RBR Rural Business Research

Newcastle University

Farm Business Survey

2015/2016

A summary from

Organic Farming in England

Charles Scott April 2017

RBR Rural Business Research

independent research, data and analysis

Farm Business Survey

2015/16

A summary from

Organic Farming in England

Charles Scott

April 2017

The full version of this report is available from:

RBR at Newcastle University,
School of Agriculture, Food & Rural Development,
Newcastle University,
Newcastle upon Tyne,
NE1 7RU,
UK
Tel: 0191-208-6902
Fax: 0191-208-6720
E-mail: farm.business.survey@ncl.ac.uk
Website: http://www.ncl.ac.uk/afrd/survey/#farmbenchmarkingservice

Price £15

Acknowledgments

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

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

Foreword to the Eleventh Series

With this eleventh series of reports on the economics of agriculture and horticulture in England from *Rural Business Research (RBR)*, our focus of providing independent data and analysis to the individual sectors has arguably never been of such importance. The collective decision of the UK voting public on the 23 June 2016 to leave the EU will have large impacts on agricultural and horticultural sectors. Issues of policy, trade, exchange rates and labour availability are now very much front and centre in the minds of many businesses. Ensuring that the enterprises that constitute the farm business are profitable is of even greater importance given the uncertainty that now exists in the industry. Brexit will also bring opportunities, and those seeking to make the most of the opportunities that will arise will need independent data to support effective decision making. In this eleventh series, RBR seeks to provide these independent data in a revised and succinct format which places the data results at the heart of each report; we have focused our succinct comments on key results within the tables to draw to the attention of readers the central highlights. Our increasing focus on the presentation of data and results flows from internal and external feedback.

Setting the context to this series, data from the Farm Business Survey (FBS) for the 2015/16 financial year, shows that average Farm Business Income (FBI) decreased by 21% to £31,400 per farm. Examining results by farm type, on average, only General Cropping, Less Favoured Areas (LFA) Grazing Livestock and Horticulture recorded increases in FBI; by contrast Dairy and Specialist Pig farms recorded FBI decreases of around 50% on 2014/15 levels. Average FBI was at its lowest point for a number of years in 2015/16. The immediate impact of Brexit on exchange rates has however led to recent increases in commodity prices, and the overall outlook for 2016/17 is consequently more positive, though farm type variation remains and not all sectors are likely to witness improvements for 2016/17. Moving forward however, businesses will need to understand the impact of the exchange rate movement on the costs incurred, and a greater focus on budgeting and cost management will be the order of the day in order to capitalise on the exchange rate benefit. Cost comparison from the independent data produced within these reports provides valuable information in relation to costs and returns across each sector to aid managers in this respect.

With respect to the policy environment for agriculture and horticulture moving forward, the rigorous and independent FBS data presented in these reports will be of crucial importance for evidenced-based policy making. Our research work within the FBS programme could not be possible without the direct support of our farmer and grower co-operators and the wider support of agricultural and horticultural businesses and sector stakeholders; our thanks are given to them all.

Professor Paul Wilson

Chief Executive Officer, Rural Business Research

March 2017

www.ruralbusinessresearch.co.uk

Executive Summary from Organic farming in England 2015/16

This report is a condensed version of the full publication;
Organic Farming in England 2015/16
(ISBN: 978-0-903698-65-8)
available from:
RBR at Newcastle University,
School of Agriculture, Food & Rural Development,
Newcastle University,
Newcastle upon Tyne,
NE1 7RU

This report uses data from the 2015/16 Farm Business Survey of 1805 farms, of which 147 are organic. Several measures of performance have been used in this report and Farm Business Income (FBI) is used as the main measure. Farm Business Output (FBO) has been split into four sources; agriculture, agri-environment, diversification and the Basic Payment. Total costs have also been broken down into selected cost centres. Organic farms have been compared year-on-year using an identical sample and a full sample comparison of organic and non-organic farms is made for the current year. Gross margin data for individual organic crop and livestock enterprises is presented whenever enterprise sample size is 10 farms or more.

