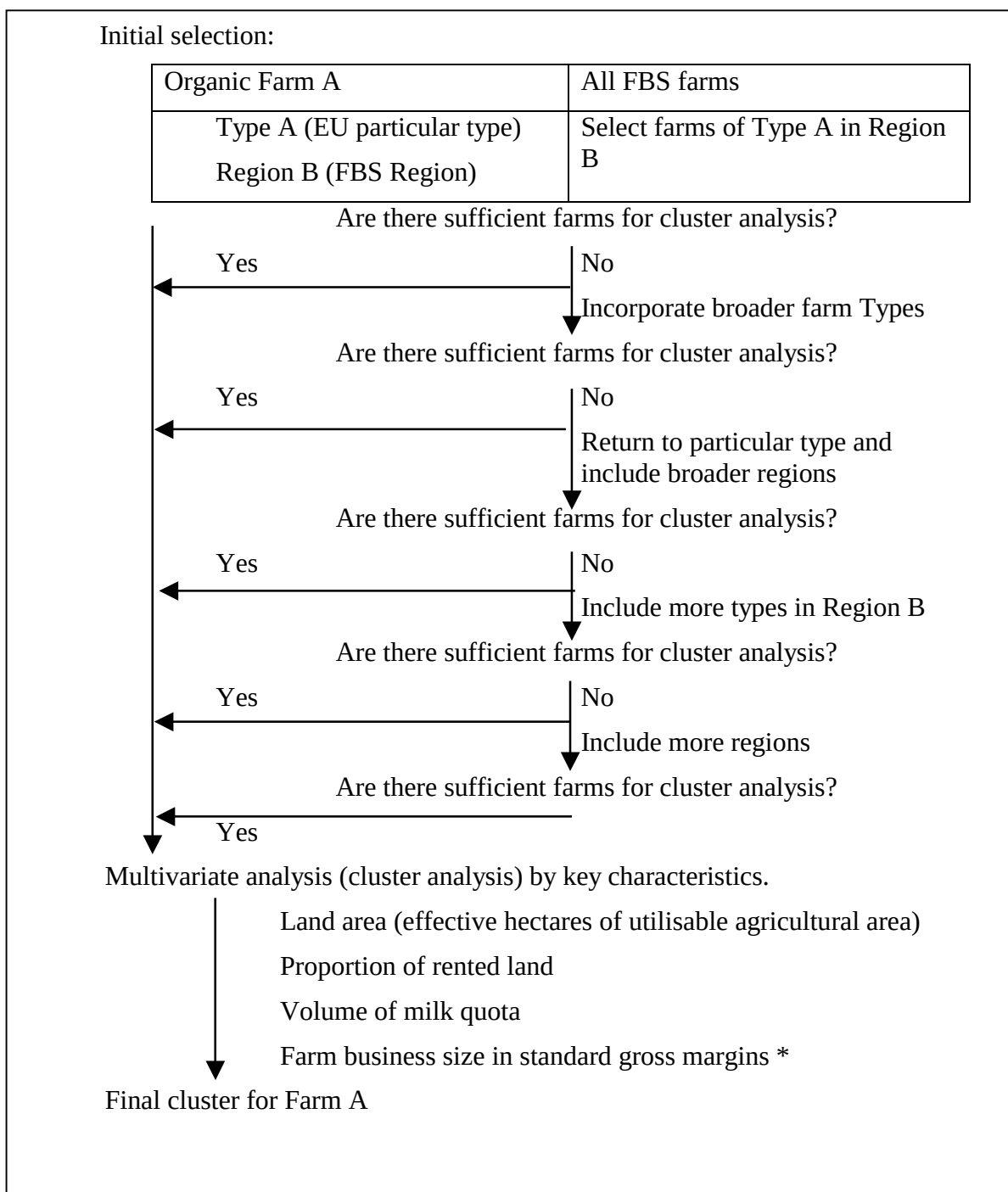
For each organic farm recorded, the aim was to generate a cluster of between 10 and 12 similar conventional farms from the Farm Business Survey database for the three years (MAFF, 1999)⁴. The emphasis for selection of comparison conventional farms for this study was to focus on variables reflecting the resource endowment rather than the management system of the farm. The first stage selection was made on their approximate location (the same Farm Business Survey province) and enterprises (the same EU farming type). A hierarchical clustering approach was then used to pick out farms with similar key characteristics selected to reflect the resource endowment of the holdings. The resource endowment of the holding is normally independent of the organic or conventional management of the holding, and is a reflection of the resources with which the farm manager can run the farm business (see Box 1).

The mechanics of cluster analysis are described in the Statistical Package for the Social Sciences manual (SPSS, 1990)⁵. Hierarchical cluster analysis consecutively clusters individuals and groups together on the basis of the minimum Euclidean squared difference between the key characteristics that distinguish each case, or group of previously clustered cases.

In most cases, the initial selection of farming type was one EU type selected from around 80 particular types (1985 EC Typology described in Commission Decision 85/377/EEC). In nine of the 41 farms detailed in this report, other, very similar, types had to be included to provide a satisfactory base for the selection procedure; this occurred for each of the horticultural holdings, three of the mixed farms and one cattle and sheep farm. In most cases, it was possible to generate the cluster from farms in the same region. In some cases, however, the organic farms were so dissimilar that farms from the same region entered clusters too late in the hierarchical process, and the comparison provided was not satisfactory. In such cases the selection group was widened, by adding in farms of the same type from adjacent regions. In the current study, it proved impossible, even then, to select a group of 12 comparable farms in a small minority of cases, and for these the respective cluster is smaller in number. In some cases the clustering procedures resulted in many more farms being selected (up to 27).

4 Ministry of Agriculture, Fisheries and Food Economic (Farm Business) Division, Welsh Office, *Farm Business Survey, 1997-1998* [computer file]. Colchester, Essex: The Data Archive [distributor] 21 July 1999. SN: 4002.

5 SPSS Inc. (1990). *SPSS reference guide*, Chicago: SPSS Inc.

Box 1 Conventional farm selection procedure

* Farm business size, as measured by standard gross margins, is a measure of the potential economic activity of the particular mix and size of enterprises on the farm.

The clustering process was carried out with the farms from which data was collected in 1995/96. Each following year a proportion of the conventional farms were dropped, which resulted in an overall loss of 17% of conventional farms, but for individual clusters the loss ranged from 0% to 56%. Results for earlier years for were re-calculated to remove farms not present in the later years thus providing an identical sample. In one case, by the third year the cluster became too small (two farms only), therefore the organic farm was also removed from the results. Only two of the organic LFA cattle and sheep farms were in the survey all three

years, so the original cluster of conventional farms selected was no longer appropriate for the 1997/98 data results and are not presented.

Interpretation of results

It should be noted that the farms have been classified by Standard Gross Margins (SGMs), a typology system originally devised for conventional agricultural systems and therefore not entirely appropriate for these organic farms (see Appendix 2). Further, because of the systematic differences in structure on organic farms, clustering conventional farms is still only an approximate guide to the possible performance of organic farms if they were managed conventionally.

The data source for the cluster farm comparisons is sufficiently large for a degree of confidence in the average; however, the organic farm sample is so small that outliers (especially larger farms) will have an undue influence on the average. If the sample of organic farms were larger, general trends would be more apparent and less influenced by individual farms. Because of the influence of individual organic farms on the average, some explanation is attempted of trends and changes in inputs, outputs and incomes. In the lowland cattle and sheep section some data are given for a subset of the farms.

3. Presentation of results

Whole farm data

Results for each type of organic farm have been averaged, and are presented with the *average of the groups* of selected cluster farms. This methodology has been adopted so that particular characteristics of each organic farm could be represented in the process, rather than drawing a single cluster for the average results of each organic farm type.

Table 3 gives an overview of the performance of organic farms in 1997/98 in £ per effective hectare of Utilisable Agricultural Area (UAA). Within sections on each farm type, figures show the development of average outputs, inputs and NFI for whole farms and £/ha for both farming approaches over the three years. Further figures and tables within each section on the different farm types give summaries of outputs and inputs, divided into categories, for both farming approaches over the three years; these include an allowance for farmer and spouse labour, thus differing from the NFI charts that do not.

Throughout the text, the terms *input* and *output* are used to define financial values rather than physical quantities (for further definitions of terms please see Appendix 4, page 91).

Within Appendix 1, Tables 1A to 7A give details of outputs, inputs, incomes, some performance measures, and asset and liability information for six farm types. Where physical information was available in addition to the financial data collected, livestock units per forage hectare, and labour units per farm, are presented. In some cases, if direct data were not available for one or two farms in the group, labour units for the other farms have been derived from wages paid using standard agricultural wages. All labour-use figures presented are, however, very approximate.

Tables provide whole farm totals averaged for each farm type, and weighted averages per hectare of UAA over the farms or holdings. Values per hectare of total UAA are used (rather than measures per hectare in specific enterprises) because presenting the whole farm situation reflects the interdependence of enterprises. The fact that, for instance, organic horticultural holdings cannot crop their entire land in one year has a considerable influence on the overall farm profitability.

Farm classification

Organic farms were classified by constituent EC type (1985 EC Typology described in Commission Decision 85/377/EEC as amended with minor modifications, MAFF, (1998))⁶. They are presented in Robust types according to the UK farm classification system (Revised 1994), (MAFF, 1997)⁷. Robust types 1 (Cereals) and 2 (General Cropping) are merged to present enough farms in each table to maintain confidentiality. (See Appendix 2 for more information.) The use of constituent EC types relies on the use of standard gross margins (SGMs) from which European Size Units (ESUs) are derived (which in turn allow classification into EC types). These SGMs do not specifically relate to organic enterprises, so that they are not entirely appropriate for organic farms but their use offers a basis for comparing like with like where comparisons are required. Classification of farms by size and

⁶ *Farm Incomes in the United Kingdom 1996/97*. (1998). MAFF, London: TSO.

⁷ *Farm Incomes in the United Kingdom 1995/96*. (1997). MAFF, Norwich: HMSO.

type is inevitably a broad-brush exercise, but where sample sizes are small and farming systems diverse, some form of categorisation is essential to elucidate trends and patterns.

Income measures

Management and Investment Income (MII) represents a return to management, whether paid or not, and tenant type capital invested in the farm, whether borrowed or not. Thus, as well as the usual variable and fixed costs, it includes a nominal charge for farmer and spouse physical labour, but not management time, and a charge for depreciation of machinery (but not the actual costs of machinery purchased in that period). Interest payments are not included.

Net Farm Income (NFI) represents the return to farmer and spouse for their manual and managerial labour and on the tenant type capital invested in the farm. NFI can be derived from MII by deducting the cost of paid management, and adding back the notional charge for farmer and spouse labour.

In the presentation of the MII and NFI results, a number of adjustments are made to make farms comparable with each other as far as resource endowment is concerned:

- Land and property: all farms are treated as tenanted - a rental value is imputed as an expense for owner-occupied land. The costs of permanent improvements to farms, together with any capital grants relating to such work, are therefore excluded from these income calculations, although such landlord-type improvements are reflected in higher rent or rental value charges.
- Capital: all farms are treated as if they have no borrowings - debt service charges incurred by farmers on farm borrowing or the leasing of equipment, were ignored for the purposes of calculating NFI and MII.
- Labour: all farms are treated as if all labour is paid – including other unpaid labour and, for MII, notional values for farmer and spouse manual labour.

Occupiers Net Income (ONI) and Cash Income definitions exclude these notional charges and reflect actual land, property and capital costs. The measure closest to the normal definition of profit is that of ONI, as it excludes nominal charges for unpaid labour of farmer and spouse as well as any nominal rents charged, but includes interest charges and depreciation of buildings and works. ONI and Cash Income more closely represent the actual situations on farms, but comparisons with other farms are less reliable because of differences in land tenure, reliance on unpaid labour, and owner equity.

For further definitions of terms see Appendix 4.

4. Results highlights

The results presented here cover three years. In each year, specific external factors have influenced the results and need to be borne in mind. These include drought conditions in the first year which had severe impacts on farms in some areas and on some soils, the BSE crisis beginning in March 1996 and the beginnings of a general downward pressure on farm-gate prices and support payments due to the increased value of the pound and other factors in 1997. The results for the organic farms also reflect the significant improvements in the marketing conditions for organic products in 1997/98.

The organic farms studied include farms from the initial stages of conversion through to long-established organic farms, ranging, for example, from dairy converters who had no land with full organic status in the first year of the study, to completely organic dairy farms. The farms in the ADAS Terrington trial were the organic farms with the highest proportion of land not in conversion; in 1997/98 the cropping farms presented in Section 5 ranged from 59% of land organic to 100% of land organic, averaging at 78%.

Table 3 gives a summary breakdown of outputs and inputs as calculated for MII, and three other income measures (NFI, ONI and Cash Income). Tables 4 – 9 give the same data for both farming approaches over three years for six farm types. From these tables the proportions of variable and fixed inputs can be calculated. Except for the dairy farms (at 32% and 33%), variable costs were only 21-23% of all inputs. Labour costs (including an allowance for farmer and spouse labour) were between 20 and 30% of all inputs except on horticultural holdings where labour accounted for 58% of total inputs. Machinery costs on horticultural holdings were particularly low, at 9% of total inputs, contrasted with 27% on cropping and LFA cattle and sheep farms, 24% on mixed, and 20% of inputs on dairy and lowland cattle and sheep farms. On average across the farm types, general costs were 9% of all inputs, ranging from 7% on mixed farms, to 14% on LFA cattle and sheep farms.

Table 3 Organic farms data summary (£/ha), 1997/98

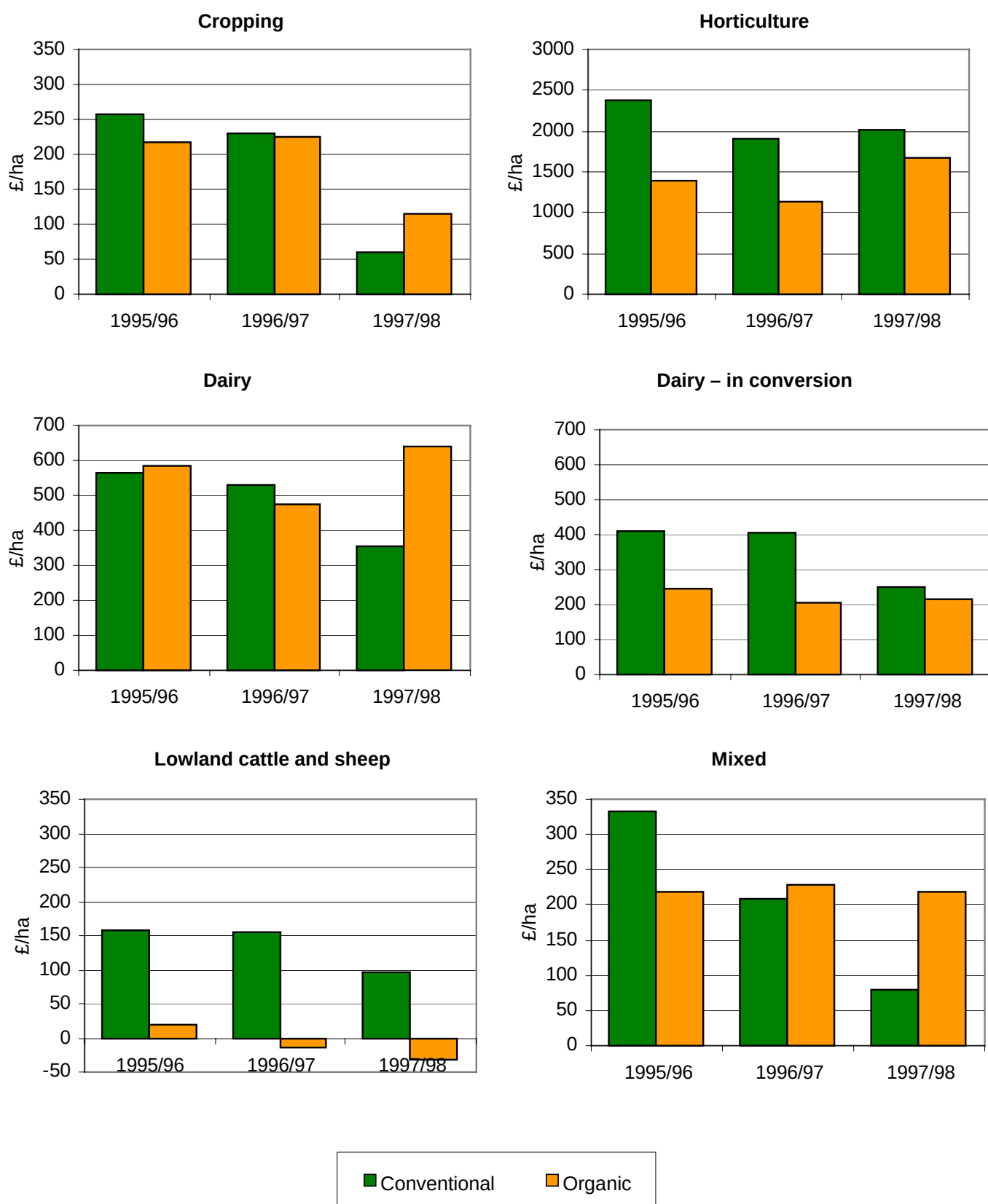
	<i>Horti- Cropping culture</i>		<i>Dairy Organic Convert.</i>		<i>Cattle & sheep Lowland LFA</i>		<i>Mixed</i>
Livestock outputs	41	140	1,670	678	590	278	374
Livestock subsidies	23	25	2	25	84	215	66
Cropping and by-products	361	4,672	105	215	154	42	394
Crop subsidies	177	14	23	121	64	20	113
Other outputs	47	121	119	49	61	88	32
TOTAL OUTPUTS	664	4,972	1,918	1,088	953	642	979
Livestock	26	121	407	209	186	140	94
Crop	77	953	34	103	46	35	85
Labour	110	3,185	334	214	329	173	241
Machinery	146	505	273	192	203	218	196
General	61	428	134	75	121	113	53
Land costs	144	261	203	163	210	125	145
TOTAL INPUTS	565	5,452	1,385	956	1,094	804	814
Add paid management input	22	0	4	0	35	0	5
Management & Investment Income	122	-481	537	132	-107	-162	171
Net Farm Income (ex.BLSA)	116	1,677	641	215	-33	-62	218
Occupier's Net Income	148	1,593	614	209	14	-13	281
Cash Income	276	2,257	714	268	101	44	322

Table 3 also illustrates the high dependence on subsidies of LFA cattle and sheep farms, with 33% of their output derived from livestock subsidies. The organic dairy farms and horticultural holdings had the lowest direct subsidies, making up only 1% of their outputs. The difference in cropping outputs of the converting dairy farms compared with the organic dairy farms is largely because of the presence, within the converting group, of a farm with a large (conventional) arable area (classified as a 'cropping and dairy' farm).

Figure 2 shows average NFI in £/ha of UAA for organic and conventional cluster farms over three years. Conventional dairy, and lowland cattle and sheep farms showed similar incomes for 1995/96 and 1996/97, and a 37% drop in income in 1997/98, whereas for cropping and mixed conventional farms there was an evident decline in incomes in 1996/97 that continued the following year. Of conventional farms, only horticultural holdings showed an improvement in incomes in 1997/98 compared with the previous year.

At the start of the study, organic dairy farms had higher incomes per hectare, on average, than the conventional dairy farms, but on other farm types conventional farms had higher incomes. By 1997/98 organic mixed, dairy and cropping farms achieved higher average NFI than conventional farms, and there was a reduced difference in incomes on horticultural holdings between the farming approaches. Average incomes on both conventional and organic lowland cattle and sheep farms were lower in the third year, the difference between them having reduced slightly.

When average results are presented per farm for cropping farms (see Figure 3) and for horticulture (Figure 6) they indicate that the relative profitability of organic compared with conventional farms is improved when reported on a whole farm, rather than per hectare basis.

Figure 2 Average NFI (£/ha) for conventional and organic farms of six types, 1995/96 - 1997/98

5. Cropping farms

For detailed results see Appendix 1, Table 1A, page 48.

Sample

Of the five farms presented in the organic sample, only one was completely converted in the first year of the study, and two retained a fairly constant amount of conventional land during the three years. The other two farms increased the proportion of their land managed organically each year during the study period.

One of the organic farms was completely stockless during the study, the other farms had a range of enterprises; three had suckler cows, of which one also had breeding sheep, and one farm had only store cattle and sheep enterprises. The conventional farms had, on average, more livestock units per farm, but they were carried on less grassland, with an average stocking rate of 1.50 Grazing Livestock Units (GLU) per forage hectare compared with the organic farms rate of 0.44 GLU/forage hectare.

The rough grazing shown in Table 1A for organic farms relates to a large area of rough grazing on one farm. (Figures are given per effective hectare area to compensate for any relatively unproductive rough grazing.)

Four of the organic farms were owner occupied, and two of these rented extra land.

Table 4 Summary data for cereal and general cropping farms (£/ha), 1995/96 – 1997/98

	1995/96		1996/97		1997/98	
	Conv.	Org.	Conv.	Org.	Conv.	Org.
UAA	265.7	372.8	266.6	379.6	276.8	380.5
Livestock outputs	97	58	97	61	89	41
Livestock subsidies	20	17	21	19	20	23
Cropping outputs	676	428	685	471	519	361
Arable area payments	250	217	243	214	226	192
Miscellaneous	26	65	35	58	44	34
Agri-env. payments	10	0	10	1	10	13
TOTAL OUTPUTS	1,079	787	1,092	823	909	664
Livestock inputs	75	22	66	22	57	26
Crop inputs	214	110	232	139	230	77
Labour	166	112	171	112	180	110
Machinery	185	128	201	145	193	146
General	56	62	58	54	61	61
Land	157	154	163	144	160	144
TOTAL INPUTS	852	587	891	616	882	565
Add paid management	15	21	15	21	19	22
MII	243	221	216	228	45	122
NFI	258	218	231	225	59	116
ONI	328	249	299	253	120	148
Cash Income	432	316	409	381	308	276

Figure 3 Output, inputs and NFI for predominantly cereal and general cropping farms (£/ha and £/farm), 1995/96 – 1997/98

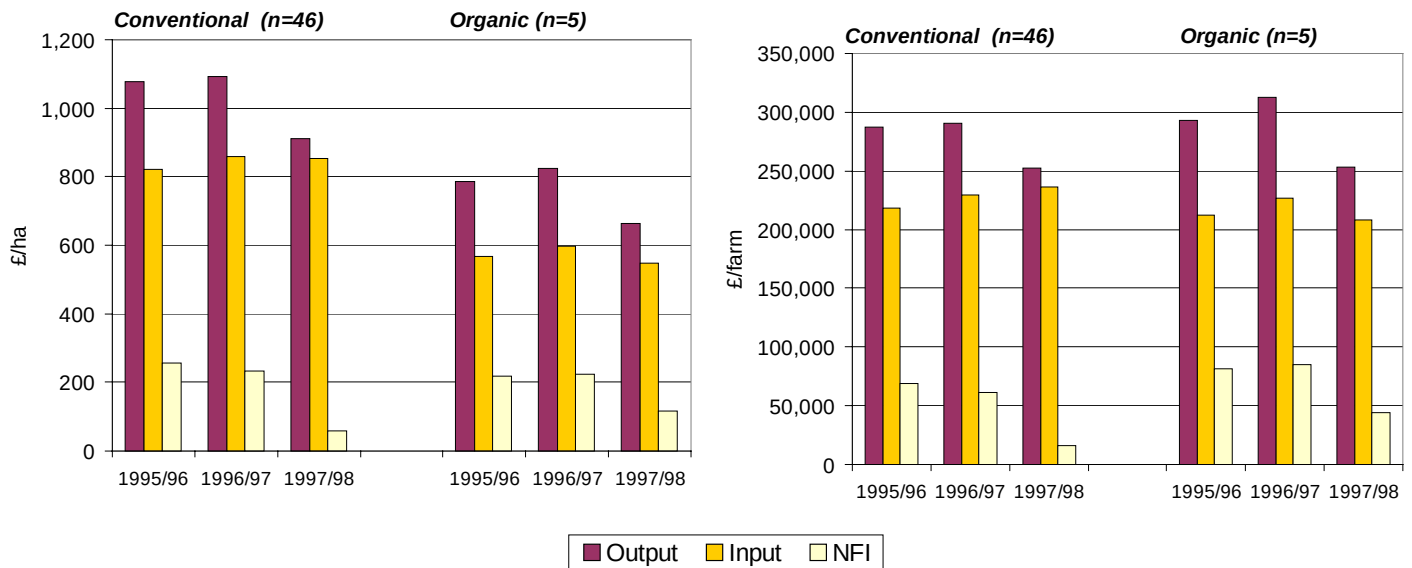
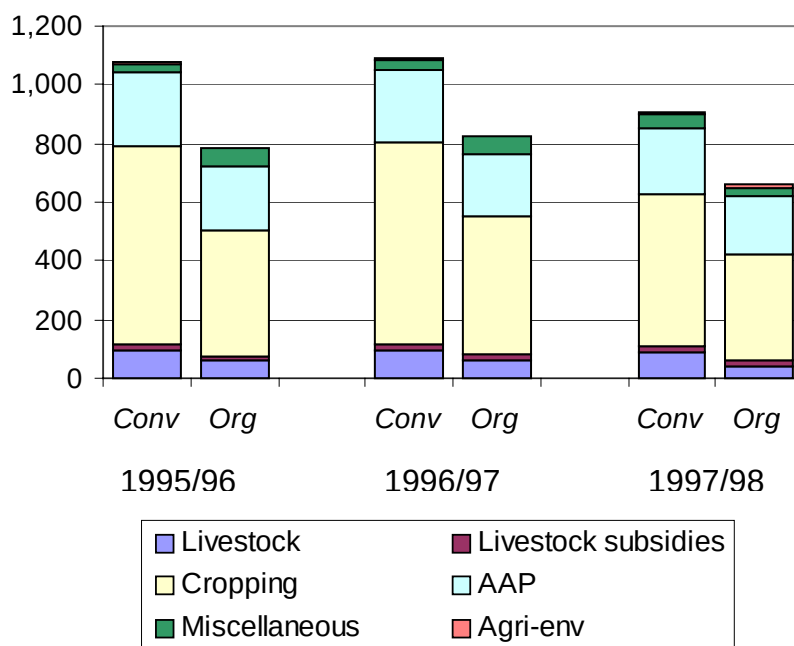


Figure 3 indicates the trends in outputs, inputs and NFI for both farming approaches over the three years in terms of £/effective hectare of UAA and for the whole-farm averages. Average whole-farm outputs and incomes for all three years were higher on organic than conventional farms. The clustering procedure was based on SGMs (and hence area in cropping) rather than absolute size, so that although the organic farms were, on average, larger, the area of land in cereals and cash crops is 200 ha for both farming approaches, confirming the success of the clustering procedure. The higher ‘per hectare’ inputs and outputs on the conventional farms therefore relate partly to the greater proportion of their total UAA that is in cereals and cash crops.