All organic farm types recorded a greater FBI/ha than their non-organic counterparts and these differences were statistically significant for three of the six farm types. At the farm level the organic: dairy, LFA grazing, and lowland grazing farm groups also recorded a significantly higher FBI than the non-organic farms. With the exception of the LFA grazing group the higher FBI is universally due to a lower expenditure on costs, and despite an overall lower farm output. The organic LFA grazing group has both a greater farm output and a greater expenditure on costs than the non-organic LFA grazing farms. On a year-on-year basis, FBI has increased for all organic farm types except dairy and LFA grazing farms.

Organic cropping farms earned on average an FBI of £240/ha, £39/ha more than the non-organic cropping farms but at the farm level the organic cropping farms recorded a slightly lower FBI than the non-organics. These differences are not significant at either the per hectare or at the farm level. The higher FBI/ha was due to a lower expenditure on costs per hectare (£1,095/ha versus £1,303/ha) and despite a lower total farm output per hectare (£1,345 versus £1,498). Organic cropping farms saw an average increase in FBI/ha of 4% between 2014/15 and 2015/16. This increase in profitability was due to an 6% increase in total output to £1,341/ha and despite a 5% increase in total costs to £1,099/ha.

The FBI/ha for organic horticulture farms of £1,430/ha was greater than that of the non-organics by £255/ha (although not significant). Non-organic horticulture farms operated a much more intensive operation than organic horticulture farms; FBO being £11,693/ha for non-organics versus £3,912/ha for organic farms. The total costs for non-organic horticulture farms were £10,528/ha but £2,483/ha for organic farms. The FBI/ha on an identical sample of organic horticulture farms increased between 2014/15 and 2015/16. This due to a 10% increase in total output and despite a 4%

increase in costs. The small sample size of the identical sample (of 9 farms) means that some care must be taken in interpreting the year-on-year results.

Organic dairy farms recorded an FBI of £405/ha, a significant £125/ha more than the non-organic dairy farms. Total farm output was £470/ha lower on the organic dairy farms, but their costs were £600/ha lower. Organic dairy farms were typically smaller with an average of 183.6 Grazing Livestock Units (GLU) on 146.4ha compared to 261.1 GLU on 261.2ha for the non-organics. Between 2014/15 and 2015/16 the FBI/ha on organic dairy farms fell by 19%; this due to a 10% increase in total costs at a time when total output only increased by 4%.

As has been the case for some years organic LFA grazing farms remained more profitable than their non-organic counterparts with an average FBI of £36,036/farm, £17,308 more than similar non-organic farms. This difference is significant at the farm level but not at the per hectare level (where the difference is £30/ha). This was due to the greater output of organic farms across all cost centres, despite a considerably higher total costs figure. The average size of an organic LFA grazing farm is 192.3 adjusted hectares (adj. ha) carrying 136.7 GLU whereas a non-organic farm is typically 119.1 adj. ha and carries 86.3 GLU. Organic LFA grazing farms saw a 14% fall in FBI/ha between 2014/15 and 2015/16 – down to a 6% fall in total output (including a 30% fall in agri-environment type revenues) and despite a 3% decrease in total costs.

In 2015/16 organic lowland grazing farms recorded an average FBI of £219/ha compared to their non-organic counterparts' of £116/ha – this difference was significant (at both the farm and the per hectare level). The average FBO/ha for organic farms was £46/ha less than the FBO/ha for the non-organics, primarily due to a lower output from agriculture but organic farms had lower total costs by £148/ha. The profitability of organic lowland grazing farms in 2015/16 was 16% higher than in 2014/15 with the identical sample achieving an FBI of £193/ha in 2015/16. This increase was due to a 10% reduction in costs and despite total farm output falling by 6% to £915/ha.

Organic mixed farms had a significantly higher FBI/ha (of £187/ha) than their non-organic equivalents (of £122/ha). While organic mixed farms earned £221/ha less in total farm output they also spent £293/ha less in total costs. Organic mixed farms saw a 31% rise in FBI from 2014/15 to 2015/16 to £151/ha. This was due to a 1% increase in FBO to £1,294/ha, and a 2% or £25/ha reduction in total costs to £1,142/ha.

Contents

Tables

Figures

1 Organic farming in the United Kingdom

1.1 Area

The area of organic farmland in England in 2015 is recorded as 303,739 hectares, down from a peak of 391,761 hectares in 2010 (DEFRA 2016). The organic share of total utilised agricultural area (UAA) in the UK was 2.9% in 2015 - this amounts to 4.5% of the EU organic area (Eurostat 2016).

1.2 Producers

Producer and processor numbers have been steadily declining throughout the UK since 2007 to a low of 6,002 in 2014 but have since increased slightly to 6,056 in 2015. England has considerably greater numbers of organic producers and processors (4,579 in 2015) than the other countries in the UK (DEFRA 2016).

1.3 Output and sales

Sales of organic products in the UK increased by 7.1% in 2016 to a total sales value of £2.09bn. This is the fifth annual increase in a row to a six-year high and only slightly below the pre-recession high of £2.11bn in 2008 (Soil Association 2017)

See the full report of Organic Farming in England 2015/16 for a more detailed breakdown of organic areas, producer & processor numbers and consumption trends of organic produce.

2 Methods

This report presents financial and physical farm data for the 2014/15 and 2015/16 financial years. Data were collected using the standard Farm Business Survey methodology for all farms[1] by the six Rural Business Research (RBR) Units in England; Newcastle University, Askham Bryan College, University of Nottingham, University of Cambridge, University of Reading, and Duchy College.

For the purpose of this report, an organic farm is defined as a farm business that has at least 70% of the Utilisable Agricultural Area (UAA) certified as organic in 2015/16. The organic farm data are presented as full and identical samples where applicable and sample size allows. The data are analysed for comparisons between years and with non-organic farms. Data from participating farms are used to compile a fully reconciled management profit and loss account. The surveyed farms had financial year-ends between 31st December 2015 and 5th April 2016 and consequently reflect the 2015 lamb crop and the 2015 arable harvest.

2.1 Data sample: farm type and region

This report uses data from the Farm Business Survey of 1805 farms, 147 of which are organic. Of the 147 organic farms, 122 are entirely organic; the remaining 25 farms have

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

some non-organic enterprises or land area. A further 21 farms have some organic enterprises but with less than 70% of their UAA being classified as organic, they are considered non-organic in this report. Therefore organic enterprises from non-organic farms may be included in the Gross margin analysis section of this report. The distribution of surveyed organic farms by type and region are presented in Table 1 and Table 2.

Table 1 The distribution of surveyed organic farms by farm type 2015/16

Robust farm type	No.	%
Cereals	14	10
General cropping	4	3
Horticulture	13	9
Pigs	0	0
Poultry	3	2
Dairy	33	22
LFA Grazing	17	12
Lowland Grazing	40	27
Mixed	23	16
All farms	147	**100**

Table 2 The distribution of surveyed organic farms by region 2015/16

Region	No	%
North East	18	12
North West	8	5
Yorks. & Humber	6	4
East Midlands	11	7
West Midlands	17	12
East of England	17	12
South East	21	14
South West	49	33
All farms	**147**	**100**

2.2 Data sample: farm type and size

The distribution of the sample by farm size is shown in Table 3. The farm size categories are based on the 2010SO (Standard Output) methodology used by DEFRA - see Appendix 2 – for more information. Farm area, unless specified as Utilisable Agricultural Area (UAA) is the total adjusted area (TAA) this includes: adjusted sole occupier rough grazing, adjusted shared grazing and short term rentals (less than 1 year).