Figure 4 Output categories on conventional and organic cereal and general cropping farms (£/ha), 1995/96-1997/98



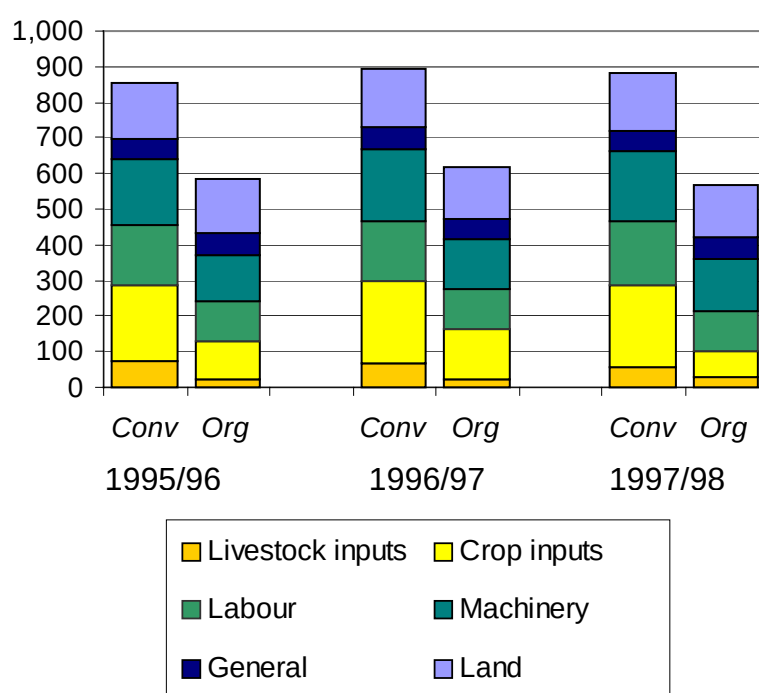
Outputs

Total output trends for individual organic farms closely mirror the trends in average cropping output. On one large farm, which dominates the picture, changes in conventional cropping and an increase in organic cereals led to increased outputs in 1996/97, but lower yields of both organic and conventional crops (except organic wheat) in the third year caused a 33% reduction in total cropping output.

Four of the five organic farms had increased output from cereals and cash cropping in 1996/97, which in two cases decreased to lower than 1995/96 levels in 1997/98. One of these four, which had soils vulnerable to drying out, had reduced winter wheat yields in 1997/98. The fifth farm showed increased cropping outputs, but decreasing total outputs, each year due to reducing outputs from non-organic livestock enterprises.

Average AAP outputs reduced each year for both farming approaches types mainly due to lower payment rates per hectare.

Figure 5 Input categories on conventional and organic cereal and general cropping farms (£/ha), 1995/96-1997/98



Inputs

Figure 5 shows the breakdown of inputs on both groups of farms. Over three years the average total variable costs on organic farms were 36% lower than on the conventional group. One organic farm suffered forage shortages in 1997/98 resulting in high purchases of forage. Apart from seed costs, fertiliser and crop protection costs would be expected to be considerably lower on organic farms, but because of the amount of conventional land on the study organic farms, average total crop costs were only 32% lower (26% of the UAA of the organic farms was conventionally managed).

Apart from general costs in 1995/96 (which include professional costs), all categories of fixed costs were also lower on the organic group compared with conventional. Labour costs were lower on the organic farms, yet labour units (an approximate measure of labour usage) were higher on the organic group, due to higher use of casual rather than paid (regular)

labour. Costs were lower on the organic farms because the Agricultural Wages Board sets a lower hourly rate for casual workers than for permanent staff. Machinery costs (including depreciation, repairs, fuel and contract costs) on organic farms were 25% lower than on conventional in 1995/96, but contract costs increased on the organic farms, so that by 1997/98 overall machinery costs were 10% lower.

Incomes

Figures 3 and 4 show that average incomes on conventional farms decreased each year over the three-year period; in 1996/97 as a result of increasing input costs and in 1997/98 due to decreased outputs. On organic farms, average inputs increased and outputs decreased in 1996/97, largely resulting from increased fertiliser and crop protection costs on one farm on the conventional land.

Discussion

In each of the three years, the average whole farm NFI on the organic farms was greater than on the conventional farms; the relative profitability increased each year (118%, 139% and 271% in 1995/96, 1996/97 and 1997/98 respectively).

Although the large amount of land within the organic group that was conventionally managed confuses the picture, analysis of the breakdown of outputs suggests the reduction in incomes on the cropping farms in the organic group in 1997/98 was largely a result of reduced prices received for conventional outputs.

6. Horticultural holdings

For detailed results see Appendix 1, Table 2A, page 54.

Sample

The organic horticultural units were not situated on typical vegetable growing land. Out of the organic holdings classified by MAFF as Robust Type 3 (Horticulture) in 1996, only one third were in the eastern counties of England, where the majority of conventional horticultural units were located. Within the sample for this study, the majority of organic holdings were in the southwest and west of England and in Wales, and 40% of the holdings were in Less Favoured Areas. In order to closely match farm types all regions of the Farm Business Survey in England and Wales had to be used for selection of the conventional ('cluster') farms. As a result, the holdings that made up the clusters were all from mid, south and eastern regions of England.

All the organic holdings in the survey grew predominantly outdoor field vegetables. A wide range of vegetables was grown, commonly 20-30 different types. The area of protected cropping was small with an average of 1.38% of land area. Their method of marketing was mixed; the survey contains 60% of organic holdings selling through their own direct marketing scheme (box scheme), 20% wholesale and 20% to a packer. Most of those with box schemes bought in vegetables to enable them to continue the box scheme through the year.

Table 5 Summary data for horticultural holdings (£/ha), 1995/96 – 1997/98

	1995/96		1996/97		1997/98	
	Conv.	Org.	Conv.	Org.	Conv.	Org.
UAA	5.2	8.1	4.9	8.1	6.0	7.8
Livestock outputs	0	386	0	243	0	140
Livestock subsidies	0	98	0	79	0	25
Cropping outputs	8,955	3,775	9,197	3,932	8,374	4,672
Arable area payments	10	0	10	0	9	14
Miscellaneous	1,653	132	2,083	214	1,805	114
Agri-env. Payments	0	6	0	24	0	7
TOTAL OUTPUTS	10,618	4,397	11,290	4,491	10,188	4,972
Livestock inputs	0	152	0	148	0	121
Crop inputs	2,496	868	2,910	940	2,432	953
Labour	5,325	2,998	6,038	3,253	5,440	3,185
Machinery	1,284	536	1,487	509	1,260	505
General	1,105	466	1,227	482	921	428
Land	831	236	818	251	744	261
TOTAL INPUTS	11,041	5,255	12,481	5,583	10,798	5,452
Add paid management	0	0	0	0	0	0
MII	-423	-858	-1,190	-1,092	-610	-481
NFI	2,383	1,391	1,909	1,144	2,025	1,677
ONI	2,692	1,481	2,277	1,081	2,267	1,593
Cash Income	3,779	2,062	3,205	1,716	3,197	2,257

Figure 6 **Outputs, inputs and NFI for horticultural holdings (£/ha and £/farm), 1995/96 - 1997/98**

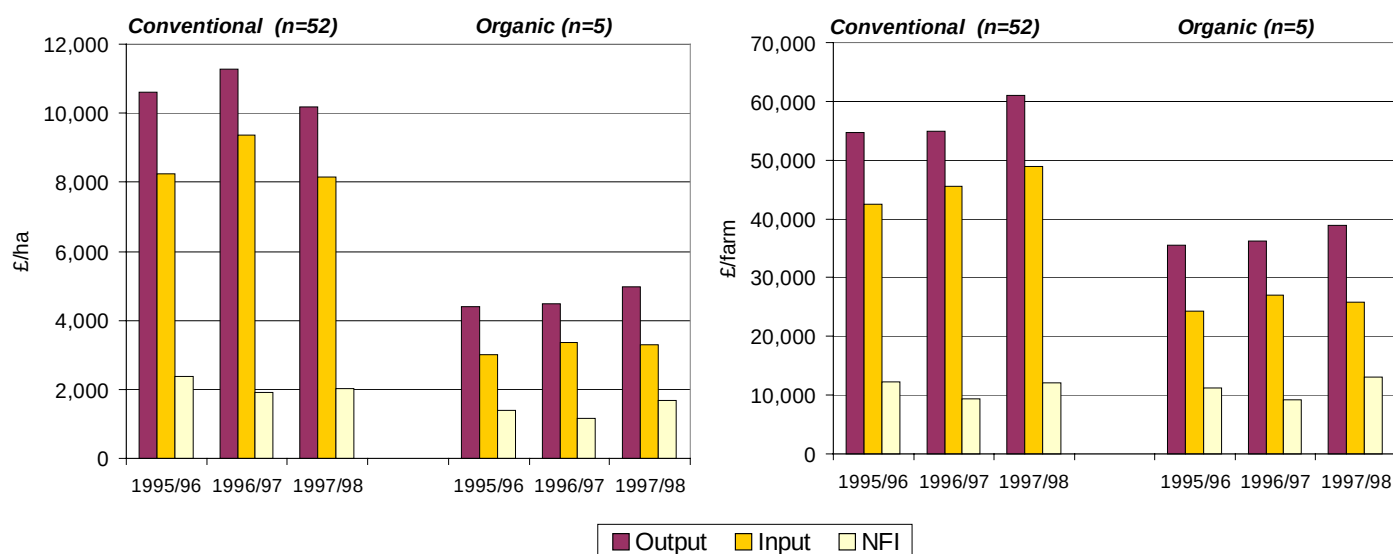


Figure 6 gives outputs, inputs and NFI in £/per hectare UAA and for whole farms, and illustrates the trends in each series for both farming approaches. Figure 6 shows that organic farms had significantly lower outputs, inputs and net farm income on a per hectare basis than matched conventional holdings. However, these measures can be misleading as organic standards require horticultural holdings to have land in fertility-building, so that each year some land on most organic holdings is not cropped.

In the sample studied, three organic holdings had grassland (with associated sheep enterprises), two of which had grassland amounting to twice the area cropped. In contrast, none of the conventional holdings had more than 2 hectares in grassland or fallow (most had some land in fallow each year), and this did not amount to more than 28% of their total UAA. Figure 6 also shows the inputs, outputs and NFI on a per farm basis, the basis on which cluster (conventional) holdings were selected to match the organic holdings.

Outputs

Figure 7 illustrates the relative amount of different outputs on conventional and organic holdings if presented in £/ha; showing the major contribution that miscellaneous outputs make to the total outputs on conventional holdings. The relatively small contribution to total outputs from the livestock enterprises on the organic holdings is also evident.

The complexity of cropping on these holdings, and the lack of detailed crop information, especially of yield and price data limits the interpretation of increases in outputs. Output increases may relate to improved marketing, prices, yields, and/or changes in crops grown.

Inputs

A slight reduction in area on the organic farms in 1997/98 affects interpretation on a per hectare basis. In 1997/98 organic farm input costs declined back to near 1995/96 levels (Table 5 and Table 2A, page 55), and paid labour costs, which had increased markedly in 1996/97 due to three of the farms employing more labour, fell slightly. In 1997/98 conventional holdings used more labour in total (average of 3.1 labour units compared with

2.6 organic), although organic farmers used more farmer and spouse labour; 1.9 labour units of the 2.6 total.

Figure 7 Output categories on conventional and organic horticultural holdings (£/ha), 1995/96 - 1997/98

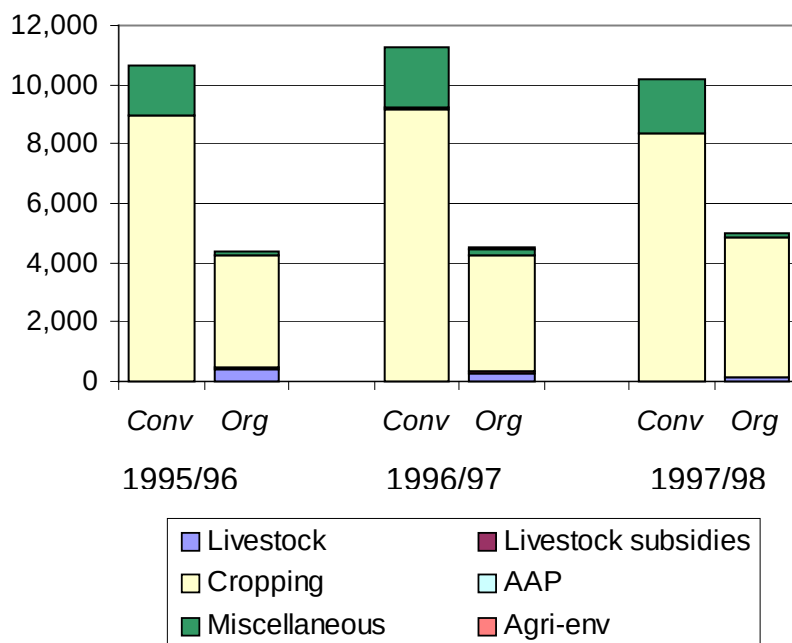
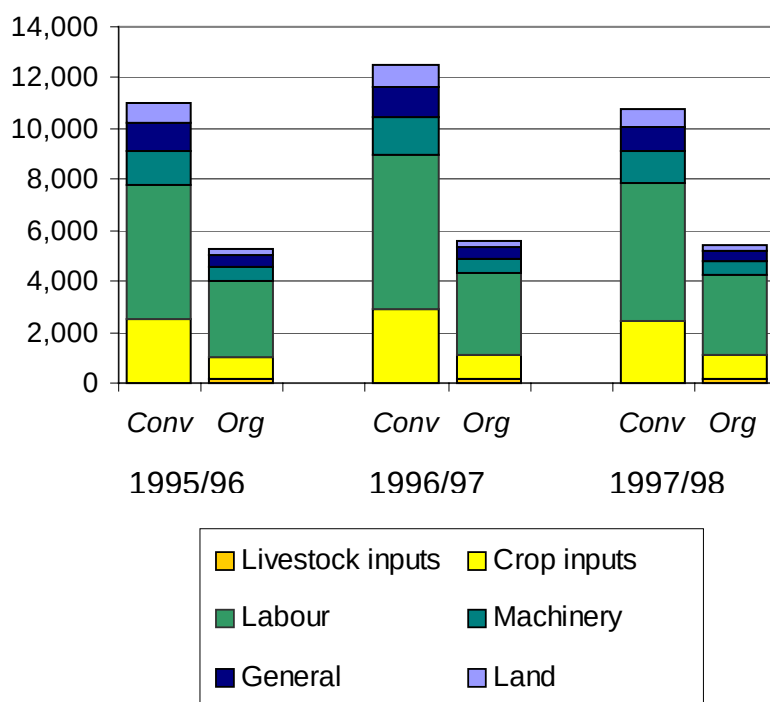


Figure 8 Input categories on conventional and organic horticultural holdings, (£/ha), 1995/96 - 1997/98



Incomes

Figure 6 illustrates that the average net incomes per farm for organic and conventional holdings were similar each year (organic NFI/farm 91%, 99% and 108% of conventional NFI for 1995/96, 1996/97 and 1997/98 respectively). The decline in incomes in 1996/97 for both farming approaches related to increased input costs rather than reduced outputs. The high

level of farmer and spouse labour on organic holdings (which averaged £2,213/ha over the three years) resulted in negative MII in each year. The combination of increased output and reduced input costs in 1997/98 lead to an improvement in income on the organic holdings (Figure 6 and Table 5 and 2A).

Discussion

The difference between NFI and MII income measures illustrates the relatively high dependency of both organic and conventional horticultural holdings of this size on farmer and spouse labour.

Over the three years, inputs amounted to an average of 80% of farm outputs on the conventional holdings, whereas the proportion of whole-farm inputs to outputs was 70% on the organic holdings; this may indicate the value of the unmeasured contribution of the costs and benefits of the fertility building land on the organic holdings.

On the organic farms the capital invested (in equipment, glasshouses and livestock) at an average of around £10,000 was considerably lower than the conventional cluster investment of £15,600.

It should be noted that the organic holdings presented in this sample are not representative of the larger, field scale, vegetable operations entering conversion in the late 1990s and their performance does not reflect the potential of larger operations.

7. Dairy farms

For detailed results see Appendix 1, Table 3A, page 60.

Sample

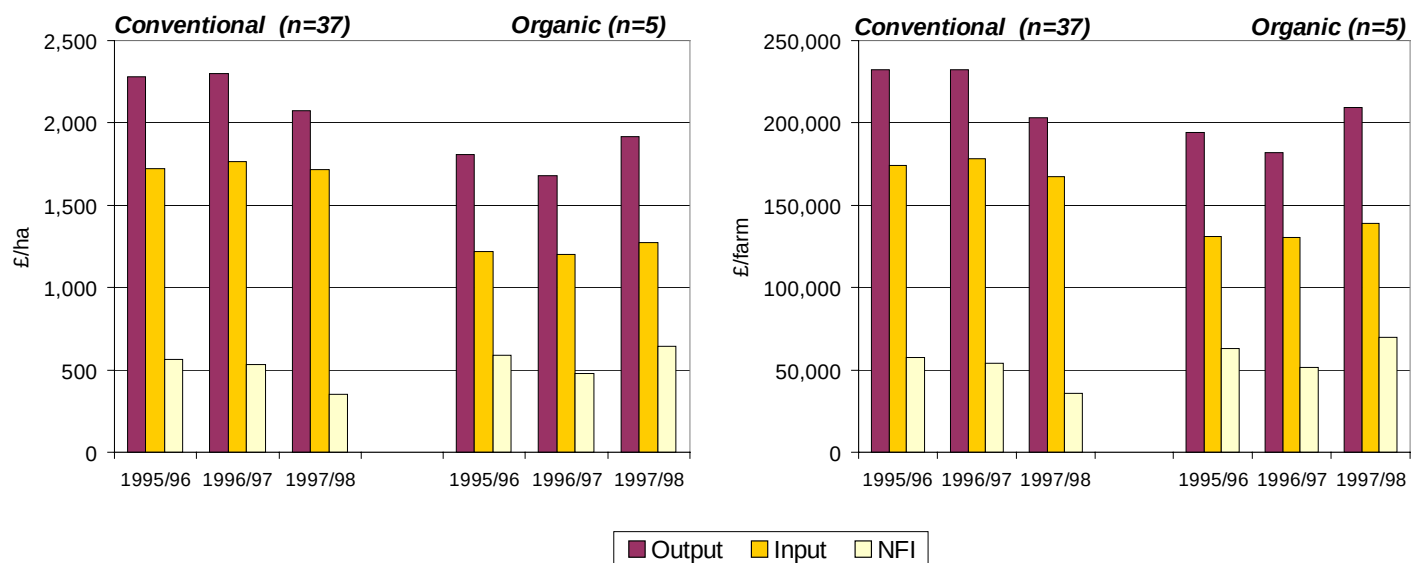
The organic sample farm average size and land utilisation is similar to the conventional farms; and inputs, outputs and NFI, charted on the whole farm basis for both farming approaches, are also similar to the same series shown per hectare of UAA (Figures 9 and 10).

All the organic farms in the sample had finished conversion by the start of the reporting period, and four of the five sold organic milk in 1995/96. The fifth started selling organic milk in 1996/97. Three of the farms had some land under cereals, of which two grew grain primarily for stock feed. Herd size ranged from 42 to 270 cows and two farms had breeding sheep enterprises.

Table 6 Summary data for dairy farms (£/ha), 1995/96 – 1997/98

	1995/96		1996/97		1997/98	
	Conv.	Org.	Conv.	Org.	Conv.	Org.
UAA	102.7	107.2	101.4	108.2	101.2	109.0
Livestock outputs	2,110	1,615	2,099	1,492	1,829	1,670
Livestock subsidies	16	7	20	5	17	2
Cropping outputs	72	75	92	70	80	105
Arable area payments	20	12	24	18	28	23
Miscellaneous	41	65	53	61	56	80
Agri-env. payments	1	35	1	35	1	39
TOTAL OUTPUTS	2,259	1,808	2,289	1,681	2,010	1,918
Livestock inputs	614	484	592	390	547	407
Crop inputs	157	44	176	38	155	34
Labour	395	279	410	321	426	334
Machinery	328	233	327	205	330	273
General	142	109	153	135	147	134
Land	207	173	237	212	252	203
TOTAL INPUTS	1,842	1,321	1,895	1,301	1,858	1,385
Add paid management	0	4	4	4	4	4
MII	417	491	398	384	156	537
NFI	563	587	532	477	354	641
ONI	552	592	517	497	346	614
Cash Income	766	674	775	554	520	714

Figure 9 **Outputs, inputs and NFI on dairy farms (£/ha and £/farm), 1995/96 - 1997/98**



Outputs

The decline in outputs on conventional farms in 1997/98 was largely due to the declining milk price. Average price achieved in the 1997/98 was 21.5ppl compared with 25ppl for the previous two years. In contrast, the average price for organic milk over the three years increased from 27.6ppl in 1995/96 to 29.4ppl in 1997/98 (see Table 10). Conventional farms had higher average yields per cow, and combined with the higher numbers of dairy cows and stocking rates, this produced greater dairy output per farm for the first two years. Only in the third year, with the reduction in the conventional milk price, and increase in the organic price, were dairy outputs from organic farms higher than conventional.

Organic farms received more agri-environmental payments than conventional. Organic aid scheme money received by one farm accounted for the average figure of over £35/ha shown as received by the organic group.

Dairy enterprise output on organic farms (excluding quota) increased by nearly 20% in 1997/98 relative to 1996/97, partly as a result of higher output per cow and higher prices for organic milk. Output from other livestock enterprises declined, while output from crops increased. The overall result was a 15% increase in total output per hectare.

Inputs

Total inputs per hectare remained relatively stable for both farming approaches over the three-year period. In 1996/97 livestock input costs on organic farms were lower because of a reduction in expenditure on feeds other than purchased concentrates; at the same time there was an increase in paid labour costs (and a reduction in the amount of unpaid labour used) bringing labour costs more in line with the conventional farms, and this was maintained in 1997/98.

Conventional dairy farms had higher expenditure on all input groups shown in Table 6, especially livestock inputs. Table 3A shows higher inputs on purchased concentrates and veterinary costs; however, the organic dairy farms had higher 'other livestock costs' per farm and per hectare each year. Higher machinery costs, especially depreciation (see Table 3A),

on conventional farms, reflect the overall higher investments in tenant's capital on conventional farms.

Figure 10 Output categories on conventional and organic dairy farms (£/ha), 1995/96 - 1997/98

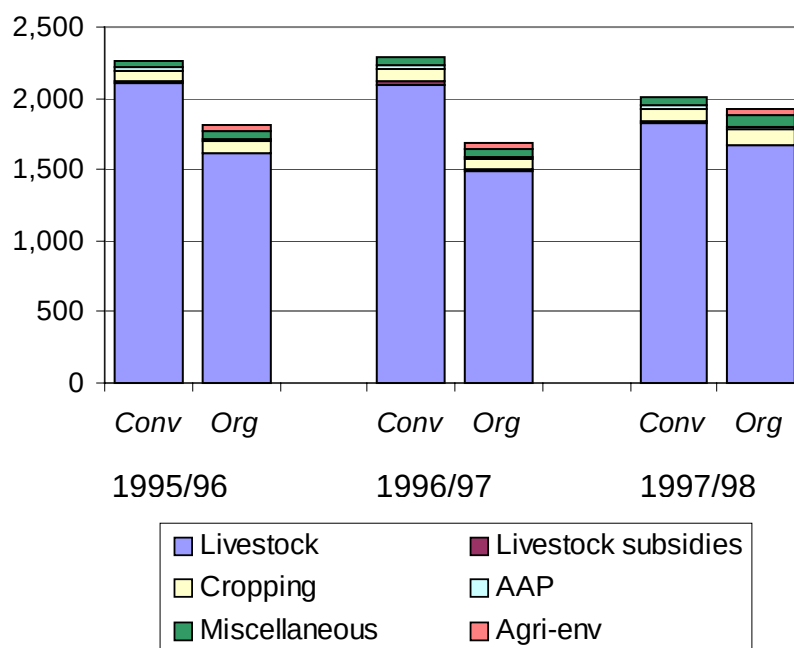
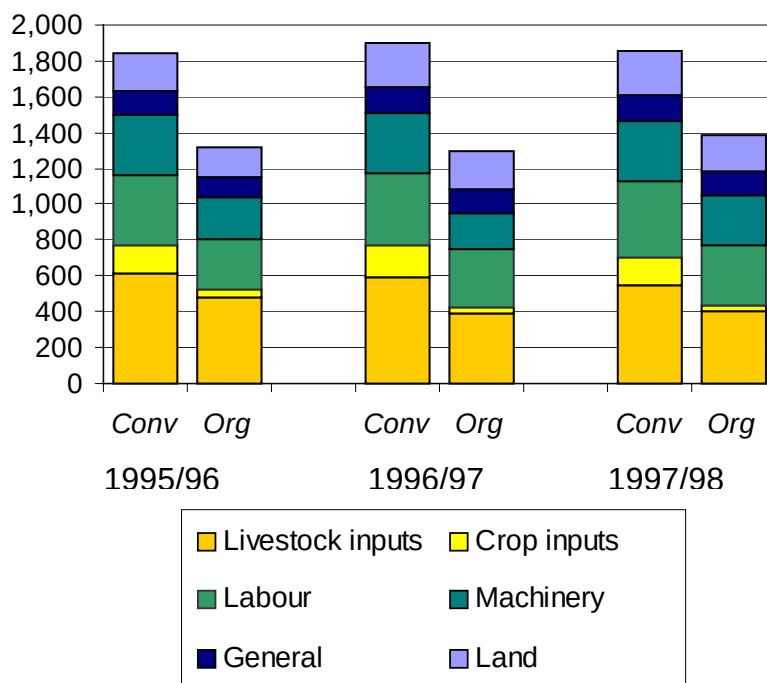


Figure 11 Input categories on conventional and organic dairy farms (£/ha), 1995/96 - 1997/98



Income

The changes in outputs and inputs (see Figures 9, 10, 11 and Table 6) resulted in a slight decrease in income measures for organic farms in 1996/97 relative to 1995/96. On organic

farms in 1997/98 the average milk yield per cow increased, which, combined with an increase in price, increased revenues to above 1995/96 levels. On conventional farms there was a slight increase in revenues in 1996/97, but a greater increase in costs, resulting in an average 6% decline in NFI/ha. The decrease in the conventional milk price in 1997/98 caused a further decline in conventional farm incomes.

Discussion

Organic dairy farms were less densely stocked than conventional farms. The stocking rate (GLU/effective forage hectare) on the conventional farms was stable during this period, at around 2.2 GLU/eff.for.ha., whereas it declined slightly on organic farms, from 1.7 to 1.56, due to minor changes in land use and total land area.

The price premium achieved for organic milk was around 10% in 1995/96. By 1997/98 conventional milk prices had dropped, and organic milk prices increased, effectively being de-coupled from the conventional milk price, so that in the third year organic farmers achieved 36% over the conventional milk price. Stocking rates of around 36% higher and the leasing in of quota on the conventional farms, with similar yields per cow, resulted in similar dairy output (net of quota) per hectare in 1997/98 (£1,565/ha organic, £1,580/ha conventional). With lower variable and fixed costs, this resulted in greater relative profitability for the organic farms in the third year. There was some evidence of an increase in machinery investment and cash balances during 1997/98, and organic farms achieved 40% return on tenant's capital, compared with the conventional farmers' return of only 7%.

8. Dairy farms (in conversion)

For detailed results see Appendix 1, Table 4A, page 66.

Sample

The sample of dairy farms converting between 1995/96 and 1997/98 comprised one large mixed farm, one newly established farm being converted from mainly arable (by an experienced dairy farmer) and three specialist dairy farms. For the converting group, the 1995/96 results are those of the last year of conventional production (hence shown as 'pre-c', *pre-conversion*, on the figures). The converting group (*c'ting*) had more land under cereals and less grassland than the conventional farms; but with an average of 77 cows per farm in 1995/96, the converting farms started with a lower stocking rate compared with the conventional farms with an average of 132 dairy cows. In 1995/96 the farms about to convert achieved 5,500 l/cow, compared with the conventional group average of 5,750 l/cow.

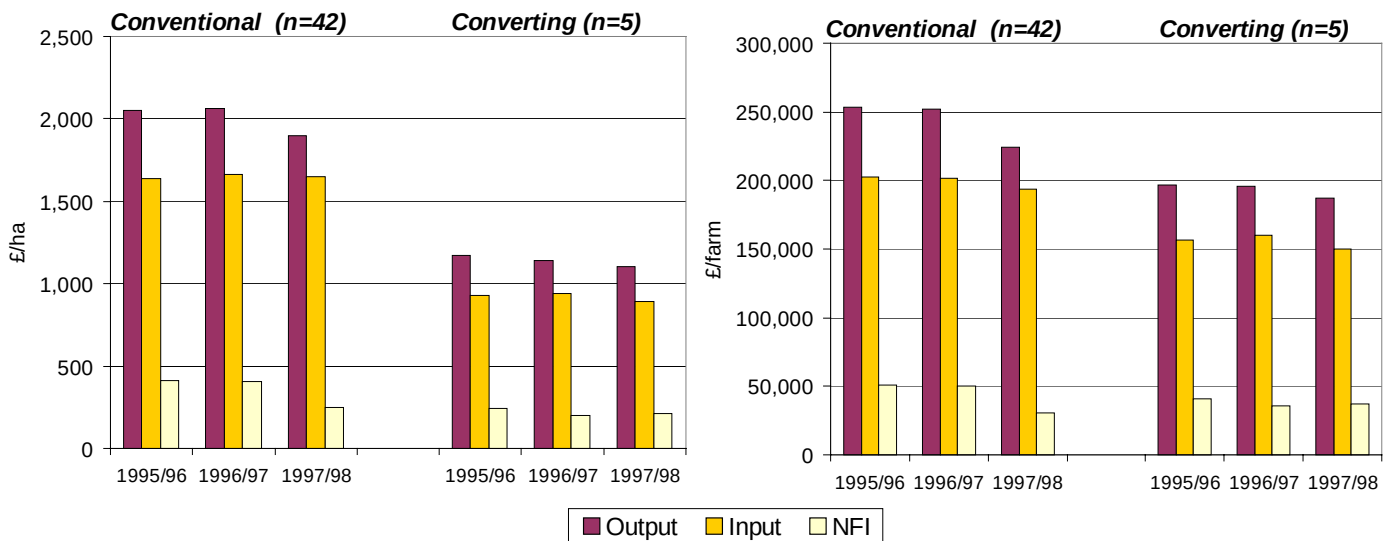
By 1997/98 three of the farms were under entirely organic management, and two sold organic milk towards the end of the year; the mixed dairy farm had not started converting the arable enterprises.

The size of the converting mixed-dairy farm means this farm has a large influence on the results from this group.

Table 7 Summary data for conventional dairy farms and dairy farms converting to organic (£/ha), 1995/96 – 1997/98

	1995/96		1996/97		1997/98	
	Conv.	Pre-conversion	Conv.	C'ting	Conv.	C'ting
UAA	125.0	167.5	123.4	171.7	122.9	171.7
Livestock outputs	1,838	743	1,809	679	1,589	678
Livestock subsidies	23	24	27	35	26	25
Cropping outputs	97	266	113	254	103	215
Arable area payments	30	114	36	128	42	121
Miscellaneous	39	17	56	43	65	40
Agri-env. payments	0	12	1	2	2	9
TOTAL OUTPUTS	2,027	1,176	2,042	1,141	1,827	1,088
Livestock inputs	561	228	557	235	506	209
Crop inputs	150	147	158	139	165	103
Labour	388	207	385	205	403	214
Machinery	272	190	283	175	288	192
General	144	64	145	83	142	75
Land	212	151	226	161	246	163
TOTAL INPUTS	1,728	988	1,753	998	1,750	956
Add paid management	0	0	4	0	5	0
MII	299	188	293	143	82	132
NFI	410	243	405	207	250	215
ONI	445	252	421	198	278	209
Cash Income	649	296	643	289	404	268

Figure 12 Outputs, inputs and NFI on conventional and converting dairy farms, (£/ha and £/farm), 1995/96 - 1997/98



Outputs

The average total outputs on farms going into conversion were similar in 1995/96 and 1996/97 despite a reduction of dairy outputs, due to a reduction of expenditure on quota leasing and an increase in miscellaneous outputs compensating for the average decreases in cattle and by-product outputs. In contrast to the fully organic dairy farms which saw dairy output increase by nearly 20% in 1997/98, dairy output on converting farms remained similar in 1997/98. Although milk yields remained almost static over the three years, milk sales per cow dropped due to the fall in conventional milk price from an average of 24.8p/litre in 1995/96 to 22.2p/litre in 1997/98. Most of the milk sold had not achieved organic status in 1997/98. The fall in milk price was counteracted in part by revenues from quota leasing. Output from crops (excluding subsidies) also fell, by 18.5% per farm on average, but small increases elsewhere meant that average overall converting farm output fell by 5% between 1995/96 and 1997/98.

Inputs

Other increases and decreases in inputs, some of which may be expected in converting farms (increasing seed expenditure, decreased fertiliser expenditure) resulted in a slight average increase in inputs in 1996/97 compared to the last conventional year. In 1997/98, reduced feed, fertiliser and crop protection inputs led to a small (4%) overall reduction in costs.

Figure 13 Output categories on conventional and converting dairy farms (£/ha), 1995/96 - 1997/98

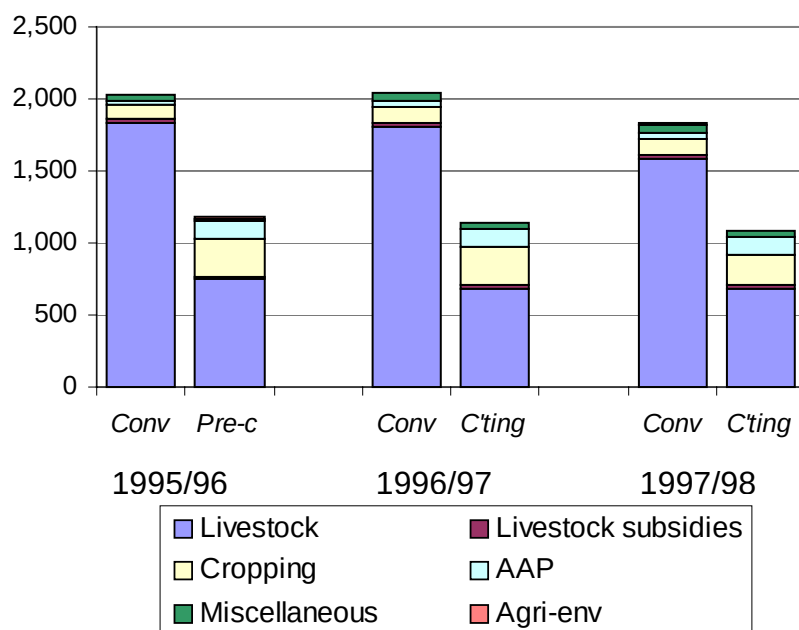
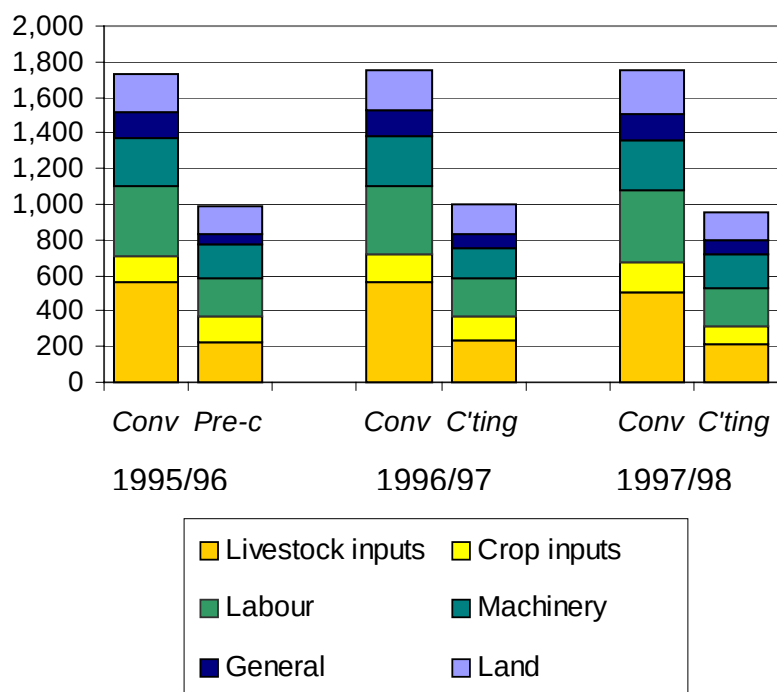


Figure 14 Input categories on conventional and converting dairy farms (£/ha), 1995/96 - 1997/98



Incomes

Despite the change to organic management in 1996/97, outputs were maintained, but higher inputs resulted in a fall in average MII and NFI compared with 1995/96. In 1997/98 MII on the converting farms fell again (8%) but NFI rose by 4% compared with the previous year, NFI being 12% lower than 1995/96, the last year in conventional farming.

The incomes of the conventional dairy farms followed a similar pattern as the conventional group selected to match the fully organic dairy farms (see page 22), with similar average incomes in 1996/97 and reduced incomes in 1997/98.

Discussion

Very different output/input ratios for the cropping on the conventional and converting farms relates partly to the smaller average area under cereals on the conventional dairy farms, but is largely due to the inclusion of fertiliser and inputs for forage in the 'crop inputs' category in Table 7.

Table 4A indicates an increased use of homegrown concentrates and relative reduction in purchased concentrates on the converting farms, which is probably a reflection of the conversion process, as greater reliance on homegrown cereals would normally be expected after conversion.

The similarity in land use over the three study years reflects the low level of structural changes in these converting farms. Also of significance is the maintenance of dairy cow numbers and milk output (see Table 4A), albeit at the expense of 'other' cattle and sheep numbers, resulting in a drop in average stocking rates from 1.64 to 1.38 GLU per effective forage hectare.

Organic milk sales by two of the converting farms in the last year ameliorated the effect of falling conventional milk prices on the results of the converting group. In 1997/98 most of the forage land management was organic on the converting farms, with resultant crop input savings, but livestock management was still conventional on three of the converting farms, so that livestock inputs were not dramatically reduced in the last year. The reduction in incomes for both groups relates to falling conventional prices for milk and livestock.

9. Cattle and sheep farms

Lowland cattle and sheep

For detailed results see Appendix 1, Table 5A, page 72.

Sample

The organic and conventional farms both had an average of around 110 livestock units. Organic farms had more land under cereals than conventional, and similar amounts of grassland.

It should be noted that many of these farms, both organic and matched conventional, were at the smaller end of the business size scale in terms of European Size Units. The organic sample also included some new entrants to farming, who had to gain farming experience at the same time as converting their farms to organic production. Although all land was being managed organically in 1996/97 and 1997/98, due to the time taken to convert livestock after land conversion, livestock sales did not qualify for premiums on one of the farms in any of the study years (although this farmer compensated for the lack of organic premium by selling through the farm shop in the third year).

Table 8 Summary data for lowland cattle and sheep farms (£/ha), 1995/96 – 1997/98

	1995/96		1996/97		1997/98	
	Conv.	Org.	Conv.	Org.	Conv.	Org.
UAA	90.5	96.3	91.1	96.2	91.0	96.0
Livestock outputs	483	592	497	579	430	590
Livestock subsidies	214	101	225	101	190	84
Cropping outputs	81	139	88	143	69	154
Arable area payments	30	67	27	69	30	64
Miscellaneous	52	37	64	36	52	28
Agri-env. payments	26	30	27	40	33	33
TOTAL OUTPUTS	886	967	929	968	804	953
Livestock inputs	208	214	226	203	182	186
Crop inputs	62	29	77	44	76	46
Labour	223	282	230	298	235	329
Machinery	142	196	145	188	149	203
General	78	111	83	121	75	121
Land	146	201	145	219	143	210
TOTAL INPUTS	859	1,033	904	1,073	860	1,094
Add paid management	0	25	0	33	0	35
MII	27	-42	25	-71	-55	-107
NFI	157	19	155	-14	96	-33
ONI	171	87	174	27	120	14
Cash Income	314	194	303	285	207	101

Figure 15 Outputs, inputs and NFI on lowland cattle and sheep farms (£/ha and £/farm), 1995/96 - 1997/98

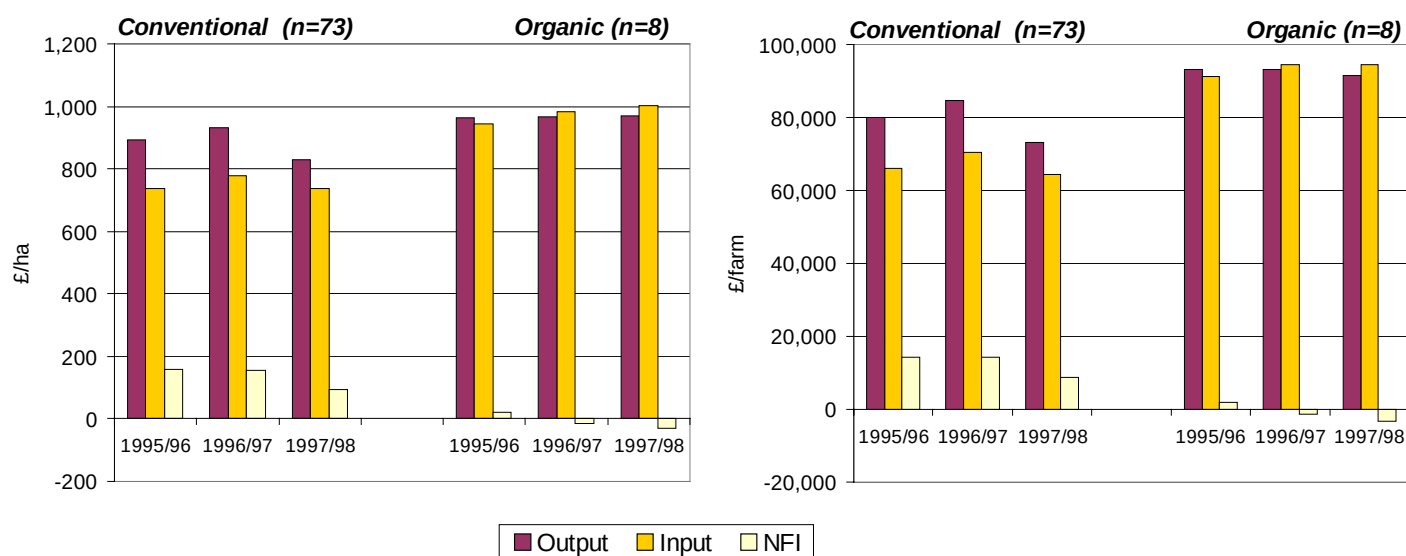


Figure 15 illustrates the higher levels of outputs and inputs on the organic, compared with conventional, farms and the critical nature of the balance between them on organic farms.

Outputs

On conventional farms, the decline in output from cattle in 1996/97 has been compensated by increased output from sheep enterprises, whereas on the organic farms cattle output increased and sheep output declined slightly in 1996/97. Each year direct livestock outputs per hectare on the organic farms were greater than the conventional, but livestock subsidies on organic farms were half those received on conventional farms, bringing overall livestock outputs to a similar level from each farming approach. Reasons for the difference in subsidies are not clear, they partly relate to one farm receiving no suckler cow payments due to its dairy enterprise. Also, although having similar stocking rates, the organic farms retained relatively more young stock per breeding animal, (possibly due to the lack of organic store markets) and the conventional farms averaged 10 more suckler cows, and over 100 more breeding ewes per farm than the organic farms (hence qualifying for the relevant headage payments).

Inputs

Livestock inputs per hectare on organic farms were similar to those on conventional farms, although all categories of overhead costs were higher on organic farms. Each year the difference between labour inputs to the two farming approaches increased. The detailed breakdown in Table 5A (Appendix 1) indicates that in 1997/98, organic farms used 227% of conventional farms paid and unpaid labour (excluding farmer and spouse labour). Costs for both farming approaches were fairly static over the three years; on organic farms increases in paid labour absorbed reductions in livestock inputs.

General farming costs include professional charges and inspection fees; the higher general costs on the organic farms partly relate to one new farm using a very high level of professional services, but also to inspection charges. Another possible explanation would be a lack of tight management on these new organic farms, but this is difficult to substantiate.

Figure 16 Output categories on conventional and organic lowland cattle and sheep farms (£/ha), 1995/96 - 1997/98

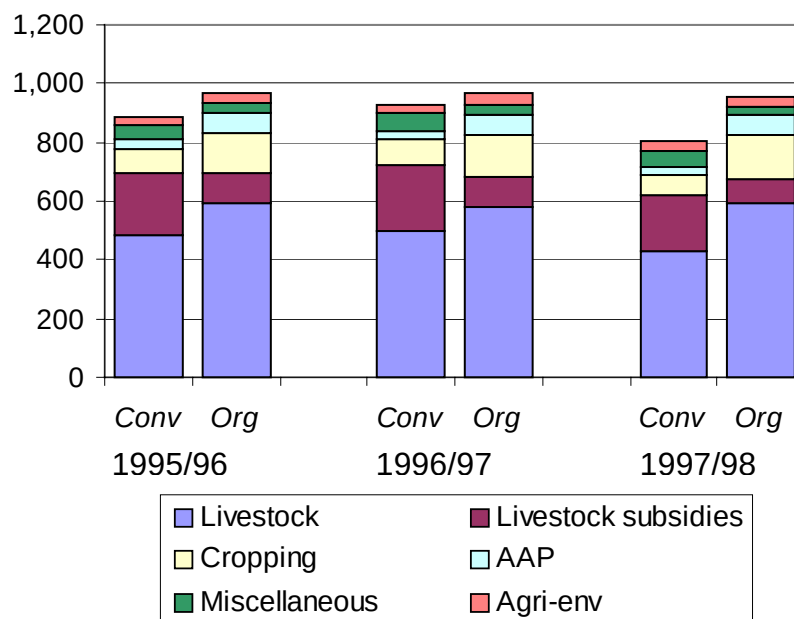
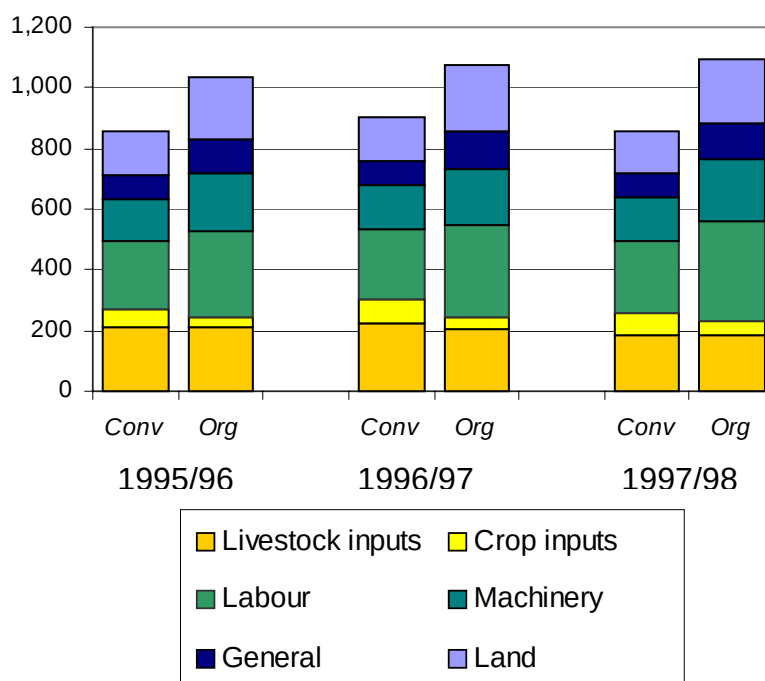


Figure 17 Input categories on conventional and organic lowland cattle and sheep farms (£/ha), 1995/96 - 1997/98



Incomes

Despite relatively static outputs and inputs, the overall income situation for organic farms worsened over the three year period, with negative MII and NFI values being recorded, and ONI barely positive in 1997/98. Figures for the organic groups are severely affected by the results of one farm in particular whose poor results depressed the average income results by around £55/ha in 1997/98. Cash income fell most dramatically – valuation changes and an

increase in credit balances explain most of the differences between this and the other income measures. The average NFI on the conventional farms was similar in 1996/97 to the previous year (£155/ha), with a 32% decrease the following year.

Discussion

Very poor profitability was achieved by this, largely inexperienced, group of organic farmers. Even the best performing (by NFI) pure cattle and sheep farm failed to achieve a positive return on tenant's capital in 1997/98, despite being farmed by an experienced farmer. If the one farm that had a dairy enterprise, and the especially poorly performing farm are excluded, NFI over the three years was -£12/ha, £21/ha and -£46/ha in 1995/96, 1996/97 and 1997/98 respectively. Excluding the three most poorly performing farms in each year (by NFI), NFI ranged between £45 and £59/ha over the three years – a NFI of £7,800 per farm from which to reward the farmer and spouse for their labour and investments. The level of labour costs on the organic farms was considerably higher than on conventional, and Table 8 shows that each category of fixed costs was greater on organic farms each year; organic farm general costs averaged £3,500 - £4,000 more per farm than conventional.

LFA cattle and sheep

For results see Appendix 1, Table 6A, page 79.

Only one year's data is shown for organic LFA farms. Both outputs and inputs are lower than for the lowland cattle and sheep farms, on a per farm and a per hectare basis. For all income measures the LFA farms fared worse than all other organic farm types.

Only two hill farms studied in 1995/96 are represented in the 1997/98 group, so it is not possible to show an identical sample of organic farms over three years whilst adhering to the confidentiality requirements of MAFF (data for no less than five farms may be presented). As the clustering procedure for all organic farms was carried out to match the farms studied in 1995/96, no conventional comparisons are available for this group.

10. Mixed farms

For detailed results see Appendix 1, Table 7A, page 82.