The 2015/16 dataset was evenly distributed overall across the size bands with each band contributing approximately one third each, but within farm type groups the distribution was somewhat less even. Dairy and lowland grazing farm types made up the largest proportion of the data sample with 22% and 27% respectively.

Table 3 Organic sample distribution by size (2010 Standard Output)

Farm size band	Small (€2,500-100,000)	Medium (€100,000-250,000	Large (>€250,000)	All
All	54	44	49	147
% distribution	37	30	33	100

2.3 Data sample: Limitations

Due to the small sample size (4) of the organic general cropping farm type this farm type has been merged with organic cereals and the combined group is referred to as cropping farms in this report. Further, there are no longer any organic pig farms in the survey and insufficient poultry (3) farms to present their data.

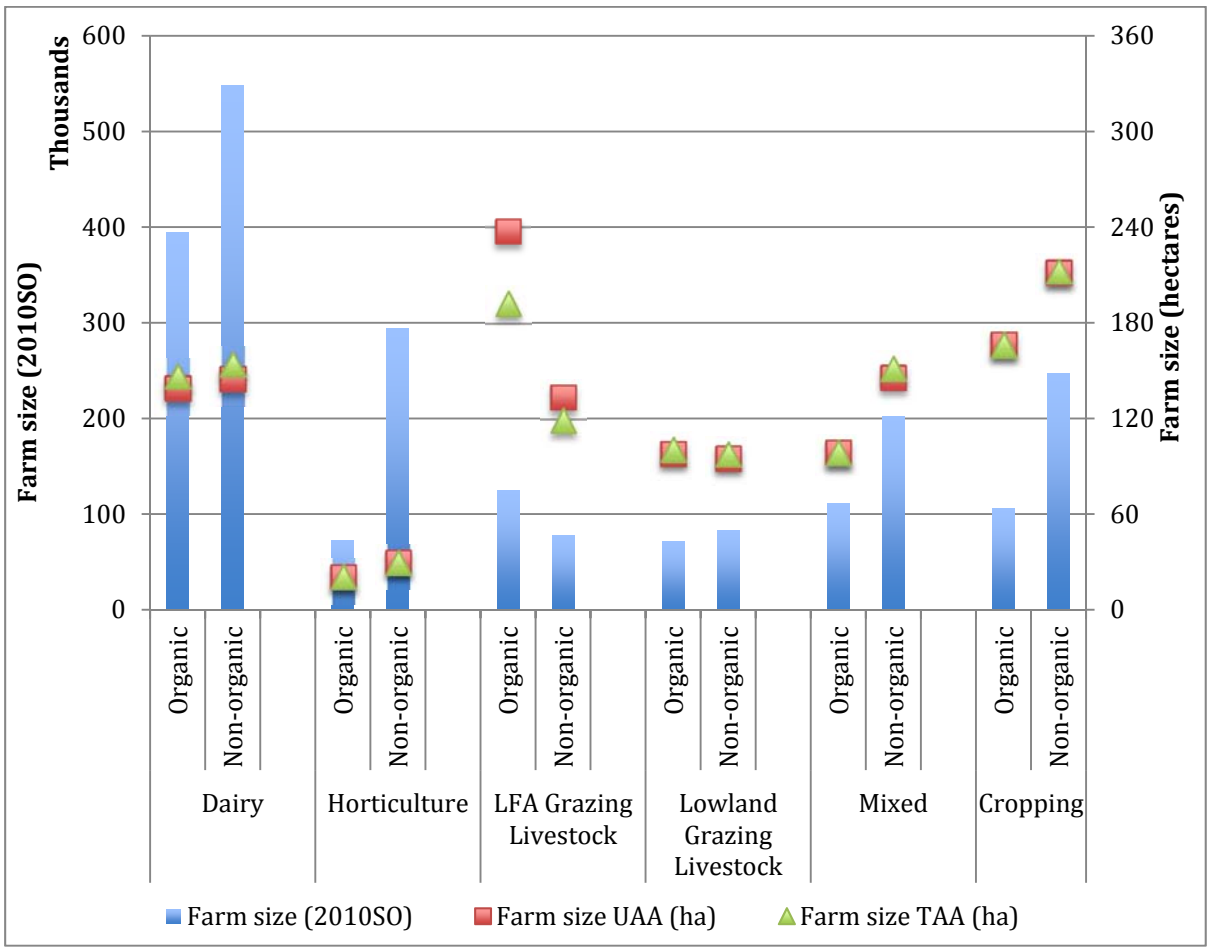
In the organic horticulture group some care must be taken in interpreting the results. The 2015/16 sample of 13 farms is composed of 3 subgroups: 2 specialist fruit, 5 specialist glass, and 6 other horticulture i.e. not a uniform group of producers. Furthermore the non-organic sample of 180 farms has a subgroup composition of: 45 specialist fruit, 62 specialist glass, 37 specialist hardy nursery stock and 36 other horticulture. The non-organic horticultural farms are clearly not perfectly comparable to the organic sample and hence the degree of caution advised above.

The identical sample of horticultural farms used to compare the 2014/15 and 2015/16 farming years is limited to 9 farms. These farms do have a consistent sub-group composition between the years (of 2 specialist fruit, 4 specialist glass, and 3 other horticulture) but the very small sample size and non-uniformity means that great care must be taken in interpreting the identical sample results.

2.4 Farm size

The common measure of farm size of Standard Output (SO) represents a theoretical business size in terms of agricultural output generated. This measure allows for a comparison of business size across farms of varying types of farm but does not necessarily correspond to the area of land farmed. Figure 1 shows the weighted farm sizes for the 2015/16 sample measured by SO and two alternative measures of farm size by farm area; Utilisable Agricultural Area (UAA) and by total adjusted area (TAA). While there is little difference between the area measurements of UAA and TAA in most groups, in the case of LFA grazing farms there is a marked difference. The choice of farm size and area measurement is therefore critical when benchmarking and making comparisons across farm types. The measure of area used throughout this report is TAA.

Figure 1 Farm size by Standard Output and area (2015/16)



3 Whole-farm results

3.1 Presentation of results

The report focuses on two main income measures: Farm Business Income (FBI) and Net Farm Income (NFI). FBI has been the headline farm income measure since the mid 2000s; it represents the financial return to all unpaid labour (farmers and spouses, non-principal partners and directors, and their spouses and family workers) and on all their capital invested in the farm business, including land and buildings. However, FBI excludes imputed rental values for owner-occupied land and unpaid labour, both of which are included in NFI.

NFI "was designed as a measure which would allow individual farms of different tenure, business organisation and indebtedness to be compared directly with one another on a consistent basis" (SEERAD, 2006: p. 10) and thus is a good benchmarking measure. However unlike FBI, interest payments, director's remuneration and ownership costs are not considered in NFI.

At the farm level the per hectare measure of income remains a more relevant benchmark figure in that it removes (arguably not completely) the impact of farm size on farm income levels.

See the full report of Organic Farming in England 2015/16 for a statistical analysis by farm type, at the farm and hectare level, between 2014/15 and 2015/16 and between organic and non-organic farms in 2015/16.

4 Detailed costs and returns by farm type

The following section provides a detailed breakdown by farm type on a per farm and per hectare basis, of revenue by cost centre and farm income measures for: an identical sample of organic farms year-on-year (2014/15 and 2015/16) and the full sample (2015/16) on an organic versus non-organic basis. This commentary focuses on the per hectare results, which, as discussed above, minimises the effect of farm size on the results.

See the full report of Organic Farming in England 2015/16 for detailed physical and financial by farm type between 2014/15 and 2015/16 and between organic and non-organic farms in 2015/16.

5 Enterprise Gross Margins

5.1 Data sample

The distribution of available crop and livestock margin data by robust farm type and size for organic farms are shown in Table 4 and Table 6.