Sample

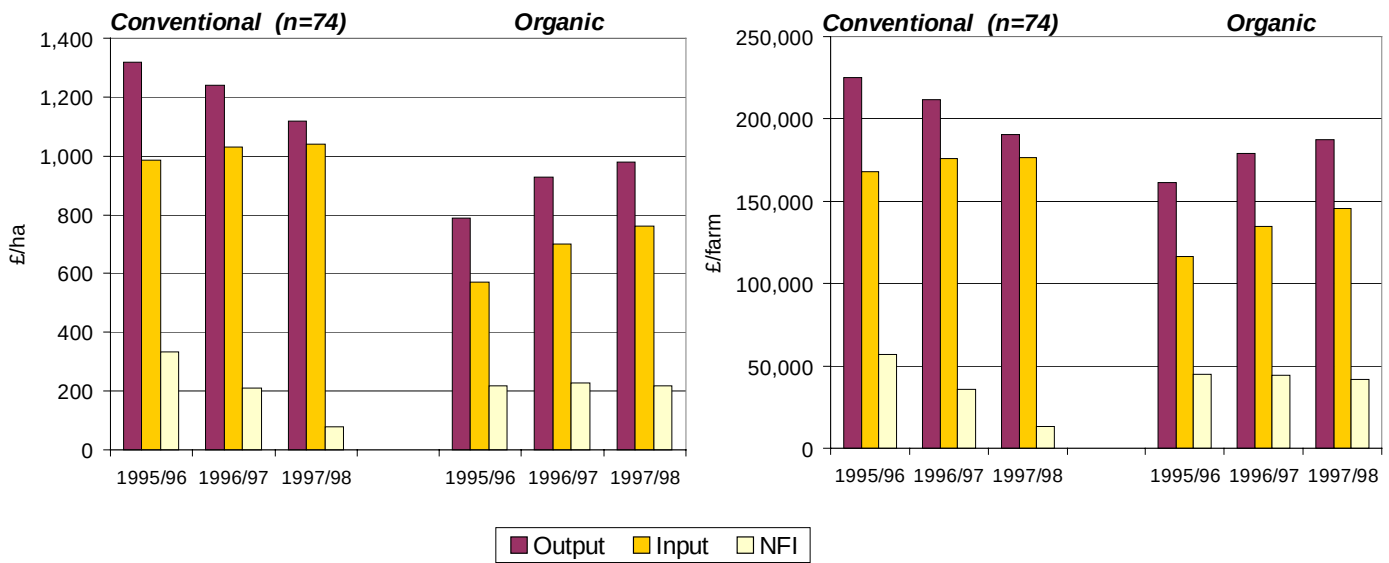
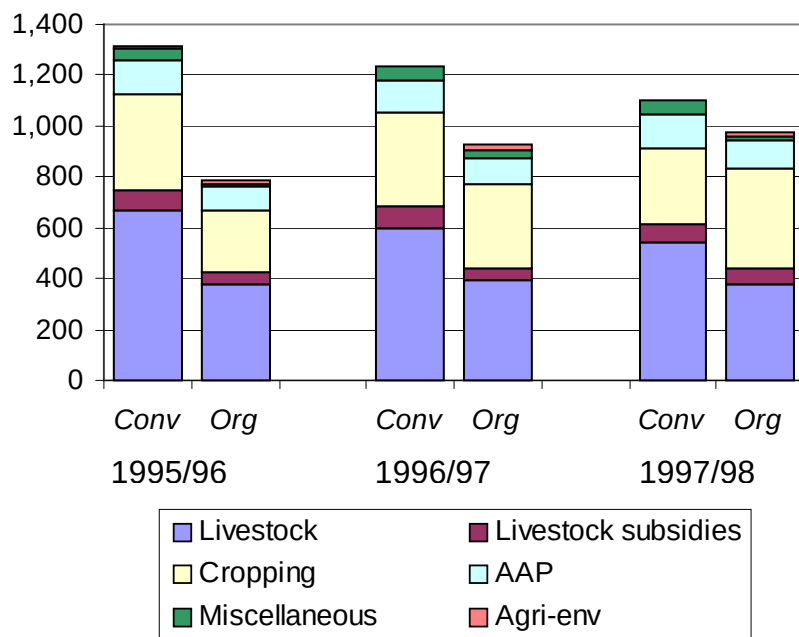
The organic mixed farm group included two with dairy enterprises and four with vegetable enterprises. Only one of the farms had no cattle enterprises, and one had no sheep. The smallest farm was 10 hectares, and four farms were between 45 and 90 hectares, the other three between 350 and 520 hectares of UAA. One farm maintained around 30% of UAA in conventional cereals.

Table 9 Summary data for mixed farms (£/ha), 1995/96 – 1997/98

	1995/96		1996/97		1997/98	
	Conv.	Org.	Conv.	Org.	Conv.	Org.
UAA	171.6	204.5	171.5	19.26	172.7	191.6
Livestock outputs	665	374	600	390	546	374
Livestock subsidies	79	48	81	54	69	66
Cropping outputs	381	246	372	328	300	394
Arable area payments	130	94	125	98	130	113
Miscellaneous	53	10	56	36	55	15
Agri-env. payments	3	18	3	23	3	17
TOTAL OUTPUTS	1,311	789	1,236	929	1,102	979
Livestock inputs	270	95	262	128	256	94
Crop inputs	147	49	165	85	180	85
Labour	227	164	235	176	252	241
Machinery	175	139	187	173	189	196
General	73	48	81	49	77	53
Land	156	115	164	140	153	145
TOTAL INPUTS	1,047	609	1,094	750	1,106	814
Add paid management	3	4	3	5	3	5
MII	267	185	145	184	-1	171
NFI	332	219	209	229	78	218
ONI	360	250	251	237	110	281
Cash Income	472	325	423	311	289	322

Outputs

The increase in NFI in 1996/97 on organic farms was due to a larger increase in outputs than the increase in inputs. The most notable increase in output in 1997/98 on organic farms was in main crops output relating to a large increase in area under cereals after 1996/97 on one of the larger farms, and increased yields on those hectares. A doubling of maincrop outputs over the three years on one of the other large farms (from a 33% increase in cropping area) related to an increase in cash crops, including field vegetables, and decrease in cereal area.

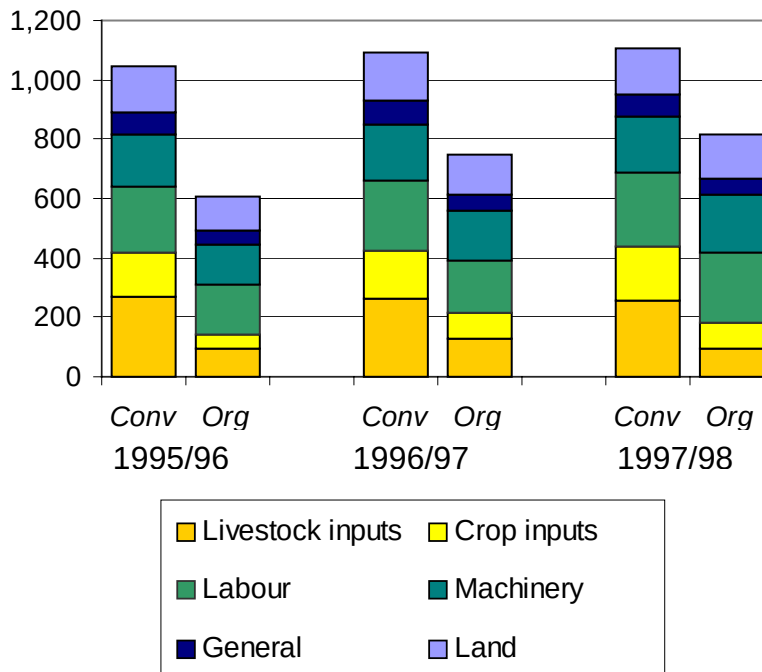
Figure 18 Outputs, inputs and NFI for mixed farms (£/ha and £/farm), 1995/96 – 1997/98**Figure 19** Output categories on conventional and organic mixed farms (£/ha), 1995/96 - 1997/98

Inputs

On the organic farms most categories of inputs showed increased expenditure each year. The relatively high livestock inputs in 1996/97 related to increased expenditure on purchased concentrates on the two dairy farms in that year. The highest overall increase on organic farms was in labour charges (47%); paid labour costs increased by 74% in 1997/98 compared with 1995/96, although there was an overall slight reduction in casual labour over the same period. Over the same period labour charges on conventional farms increased by 11%, due to an increase in paid labour. In 1997/98 the organic farms used 0.5 of a labour unit more per

farm than the conventional farms. All organic farms, bar one, increased their expenditure on seeds over the period.

Figure 20 Input categories on conventional and organic mixed farms (£/ha), 1995/96 - 1997/98



Incomes

Compared with 1995/96, the conventional farms NFI declined by 37% in 1996/97, and declined a further 39% in 1997/98 as a result of increasing inputs and decreasing outputs. The average total NFI on organic farms decreased slightly in 1996/97 (although incomes per hectare increased by 5% due to a reduction in grassland on one of the larger farms); average whole farm incomes decreased further in 1997/98 and incomes per hectare returned to 1995/96 levels.

Discussion

Tenant's capital, lower on organic than on conventional farms, increased each year on the organic farms, reflecting increases in both machinery and crop valuations. One farm reduced overall UAA in 1996/97, but maintained a similar cropping area, so that the average cropping output for all farms, when shown by hectare of UAA, indicates a relatively higher increase (30%) than the whole farm figure (22%).

The conventional mixed farms had higher proportions of their land in cropping and higher stocking rates of grazing livestock units per forage hectare, but, despite this higher intensity, the average return on tenants' capital was zero in 1997/98, having dropped from 22% in 1995/96. In contrast, the average return on organic farms was 19% in 1997/98 having decreased from 29% in 1995/96 due to the increase in tenant's capital.

11. Gross margins

Tables 10 to 22 present gross margin results for specific livestock and crop enterprises from the organic study farms from 1995/96 to 1997/98. Where gross margin data are not shown for crops in some years, it is because less than five farms in the study grew the crops in those years, or data were insufficiently reliable. The suckler cow table includes one farm with a dairy youngstock rearing enterprise, and the lowland sheep category includes one farm that is nominally in an LFA area but has the characteristics and opportunities of a lowland farm.

The dairy gross margin table (Table 10) includes data from farms that were not classified as pure dairy farms (see Appendix 2), but had organic dairy enterprises.

Separate gross margin tables are presented for suckler cows (Table 12) and finishing beef (Table 13) and for lowland (Table 14) and upland sheep (Table 15). Care should be taken in assessing the suckler and finishing beef gross margins with standard farm management projections. Some 24-month beef figures base the costs on the purchase of weaned calves at market, whereas the figures in Table 13 take in calves at 12 months (at market price) from the suckler enterprise. Therefore, the suckler enterprise (Table 12) carries the costs of rearing the calves to 12 months, and is credited with the greater value (based on market price) of their transfer to the beef enterprise at that point. As different systems are employed on each farm, assumptions were made concerning the split of feed and veterinary costs to the different cattle enterprises. These assumptions are listed in the tables.

Gross margin figures for crops are for certified organic enterprises, but livestock gross margins are included in some cases where management is deemed to be organic but not certified. It should also be noted that the gross margin tables do not necessarily reflect data from the same farms in both years.

Dairy

The organic dairy enterprises increased yields and stocking rates and reduced concentrate use, which, combined with increased premium prices, resulted in a significant increase in gross margins per cow (and per hectare) in 1997/98.

Table 10 Organic dairy gross margins (£/cow), 1995/96 - 1997/98

	1995/96	1996/97	1997/98	1997/98	
				Low 50% ¹	Top 50% ¹
No. of farms	9	9	9	5	5
Size of dairy herd - average number	119	125	126	163	82
Milk yield (litres per cow)	5,361	5,227	5,510	5,578	5,475
LU per forage hectare	1.5	1.5	1.6	1.6	1.6
Milk disposals/yield (pence per litre)	27.6	28.0	29.4	29.2	29.5
Milk disposals ²	1,482	1,465	1,620	1,626	1,615
Sales and transfers out - calves	119	75	87	95	85
Sales and transfers out - bulls and cows	95	84	170	200	173
Net milk quota	35	22	-37	-86	29
Valuation change	30	0	-6	-4	-11
Less purchases and transfers in	181	156	163	205	163
Total outputs	1,580	1,489	1,671	1,626	1,728
Concentrates	203	209	163	164	172
Purchased bulk feed	13	18	7	9	4
Stock keep	2	1	0	0	0
Veterinary and medicines	39	35	36	38	33
Other livestock costs - dairy	179	142	163	182	152
Total variable costs	436	406	369	392	360
Gross margin before forage costs	1,144	1,083	1,301	1,234	1,368
Gross margin including forage costs	1,112	1,045	1,260	1,197	1,328
Margin over concentrates	1,279	1,255	1,448	1,462	1,427
Concentrates (t/cow)	1.28	1.09	0.94	1.08	0.91
Forage variable costs to dairy	31	38	41	38	39

1. Selected by gross margin before forage costs

2. Including milk to calves and farmhouse

In contrast to yields on organic farms, milk yields on the converting enterprises were static, while stocking rates fell, leading to lower output per hectare.

The high valuation change and purchases in 1996/97 are the results of a herd re-establishment on one of the farms; dairy cows had been sold off two years prior to the decision to convert to organic farming.

Two of the converting dairy enterprises had started selling organic milk, one at a premium, in the latter part of 1997/98; the others were largely under organic management, although not yet selling their milk at a premium. Three of the farms were able to generate income by leasing out unused quota. The decrease in concentrates fed and purchased bulk feed was

somewhat offset by increases in other dairy costs, resulting in a slight overall decrease in inputs, and a slight overall decrease in dairy gross margin per cow.

Table 11 Dairy gross margins for enterprises converting to organic production (£/cow), 1995/96 - 1997/98

	1995/96	1996/97	1997/98
No of farms	5	5	5
Size of dairy herd - average number	77	76	80
Milk yield (litres per cow)	5,496	5,400	5,524
L.U. per forage hectare	1.6	1.5	1.4
Milk disposals/yield (pence per litre)	24.6	24.0	21.4
Milk disposals*	1,353	1,298	1,181
Sales and transfers out - calves	79	75	64
Sales and transfers out - bulls and cows	121	91	171
Net milk quota	-57	-4	22
Valuation change	-23	162	-35
Less purchases and transfers in	157	352	227
Total outputs	1,317	1,270	1,176
Variable Costs			
Concentrates	259	201	174
Purchased bulk feed	7	15	3
Stock keep	0	0	0
Veterinary and medicines	37	38	37
Other livestock costs - dairy	104	87	113
Total variable costs	402	342	327
Gross margin before forage costs	915	928	849
Gross margin including forage costs	842	879	817
Margin over concentrates	1,099	1,097	1,006
Concentrate use (t/cow)	1.9	1.5	1.2
Forage variable costs to Dairy	72	49	32

* Including milk to calves and farmhouse

Beef

In 1997/98 suckler cow output was reduced due to the reduced value of sales, transfers out and culls, in line with experiences in the conventional sector. However, feed and sundry costs were also reduced, resulting in similar gross margins to the previous year.

Finishing beef output was also reduced in 1997/98 because of reduced subsidies and sales/transfers out, suggesting that many were not achieving significant premium prices. Feed and sundry costs fell sharply compared with 1996/97, leading to a small increase in gross margin per head.

Table 12 Suckler cows gross margins (£/cow), 1995/96 - 1997/98

	1995/96	1996/97	1997/98	1997/98	
	Average	Average	Average	Low 28%*	Top 28%*
No. of farms	20	21	18	5	5
No. of cows	36	39	42	30	61
Forage costs/LU	41	24	35	22	44
Subsidies ¹	110	177	183	181	197
Sales/transfers out ²	267	261	167	36	348
Cull stock ³	77	54	34	45	46
Replacement/transfers in	-157	-115	-65	-87	-13
Valuation changes	28	28	39	-76	25
Total outputs	326	406	358	99	602
Feed ⁴	17	58	29	11	19
Veterinary and medicines ⁵	10	13	16	17	11
Sundry ⁵	30	26	25	34	15
Total variable costs	58	97	70	62	44
Gross margin before forage costs	268	309	288	37	558
Gross margin including forage costs	224	272	252	19	517
Allocatable forage costs/cow ⁶	44	37	36	18	41

* Selected by gross margin before forage costs

Assumptions and notes:

1. Suckler Cow Premium (SCP) and Hill Land Compensatory Allowance (HLCA), 1st Beef Special Premium (BSP)
2. Calf and weaner sales and transfers out at 12 months
3. Cow and bull sales
4. Feed split 80:20 finishing beef:suckler cows
5. Costs split on a livestock unit basis (finishing beef:suckler cows)
6. Forage costs include forage costs to calves to 12 months.

Table 13 Finishing beef gross margins (£ per head), 1995/96 – 1997/98

	1995/96	1996/97	1997/98	1997/98	
	<i>Average</i>	<i>Average</i>	<i>Average</i>	<i>Low 42%*</i>	<i>Top 42%*</i>
No. of farms	12	14	12	5	5
Enterprise size (head)	39	40	33	34	36
Forage costs/LU	18	26	27	19	28
Subsidies	65	106	77	52	87
Sales/transfers	534	592	486	346	583
Transfers/transfers in	-254	-202	-229	-190	-194
Valuation changes	4	-57	48	-9	117
Total outputs	349	439	382	199	593
Feed ¹	79	134	79	96	57
Veterinary and medicines ²	7	9	11	16	8
Sundry ²	34	33	22	26	21
Total variable costs	120	176	112	138	86
Gross margin before forage costs	229	263	270	61	507
Gross margin including forage costs	210	246	255	49	495
Allocatable forage costs/head	19	18	15	12	11

* Selected by gross margin before forage costs

Assumptions and notes:

1. Feed split 80:20 finishing beef:suckler cows
2. Costs split on a livestock unit basis (finishing beef:suckler cows)

Sheep

Reduced subsidies and sales in lowland sheep enterprises led to reduced average outputs in 1997/98. In contrast, sales values for upland sheep flocks increased. Production costs were very similar to the previous years in both cases, so that gross margins varied in line with output changes.

Table 14 Lowland farms, breeding sheep gross margins (£/ewe), 1995/96 – 1997/98

	1995/96	1996/97	1997/98	1997/98	
				Low 33%*	Top 33%*
No. of farms	17	17	15	5	5
No. of Ewes	213	208	213	193	213
Forage costs/LU	32	12	15	7	34
Rearing %	n/a	111	142	126	148
Subsidies	21.8	15.1	13.0	12.2	15.0
Sales/transfers	53.9	60.8	42.9	22.0	54.4
Cull stock	8.5	7.0	6.7	5.2	11.7
Wool	4.0	3.8	3.3	4.5	4.0
Replacement	-5.4	-6.7	-9.8	-5.8	-6.6
Valuation changes	2.7	-1.7	10.8	3.9	13.3
Total output	85.4	78.3	66.9	41.9	91.8
Feed	10.0	11.7	9.7	11.9	7.2
Veterinary and medicines	3.3	3.6	4.5	3.3	5.1
Sundry	5.2	5.5	5.0	3.6	6.6
Total variable costs	18.6	20.8	19.2	18.9	18.9
Gross margin before forage costs	66.8	57.5	47.6	23.0	72.9
Gross margin including forage costs	62.1	55.8	45.6	22.0	68.7
Allocatable forage costs/ewe	4.8	1.5	2.0	1.1	4.3

* Selected by gross margin before forage costs

Table 15 Upland farms, breeding sheep gross margins (£/ewe), 1995/96 – 1997/98

	1995/96	1996/97	1997/98	1997/98	
				Low 50%*	Top 50%*
Farm No	7	10	10	5	5
No. of Ewes	440	443	356	414	298
Forage costs/LU	16	19	31	49	17
Rearing %	n/a	109	104	94	114
Output					
Subsidies	30.5	23.7	21.8	21.5	22.1
Sales/transfers	24.0	33.2	36.5	33.9	39.1
Cull stock	3.3	6.2	7.9	7.3	8.5
Wool	2.4	2.0	2.2	2.2	2.2
Replacement	-3.0	-4.5	-4.7	-4.2	-5.3
Valuation changes	2.4	2.4	2.0	-0.1	4.1
Total output	59.5	63.0	65.8	60.8	70.8
Variable costs					
Feed	3.2	6.5	6.1	6.0	6.1
Veterinary and medicines	3.3	2.7	3.2	2.7	3.7
Sundry	2.5	3.0	3.0	3.2	2.8
Total variable costs	9.0	12.2	12.3	12.0	12.7
Gross margin before forage costs	50.6	50.8	53.4	48.8	58.1
Gross margin including forage costs	45.7	49.0	50.4	43.0	56.7
Allocatable forage costs/ewe	4.8	1.8	3.0	5.8	1.4

* Selected by gross margin before forage costs

Crops

Twenty-one different crop enterprise gross margins were collected, but few crops had sufficient samples to give reliable results. Gross margins are presented for seven crops for the 1997/98 harvest year. It should be noted that the three years' gross margin figures for the different enterprises are not necessarily from the same farms. There was no clear pattern in yield changes between 1996 and 1997 crop harvests over the different enterprises. However, cereal prices received fell in 1997, in line with changes in the conventional sector, while prices for beans increased, reflecting strong demand. The data exclude subsidy income to enable production factors and price trends to be studied separately. For conversion to actual enterprise gross margins the relevant subsidy level can be added. The gross margin trends for crop enterprises are strongly influenced by the combination of yield levels and price received.

Table 16 Gross margins for winter wheat (£/ha), 1995/96 – 1997/98

	1995/96	1996/97	1997/98	1997/98	
	Average	Average	Average	Low 38%	Top 38%
No of farms	13	12	13	5	5
Size (ha)	37	36	39	13	54
Yield (t/ha)	3.7	4.6	4.0	3.4	4.2
Value (£/t)	217	217	180	152	191
Total outputs	806	991	716	514	810
Seeds	50	57	46	55	43
Fertilisers	4	4	0	2	0
Sprays	1	0	0	0	0
Other	3	2	3	7	2
Total variable costs	58	62	49	64	45
Gross margin	748	929	667	450	765

Table 17 Gross margins for spring wheat (£/ha), 1995/96 – 1997/98

	1995/96	1996/97	1997/98
No of farms	6	7	7
Size (ha)	12	21	17
Yield (t/ha)	2.7	3.0	3.3
Value (£/t)	214	204	176
Total outputs	583	608	577
Seeds	54	68	58
Fertilisers	0	1	2
Sprays	0	2	4
Other	0	2	11
Total variable costs	54	72	75
Gross margin	528	535	502

Table 18 Gross margins for winter oats (£/ha), 1995/96

	1995/96
No of farms	9
Size (ha)	12
Yield (t/ha)	3.8
Value (£/t)	155
Total outputs	584
Seeds	58
Fertilisers	6
Sprays	2
Other	2
Total variable costs	68
Gross margin	516

Table 19 Gross margins for spring oats (£/ha), 1995/96 – 1996/97

	1995/96	1996/97
No of farms	7	5
Size (ha)	21	17
Yield (t/ha)	3.8	4.0
Value (£/t)	157	153
Total outputs	596	615
Seeds	60	65
Fertilisers	24	15
Sprays	2	0
Other	29	2
Total variable costs	115	83
Gross margin	481	532

Table 20 Gross margins for spelt wheat (£/ha), 1995/96

	1995/96
No of farms	5
Size (ha)	8
Yield (t/ha)	3.2
Value (£/t)	137
Total outputs	446
Seeds	70
Fertilisers	0
Sprays	0
Other	1
Total variable costs	71
Gross margin	375

Table 21 Gross margins for spring barley (£/ha), 1996/97

	<i>1996/97</i>
No of farms	6
Size (ha)	6
Yield (t/ha)	3.7
Value (£/t)	174
Total outputs	650
Seeds	62
Fertilisers	0
Sprays	0
Other	1
Total variable costs	63
Gross margin	587

Table 22 Gross margins for potatoes (£/ha), 1996/97

	<i>1996/97</i>
No of farms	6
Size (ha)	4
Yield (t/ha)	25
Value (£/t)	216
Total outputs	5,298
Seeds	906
Fertilisers	0
Sprays	46
Casual labour	244
Other	751
Total variable costs	1,947
Gross margin	3,350

12. Appendices

Appendix 1 Detailed farm results

Table 1A. Results of cropping farms

Table 1A. Results of cropping farms				CONVENTIONAL									
				1995/96		1996/97		1997/98					
No of Farms				46, in 5 clusters of 5 to 11 farms									
ESU per farm				145		149		153					
Area organic or in conversion. (%)				n/a		n/a		n/a					
OUTPUTS, INPUTS & INCOMES				£/farm		£/ha		£/farm		£/ha			
OUTPUTS													
Dairy	output	0		0		0		0		13		0	
	net quota	10		0		0		0		0		0	
Other cattle	output	13,386		50		11,992		45		8,793		32	
	subsidies	2,849		11		4,292		16		4,109		15	
Sheep -	output	5,990		23		6,357		24		6,318		23	
	subsidies	2,482		9		1,380		5		1,313		5	
Other livestock		6,492		24		7,630		29		9,620		35	
Main crops	output	171,429		645		173,900		652		137,474		497	
	subsidies	57,337		216		56,099		210		56,486		204	
By-products, forage and cultivations		8,128		31		8,811		33		6,144		22	
subsidies (set-aside)		9,064		34		8,670		33		6,164		22	
Miscellaneous		7,007		26		9,311		35		12,294		44	
- organic grants		0		0		0		0		0		0	
- other agri-env.payments		2,630		10		2,640		10		2,831		10	
TOTAL OUTPUTS		286,805		1,079		291,083		1,092		251,559		909	
INPUTS													
Feeds	purchased concentrates	13,516		51		11,727		44		9,803		35	
	homegrown concentrates	1,517		6		1,284		5		1,082		4	
Purchased fodder, Tack and stock keep		819		3		711		3		929		3	
Veterinary and medicines		1,292		5		1,074		4		1,200		4	
Other livestock costs		2,702		10		2,801		11		2,722		10	
Seeds -	purchased and homegrown	12,360		47		12,254		46		11,758		42	
Fertilisers		18,026		68		19,673		74		21,075		76	
Crop protection		22,703		85		25,319		95		26,486		96	
Other crop costs		3,683		14		4,520		17		4,430		16	
Labour	farmer & spouse (manual only)	7,991		30		8,222		31		8,314		30	
	paid incl. paid management	30,570		115		31,752		119		35,244		127	
	unpaid	2,587		10		2,618		10		2,875		10	
	casual	2,936		11		2,959		11		3,522		13	
Machinery	contract	9,002		34		10,176		38		10,003		36	
	repairs	11,105		42		11,886		45		10,830		39	
	fuels	5,924		22		6,475		24		6,736		24	
	depreciation	23,000		87		24,998		94		25,921		94	
General farming costs		14,930		56		15,549		58		16,816		61	
Land expenses		6,158		23		5,397		20		4,320		16	
Rent		7,093		27		7,257		27		8,131		29	
Rental value		28,349		107		30,929		116		31,958		115	
TOTAL INPUTS		226,262		852		237,579		891		244,153		882	
Add back managerial input of paid manager		3,891		15		4,040		15		5,178		19	
MANAGEMENT AND INVESTMENT INCOME		64,433		243		57,545		216		12,584		45	
Add back farmer and spouse labour		7,991		30		8,222		31		8,314		30	
Deduct managerial input of paid manager		3,891		15		4,040		15		5,178		19	
NET FARM INCOME (inc. BLSA)		68,533		258		61,726		232		15,720		57	
NET FARM INCOME (excl. BLSA)		68,602		258		61,573		231		16,344		59	

Table 1A. Results of cropping farms

ORGANIC

		1995/96		1996/97		1997/98	
No of Farms		5		5		5	
ESU per farm		149		157		172	
Area organic or in conversion. (%)		71		74		78	
OUTPUTS, INPUTS & INCOMES		£/farm £/ha		£/farm £/ha		£/farm £/ha	
OUTPUTS							
Dairy	output	0	0	0	0	0	0
	net quota	0	0	0	0	0	0
Other cattle	output	19,312	52	20,758	55	13,482	35
	subsidies	5,686	15	6,803	18	8,116	21
Sheep -	output	2,224	6	2,621	7	1,825	5
	subsidies	668	2	458	1	463	1
Other livestock		164	0	-131	0	417	1
Main crops	output	145,090	389	161,292	425	132,820	349
	subsidies	63,949	172	68,255	180	58,375	153
By-products, forage and cultivations		14,504	39	17,302	46	4,654	12
subsidies (set-aside)		17,137	46	12,796	34	14,690	39
Miscellaneous		24,318	65	21,952	58	12,859	34
- organic grants		174	0	440	1	2,034	5
- other agri-env.payments		0	0	0	0	3,056	8
TOTAL OUTPUTS		293,226	787	312,546	823	252,792	664
INPUTS							
Feeds	purchased concentrates	1,661	4	1,570	4	2,122	6
	homegrown concentrates	1,982	5	2,625	7	1,282	3
Purchased fodder, Tack and stock keep		457	1	966	3	2,769	7
Veterinary and medicines		576	2	545	1	765	2
Other livestock costs		3,373	9	2,716	7	2,975	8
Seeds -	purchased and homegrown	19,558	52	19,045	50	12,502	33
Fertilisers		8,849	24	13,110	35	3,026	8
Crop protection		10,907	29	17,314	46	11,358	30
Other crop costs		1,820	5	3,365	9	2,482	7
Labour	farmer & spouse (manual only)	6,679	18	6,693	18	6,280	17
	paid incl. paid management	34,484	92	34,743	92	34,644	91
	unpaid	0	0	0	0	0	0
Machinery	casual	530	1	1,089	3	959	3
	contract	5,765	15	4,442	12	5,205	14
	repairs	13,883	37	15,487	41	14,698	39
	fuels	5,262	14	4,662	12	5,882	15
depreciation		22,658	61	30,397	80	29,613	78
General farming costs		23,019	62	20,554	54	23,348	61
Land expenses		10,385	28	6,980	18	6,313	17
Rent		20,708	56	20,083	53	20,048	53
Rental value		26,135	70	27,537	73	28,553	75
TOTAL INPUTS		218,689	587	233,922	616	214,824	565
Add back managerial input of paid manager		7,938	21	7,990	21	8,540	22
MANAGEMENT AND INVESTMENT INCOME		82,474	221	86,614	228	46,508	122
Add back farmer and spouse labour		6,679	18	6,693	18	6,280	17
Deduct managerial input of paid manager		7,938	21	7,990	21	8,540	22
NET FARM INCOME (inc. BLSA)		81,216	218	85,316	225	44,248	116
NET FARM INCOME (excL. BLSA)		81,198	218	85,316	225	44,248	116

Table 1A. Results of cropping farms

	CONVENTIONAL					
	1995/96		1996/97		1997/98	
INCOME MEASURES	£/farm	£/ha	£/farm	£/ha	£/farm	£/ha
NET FARM INCOME (excl. BLSA)	68,602	258	61,573	231	16,344	59
plus net rental value/imputed rent	27,807	105	30,275	114	31,275	113
minus occupier's expenses	1,492	6	1,266	5	1,217	4
minus interest payments	3,582	13	3,312	12	3,428	12
minus buildings & works depreciation	4,113	15	7,688	29	9,658	35
OCCUPIER'S NET INCOME	87,223	328	79,583	299	33,316	120
plus other imputed charges	2,473	9	1,171	4	4,449	16
plus fixed asset depreciation	27,112	102	32,686	123	35,579	129
minus valuation changes	1,950	7	4,304	16	-11,906	-43
CASH INCOME	114,858	432	109,136	409	85,250	308
TENANT'S CAPITAL - £ per farm	£/farm	£/ha	£/farm	£/ha	£/farm	£/ha
Machinery	117,668	443	121,506	456	127,392	460
Livestock	29,816	112	28,447	107	27,516	99
Crops	44,707	168	48,216	181	46,838	169
Stores	32,585	123	33,780	127	32,556	118
TOTAL	224,777	846	231,950	870	234,302	846
PERFORMANCE INDICATORS						
Stocking rate (LU per eff.ha)		0.21		0.24		0.22
GLU/forage effective hectare*		1.72		1.57		1.20
Owner Equity (%)		95%		95%		94%
ONI/Net worth (%)		7%		6%		2%
Return on tenant's capital (%)		29%		25%		5%
Return on all capital (%)		8%		7%		3%
Average business size (ESU)		145		149		153
Annual labour units		3.4		3.4		3.5
of which farmer & spouse		0.8		0.8		0.8
LAND UTILISATION - hectares per farm		ha		ha		ha
Cereals and cash crops		196.4		198.9		205.9
Roots, fodder and other crops		0.4		0.4		0.4
Total grassland		25.7		25.3		33.8
Fallow, land let and set aside		40.4		39.2		33.9
Rough grazing - sole (Effective ha.)		2.8		2.8		2.8
Utilisable agricultural area (Effective ha.)		265.7		266.6		276.8
Rough grazing - common (Effective ha.)		0.0		0.0		0.0
Woods, roads and buildings		7.7		7.9		6.1
TOTAL AREA (Actual ha.)		273.3		274.5		282.9
Effective forage area		28.9		28.4		37.0

* for conventional farms, pigs, poultry and other livestock are deemed to be non-grazing livestock

Table 1A. Results of cropping farms

		ORGANIC					
		1995/96		1996/97		1997/98	
INCOME MEASURES		£/farm	£/ha	£/farm	£/ha	£/farm	£/ha
NET FARM INCOME (excl. BLSA)		81,198	218	85,316	225	44,248	116
plus net rental value/imputed rent		26,135	70	27,496	72	28,059	74
minus occupier's expenses		9,746	26	1,975	5	0	0
minus interest payments				4,806	13	5,619	15
minus buildings & works depreciation		4,627	12	9,865	26	10,271	27
OCCUPIER'S NET INCOME		92,959	249	96,166	253	56,417	148
plus other imputed charges		6,021	16	4,092	11	2,181	6
plus fixed asset depreciation		30,971	83	57,508	152	40,639	107
minus valuation changes		12,208	33	13,045	34	-5,776	-15
CASH INCOME		117,744	316	144,721	381	105,013	276
TENANT'S CAPITAL - £ per farm		£/farm	£/ha	£/farm	£/ha	£/farm	£/ha
Machinery		109,563	294	126,738	334	136,001	357
Livestock		41,229	111	43,196	114	41,491	109
Crops		81,796	219	93,554	246	93,245	245
Stores		6,940	19	8,248	22	5,186	14
TOTAL		239,529	642	271,736	716	275,924	725
PERFORMANCE INDICATORS							
Stocking rate (LU per eff.ha)			0.15		0.13		0.18
GLU/forage effective hectare*			0.44		0.38		0.52
Owner Equity (%)			97%		96%		97%
ONI/Net worth (%)			7%		4%		4%
Return on tenant's capital (%)			34%		32%		17%
Return on all capital (%)			8%		8%		5%
Average business size (ESU)			149		157		172
Annual labour units			n/a		3.3		3.1
of which farmer & spouse			n/a		0.7		0.6
LAND UTILISATION - hectares per farm			ha		ha		ha
Cereals and cash crops			181.8		212.1		205.8
Roots, fodder and other crops			6.3		6.5		0.4
Total grassland			97.7		101.1		104.2
Fallow, land let and set aside			62.1		34.8		45.2
Rough grazing - sole (Effective ha.)			25.0		25.0		25.0
Utilisable agricultural area (Effective ha.)			372.8		379.6		380.5
Rough grazing - common (Effective ha.)			0.0		0.0		0.0
Woods, roads and buildings			15.2		14.2		12.8
TOTAL AREA (Actual ha.)			497.3		495.8		495.3
Effective forage area			128.9		132.6		129.5

* for organic farms, pigs, poultry and other livestock are deemed to be grazing livestock

Table 1A. Results of cropping farms

	CONVENTIONAL					
	1995/96		1996/97		1997/98	
LIVESTOCK CARRIED - per farm	Average		Average		Average	
	Number	LU	Number	LU	Number	LU
Dairy cows	0.0	0.0	0.2	0.2	0.0	0.0
Beef cows	11.2	8.4	11.9	8.9	12.1	9.1
Other cattle	47.5	26.2	46.1	21.6	38.9	18.8
Breeding sheep	101.0	10.9	103.0	10.9	116.0	12.4
Other sheep	99.2	4.3	72.6	3.2	90.5	3.9
Pigs	34.0	5.0	90.0	14.6	89.1	14.0
Poultry	47.1	0.8	1118.4	3.6	1003.0	3.0
Other livestock	0.4	0.3	0.5	0.4	0.4	0.4
TOTAL (L.U.)	55.9		63.3		61.6	
ASSETS - £ per farm	Opening	Closing	Opening	Closing	Opening	Closing
	Value	Value	Value	Value	Value	Value
Land and Property	770,677	915,046	947,925	1,017,562	1,024,097	1,071,914
Buildings, improvements and fixtures	118,218	86,727	117,119	57,589	126,204	61,971
Machinery	83,615	117,119	53,564	125,894	56,696	128,579
Livestock	30,719	28,913	29,006	27,889	27,889	27,143
Produce and goods in store	75,371	79,214	79,214	84,779	85,273	73,516
Quotas	4,753	3,867	3,970	3,856	3,721	3,344
Credit balances	65,366	83,826	83,863	79,608	79,276	75,318
TOTAL	1,148,719	1,314,712	1,314,660	1,397,177	1,403,155	1,441,786
EXTERNAL LIABILITIES						
Long and medium term loans	7,423	6801.3	6,801	9179.091	9,179	14710.83
Short term loans	38,397	42942.73	43,205	36379.79	36,612	39385.75
Overdrafts	21,038	17773.53	17,774	30035.07	30,096	36565.02
TOTAL	66,858	67,518	67,780	75,594	75,887	90,662
NET WORTH	1,081,861	1,247,194	1,246,881	1,321,583	1,327,268	1,351,124

Table 1A. Results of cropping farms

ORGANIC

	1995/96		1996/97		1997/98	
LIVESTOCK CARRIED - per farm	Average		Average		Average	
	Number	LU	Number	LU	Number	LU
Dairy cows	0.0	0.0	0.0	0.0	0.0	0.0
Beef cows	27.4	20.5	28.1	21.1	26.5	20.4
Other cattle	59.5	30.3	43.2	22.7	62.2	31.3
Breeding sheep	26.0	3.6	32.2	4.4	31.2	3.4
Other sheep	11.4	0.4	16.4	0.6	23.4	1.1
Pigs	0.0	0.0	0.0	0.0	47.4	9.5
Poultry	0.0	0.0	0.0	0.0	0.0	0.0
Other livestock	1.9	1.5	1.8	1.4	0.8	1.8
TOTAL (L.U.)		56.3		50.3		67.2
ASSETS - £ per farm	Opening Value	Closing Value	Opening Value	Closing Value	Opening Value	Closing Value
Land and Property	1,063,061	1,123,061	1,063,061	1,063,061	1,050,584	935,784
Buildings, improvements and fixtures	16,765	78,861	78,012	76,405	116,744	79,880
Machinery	91,107	128,020	126,100	127,376	127,873	144,129
Livestock	39,265	43,192	43,665	42,727	42,727	40,255
Produce and goods in store	84,608	92,866	95,133	108,471	105,553	91,310
Quotas	1,850	1,850	1,956	1,956	1,850	1,850
Credit balances	27,552	46,814	45,273	136,867	126,204	223,438
TOTAL	1,324,208	1,514,665	1,453,200	1,556,863	1,571,535	1,516,645
EXTERNAL LIABILITIES						
Long and medium term loans	33,131	29,160	33,531	28,539	34,198	31,120
Short term loans	15,209	22,143	8,402	27,902	24,359	17,313
Overdrafts	1,016	502	489	0	902	565
TOTAL	49,357	51,805	42,422	56,440	59,460	48,998
NET WORTH	1,274,851	1,462,860	1,410,778	1,500,423	1,512,076	1,467,647

Table 2A. Results of horticultural holdings

CONVENTIONAL

		1995/96		1996/97		1997/98	
No of Farms		52, in 5 clusters of 9 to 13 farms					
ESU per farm		22		22		32	
Area organic or in conversion. (%)		n/a		n/a		n/a	
OUTPUTS, INPUTS & INCOMES		£/farm	£/ha	£/farm	£/ha	£/farm	£/ha
OUTPUTS							
Dairy	output	0	0	0	0	0	0
	net quota	0	0	0	0	0	0
Other cattle	output	0	0	0	0	0	0
	subsidies	0	0	0	0	0	0
Sheep -	output	0	0	0	0	0	0
	subsidies	0	0	0	0	0	0
Other livestock		0	0	0	0	0	0
Main crops	output	46,065	8,930	44,677	9,195	50,138	8,371
	subsidies	53	10	50	10	55	9
By-products, forage and cultivations		128	25	10	2	19	3
	subsidies (set-aside)	0	0	0	0	0	0
Miscellaneous		8,529	1,653	10,123	2,083	10,808	1,805
	- organic grants	0	0	0	0	0	0
	- other agri-env.payments	0	0	0	0	0	0
TOTAL OUTPUTS		54,776	10,618	54,860	11,290	61,020	10,188
INPUTS							
Feeds	purchased concentrates	0	0	0	0	0	0
	homegrown concentrates	0	0	0	0	0	0
Purchased fodder, Tack and stock keep		0	0	0	0	0	0
Veterinary and medicines		0	0	0	0	0	0
Other livestock costs		0	0	0	0	0	0
Seeds -	purchased and homegrown	4,172	809	4,644	956	5,006	836
Fertilisers		2,004	389	1,967	405	1,878	314
Crop protection		1,437	279	1,389	286	1,236	206
Other crop costs		5,262	1,020	6,139	1,263	6,444	1,076
Labour	farmer & spouse (manual only)	14,473	2,806	15,057	3,099	15,779	2,634
	paid incl. paid management	8,740	1,694	9,163	1,886	9,495	1,585
	unpaid	511	99	571	118	1,854	310
	casual	3,745	726	4,546	936	5,456	911
Machinery	contract	346	67	376	77	248	41
	repairs	1,982	384	2,201	453	2,584	431
	fuels	1,249	242	1,461	301	1,324	221
	depreciation	3,046	590	3,188	656	3,392	566
General farming costs		5,703	1,105	5,963	1,227	5,518	921
Land expenses		1,549	300	1,254	258	1,422	237
Rent		102	20	144	30	121	20
Rental value		2,637	511	2,577	530	2,915	487
TOTAL INPUTS		56,957	11,041	60,644	12,481	64,671	10,798
Add back managerial input of paid manager		0	0	0	0	0	0
MANAGEMENT AND INVESTMENT INCOME		-2,181	-423	-5,784	-1,190	-3,651	-610
Add back farmer and spouse labour		14,473	2,806	15,057	3,099	15,779	2,634
Deduct managerial input of paid manager		0	0	0	0	0	0
NET FARM INCOME (including BLSA)		12,292	2,383	9,274	1,909	12,128	2,025
NET FARM INCOME (excl. BLSA)		12,292	2,383	9,274	1,909	12,128	2,025

Table 2A. Results of horticultural holdings

ORGANIC

		1995/96		1996/97		1997/98	
No of Farms		5		5		5	
ESU per farm		17		15		12	
Area organic or in conversion. (%)		97		100		100	
OUTPUTS, INPUTS & INCOMES		£/farm	£/ha	£/farm	£/ha	£/farm	£/ha
OUTPUTS							
Dairy	output	0	0	0	0	0	0
	net quota	0	0	0	0	0	0
Other cattle	output	1,093	136	216	27	182	23
	subsidies	75	9	119	15	101	13
Sheep -	output	1,579	196	1,439	179	441	56
	subsidies	711	88	515	64	94	12
Other livestock		437	54	302	37	469	60
Main crops	output	30,282	3,756	31,463	3,903	36,222	4,633
	subsidies	0	0	0	0	112	14
By-products, forage and cultivations		149	18	241	30	300	38
subsidies (set-aside)		0	0	0	0	0	0
Miscellaneous		1,067	132	1,724	214	889	114
- organic grants		0	0	0	0	0	0
- other agri-env.payments		50	6	192	24	57	7
TOTAL OUTPUTS		35,444	4,397	36,210	4,491	38,868	4,972
INPUTS							
Feeds	purchased concentrates	659	82	639	79	598	77
	homegrown concentrates	0	0	115	14	240	31
Purchased fodder, Tack and stock keep		142	18	90	11	0	0
Veterinary and medicines		119	15	180	22	35	4
Other livestock costs		301	37	164	20	76	10
Seeds - purchased and homegrown		1,814	225	2,293	284	2,519	322
Fertilisers		964	120	1,457	181	649	83
Crop protection		28	3	14	2	99	13
Other crop costs		4,190	520	3,813	473	4,184	535
Labour	farmer & spouse (manual only)	18,129	2,249	18,022	2,235	16,857	2,156
	paid incl. paid management	2,625	326	5,867	728	5,310	679
	unpaid	2,976	369	2,228	276	2,466	315
	casual	439	55	107	13	265	34
Machinery	contract	95	12	46	6	103	13
	repairs	1,321	164	1,507	187	1,351	173
	fuels	1,058	131	1,019	126	1,092	140
	depreciation	1,846	229	1,535	190	1,402	179
General farming costs		3,753	466	3,888	482	3,343	428
Land expenses		97	12	222	28	233	30
Rent		185	23	185	23	185	24
Rental value		1,620	201	1,620	201	1,620	207
TOTAL INPUTS		42,361	5,255	45,013	5,583	42,627	5,452
Add back managerial input of paid manager		0	0	0	0	0	0
MANAGEMENT AND INVESTMENT INCOME		-6,918	-858	-8,803	-1,092	-3,760	-481
Add back farmer and spouse labour		18,129	2,249	18,022	2,235	16,857	2,156
Deduct managerial input of paid manager		0	0	0	0	0	0
NET FARM INCOME (including BLSA)		11,211	1,391	9,219	1,144	13,097	1,675
NET FARM INCOME (excluding BLSA)		11,211	1,391	9,219	1,144	13,107	1,677

Table 2A. Results of horticultural holdings

	CONVENTIONAL					
	1995/96		1996/97		1997/98	
INCOME MEASURES	£/farm	£/ha	£/farm	£/ha	£/farm	£/ha
NET FARM INCOME (excl. BLSA)	12,292	2,383	9,274	1909	12,128	2025
plus net rental value/imputed rent	2,414	468	2,321	478	2,731	456
minus occupier's expenses	140	27	176	36	166	28
minus interest payments	-219	-42	77	16	199	33
minus buildings & works depreciation	899	174	276	57	917	153
OCCUPIER'S NET INCOME	13,885	2,692	11,066	2277	13,577	2267
plus other imputed charges	1,210	234	1,384	285	557	93
plus fixed asset depreciation	3,945	765	3,464	713	4,308	719
minus valuation changes	-455	-88	343	71	-705	-118
CASH INCOME	19,495	3,779	15,571	3205	19,147	3197
TENANT'S CAPITAL - £ per farm	£/farm	£/ha	£/farm	£/ha	£/farm	£/ha
Machinery	14,764	2,862	15,570	3,204	16,410	2,740
Livestock	0	0	0	0	0	0
Crops	2,150	417	2,099	432	1,884	315
Stores	2,122	411	2,599	535	3,052	510
TOTAL	19,036	3,690	20,268	4,171	21,346	3,564
PERFORMANCE INDICATORS						
Stocking rate (LU per eff.ha)		0.00		0.00		0.00
GLU/forage effective hectare*		0.00		0.00		0.00
Owner Equity (%)		90%		88%		85%
ONI/Net worth (%)		11%		9%		11%
Return on tenant's capital (%)		-11%		-29%		-17%
Return on all capital (%)		0%		-2%		0%
Average business size (ESU)		22		22		32
Annual Labour Units per farm		2.7		2.8		3.1
of which farmer & spouse		1.3		1.3		1.3
LAND UTILISATION - hectares per farm		ha		ha		ha
Cereals and cash crops		3.9		3.6		5.0
Roots, fodder and other crops		0.0		0.0		0.0
Total grassland		0.2		0.2		0.2
Fallow, land let and set aside		1.1		1.1		0.8
Rough grazing - sole (Effective ha.)		0.0		0.0		0.0
Utilisable agricultural area (Effective ha.)		5.2		4.9		6.0
Rough grazing - common (Effective ha.)		0.0		0.0		0.0
Woods, roads and buildings		0.9		1.0		1.2
TOTAL AREA (Actual ha.)		6.0		5.9		7.2
Effective forage area		0.2		0.2		0.2

* for conventional farms, pigs, poultry and other livestock are deemed to be non-grazing livestock

Table 2A. Results of horticultural holdings

ORGANIC

INCOME MEASURES	1995/96		1996/97		1997/98	
	£/farm	£/ha	£/farm	£/ha	£/farm	£/ha
NET FARM INCOME (excl. BLSA)	11,211	1,391	9,219	1,144	13,107	1,677
plus net rental value/imputed rent	1,620	201	1,620	201	1,620	207
minus occupier's expenses	889	110	0	0	852	109
minus interest payments			1,356	168	890	114
minus buildings & works depreciation	0	0	772	96	532	68
OCCUPIER'S NET INCOME	11,942	1,481	8,712	1,081	12,453	1,593
plus other imputed charges	2,976	369	2,792	346	3,231	413
plus fixed asset depreciation	1,846	229	2,306	286	1,934	247
minus valuation changes	141	17	-25	-3	-24	-3
CASH INCOME	16,624	2,062	13,835	1,716	17,642	2,257
TENANT'S CAPITAL - £ per farm	£/farm	£/ha	£/farm	£/ha	£/farm	£/ha
Machinery	8,711	1,081	7,816	969	7,078	905
Livestock	2,510	311	1,837	228	1,558	199
Crops	1,516	188	2,765	343	2,765	354
Stores	1,342	166	1,336	166	1,307	167
TOTAL	14,078	1,746	13,753	1,706	12,708	1,626
PERFORMANCE INDICATORS						
Stocking rate (LU per eff.ha)		0.56		0.40		0.30
GLU/forage effective hectare*		1.06		0.92		0.69
Owner Equity (%)		74%		86%		87%
ONI/Net worth (%)		27%		15%		20%
Return on tenant's capital (%)		-49%		-64%		-30%
Return on all capital (%)		-9%		-10%		-3%
Average business size (ESU)		17		15		12
Annual Labour Units per farm		n/a		2.9		2.6
of which farmer & spouse		n/a		2.0		1.9
LAND UTILISATION - hectares per farm						
		ha		ha		ha
Cereals and cash crops		3.8		3.8		3.6
Roots, fodder and other crops		0.0		0.0		0.0
Total grassland		4.1		3.9		3.9
Fallow, land let and set aside		0.0		0.2		0.2
Rough grazing - sole (Effective ha.)		0.2		0.2		0.2
Utilisable agricultural area (Effective ha.)		8.1		8.1		7.8
Rough grazing - common (Effective ha.)		0.0		0.0		0.0
Woods, roads and buildings		0.3		0.3		0.3
TOTAL AREA (Actual ha.)		9.9		9.9		9.6
Effective forage area		4.3		4.1		4.1

* for organic farms, pigs, poultry and other livestock are deemed to be grazing livestock

Table 2A. Results of horticultural holdings

CONVENTIONAL

	1995/96		1996/97		1997/98	
LIVESTOCK CARRIED - per farm	Average		Average		Average	
	Number	LU	Number	LU	Number	LU
Dairy cows	0.0	0.0	0.0	0.0	0.0	0.0
Beef cows	0.0	0.0	0.0	0.0	0.0	0.0
Other cattle	0.0	0.0	0.0	0.0	0.0	0.0
Breeding sheep	0.0	0.0	0.0	0.0	0.0	0.0
Other sheep	0.0	0.0	0.0	0.0	0.0	0.0
Pigs	0.0	0.0	0.0	0.0	0.0	0.0
Poultry	0.0	0.0	0.0	0.0	0.0	0.0
Other livestock	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL (L.U.)		0.0		0.0		0.0
ASSETS - £ per farm	Opening	Closing	Opening	Closing	Opening	Closing
	Value	Value	Value	Value	Value	Value
Land and Property	74,479	76,319	85,868	89,701	90,988	91,158
Buildings, improvements and fixtures	20,660	19,982	9,800	9,236	9,236	7,906
Machinery	14,247	15,281	15,280	15,859	15,859	16,961
Livestock	0	0	0	0	0	0
Produce and goods in store	4,256	4,289	4,362	5,034	5,067	4,804
Quotas	0	0	0	0	0	0
Credit balances	22,259	22,676	22,757	25,237	25,241	28,290
TOTAL	135,901	138,546	138,066	145,067	146,391	149,119
EXTERNAL LIABILITIES						
Long and medium term loans	7,354	9,479	9,479	12,964	14,899	14,882
Short term loans	4,157	4,842	4,899	4,350	4,352	4,921
Overdrafts	1,611	1,363	1,518	3,179	3,179	4,923
TOTAL	13,121	15,685	15,896	20,493	22,431	24,726
NET WORTH	122,780	122,861	122,170	124,575	123,960	124,394

Table 2A. Results of horticultural holdings

ORGANIC

	1995/96		1996/97		1997/98	
LIVESTOCK CARRIED - per farm	Average		Average		Average	
	Number	LU	Number	LU	Number	LU
Dairy cows	0.0	0.0	0.0	0.0	0.0	0.0
Beef cows	1.4	1.1	0.4	0.3	0.4	0.3
Other cattle	0.8	0.4	0.8	0.5	0.8	0.4
Breeding sheep	21.4	2.4	18.6	2.0	14.2	1.3
Other sheep	0.4	0.0	5.3	0.2	2.3	0.1
Pigs	0.0	0.0	0.0	0.0	0.0	0.0
Poultry	20.0	0.3	40.0	0.7	30.0	0.1
Other livestock	0.0	0.0	0.0	0.0	1.0	0.7
TOTAL (L.U.)		4.5		3.8		2.8
ASSETS - £ per farm	Opening	Closing	Opening	Closing	Opening	Closing
	Value	Value	Value	Value	Value	Value
Land and Property	33,018	33,338	41,052	41,997	41,997	41,997
Buildings, improvements and fixtures	4,782	4,304	4,304	4,317	4,317	4,343
Machinery	8,988	8,434	8,176	7,455	7,395	6,760
Livestock	2,462	2,558	2,128	1,546	1,546	1,570
Produce and goods in store	2,835	2,880	4,129	4,072	4,072	4,072
Quotas	1,699	2,170	478	326	244	244
Credit balances	6,093	7,507	9,351	12,553	12,553	14,460
TOTAL	59,878	61,190	69,618	72,266	72,125	73,448
EXTERNAL LIABILITIES						
Long and medium term loans	15,596	14,786	14,786	8,258	8,258	7,564
Short term loans	457	494	653	1,433	1,433	1,532
Overdrafts	0	326	326	701	701	504
TOTAL	16,053	15,607	15,766	10,392	10,392	9,601
NET WORTH	43,825	45,584	53,853	61,875	61,733	63,847