All variable costs to gross margin level are allocated through careful recording and in consultation with participating farmers.

Table 5 and Table 7 show the sample size of organic crop and livestock enterprises that have been analysed to gross margin level. Where sample numbers allowed, analyses for a premium group (top third by weighted numbers by GM/ha or GM/head) are presented.

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

See the full report of Organic Farming in England 2015/16 for detailed physical and financial analysis of organic enterprises to gross margin level.

5.2 Organic cropping enterprises gross margins

Table 4 Sample distribution of organic crop margin data (>10 records) by robust farm type and size (2010SO)

Robust farm type	Small (€2,500-100,000)	Medium (€100,000-250,000	Large (>€250,000)	All
Cereals	12	17	1	30
General cropping	4	1	6	11
Horticulture	8	2	0	10
Pigs	0	0	0	0
Poultry	0	0	0	0
Dairy	0	0	19	19
LFA Grazing	2	3	5	10
Lowland Grazing	6	11	7	24
Mixed	14	11	19	44
All	**46**	**45**	**57**	**148**

Table 5 Sample size for organic crop gross margin analysis

Enterprise	Sample			Premium		
	Sample size	Weighted sample size	Average crop area (ha)	Sample size	Weighted sample size	Average crop area (ha)
Winter wheat	22	275	19.9			
Spring wheat	15	190	24.5			
Spring barley	29	316	17.4	10	112	15.0
Winter oats	20	231	19.4			
Spring oats	23	320	25.2			
Spring beans	15	155	15.9			
Fresh vegetables	12	569	5.0			
Fertility crop	12	333	11.0			

5.3 Organic livestock enterprises gross margins

Table 6 Sample distribution of organic livestock margin data (>10 records) by robust farm type and size (2010SO)

Robust farm type	Small (€2,500-100,000)	Medium (€100,000-250,000)	Large (>€250,000)	All
Cereals	1	2	6	9
General cropping	0	2	3	5
Horticulture	4	1	0	5
Pigs	0	0	0	0
Poultry	1	0	3	4
Dairy	2	17	46	65
LFA Grazing	15	12	17	44
Lowland Grazing	46	30	11	87
Mixed	14	18	18	50
All	**83**	**82**	**104**	**269**

Table 7 Sample size for organic livestock gross margin analysis

Enterprise	Sample		Premium	
	Sample size	Weighted sample size	Sample size	Weighted sample size
Dairy cows	34	307	10	100
LFA suckler cows	15	89	-	-
Lowland suckler cows	53	935	17	342
Dairy followers	28	264	10	91
Fat cattle from suckler bred calves or stores	43	692	7	224
Store cattle from suckler bred calves or stores	25	522	-	-
Lowland sheep	40	498	16	166
LFA sheep (upland)	12	81	-	-

6 Appendix 1 – Reports in this series

Crop Production in England

Dairy Farming in England

Hill Farming in England

Horticulture Production in England (Horticultural Business Data)

Lowland Grazing Livestock Production

Pig Production in England

Poultry Production in England

Details available at: www.ruralbusinessresearch.co.uk

7 Appendix 2 – Definition of terms

I. BUSINESS OUTPUTS, INPUTS, COSTS AND INCOME

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

2. ***Farm Corporate Income (FCI)*** represents the return on own capital invested in the farm business, to risk and to entrepreneurship. It is derived by deducting unpaid labour, both manual and managerial, from Farm Business Income. This allows the profitability of sole traders and partnerships to be compared directly with that of companies. Currently we are able to deduct an estimate of unpaid manual labour but not of unpaid managerial labour and so the data are only approximate. However, we plan to undertake a research project to produce a method for deriving an estimate of unpaid managerial labour, so that we can produce better data for this measure in future.