Table 3A. Results of dairy farms

Table 3A. Results of dairy farms				CONVENTIONAL							
				1995/96		1996/97		1997/98			
No of Farms				37, in 5 clusters of 6 to 8 farms							
ESU per farm				121		124		123			
Area organic or in conversion. (%)				n/a		n/a		n/a			
OUTPUTS, INPUTS & INCOMES				£/farm		£/ha		£/farm		£/ha	
OUTPUTS											
Dairy -	output			162,797	1,585	195,082	1,924	166,679	1,647		
	net quota			-5,240	-51	-8,581	-85	-6,815	-67		
Other cattle	output			56,541	550	23,549	232	23,550	233		
	subsidies			612	6	1,378	14	993	10		
Sheep -	output			2,710	26	2,807	28	1,743	17		
	subsidies			992	10	697	7	688	7		
Other livestock				1	0	0	0	2	0		
Main crops	output			5,568	54	4,900	48	5,811	57		
	subsidies			1,795	17	2,017	20	2,604	26		
By-products, forage and cultivations				1,789	17	4,429	44	2,283	23		
subsidies (set-aside)				288	3	390	4	271	3		
Miscellaneous				4,207	41	5,355	53	5,632	56		
- organic grants				0	0	0	0	0	0		
- other agri-env.payments				54	1	109	1	61	1		
TOTAL OUTPUTS				232,114	2,259	232,131	2,289	203,501	2,010		
INPUTS											
Feeds	purchased concentrates			37,581	366	36,733	362	30,369	300		
	homegrown concentrates			2,455	24	2,527	25	3,565	35		
Purchased fodder, Tack and stock keep				4,987	49	3,753	37	3,355	33		
Veterinary and medicines				5,718	56	5,377	53	5,272	52		
Other livestock costs				12,308	120	11,661	115	12,838	127		
Seeds -	purchased and homegrown			2,102	20	2,563	25	2,259	22		
Fertilisers				11,487	112	12,144	120	10,210	101		
Crop protection				1,497	15	1,739	17	1,947	19		
Other crop costs				1,028	10	1,388	14	1,271	13		
Labour	farmer & spouse (manual only)			12,450	121	12,986	128	14,033	139		
	paid incl. paid management			22,001	214	21,967	217	22,613	223		
	unpaid			5,477	53	6,096	60	5,508	54		
	casual			674	7	569	6	1,006	10		
Machinery	contract			9,694	94	9,266	91	10,181	101		
	repairs			9,860	96	8,575	85	7,900	78		
	fuels			3,113	30	3,535	35	3,561	35		
	depreciation			11,000	107	11,764	116	11,768	116		
General farming costs				14,570	142	15,503	153	14,904	147		
Land expenses				5,480	53	5,829	57	6,392	63		
Rent				4,930	48	5,843	58	6,201	61		
Rental value				10,830	105	12,351	122	12,923	128		
TOTAL INPUTS				189,242	1,842	192,167	1,895	188,080	1,858		
Add back managerial input of paid manager				0	0	357	4	407	4		
MANAGEMENT AND INVESTMENT INCOME				42,871	417	40,321	398	15,828	156		
Add back farmer and spouse labour				12,450	121	12,986	128	14,033	139		
Deduct managerial input of paid manager				0	0	357	4	407	4		
NET FARM INCOME (including BLSA)				55,321	539	52,951	522	29,454	291		
NET FARM INCOME (excl. BLSA)				57,856	563	53,974	532	35,795	354		

Table 3A. Results of dairy farms

ORGANIC

		1995/96		1996/97		1997/98	
No of Farms		5		5		5	
ESU per farm		90		90		95	
Area organic or in conversion. (%)		100		100		100	
OUTPUTS, INPUTS & INCOMES		£/farm	£/ha	£/farm	£/ha	£/farm	£/ha
OUTPUTS							
Dairy -	output	151,744	1,415	142,114	1,314	169,906	1,559
	net quota	3,220	30	5,571	51	647	6
Other cattle	output	16,468	154	11,080	102	10,356	95
	subsidies	217	2	0	0	88	1
Sheep -	output	1,698	16	1,925	18	1,090	10
	subsidies	540	5	526	5	151	1
Other livestock		0	0	700	6	0	0
Main crops	output	3,772	35	1,926	18	6,465	59
	subsidies	1,268	12	1,984	18	2,474	23
By-products, forage and cultivations		4,251	40	5,638	52	4,934	45
subsidies (set-aside)		0	0	0	0	0	0
Miscellaneous		6,979	65	6,636	61	8,717	80
- organic grants		3,373	31	3,444	32	3,236	30
- other agri-env.payments		385	4	377	3	990	9
TOTAL OUTPUTS		193,915	1,808	181,921	1,681	209,053	1,918
INPUTS							
Feeds	purchased concentrates	15,704	146	16,322	151	15,398	141
	homegrown concentrates	10,039	94	4,957	46	4,217	39
Purchased fodder, Tack and stock keep		8,280	77	4,988	46	2,600	24
Veterinary and medicines		3,270	30	3,150	29	3,596	33
Other livestock costs		14,592	136	12,742	118	18,537	170
Seeds -	purchased and homegrown	2,382	22	3,588	33	2,839	26
Fertilisers		1,263	12	57	1	469	4
Crop protection		778	7	0	0	0	0
Other crop costs		346	3	487	4	354	3
Labour	farmer & spouse (manual only)	10,744	100	10,534	97	11,739	108
	paid incl. paid management	15,553	145	21,438	198	22,328	205
	unpaid	3,218	30	1,588	15	330	3
	casual	400	4	1,212	11	2,009	18
Machinery	contract	7,318	68	5,032	47	10,179	93
	repairs	7,894	74	7,089	66	6,329	58
	fuels	3,984	37	2,706	25	3,407	31
	depreciation	5,756	54	7,396	68	9,869	91
General farming costs		11,655	109	14,552	135	14,565	134
Land expenses		4,181	39	7,219	67	6,490	60
Rent		7,989	75	8,609	80	8,669	80
Rental value		6,349	59	7,134	66	6,996	64
TOTAL INPUTS		141,696	1,321	140,800	1,301	150,919	1,385
Add back managerial input of paid manager		400	4	400	4	400	4
MANAGEMENT AND INVESTMENT INCOME		52,620	491	41,522	384	58,535	537
Add back farmer and spouse labour		10,744	100	10,534	97	11,739	108
Deduct managerial input of paid manager		400	4	400	4	400	4
NET FARM INCOME (including BLSA)		62,963	587	51,656	477	69,874	641
NET FARM INCOME (excluding BLSA)		62,963	587	51,656	477	69,874	641

Table 3A. Results of dairy farms

	CONVENTIONAL					
	1995/96		1996/97		1997/98	
	£/farm	£/ha	£/farm	£/ha	£/farm	£/ha
INCOME MEASURES						
NET FARM INCOME (excl. BLSA)	57,856	563	53,974	532	35,795	354
plus net rental value/imputed rent	10,775	105	12,206	120	12,883	127
minus occupier's expenses	541	5	271	3	348	3
minus interest payments	8,319	81	7,822	77	7,347	73
minus buildings & works depreciation	3,102	30	5,647	56	6,005	59
OCCUPIER'S NET INCOME	56,669	552	52,440	517	34,978	346
plus other imputed charges	8,226	80	5,915	58	-3,311	-33
plus fixed asset depreciation	14,102	137	17,411	172	17,774	176
minus valuation changes	274	3	-2,870	-28	-3,239	-32
CASH INCOME	78,723	766	78,637	775	52,680	520
TENANT'S CAPITAL - £ per farm	£/farm	£/ha	£/farm	£/ha	£/farm	£/ha
Machinery	65,525	638	73,102	721	77,702	768
Livestock	131,539	1,280	127,252	1,255	119,565	1,181
Crops	7,929	77	9,806	97	9,699	96
Stores	5,771	56	6,161	61	5,859	58
TOTAL	210,765	2,052	216,322	2,133	212,826	2,102
PERFORMANCE INDICATORS						
Milk yield per cow (litres)		5,613		5,448		5,674
Milk sales per cow (£)		1,404		1,369		1,221
Margin over concentrates per cow (£)		n/a		n/a		n/a
Lambs reared per ewe (nos.)		1.4		2.1		2.1
Fat lamb sales per ewe (nos.)		1.0		1.4		1.6
Stocking rate (LU per eff.ha)		1.99		2.03		1.98
GLU/forage effective hectare*		2.16		2.23		2.24
Owner Equity (%)		85%		87%		87%
ONI/Net worth (%)		8%		7%		5%
Return on tenant's capital (%)		20%		19%		7%
Return on all capital (%)		7%		6%		3%
Annual Labour Units per farm		3.6		3.7		3.6
of which farmer & spouse		1.3		1.3		1.4
LAND UTILISATION - hectares per farm		ha		ha		ha
Cereals and cash crops		7.3		7.9		10.3
Roots, fodder and other crops		9.0		10.1		9.0
Total grassland		84.8		81.6		79.9
Fallow, land let and set aside		0.9		1.2		1.3
Rough grazing - sole (Effective ha.)		0.7		0.7		0.7
Utilisable agricultural area (Effective ha.)		102.7		101.4		101.2
Rough grazing - common (Effective ha.)		0.0		0.0		0.0
Woods, roads and buildings		6.8		7.1		7.1
TOTAL AREA (Actual ha.)		109.6		108.5		108.4
Effective forage area		94.5		92.4		89.6

* for conventional farms, pigs, poultry and other livestock are deemed to be non-grazing livestock

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Table 3A. Results of dairy farms

ORGANIC

	1995/96		1996/97		1997/98	
	£/farm	£/ha	£/farm	£/ha	£/farm	£/ha
INCOME MEASURES						
NET FARM INCOME (excl. BLSA)	62,963	587	51,656	477	69,874	641
plus net rental value/imputed rent	6,349	59	6,866	63	6,567	60
minus occupier's expenses	0	0	0	0	0	0
minus interest payments	4,031	38	5,172	48	5,854	54
minus buildings & works depreciation	1,804	17	-437	-4	3,702	34
OCCUPIER'S NET INCOME	63,477	592	53,787	497	66,884	614
plus other imputed charges	4,877	45	302	3	-656	-6
plus fixed asset depreciation	6,535	61	6,959	64	13,571	125
minus valuation changes	2,639	25	1,148	11	2,023	19
CASH INCOME	72,249	674	59,901	554	77,777	714
TENANT'S CAPITAL - £ per farm	£/farm	£/ha	£/farm	£/ha	£/farm	£/ha
Machinery	40,790	380	44,875	415	54,636	501
Livestock	85,357	796	87,175	806	86,419	793
Crops	3,456	32	4,171	39	2,107	19
Stores	1,817	17	3,807	35	1,667	15
TOTAL	131,420	1,226	137,718	1,273	148,099	1,359
PERFORMANCE INDICATORS						
Milk yield per cow (litres)		5,294		5,289		5,536
Milk sales per cow (£)		1,390		1,417		1,543
Margin over concentrates per cow (£)		1,305		1,253		1,415
Lambs reared per ewe (nos.)		1.9		1.4		1.9
Fat lamb sales per ewe (nos.)		1.5		1.4		1.7
Stocking rate (LU per eff.ha)		1.45		1.31		1.33
GLU/forage effective hectare*		1.70		1.63		1.56
Owner Equity (%)		84%		84%		85%
ONI/Net worth (%)		13%		11%		12%
Return on tenant's capital (%)		40%		30%		40%
Return on all capital (%)		10%		8%		10%
Annual Labour Units per farm		n/a		3.3		3.1
of which farmer & spouse		n/a		1.1		1.3
LAND UTILISATION - hectares per farm		ha		ha		ha
Cereals and cash crops		5.8		5.7		6.6
Roots, fodder and other crops		9.0		5.1		1.9
Total grassland		81.2		80.5		89.3
Fallow, land let and set aside		10.0		15.7		10.0
Rough grazing - sole (Effective ha.)		1.2		1.2		1.2
Utilisable agricultural area (Effective ha.)		107.2		108.2		109.0
Rough grazing - common (Effective ha.)		0.0		0.0		0.0
Woods, roads and buildings		2.9		1.6		1.6
TOTAL AREA (Actual ha.)		111.1		110.8		111.6
Effective forage area		91.5		86.8		92.4

* for organic farms, pigs, poultry and other livestock are deemed to be grazing livestock

Table 3A. Results of dairy farms

	CONVENTIONAL					
	1995/96		1996/97		1997/98	
LIVESTOCK CARRIED - per farm						
	Average		Average		Average	
	Number	LU	Number	LU	Number	LU
Dairy cows	130.4	130.4	134.4	134.4	131.2	131.2
Beef cows	2.4	1.8	1.2	0.9	0.6	0.5
Other cattle	117.0	66.0	114.8	64.3	115.4	62.7
Breeding sheep	42.4	3.9	36.2	3.2	44.9	3.9
Other sheep	50.4	2.3	56.6	2.8	47.8	2.2
Pigs	0.0	0.0	0.0	0.0	0.0	0.0
Poultry	0.0	0.0	0.0	0.0	0.0	0.0
Other livestock	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL (L.U.)		204.3		205.6		200.5
ASSETS - £ per farm	Opening	Closing	Opening	Closing	Opening	Closing
	Value	Value	Value	Value	Value	Value
Land and Property	250,231	257,919	271,327	277,668	277,668	280,963
Buildings, improvements and fixtures	43,538	48,994	34,347	36,983	36,983	35,183
Machinery	62,345	68,705	68,705	77,499	77,499	77,906
Livestock	132,819	130,259	130,259	124,246	124,010	115,120
Produce and goods in store	13,550	13,850	14,908	17,027	15,903	15,213
Quotas	269,216	285,483	277,725	272,589	301,732	310,384
Credit balances	23,065	30,916	31,075	37,640	37,696	32,377
TOTAL	794,763	836,127	828,346	843,652	871,491	867,145
EXTERNAL LIABILITIES						
Long and medium term loans	73,148	65,279	65,279	68,271	72,629	73,263
Short term loans	13,298	13,721	11,877	12,686	12,969	15,943
Overdrafts	32,943	30,766	30,766	28,544	28,544	30,813
TOTAL	119,388	109,767	107,922	109,501	114,143	120,019
NET WORTH						
	675,375	726,361	720,424	734,151	757,348	747,126

Table 3A. Results of dairy farms

ORGANIC

	1995/96		1996/97		1997/98	
LIVESTOCK CARRIED - per farm	Average		Average		Average	
	Number	LU	Number	LU	Number	LU
Dairy cows	103.6	103.6	101.1	101.1	100.9	100.9
Beef cows	0.0	0.0	0.0	0.0	0.0	0.0
Other cattle	79.9	47.4	66.6	37.3	68.6	40.2
Breeding sheep	19.7	1.7	18.7	1.6	14.4	1.6
Other sheep	42.0	1.9	11.7	0.8	13.6	1.1
Pigs	0.0	0.0	0.0	0.0	0.0	0.0
Poultry	0.0	0.0	0.0	0.0	0.0	0.0
Other livestock	2.7	1.0	2.5	2.0	1.4	1.3
TOTAL (L.U.)	155.4		141.5		144.4	
ASSETS - £ per farm	Opening	Closing	Opening	Closing	Opening	Closing
	Value	Value	Value	Value	Value	Value
Land and Property	170,471	172,920	170,796	177,926	177,926	184,586
Buildings, improvements and fixtures	11,879	13,489	13,590	21,513	21,513	24,998
Machinery	39,141	42,440	41,900	47,851	47,851	61,422
Livestock	82,582	88,131	89,267	85,082	85,082	87,756
Produce and goods in store	6,132	4,414	4,625	6,709	6,619	7,468
Quotas	279,389	276,938	276,938	276,522	273,544	279,159
Credit balances	1,927	3,831	1,978	4,847	4,676	40,570
TOTAL	591,521	602,163	599,095	620,450	617,211	685,959
EXTERNAL LIABILITIES						
Long and medium term loans	32,619	28,173	28,173	32,073	32,174	30,287
Short term loans	11,544	10,811	9,463	5,791	5,791	9,041
Overdrafts	43,516	59,015	59,301	60,797	61,353	61,453
TOTAL	87,678	98,000	96,937	98,661	99,318	100,781
NET WORTH	503,843	504,163	502,158	521,789	517,893	585,178

Table 4A. Results of converting dairy farms

CONVENTIONAL

		1995/96		1996/97		1997/98	
No of Farms		42, in 5 clusters of 4 to 14 farms					
ESU per farm		128		128		128	
Area organic or in conversion. (%)		n/a		n/a		n/a	
OUTPUTS, INPUTS & INCOMES		£/farm	£/ha	£/farm	£/ha	£/farm	£/ha
OUTPUTS							
Dairy -	output	203,073	1,625	199,605	1,617	170,412	1,387
	net quota	-8,218	-66	-11,902	-96	-7,677	-62
Other cattle	output	32,189	258	31,982	259	29,704	242
	subsidies	1,917	15	2,593	21	2,297	19
Sheep -	output	2,362	19	3,485	28	2,656	22
	subsidies	961	8	745	6	944	8
Other livestock		355	3	49	0	153	1
Main crops	output	8,966	72	8,582	70	9,929	81
	subsidies	3,205	26	3,705	30	4,671	38
By-products, forage and cultivations		3,103	25	5,320	43	2,728	22
	subsidies (set-aside)	589	5	772	6	432	4
Miscellaneous		4,855	39	6,946	56	8,008	65
	- organic grants	0	0	0	0	0	0
	- other agri-env.payments	14	0	102	1	253	2
TOTAL OUTPUTS		253,371	2,027	251,984	2,042	224,510	1,827
INPUTS							
Feeds	purchased concentrates	40,336	323	40,867	331	33,790	275
	homegrown concentrates	3,987	32	3,417	28	4,283	35
Purchased fodder, Tack and stock keep		4,760	38	3,637	29	3,051	25
Veterinary and medicines		5,786	46	5,662	46	5,858	48
Other livestock costs		15,291	122	15,100	122	15,152	123
Seeds -	purchased and homegrown	3,370	27	3,874	31	3,734	30
Fertilisers		11,382	91	11,289	91	11,445	93
Crop protection		2,193	18	2,910	24	3,408	28
Other crop costs		1,801	14	1,471	12	1,729	14
Labour	farmer & spouse (manual only)	11,112	89	11,436	93	12,389	101
	paid incl. paid management	30,015	240	29,375	238	31,347	255
	unpaid	6,588	53	5,812	47	4,752	39
	casual	829	7	839	7	1,003	8
Machinery	contract	9,621	77	9,841	80	10,621	86
	repairs	8,959	72	8,889	72	8,166	66
	fuels	3,173	25	3,520	29	3,723	30
	depreciation	12,293	98	12,720	103	12,876	105
General farming costs		17,957	144	17,844	145	17,506	142
Land expenses		5,092	41	5,216	42	5,111	42
Rent		7,393	59	7,343	60	8,952	73
Rental value		14,011	112	15,318	124	16,164	132
TOTAL INPUTS		215,949	1,728	216,381	1,753	215,058	1,750
Add back managerial input of paid manager		0	0	500	4	570	5
MANAGEMENT AND INVESTMENT INCOME		37,421	299	36,104	293	10,022	82
Add back farmer and spouse labour		11,112	89	11,436	93	12,389	101
Deduct managerial input of paid manager		0	0	500	4	570	5
NET FARM INCOME (including BLSA)		48,533	388	47,040	381	21,841	178
NET FARM INCOME (excl. BLSA)		51,200	410	50,032	405	30,750	250

Table 4A. Results of converting dairy farms

Table 4A. Results of converting dairy farms				CONVERTING							
				1995/96		1996/97		1997/98			
No of Farms				5		5		5			
ESU per farm				112		93		118			
Area organic or in conversion. (%)				0		68		83			
OUTPUTS, INPUTS & INCOMES				£/farm		£/ha		£/farm		£/ha	
OUTPUTS											
Dairy -	output			102,619	613	93,465	544	92,157	537		
	net quota			-6,423	-38	-1,006	-6	3,950	23		
Other cattle	output			27,132	162	21,942	128	19,432	113		
	subsidies			3,060	18	5,076	30	4,234	25		
Sheep -	output			1,163	7	2,118	12	905	5		
	subsidies			957	6	853	5	0	0		
Other livestock				0	0	0	0	0	0		
Main crops	output			40,448	241	41,189	240	33,540	195		
	subsidies			15,906	95	19,602	114	19,585	114		
By-products, forage and cultivations				4,074	24	2,333	14	3,403	20		
subsidies (set-aside)				3,160	19	2,428	14	1,172	7		
Miscellaneous				2,808	17	7,374	43	6,862	40		
- organic grants				0	0	0	0	800	5		
- other agri-env.payments				2,025	12	426	2	743	4		
TOTAL OUTPUTS				196,930	1,176	195,799	1,141	186,782	1,088		
INPUTS											
Feeds	purchased concentrates			22,891	137	21,230	124	16,645	97		
	homegrown concentrates			2,562	15	4,483	26	4,943	29		
Purchased fodder, Tack and stock keep				1,324	8	3,407	20	1,754	10		
Veterinary and medicines				3,426	20	3,344	19	3,136	18		
Other livestock costs				7,991	48	7,899	46	9,319	54		
Seeds - purchased and homegrown				5,022	30	7,156	42	7,225	42		
Fertilisers				10,490	63	7,490	44	3,984	23		
Crop protection				7,241	43	7,878	46	5,027	29		
Other crop costs				1,833	11	1,410	8	1,503	9		
Labour	farmer & spouse (manual only)			10,000	60	10,328	60	10,917	64		
	paid incl. paid management			19,599	117	24,260	141	22,269	130		
	unpaid			1,992	12	0	0	2,143	12		
	casual			3,104	19	639	4	1,328	8		
Machinery	contract			5,015	30	5,822	34	6,386	37		
	repairs			11,414	68	10,554	61	12,077	70		
	fuels			3,508	21	3,614	21	3,492	20		
	depreciation			11,919	71	10,000	58	11,047	64		
General farming costs				10,800	64	14,164	83	12,860	75		
Land expenses				2,967	18	4,000	23	3,089	18		
Rent				10,923	65	11,355	66	11,676	68		
Rental value				11,444	68	12,212	71	13,289	77		
TOTAL INPUTS				165,463	988	171,242	998	164,109	956		
Add back managerial input of paid manager				0	0	0	0	0	0		
MANAGEMENT AND INVESTMENT INCOME				31,467	188	24,557	143	22,673	132		
Add back farmer and spouse labour				10,000	60	10,328	60	10,917	64		
Deduct managerial input of paid manager				0	0	0	0	0	0		
NET FARM INCOME (including BLSA)				41,467	248	34,885	203	33,591	196		
NET FARM INCOME (excluding BLSA)				40,689	243	35,576	207	36,864	215		

Table 4A. Results of converting dairy farms

	1995/96		1996/97		1997/98	
	£/farm	£/ha	£/farm	£/ha	£/farm	£/ha
INCOME MEASURES						
NET FARM INCOME (excl. BLSA)	51,200	410	50,032	405	30,750	250
plus net rental value/imputed rent	13,902	111	15,087	122	16,103	131
minus occupier's expenses	367	3	585	5	384	3
minus interest payments	5,017	40	6,384	52	5,410	44
minus buildings & works depreciation	4,107	33	6,206	50	6,899	56
OCCUPIER'S NET INCOME	55,610	445	51,944	421	34,161	278
plus other imputed charges	10,290	82	5,359	43	-7,106	-58
plus fixed asset depreciation	16,400	131	18,926	153	19,775	161
minus valuation changes	1,130	9	-3,101	-25	-2,778	-23
CASH INCOME	81,171	649	79,331	643	49,607	404
TENANT'S CAPITAL - £ per farm	£/farm	£/ha	£/farm	£/ha	£/farm	£/ha
Machinery	67,815	543	72,591	588	76,140	620
Livestock	143,071	1,145	136,704	1,108	126,827	1,032
Crops	12,320	99	13,623	110	13,629	111
Stores	9,206	74	10,450	85	10,054	82
TOTAL	232,412	1,860	233,368	1,891	226,650	1,844
PERFORMANCE INDICATORS						
Milk yield per cow (litres)	5,747		5,848		5,956	
Milk sales per cow (£)	1470		1494		1366	
Margin over concentrates per cow (£)	n/a		n/a		n/a	
Lambs reared per ewe (nos.)	4.1		2.8		3.4	
Fat lamb sales per ewe (nos.)	2.5		1.9		2.2	
Stocking rate (LU per eff.ha)	1.71		1.72		1.73	
GLU/forage effective hectare*	1.93		1.99		2.06	
Owner Equity (%)	92%		92%		92%	
ONI/Net worth (%)	7%		6%		4%	
Return on tenant's capital (%)	16%		15%		4%	
Return on all capital (%)	6%		5%		3%	
Annual Labour Units per farm	4.0		3.8		3.7	
of which farmer & spouse	1.1		1.1		1.1	
LAND UTILISATION - hectares per farm	ha		ha		ha	
Cereals and cash crops	12.2		13.4		17.9	
Roots, fodder and other crops	14.2		17.0		13.7	
Total grassland	95.6		89.5		89.0	
Fallow, land let and set aside	2.8		3.4		1.6	
Rough grazing - sole (Effective ha.)	0.2		0.2		0.6	
Utilisable agricultural area (Effective ha.)	125.0		123.4		122.9	
Rough grazing - common (Effective ha.)	0.0		0.0		0.0	
Woods, roads and buildings	6.6		6.8		6.7	
TOTAL AREA (Actual ha.)	131.6		130.2		129.6	
Effective forage area	110.0		106.7		103.4	

* for conventional farms, pigs, poultry and other livestock are deemed to be non-grazing livestock

Table 4A. Results of converting dairy farms

CONVERTING

INCOME MEASURES	1995/96		1996/97		1997/98	
	£/farm	£/ha	£/farm	£/ha	£/farm	£/ha
NET FARM INCOME (excl. BLSA)	40,689	243	35,576	207	36,864	215
plus net rental value/imputed rent	9,552	57	12,212	71	13,289	77
minus occupier's expenses	5,281	32	645	4	307	2
minus interest payments			9,278	54	9,911	58
minus buildings & works depreciation	2,735	16	3,894	23	4,064	24
OCCUPIER'S NET INCOME	42,224	252	33,970	198	35,871	209
plus other imputed charges	563	3	650	4	1,530	9
plus fixed asset depreciation	14,654	87	13,894	81	15,110	88
minus valuation changes	7,850	47	-1,172	-7	6,570	38
CASH INCOME	49,591	296	49,686	289	45,941	268
TENANT'S CAPITAL - £ per farm	£/farm	£/ha	£/farm	£/ha	£/farm	£/ha
Machinery	78,099	466	78,349	456	84,464	492
Livestock	87,355	521	89,286	520	84,354	491
Crops	7,126	43	11,195	65	16,057	94
Stores	2,914	17	10,393	61	11,627	68
TOTAL	175,493	1,048	189,223	1,102	196,501	1,145
PERFORMANCE INDICATORS						
Milk yield per cow (litres)		5,496		5,400		5,524
Milk sales per cow (£)		1,324		1,258		1,152
Margin over concentrates per cow (£)		1,099		1,097		1,006
Lambs reared per ewe (nos.)		n/a		n/a		n/a
Fat lamb sales per ewe (nos.)		n/a		n/a		n/a
Stocking rate (LU per eff.ha)		0.86		0.85		0.79
GLU/forage effective hectare*		1.56		1.49		1.38
Owner Equity (%)		88%		88%		86%
ONI/Net worth (%)		6%		4%		5%
Return on tenant's capital (%)		18%		13%		12%
Return on all capital (%)		5%		4%		4%
Annual Labour Units per farm		3.4		3.1		3.1
of which farmer & spouse		1.3		1.2		1.2
LAND UTILISATION - hectares per farm						
		ha		ha		ha
Cereals and cash crops		65.7		66.0		69.2
Roots, fodder and other crops		9.3		9.6		8.7
Total grassland		83.3		87.6		90.0
Fallow, land let and set aside		9.1		8.5		3.8
Rough grazing - sole (Effective ha.)		0.0		0.0		0.0
Utilisable agricultural area (Effective ha.)		167.5		171.7		171.7
Rough grazing - common (Effective ha.)		0.0		0.0		0.0
Woods, roads and buildings		5.4		5.4		7.2
TOTAL AREA (Actual ha.)		173.3		177.4		179.2
Effective forage area		92.6		97.1		98.7

Table 4A. Results of converting dairy farms

CONVENTIONAL

	1995/96		1996/97		1997/98	
LIVESTOCK CARRIED - per farm	Average		Average		Average	
	Number	LU	Number	LU	Number	LU
Dairy cows	132.1	132.1	129.9	129.9	125.3	125.3
Beef cows	2.6	2.0	1.8	1.4	0.9	0.7
Other cattle	132.4	73.1	138.4	75.0	145.2	80.0
Breeding sheep	46.2	3.9	55.1	4.6	55.1	4.7
Other sheep	34.1	1.5	33.6	1.4	42.3	1.9
Pigs	0.2	0.0	0.2	0.0	0.1	0.0
Poultry	42.9	0.7	7.1	0.1	3.7	0.1
Other livestock	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL (L.U.)		213.3		212.3		212.7
ASSETS - £ per farm	Opening	Closing	Opening	Closing	Opening	Closing
	Value	Value	Value	Value	Value	Value
Land and Property	320,700	352,321	365,342	373,676	373,676	377,638
Buildings, improvements and fixtures	47,223	53,784	38,387	38,520	38,520	38,612
Machinery	66,140	69,490	69,490	75,692	75,872	76,408
Livestock	144,375	141,767	141,777	131,632	131,080	122,574
Produce and goods in store	20,991	22,062	22,047	26,099	25,274	22,092
Quotas	246,195	273,837	262,858	236,763	281,174	277,951
Credit balances	37,498	49,234	47,924	56,793	57,480	54,157
TOTAL	883,121	962,494	947,824	939,175	983,076	969,433
EXTERNAL LIABILITIES						
Long and medium term loans	30,558	33,690	33,690	32,258	39,991	49,196
Short term loans	22,712	21,265	18,403	20,879	21,198	24,439
Overdrafts	21,633	21,715	21,801	21,078	21,114	26,361
TOTAL	74,903	76,670	73,894	74,214	82,303	99,996
NET WORTH	808,218	885,824	873,930	864,961	900,773	869,437

Table 4A. Results of converting dairy farms

CONVERTING

	1995/96		1996/97		1997/98	
LIVESTOCK CARRIED - per farm	Average		Average		Average	
	Number	LU	Number	LU	Number	LU
Dairy cows	77.0	77.0	75.8	75.8	80.2	80.2
Beef cows	0.0	0.0	0.0	0.0	0.0	0.0
Other cattle	108.9	60.6	107.5	63.3	96.0	53.2
Breeding sheep	49.6	4.7	53.5	4.7	18.0	1.4
Other sheep	45.4	2.4	26.6	1.1	16.7	0.7
Pigs	0.0	0.0	0.0	0.0	0.0	0.0
Poultry	0.0	0.0	0.0	0.0	0.0	0.0
Other livestock	0.4	0.4	0.4	0.4	0.4	0.4
TOTAL (L.U.)		144.7		145.2		135.9
ASSETS - £ per farm	Opening	Closing	Opening	Closing	Opening	Closing
	Value	Value	Value	Value	Value	Value
Land and Property	451,057	451,057	451,412	478,339	478,339	465,546
Buildings, improvements and fixtures	16,446	26,580	26,226	26,819	26,819	24,352
Machinery	77,595	78,603	78,602	78,096	78,023	90,905
Livestock	83,260	91,449	91,449	87,123	87,123	81,585
Produce and goods in store	10,129	9,950	16,919	26,257	26,257	29,110
Quotas	164,237	164,560	164,559	165,381	165,381	165,381
Credit balances	7,887	10,671	10,671	22,229	45,082	45,189
TOTAL	810,611	832,870	839,839	884,244	907,024	902,068
EXTERNAL LIABILITIES						
Long and medium term loans	36,250	39,995	39,995	37,420	37,420	45,246
Short term loans	15,576	21,559	21,559	23,031	32,509	36,542
Overdrafts	34,209	38,811	38,811	43,093	43,093	41,185
TOTAL	86,035	100,365	100,364	103,544	113,022	122,973
NET WORTH	724,577	732,505	739,475	780,700	794,002	779,095

Table 5A. Results of lowland cattle and sheep farms

CONVENTIONAL

		1995/96		1996/97		1997/98	
No of Farms		73, in 8 clusters of 4 to 20 farms					
ESU per farm		38		38		38	
Area organic or in conversion. (%)		n/a		n/a		n/a	
OUTPUTS, INPUTS & INCOMES		£/farm	£/ha	£/farm	£/ha	£/farm	£/ha
OUTPUTS							
Dairy	output	10,014	111	9,690	106	7,322	80
	net quota	-140	-2	-395	-4	-192	-2
Other cattle	output	18,263	202	15,020	165	15,633	172
	subsidies	8,372	93	12,942	142	10,405	114
Sheep -	output	15,438	171	20,663	227	16,256	179
	subsidies	10,988	121	7,574	83	6,910	76
Other livestock		136	1	319	3	98	1
Main crops	output	6,114	68	6,566	72	4,755	52
	subsidies	2,167	24	2,191	24	2,461	27
By-products, forage and cultivations		1,242	14	1,467	16	1,543	17
subsidies (set-aside)		529	6	283	3	231	3
Miscellaneous		4,685	52	5,857	64	4,764	52
- organic grants		0	0	0	0	0	0
- other agri-env.payments		2,313	26	2,474	27	2,991	33
TOTAL OUTPUTS		80,121	886	84,652	929	73,176	804
INPUTS							
Feeds	purchased concentrates	8,525	94	9,436	104	7,309	80
	homegrown concentrates	1,655	18	2,256	25	1,462	16
Purchased fodder, Tack and stock keep		1,633	18	1,879	21	1,266	14
Veterinary and medicines		2,690	30	2,826	31	2,665	29
Other livestock costs		4,303	48	4,164	46	3,875	43
Seeds -	purchased and homegrown	817	9	930	10	970	11
Fertilisers		3,570	39	4,307	47	4,156	46
Crop protection		710	8	1,037	11	1,293	14
Other crop costs		496	5	701	8	484	5
Labour	farmer & spouse (manual only)	11,043	122	11,530	127	11,403	125
	paid incl. paid management	5,851	65	6,386	70	6,992	77
	unpaid	1,916	21	2,258	25	2,573	28
	casual	1,341	15	767	8	380	4
Machinery	contract	2,388	26	2,389	26	2,971	33
	repairs	3,670	41	3,813	42	4,234	47
	fuels	1,887	21	2,210	24	1,995	22
	depreciation	4,939	55	4,761	52	4,404	48
General farming costs		7,081	78	7,548	83	6,791	75
Land expenses		3,680	41	3,423	38	2,840	31
Rent		2,023	22	1,825	20	1,845	20
Rental value		7,465	83	7,931	87	8,316	91
TOTAL INPUTS		77,680	859	82,376	904	78,226	860
Add back managerial input of paid manager		0	0	0	0	0	0
MANAGEMENT AND INVESTMENT INCOME		2,441	27	2,277	25	-5,051	-55
Add back farmer and spouse labour		11,043	122	11,530	127	11,403	125
Deduct managerial input of paid manager		0	0	0	0	0	0
NET FARM INCOME (including BLSA)		13,484	149	13,806	152	6,353	70
NET FARM INCOME (excl. BLSA)		14,185	157	14,162	155	8,721	96

Table 5A. Results of lowland cattle and sheep farms

ORGANIC

		1995/96		1996/97		1997/98	
No of Farms		8		8		8	
ESU per farm		46		48		51	
Area organic or in conversion. (%)		96		100		100	
OUTPUTS, INPUTS & INCOMES		£/farm	£/ha	£/farm	£/ha	£/farm	£/ha
OUTPUTS							
Dairy	output	26,770	278	25,105	261	28,699	299
	net quota	135	1	0	0	1,614	17
Other cattle	output	15,588	162	16,894	176	14,562	152
	subsidies	4,530	47	6,646	69	5,447	57
Sheep -	output	14,596	152	13,701	142	11,806	123
	subsidies	5,230	54	3,105	32	2,583	27
Other livestock		-56	-1	-3	0	-23	0
Main crops	output	11,823	123	14,022	146	14,854	155
	subsidies	5,463	57	5,912	61	5,672	59
By-products, forage and cultivations		1,561	16	-218	-2	-86	-1
subsidies (set-aside)		1,015	11	686	7	458	5
Miscellaneous		3,538	37	3,458	36	2,666	28
- organic grants		1,983	21	2,726	28	1,871	19
- other agri-env.payments		923	10	1,121	12	1,286	13
TOTAL OUTPUTS		93,101	967	93,154	968	91,409	953
INPUTS							
Feeds	purchased concentrates	7,839	81	7,521	78	5,949	62
	homegrown concentrates	3,067	32	3,045	32	3,614	38
Purchased fodder, Tack and stock keep		786	8	1,232	13	350	4
Veterinary and medicines		1,689	18	2,023	21	2,190	23
Other livestock costs		7,219	75	5,695	59	5,733	60
Seeds -	purchased and homegrown	1,639	17	2,894	30	3,060	32
Fertilisers		490	5	225	2	524	5
Crop protection		38	0	0	0	13	0
Other crop costs		624	6	1,083	11	844	9
Labour	farmer & spouse (manual only)	8,532	89	8,680	90	8,894	93
	paid incl. paid management	17,634	183	19,401	202	21,606	225
	unpaid	950	10	99	1	103	1
	casual	59	1	510	5	942	10
Machinery	contract	3,517	37	2,729	28	2,230	23
	repairs	4,453	46	5,254	55	6,030	63
	fuels	1,997	21	2,650	28	2,946	31
	depreciation	8,911	93	7,497	78	8,230	86
General farming costs		10,675	111	11,622	121	11,629	121
Land expenses		3,872	40	5,099	53	3,161	33
Rent		2,076	22	2,393	25	2,887	30
Rental value		13,431	140	13,576	141	14,077	147
TOTAL INPUTS		99,497	1,033	103,225	1,073	105,012	1,094
Add back managerial input of paid manager		2,365	25	3,192	33	3,372	35
MANAGEMENT AND INVESTMENT INCOME		-4,032	-42	-6,879	-71	-10,230	-107
Add back farmer and spouse labour		8,532	89	8,680	90	8,894	93
Deduct managerial input of paid manager		2,365	25	3,192	33	3,372	35
NET FARM INCOME (including BLSA)		2,136	22	-1,392	-14	-4,708	-49
NET FARM INCOME (excluding BLSA)		1,800	19	-1,373	-14	-3,152	-33

Table 5A. Results of lowland cattle and sheep farms

CONVENTIONAL

INCOME MEASURES	1995/96		1996/97		1997/98	
	£/farm	£/ha	£/farm	£/ha	£/farm	£/ha
NET FARM INCOME (excl. BLSA)	14,185	157	14,162	155	8,721	96
plus net rental value/imputed rent	7,420	82	7,892	87	8,280	91
minus occupier's expenses	226	3	253	3	211	2
minus interest payments	3,976	44	3,734	41	3,683	40
minus buildings & works depreciation	1,919	21	2,182	24	2,169	24
OCCUPIER'S NET INCOME	15,484	171	15,886	174	10,937	120
plus other imputed charges	1,505	17	4,121	45	1,776	20
plus fixed asset depreciation	6,858	76	6,943	76	6,573	72
minus valuation changes	-4,521	-50	-699	-8	488	5
CASH INCOME	28,368	314	27,649	303	18,798	207
TENANT'S CAPITAL - £ per farm	£/farm	£/ha	£/farm	£/ha	£/farm	£/ha
Machinery	25,512	282	27,405	301	29,399	323
Livestock	64,925	718	62,495	686	60,305	663
Crops	4,214	47	4,391	48	4,793	53
Stores	2,355	26	2,856	31	2,819	31
TOTAL	97,006	1,072	97,146	1,066	97,316	1,069
PERFORMANCE INDICATORS						
Lambs reared per ewe (nos.)		1.3		1.1		1.3
Fat lamb sales per ewe (nos.)		1.0		1.0		1.1
Stocking rate (LU per eff.ha)		1.21		1.21		1.23
GLU/forage effective hectare*		1.39		1.40		1.42
Owner Equity (%)		88%		88%		87%
ONI/Net worth (%)		4%		4%		3%
Return on tenant's capital (%)		3%		2%		-5%
Return on all capital (%)		2%		2%		1%
Annual Labour Units per farm		1.9		1.9		1.8
of which farmer & spouse		1.1		1.1		1.1
LAND UTILISATION - hectares per farm		ha		ha		ha
Cereals and cash crops		9.7		10.9		10.5
Roots, fodder and other crops		0.6		0.8		2.0
Total grassland		63.3		63.1		62.4
Fallow, land let and set aside		2.0		1.6		1.4
Rough grazing - sole (Effective ha.)		14.9		14.7		14.7
Utilisable agricultural area (Effective ha.)		90.5		91.1		91.0
Rough grazing - common (Effective ha.)		1.8		1.7		1.7
Woods, roads and buildings		3.0		3.1		3.3
TOTAL AREA (Actual ha.)		95.2		95.9		95.9
Effective forage area		78.8		78.6		79.1

* for conventional farms, pigs, poultry and other livestock are deemed to be non-grazing livestock

Table 5A. Results of lowland cattle and sheep farms

ORGANIC

INCOME MEASURES	1995/96		1996/97		1997/98	
	£/farm	£/ha	£/farm	£/ha	£/farm	£/ha
NET FARM INCOME (excl. BLSA)	1,800	19	-1,373	-14	-3,152	-33
plus net rental value/imputed rent	12,473	130	13,564	141	14,077	147
minus occupier's expenses	0	0	42	0	0	0
minus interest payments	142	1	456	5	299	3
minus buildings & works depreciation	5,720	59	9,080	94	9,295	97
OCCUPIER'S NET INCOME	8,411	87	2,613	27	1,330	14
plus other imputed charges	-836	-9	-1,766	-18	-1,761	-18
plus fixed asset depreciation	14,631	152	16,577	172	17,525	183
minus valuation changes	3,552	37	-10,012	-104	7,365	77
CASH INCOME	18,654	194	27,437	285	9,729	101
TENANT'S CAPITAL - £ per farm	£/farm	£/ha	£/farm	£/ha	£/farm	£/ha
Machinery	51,027	530	53,902	560	54,873	572
Livestock	63,926	664	65,978	686	64,791	675
Crops	14,228	148	12,814	133	9,686	101
Stores	3,137	33	3,433	36	2,825	29
TOTAL	132,317	1,374	136,127	1,415	132,175	1,377
PERFORMANCE INDICATORS						
Lambs reared per ewe (nos.)		1.4		1.3		1.4
Fat lamb sales per ewe (nos.)		0.9		1.0		1.0
Stocking rate (LU per eff.ha)		1.13		1.11		1.16
GLU/forage effective hectare*		1.46		1.43		1.54
Owner Equity (%)		99%		99%		99%
ONI/Net worth (%)		1%		0%		0%
Return on tenant's capital (%)		-3%		-5%		-8%
Return on all capital (%)		1%		1%		0%
Annual Labour Units per farm		n/a		3.0		2.9
of which farmer & spouse		n/a		0.8		0.9
LAND UTILISATION - hectares per farm		ha		ha		ha
Cereals and cash crops		18.7		19.5		22.1
Roots, fodder and other crops		2.5		0.9		0.0
Total grassland		71.1		73.1		71.8
Fallow, land let and set aside		3.3		2.0		1.4
Rough grazing - sole (Effective ha.)		0.6		0.6		0.6
Utilisable agricultural area (Effective ha.)		96.3		96.2		96.0
Rough grazing - common (Effective ha.)		0.0		0.0		0.0
Woods, roads and buildings		5.8		5.8		5.9
TOTAL AREA (Actual ha.)		104.0		104.0		103.8
Effective forage area		74.3		74.7		72.5

* for organic farms, pigs, poultry and other livestock are deemed to be grazing livestock

Table 5A. Results of lowland cattle and sheep farms

CONVENTIONAL

	1995/96		1996/97		1997/98	
LIVESTOCK CARRIED - per farm	Average		Average		Average	
	Number	LU	Number	LU	Number	LU
Dairy cows	5.2	5.2	4.7	4.7	4.7	4.7
Beef cows	38.2	28.7	41.2	30.9	43.1	32.3
Other cattle	63.9	31.9	71.6	35.4	72.6	35.2
Breeding sheep	380.6	30.6	350.3	27.4	347.1	27.2
Other sheep	283.2	13.0	257.2	11.4	279.0	12.3
Pigs	0.5	0.0	0.6	0.1	0.0	0.0
Poultry	0.4	0.0	0.4	0.0	0.5	0.0
Other livestock	0.5	0.3	0.6	0.3	0.8	0.5
TOTAL (L.U.)	109.6		110.1		112.1	
ASSETS - £ per farm	Opening Value	Closing Value	Opening Value	Closing Value	Opening Value	Closing Value
Land and Property	253,759	264,849	274,015	280,641	280,641	275,780
Buildings, improvements and fixtures	18,334	20,335	11,067	11,073	11,064	10,752
Machinery	24,360	26,664	26,570	28,240	28,240	30,558
Livestock	67,853	61,998	63,209	61,780	61,564	59,046
Produce and goods in store	6,254	6,885	7,060	7,433	7,293	7,931
Quotas	32,824	32,767	30,831	31,197	32,755	32,387
Credit balances	14,163	13,939	12,532	14,890	15,178	16,444
TOTAL	417,546	427,436	425,284	435,254	436,734	432,897
EXTERNAL LIABILITIES						
Long and medium term loans	31,552	32,377	31,900	31,274	31,292	31,650
Short term loans	10,457	11,707	10,275	6,970	8,317	8,802
Overdrafts	10,076	6,960	9,283	9,134	15,633	12,396
TOTAL	52,085	51,044	51,457	47,378	55,243	52,847
NET WORTH	365,461	376,392	373,827	387,876	381,491	380,050

Table 5A. Results of lowland cattle and sheep farms

ORGANIC

	1995/96		1996/97		1997/98	
LIVESTOCK CARRIED - per farm	Average		Average		Average	
	Number	LU	Number	LU	Number	LU
Dairy cows	16.6	16.6	16.9	16.9	16.6	16.6
Beef cows	27.6	20.7	32.2	24.1	32.1	24.1
Other cattle	64.7	36.2	62.5	33.3	66.3	37.8
Breeding sheep	252.2	25.9	243.4	25.5	239.2	24.8
Other sheep	213.2	8.7	166.5	7.1	192.3	8.2
Pigs	0.0	0.0	0.0	0.0	0.0	0.0
Poultry	9.9	0.0	4.3	0.1	8.6	0.1
Other livestock	0.9	0.1	0.9	0.2	1.8	0.2
TOTAL (L.U.)	108.3		107.2		111.7	
ASSETS - £ per farm	Opening Value	Closing Value	Opening Value	Closing Value	Opening Value	Closing Value
Land and Property	512,010	514,323	548,637	548,642	548,642	548,642
Buildings, improvements and fixtures	74,408	79,769	45,457	46,967	46,967	41,851
Machinery	48,979	53,076	53,076	54,729	54,729	55,018
Livestock	61,058	66,794	66,737	65,219	65,185	64,397
Produce and goods in store	17,119	17,609	17,406	15,087	14,902	10,120
Quotas	52,359	52,359	54,412	54,934	54,934	53,762
Credit balances	20,552	46,828	46,204	29,281	29,281	82,498
TOTAL	786,485	830,758	831,926	814,857	814,639	856,287
EXTERNAL LIABILITIES						
Long and medium term loans	0	0	0	0	0	0
Short term loans	4,403	7,054	6,172	7,791	7,791	5,759
Overdrafts	99	1,875	1,640	2,227	2,227	5,248
TOTAL	4,502	8,928	7,812	10,018	10,018	11,007
NET WORTH	781,983	821,830	824,114	804,839	804,621	845,281

Table 6A. Results of LFA cattle and sheep farms

ORGANIC

		1997/98	
No of Farms		5	
ESU per farm		32	
Area organic or in conversion. (%)		100	
OUTPUTS, INPUTS & INCOMES		£/farm	£/ha
OUTPUTS			
Dairy	output	0	0
	net quota	0	0
Other cattle	output	6,801	85
	subsidies	9,351	118
Sheep -	output	13,363	168
	subsidies	7,770	98
Other livestock		1,917	24
Main crops	output	1,237	16
	subsidies	1,557	20
By-products, forage and cultivations		2,074	26
subsidies (set-aside)		0	0
Miscellaneous		3,250	41
- organic grants		3,764	47
- other agri-env.payments		0	0
TOTAL OUTPUTS		51,083	642
INPUTS			
Feeds	purchased concentrates	5,582	70
	homegrown concentrates	0	0
Purchased fodder, Tack and stock keep		1,591	20
Veterinary and medicines		1,806	23
Other livestock costs		2,139	27
Seeds - purchased and homegrown		857	11
Fertilisers		1,825	23
Crop protection		7	0
Other crop costs		75	1
Labour	farmer & spouse (manual only)	7,990	100
	paid incl. paid management	5,408	68
	unpaid	0	0
Machinery	casual	371	5
	contract	5,322	67
	repairs	3,150	40
	fuels	2,599	33
depreciation		6,276	79
General farming costs		9,014	113
Land expenses		1,506	19
Rent		411	5
Rental value		8,045	101
TOTAL INPUTS		63,974	804
Add back managerial input of paid manager		0	0
MANAGEMENT AND INVESTMENT INCOME		-12,891	-162
Add back farmer and spouse labour		7,990	100
Deduct managerial input of paid manager		0	0
NET FARM INCOME (including BLSA)		-4,901	-62
NET FARM INCOME (excluding BLSA)		-4,901	-62

Table 6A. Results of LFA cattle and sheep farms

	ORGANIC	
	1997/98	
INCOME MEASURES	£/farm	£/ha
NET FARM INCOME (excl. BLSA)	-4,901	-62
plus net rental value/imputed rent	8,045	101
minus occupier's expenses	0	0
minus interest payments	761	10
minus buildings & works depreciation	3,385	43
OCCUPIER'S NET INCOME	-1,003	-13
plus other imputed charges	0	0
plus fixed asset depreciation	9,661	121
minus valuation changes	5,122	64
CASH INCOME	3,537	44
TENANT'S CAPITAL - £ per farm		
Machinery	19,386	244
Livestock	48,091	604
Crops	4,402	55
Stores	2,037	26
TOTAL	73,916	929
PERFORMANCE INDICATORS		
Lambs reared per ewe (nos.)		1.0
Fat lamb sales per ewe (nos.)		0.8
Stocking rate (LU per eff.ha)		1.34
GLU per forage hectare		1.47
Owner Equity (%)		97%
ONI/Net worth (%)		0%
Return on tenant's capital (%)		-17%
Return on all capital (%)		-1%
Annual Labour Units per farm		1.5
of which farmer & spouse		0.9
LAND UTILISATION - hectares per farm		
Cereals and cash crops		6.8
Roots, fodder and other crops		0.0
Total grassland		51.4
Fallow, land let and set aside		0.4
Rough grazing - sole (Effective ha.)		21.1
Utilisable agricultural area (Effective ha.)		79.6
Rough grazing - common (Effective ha.)		3.1
Woods, roads and buildings		34.6
TOTAL AREA (Actual ha.)		150.6
Effective forage area		72.4

Table 6A. Results of LFA cattle and sheep farms

		ORGANIC	
		1997/98	
LIVESTOCK CARRIED - per farm		Average	
		Number	LU
Dairy cows		0.0	1.6
Beef cows		31.4	25.2
Other cattle		46.4	28.6
Breeding sheep		436.8	51.2
Other sheep		0.0	0.2
Pigs		0.0	0.0
Poultry		0.0	0.0
Other livestock		0.0	0.0
TOTAL (L.U.)			106.8
ASSETS - £ per farm		Opening	Closing
		Value	Value
Land and Property		372,481	419,655
Buildings, improvements and fixtures		29,809	40,243
Machinery		18,214	20,557
Livestock		41,820	54,363
Produce and goods in store		5,343	7,534
Quotas		6,240	6,240
Credit balances		11,871	18,731
TOTAL		485,778	567,323
EXTERNAL LIABILITIES			
Long and medium term loans		0	0
Short term loans		12,745	34,550
Overdrafts		724	43,945
TOTAL		13,469	78,495
NET WORTH		472,309	488,828

Table 7A. Results of mixed farms

CONVENTIONAL

		1995/96		1996/97		1997/98	
No of Farms		74, in 8 clusters of 5 to 13 farms					
ESU per farm		106		104		109	
Area organic or in conversion. (%)		n/a		n/a		n/a	
OUTPUTS, INPUTS & INCOMES		£/farm	£/ha	£/farm	£/ha	£/farm	£/ha
OUTPUTS							
Dairy	output	53,483	312	46,348	270	41,282	239
	net quota	6,006	35	1,797	10	120	1
Other cattle	output	30,011	175	24,307	142	22,336	129
	subsidies	7,271	42	9,546	56	7,994	46
Sheep -	output	15,720	92	17,895	104	14,424	84
	subsidies	6,242	36	4,358	25	3,874	22
Other livestock		8,950	52	12,566	73	16,070	93
Main crops	output	59,893	349	57,082	333	45,792	265
	subsidies	18,759	109	18,415	107	20,882	121
By-products, forage and cultivations		5,479	32	6,647	39	5,996	35
	subsidies (set-aside)	3,590	21	3,057	18	1,532	9
Miscellaneous		9,054	53	9,560	56	9,558	55
- organic grants		0	0	0	0	0	0
- other agri-env.payments		515	3	440	3	533	3
TOTAL OUTPUTS		224,974	1,311	212,020	1,236	190,394	1,102
INPUTS							
Feeds	purchased concentrates	25,683	150	25,111	146	24,497	142
	homegrown concentrates	4,998	29	4,793	28	4,865	28
Purchased fodder, Tack and stock keep		2,997	17	2,607	15	2,302	13
Veterinary and medicines		3,580	21	3,935	23	4,319	25
Other livestock costs		9,006	52	8,486	49	8,230	48
Seeds -	purchased and homegrown	4,607	27	5,245	31	5,276	31
Fertilisers		12,307	72	13,290	77	14,260	83
Crop protection		6,502	38	7,776	45	9,057	52
Other crop costs		1,847	11	2,026	12	2,434	14
Labour	farmer & spouse (manual only)	10,559	62	10,992	64	11,613	67
	paid incl. paid management	21,863	127	22,411	131	25,037	145
	unpaid	5,020	29	5,580	33	5,191	30
	casual	1,440	8	1,408	8	1,620	9
Machinery	contract	5,154	30	5,081	30	4,823	28
	repairs	7,486	44	7,921	46	7,230	42
	fuels	3,533	21	4,050	24	4,397	25
	depreciation	13,812	80	14,972	87	16,128	93
General farming costs		12,567	73	13,879	81	13,343	77
Land expenses		4,802	28	5,081	30	3,169	18
Rent		5,816	34	6,165	36	6,313	37
Rental value		16,085	94	16,914	99	16,983	98
TOTAL INPUTS		179,665	1047	187,723	1,094	191,086	1,106
Add back managerial input of paid manager		528	3	541	3	546	3
MANAGEMENT AND INVESTMENT INCOME		45,838	267	24,839	145	-146	-1
Add back farmer and spouse labour		10,559	62	10,992	64	11,613	67
Deduct managerial input of paid manager		528	3	541	3	546	3
NET FARM INCOME (including BLSA)		55,869	326	35,289	206	10,920	63
NET FARM INCOME (excl. BLSA)		57,039	332	35,843	209	13,518	78

Table 7A. Results of mixed farms

		ORGANIC					
		1995/96		1996/97		1997/98	
No of Farms		8		8		8	
ESU per farm		78		83		117	
Area organic or in conversion. (%)		96		96		96	
OUTPUTS, INPUTS & INCOMES		£/farm		£/ha		£/farm	
OUTPUTS		£/ha		£/ha		£/ha	
Dairy	output	49,230	241	47,636	247	47,975	250
	net quota	-3,251	-16	-2,760	-14	-430	-2
Other cattle	output	15,362	75	14,917	77	11,850	62
	subsidies	3,496	17	5,859	30	7,813	41
Sheep -	output	14,089	69	14,726	76	13,092	68
	subsidies	6,268	31	4,527	24	4,859	25
Other livestock		1,044	5	658	3	-811	-4
Main crops	output	46,881	229	57,385	298	72,392	378
	subsidies	12,866	63	15,007	78	18,942	99
By-products, forage and cultivations		3,418	17	5,701	30	3,007	16
	subsidies (set-aside)	6,312	31	3,801	20	2,637	14
Miscellaneous		2,097	10	6,994	36	2,920	15
	- organic grants	2,644	13	3,387	18	2,140	11
	- other agri-env.payments	1,014	5	1,011	5	1,196	6
TOTAL OUTPUTS		161,467	789	178,848	929	187,581	979
INPUTS							
Feeds	purchased concentrates	5,038	25	8,536	44	3,252	17
	homegrown concentrates	5,081	25	6,609	34	5,946	31
Purchased fodder, Tack and stock keep		269	1	1,158	6	539	3
Veterinary and medicines		1,560	8	1,631	8	2,214	12
Other livestock costs		7,426	36	6,720	35	6,006	31
Seeds -	purchased and homegrown	4,198	21	8,531	44	8,466	44
Fertilisers		2,953	14	4,355	23	4,007	21
Crop protection		1,616	8	1,742	9	1,373	7
Other crop costs		1,174	6	1,807	9	2,468	13
Labour	farmer & spouse (manual only)	7,928	39	9,646	50	10,086	53
	paid incl. paid management	17,814	87	18,066	94	31,040	162
	unpaid	2,647	13	3,136	16	3,255	17
	casual	5,168	25	2,992	16	1,706	9
Machinery	contract	8,770	43	8,919	46	12,260	64
	repairs	6,652	33	7,754	40	8,041	42
	fuels	2,969	15	3,242	17	3,651	19
	depreciation	9,951	49	13,335	69	13,630	71
General farming costs		9,831	48	9,406	49	10,185	53
Land expenses		4,225	21	4,970	26	2,513	13
Rent		8,111	40	9,274	48	11,381	59
Rental value		11,167	55	12,629	66	13,897	73
TOTAL INPUTS		124,546	609	144,455	750	155,916	814
Add back managerial input of paid manager		900	4	1,000	5	1,000	5
MANAGEMENT AND INVESTMENT INCOME		37,821	185	35,393	184	32,665	171
Add back farmer and spouse labour		7,928	39	9,646	50	10,086	53
Deduct managerial input of paid manager		900	4	1,000	5	1,000	5
NET FARM INCOME (including BLSA)		44,849	219	44,039	229	41,751	218
NET FARM INCOME (excluding BLSA)		44,797	219	44,186	229	41,751	218

Table 7A. Results of mixed farms

INCOME MEASURES	CONVENTIONAL					
	1995/96		1996/97		1997/98	
	£/farm	£/ha	£/farm	£/ha	£/farm	£/ha
NET FARM INCOME (excl. BLSA)	57,039	332	35,843	209	13,518	78
plus net rental value/imputed rent	15,757	92	16,830	98	16,873	98
minus occupier's expenses	872	5	858	5	2,153	12
minus interest payments	6,875	40	5,004	29	5,820	34
minus buildings & works depreciation	3,239	19	3,760	22	3,483	20
OCCUPIER'S NET INCOME	61,810	360	43,050	251	18,935	110
plus other imputed charges	4,496	26	6,782	40	5,068	29
plus fixed asset depreciation	17,052	99	18,732	109	19,611	114
minus valuation changes	2,421	14	-3,932	-23	-6,363	-37
CASH INCOME	80,937	472	72,496	423	49,977	289
TENANT'S CAPITAL - £ per farm	£/farm	£/ha	£/farm	£/ha	£/farm	£/ha
Machinery	74,610	435	81,434	475	86,560	501
Livestock	97,072	566	91,806	535	85,845	497
Crops	23,193	135	24,497	143	25,339	147
Stores	17,509	102	19,692	115	18,695	108
TOTAL	212,385	1,238	217,430	1,267	216,439	1,253
PERFORMANCE INDICATORS						
Lambs reared per ewe (nos.)		1.4		1.4		1.4
Fat lamb sales per ewe (nos.)		1.1		1.0		1.2
Stocking rate (LU per eff.ha)		0.93		0.93		0.95
GLU/forage effective hectare*		1.78		1.70		1.71
Owner Equity (%)		90%		91%		90%
ONI/Net worth (%)		8%		5%		2%
Return on tenant's capital (%)		22%		11%		0%
Return on all capital (%)		7%		5%		2%
Annual labour units		3.2		3.2		3.3
of which farmer & spouse		1.1		1.1		1.1
LAND UTILISATION - hectares per farm		ha		ha		ha
Cereals and cash crops		71.0		72.2		80.8
Roots, fodder and other crops		4.7		5.0		4.8
Total grassland		80.4		80.5		77.1
Fallow, land let and set aside		13.4		12.4		8.5
Rough grazing - sole (Effective ha.)		1.4		1.4		1.4
Utilisable agricultural area (Effective ha.)		171.6		171.5		172.7
Rough grazing - common (Effective ha.)		0.5		0.3		0.3
Woods, roads and buildings		8.3		8.6		8.6
TOTAL AREA (Actual ha.)		179.7		180.5		181.7
Effective forage area		87.2		87.0		83.4

* for conventional farms, pigs, poultry and other livestock are deemed to be non-grazing livestock

Table 7A. Results of mixed farms

	ORGANIC					
	1995/96		1996/97		1997/98	
INCOME MEASURES	£/farm	£/ha	£/farm	£/ha	£/farm	£/ha
NET FARM INCOME (excl. BLSA)	44,797	219	44,186	229	41,751	218
plus net rental value/imputed rent	10,286	50	12,475	65	13,897	73
minus occupier's expenses			215	1	267	1
minus interest payments	2,066	10	8,514	44	1,937	10
minus buildings & works depreciation	1,866	9	2,364	12	-470	-2
OCCUPIER'S NET INCOME	51,152	250	45,568	237	53,915	281
plus other imputed charges	4,353	21	4,915	26	4,742	25
plus fixed asset depreciation	12,100	59	15,699	82	14,887	78
minus valuation changes	1,118	5	6,331	33	11,780	61
CASH INCOME	66,488	325	59,851	311	61,764	322
TENANT'S CAPITAL - £ per farm	£/farm	£/ha	£/farm	£/ha	£/farm	£/ha
Machinery	57,761	282	67,519	351	80,331	419
Livestock	62,173	304	66,889	347	67,590	353
Crops	7,160	35	10,593	55	19,192	100
Stores	3,095	15	4,162	22	4,761	25
TOTAL	130,189	637	149,163	775	171,875	897
PERFORMANCE INDICATORS						
Lambs reared per ewe (nos.)		1.3		1.3		1.1
Fat lamb sales per ewe (nos.)		1.1		0.9		1.1
Stocking rate (LU per eff.ha)		0.58		0.55		0.67
GLU/forage effective hectare*		0.91		0.86		1.18
Owner Equity (%)		97%		97%		97%
ONI/Net worth (%)		5%		5%		5%
Return on tenant's capital (%)		29%		28%		19%
Return on all capital (%)		5%		5%		4%
Annual labour units		n/a		3.5		3.8
of which farmer & spouse		n/a		1.2		1.0
LAND UTILISATION - hectares per farm		ha		ha		ha
Cereals and cash crops		51.5		52.6		71.2
Roots, fodder and other crops		15.5		13.9		0.9
Total grassland		112.2		101.8		100.3
Fallow, land let and set aside		22.1		16.7		10.7
Rough grazing - sole (Effective ha.)		3.2		7.6		8.5
Utilisable agricultural area (Effective ha.)		204.5		192.6		191.6
Rough grazing - common (Effective ha.)		0.0		0.0		0.0
Woods, roads and buildings		11.0		12.4		13.4
TOTAL AREA (Actual ha.)		228.5		213.1		212.8
Effective forage area		130.8		123.3		109.7

* for organic farms, pigs, poultry and other livestock are deemed to be grazing livestock

Table 7A. Results of mixed farms

	CONVENTIONAL					
	1995/96		1996/97		1997/98	
LIVESTOCK CARRIED - per farm	Average		Average		Average	
	Number	LU	Number	LU	Number	LU
Dairy cows	36.2	36.2	32.6	32.6	30.6	30.6
Beef cows	21.3	15.9	21.4	16.1	21.2	15.9
Other cattle	119.8	63.3	116.7	61.2	108.8	57.8
Breeding sheep	274.7	27.8	278.0	27.7	276.8	27.6
Other sheep	249.7	10.7	238.4	10.2	253.1	10.8
Pigs	42.8	6.0	70.8	12.3	130.5	20.7
Poultry	1.0	0.0	0.0	0.0	0.0	0.0
Other livestock	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL (L.U.)	159.9		160.1		163.4	
ASSETS - £ per farm	Opening Value	Closing Value	Opening Value	Closing Value	Opening Value	Closing Value
Land and Property	453,365	481,377	507,458	528,433	522,507	532,721
Buildings, improvements and fixtures	43,527	48,435	21,661	22,616	22,616	20,049
Machinery	71,391	77,828	77,874	84,995	84,931	88,188
Livestock	98,981	95,164	94,885	88,728	89,110	82,580
Produce and goods in store	38,189	43,216	43,344	45,035	45,241	42,827
Quotas	70,801	86,008	86,121	86,077	76,718	75,740
Credit balances	32,570	34,021	38,192	44,140	49,319	41,994
TOTAL	808,824	866,049	869,535	900,022	890,443	884,099
EXTERNAL LIABILITIES						
Long and medium term loans	35,139	39,801	39,781	38,264	46,560	35,917
Short term loans	15,469	15,406	15,653	23,997	24,424	22,055
Overdrafts	29,118	23,323	23,347	15,666	15,666	20,836
TOTAL	79,727	78,530	78,782	77,927	86,650	78,809
NET WORTH	729,098	787,519	790,753	822,095	803,792	805,290

Table 7A. Results of mixed farms

		ORGANIC					
		1995/96		1996/97		1997/98	
LIVESTOCK CARRIED - per farm		Average		Average		Average	
		Number	LU	Number	LU	Number	LU
Dairy cows		32.3	32.3	33.8	38.6	33.2	33.2
Beef cows		18.6	14.0	18.9	11.2	19.0	14.0
Other cattle		64.5	33.4	66.2	33.7	67.8	37.6
Breeding sheep		276.4	34.3	274.6	16.3	291.4	35.9
Other sheep		108.1	4.8	71.9	3.7	114.3	5.4
Pigs		0.1	0.0	0.2	0.0	0.1	0.0
Poultry		0.0	0.0	70.0	1.4	0.0	1.1
Other livestock		0.6	0.4	1.1	1.0	1.3	1.9
TOTAL (L.U.)		119.3		105.7		129.1	
ASSETS - £ per farm		Opening	Closing	Opening	Closing	Opening	Closing
		Value	Value	Value	Value	Value	Value
Land and Property		778,578	786,146	727,938	727,938	858,345	865,203
Buildings, improvements and fixtures		11,696	20,125	15,239	20,426	15,611	18,991
Machinery		55,540	59,982	59,605	75,433	75,433	85,229
Livestock		61,259	63,087	65,283	68,495	68,486	66,694
Produce and goods in store		9,205	11,305	11,625	17,884	18,075	29,725
Quotas		76,828	76,828	77,504	78,133	78,048	81,512
Credit balances		19,050	55,413	55,480	53,957	54,322	75,443
TOTAL		1,012,155	1,072,886	1,012,675	1,042,266	1,168,320	1,222,796
EXTERNAL LIABILITIES							
Long and medium term loans		10,734	10,013	8,762	8,762	10,329	4,552
Short term loans		5,753	6,283	5,518	7,890	5,858	21,939
Overdrafts		14,421	15,043	12,187	11,667	9,320	12,719
TOTAL		30,908	31,339	26,466	28,318	25,507	39,210
NET WORTH		981,248	1,041,547	986,208	1,013,948	1,142,813	1,183,586

Appendix 2 The Farm Classification System

For each farm in the survey, each hectare of crop area and each head of livestock are assessed in terms of Standard Gross Margins (SGMs). These SGMs are expressed in European Currency Units, with 1200 such units equivalent to 1 European Size Unit (ESU).

Farm size is measured for a particular farm by the number of ESUs registered in total, and this is thus a measure of the size of the farm business. It is a measure of the economic size of holdings in terms of the value they add to variable inputs and thus differs from physical measures, such as area, which take no account of the intensity of production. The survey is designed to cover farms of at least 8 ESU in size.

Farm type is determined for a particular farm by the proportion of the SGM total accounted for by each enterprise. Precise details of the typology are complex, but may be summarised as follows:

<i>Farm type</i>	<i>Characteristics</i>
Cropping	In this report, two categories are combined:
<i>Cereals</i>	Farms on which cereals and other crops generally found in cereal rotations account for more than two thirds of their total SGM.
<i>General cropping</i>	Farms on which arable crops (including field scale vegetables) account for more than two thirds of their total SGM excluding farms classified as <i>cereals</i> .
Horticulture	Farms where horticultural crops or permanent crops including fruit, either alone or in combination, account for over one-third of total SGM and form the largest enterprise group.
Dairy	Farms where the dairy enterprise, including followers, accounts for over one third, and commonly over two-thirds of total SGM and is the largest enterprise group.
Cattle and sheep	In this report, two categories are presented separately:
<i>Lowland livestock</i>	Farms outside the Less Favoured Areas on which grazing livestock, other than dairy cattle, account for over one-third, commonly over two-thirds, of total SGM, and form the largest enterprise group, or farms on which grazing livestock (except dairy cattle) and field crops each account for over one-third but less than two-thirds of total SGM.
<i>LFA livestock</i>	Farms in the Less Favoured Areas on which sheep, cattle or cattle and sheep together, other than dairy cattle, account for over one-third of total SGM, commonly over two-thirds and are the largest enterprise group.
Mixed	Farms with a range of enterprise where none clearly predominates.

Appendix 3 Comparing farming systems

Much of the early research carried out on organic farming systems was based on comparisons between organic and conventional approaches. This type of work was criticised for a number of reasons, including the methodological difficulties of comparing whole farm systems, the limited applicability and the costs of the results obtained, and the lack of progress in solving technical problems in organic farming (Lampkin and Padel, 1994).

Comparisons with conventional systems, particularly relating to the economic and environmental impacts of organic farming, can be useful despite these concerns. Existing organic producers, clearly, will be more interested in developmental work and in comparisons between their own holdings and those of other organic producers. Conventional producers, however, need conventional *versus* organic comparative data in order to make soundly-based decisions on the implications of conversion, although the most important issue for the conventional farmer is the likely impact on his or her own farm, rather than the generality of farms. All farmers, organic and conventional, are influenced by the decisions of policy makers and governments in the fields of agricultural, economic, and environmental policy. The success or otherwise of policy-making depends critically on the quality (often even more than the quantity) of data available to the policy maker, and this must include soundly based, comparative data on different farming systems.

The comparison of farming systems is an area of research that is problematic even in situations where the results are not likely to be controversial. Unlike an experimental situation, it is not possible to hold most factors constant while examining the effects of changes in a few key variables. In the case of system comparisons, a large number of variables are involved. Some of these variables, such as enterprise mix and intensity of input use, will be (more or less) directly influenced by the farmer or the farming system employed. Others, such as location (infrastructure and market access), soil texture, topography and climate, are not directly influenced by farm management decisions. Resource endowment in terms of land area and tenure, owner equity, availability of family labour, management capacity (skill, education, experience), and quota ownership is also to large extent independent of management decisions.

The Farm Business Survey has, over the years, developed some techniques to deal with the problem of making such comparisons. Farms are classified by farm type and business size, and in some cases by region. The type and size classifications are based on a detailed European methodology described in Commission Decision 85/377/EEC.

In addition, income measures such as Management and Investment Income and Net Farm Income are based on standardised assumptions:

- All land is assumed tenanted - a notional rental value is applied to owner-occupied land and landlord-type property costs are excluded
- All capital is assumed to belong to the farmer - interest charges are excluded
- All labour is assumed to be paid - notional charges based on average employee wages are applied to unpaid family as well as farmer and spouse labour

These assumptions are relaxed in the case of Occupier's Net Income and Cash Income, which reflect the actual labour, tenure and capital borrowing situations on farms, but comparability between farms is correspondingly reduced.

However, the situation becomes more complex when comparing organic and conventional farms. For example, the actual farming decisions concerning the enterprise mix and size are, to

a certain extent, dependent on the above factors, but also on the wishes and experience of the owner or manager. The factor of organic management may affect the enterprise mix, but does not necessarily. Some farms converting to organic management do not change their enterprise mix, others make radical changes. Additionally there is a spectrum within each type of farm: a predominantly dairy farm, whether organic or conventional, may operate at a high intensity, with high inputs, or may be extensive and grow a variety of forage crops and cereal crops for feeds.

Further, there are potential difficulties of definition of organic and conventional systems. In this study, all the results presented for organic farms will have a certified organic land area of greater than 50% by the third year of the study. Some organic farms with non-organic areas actually manage their land according to organic principles even if land is not registered as in conversion. Also, since the FBS does not differentiate between organic and conventional farms in their survey, so-called conventional farms may also be managed organically but not certified.

With reference to the economic performance of organic farms, different researchers have adopted a number of approaches. These include comparisons of pairs of similar organic and conventional farms, as well as comparisons with differentiated (e.g. by type, size and location) and undifferentiated groups (e.g. national averages for all farms). The possible combinations of these approaches are indicated schematically below:

		Conventional		
		Individual farms	Differentiated groups	Undifferentiated groups
Organic	Individual farms	✓	✓	✓
	Differentiated groups	✓	✓	✓
	Undifferentiated groups		✓	✓

Examples of these different approaches are described in Lampkin and Padel (1994)⁸. Each approach has particular strengths and weaknesses, depending on what information is required as well as which factors are determined by the organic or conventional management of the system. Reliance on individual farm data and pairwise comparisons is subject to the influence of the management capacity of individual farmers, while undifferentiated groupings do not take sufficient account of differences in farm type.

Farm comparisons are always flawed due to the difficulties in finding the right group and the delay in publishing of the data. Further, analysis can indicate whether performance is above or below average and may indicate areas of weakness, but it fails to provide information on why performance is poor and how to improve it, or how to improve on good performance.

⁸ Lampkin, N. H. and S. Padel (ed.) (1994) *The economics of organic farming: an international perspective*. CAB International, Wallingford.

Appendix 4 Definition of Terms

Breeding Livestock Appreciation (BLSA)

BLSA is that element of Net Farm Income resulting from changes in breeding livestock prices between the opening and closing valuations. It is calculated by multiplying for each category of breeding livestock the change in the opening and closing valuations by the average number of livestock in that category during the year.

Cash Income

Cash income is based on actual receipts and actual expenditure. It represents the difference between receipts and expenditure on current account, before depreciation charges and investment spending.

Effective Hectares (Eff.ha.) and Effective Forage Hectares (Eff.for.ha)

The effective hectareage constitutes the total farm area minus the area occupied by roads, woodland, wasteland and buildings, and with rough grazings expressed in terms of their pasture equivalent. E.g. on a particular farm, 20 hectares of rough grazing in terms of its capacity to carry stock may be worth 4 hectares of permanent pasture - it is therefore regarded as being 4 effective hectares. A notional area is also estimated for the use made of any common grazings.

Effective forage hectares excludes land for cash cropping.

Enterprise Output

Enterprise output is all returns from an enterprise, plus the market value of any of its products transferred out to another enterprise, plus the market value of any production from the enterprise given to workers or consumed on the farm. In the case of livestock enterprises, the value of purchased livestock and the market value of livestock transferred in from another enterprise are deducted. All totals are adjusted for changes in valuation. Milk output includes quota transactions and any super-levies paid, have been deducted.

General Farming Costs

General farming costs include electricity, water and telephone charges, licences, insurances, subscriptions, professional charges, etc.

Livestock Units (LU) and Grazing Livestock Units (GLU)

Livestock numbers are converted to livestock units, which are based on estimated energy requirements, in order to calculate the total stocking of grazing livestock on the farm. The following conversion factors are used:

Dairy cow	1.00	Hill ewe	0.06
Beef/hill cow	0.75	Upland ewe	0.08
Beef/dairy bull	0.65	Lowland ewe	0.11
Beef/dairy heifer	0.80	Ram	0.08
Other cattle - 2 years old and over	0.80	Ewe lamb	0.08
- 1 to 2 years old	0.65	Other sheep 1 year old and over	0.08
- under 1 year old	0.34	Store lamb under 1 yr.	0.04

Management and Investment Income (MII)

MII is total farm enterprise output less total inputs (including the value of the labour input of the farmer and spouse). It represents the reward for the farmer's (and spouse's) management and interest on the tenant's capital employed on the farm.

Margin over concentrates

Margin over concentrates is the difference between milk sales and the value of purchased and homegrown concentrates used for the dairy herd.

Miscellaneous Output

Miscellaneous output includes contract work, farm cottage rents, benefit value of farmhouses, and profit on resale of purchased agricultural produce.

Net Farm Income (NFI)

NFI is total farm enterprise output less total inputs (excluding the value of the labour of the farmer and spouse). It is calculated as if all farms are tenanted, and represents the return to the farmer and spouse for their labour and management, and on the tenant-type capital of the business.

Net Worth

Net worth is the difference between total assets and total liabilities and represents the value of assets available to the business, all other claims against these assets having been met.

Occupier's Net Income

Occupier's net income is based on actual tenure and indebtedness. It represents the return to the farmer and spouse for their labour, management and investment in the farm business.

Other Crop Costs

Other crop costs include crop protection chemicals and other costs incurred specifically for crop enterprises and forage.

Other Livestock Costs

Other livestock costs include purchased bedding materials, and other costs incurred specifically for livestock enterprises.

Owner Equity

Owner equity is net worth expressed as a percentage of total assets.

Rental Value

For owner-occupied farms, a rental value is imputed to make it possible to compare results with farms on which rents have to be paid.

Return on Tenant's Capital

Return on tenant's capital is management and investment income expressed as a percentage of total tenant's capital.

Return on All Capital

Return on tenant's capital is management and investment income plus rental value expressed as a percentage of total tenant's capital.

Tenant's Capital

Tenant's capital is the value of livestock, machinery, crops (including cultivations) and stores. In the tables, it is expressed as the average of the opening and closing valuations for these items.