3. ***Farm Investment Income (FII)*** represents the return on ***all*** capital invested in the farm business ***whether borrowed or not***, to risk and to entrepreneurship. It is a general measure of the profitability of farming as an activity rather than of a particular business. It is derived by adding net interest payments to Farm Corporate Income. Since currently the data for Farm Corporate income are only approximate, so too are the data for Farm Investment Income.

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

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

indebtedness to be compared. It represents the return to the farmer and spouse alone for their manual and managerial labour and on the tenant-type capital[3] invested in the farm business. To represent the return to farmer and spouse alone, a notional deduction is made for any unpaid labour provided by non-principal partners and directors, their spouses and by others; this unpaid labour is valued at average local market rates for manual agricultural work.

To confine the measure to the tenant-type activities and assets of the business, an imputed rent is deducted for owner-occupied land and buildings and for landlord-type improvements made by the tenant. No deduction is made for interest payments on any farming loans, overdrafts or mortgages; interest earned on financial assets is also excluded.

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

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

II. CROPPING, STOCKING AND LABOUR TABLES

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

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

---

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

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

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

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

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

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

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

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

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

III. OUTPUTS, INPUTS AND FARM BUSINESS INCOME TABLES

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

(a) ***Livestock enterprise output*** comprises the total sales of livestock and livestock products including *direct livestock subsidies* and production grants received, part of the valuation change (see below), produce consumed in the

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

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

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

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

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

Total variable costs	These are taken to be costs of feed, veterinary fees and medicines, other livestock costs, seeds, fertilisers, crop protection and other crop costs.
Purchased concentrate feed and fodder	This represents expenditure on feeds and feed additives, including charges for agistment.

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

Depreciation of machinery, glasshouses and permanent crops	Depreciation provisions in respect of machinery, glasshouses and permanent crops (e.g. orchards) are shown on a current cost basis. The rates of depreciation used (generally on a diminishing balance basis for machinery and straight line for glasshouses and permanent crops) are intended to reflect the degree of deterioration of the assets.
Other general farming costs	These consist of electricity, heating fuel, water for all farming purposes, insurance (excluding labour and farm buildings), bank charges, professional fees, vehicle licences, and other miscellaneous expenses not recorded elsewhere.
Interest payments	Interest charges on loans taken out for business purposes, net of interest receipts on monies invested temporarily outside the business, are deducted in the calculation of farm business income.
Depreciation of buildings and works	This is calculated on a current cost basis (generally on a straight line basis over 10 years) with an adjustment to allow for the effect of capital grants.

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

IV. BALANCE SHEET TABLES

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

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

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

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

V. IMPLIED OUTPUT PRICES

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

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

Standard Output (SO)

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

Standard outputs measure the total value of output of any one enterprise - per head for livestock and per hectare for crops. For crops this will be the main product (e.g. wheat, barley, peas) plus any by-product that is sold, for example straw. For livestock it will be the value of the main product (milk, eggs, lamb, pork) plus the value of any secondary product (calf, wool) minus the cost of replacement.

Up until 2010, Standard Gross Margins were used for the classification of farms. The difference between standard outputs and standard gross margins is that no variable costs are deducted in the derivation of standard outputs. A Defra note looking at the effects on the population by farm type as a result of the change from SGM's to SO's is available at:
http://webarchive.nationalarchives.gov.uk/20130123162956/http:/www.defra.gov.uk/statistics/files/defra-stats-foodfarm-farmmanage-fbs-reviseclass_111221.pdf/

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

The 2010 SO's for England can be seen on Annex 1 under UK Farm Classification on the above site.

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

Adjusted Forage Area (adj. for. Ha)

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

Total Adjusted Area (TAA)

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

References

DEFRA (2016) *Organic Farming.* [Online], Available at: https://www.gov.uk/government/collections/organic-farming (Accessed: 14 April 2017).

Euro Stat (2016) *Organic Farming.* [Online], Available at: http://ec.europa.eu/eurostat/data/database (Accessed: 14 April 2017).

Soil Association (2017) *Organic market report 2016.* Available at http://www.soilassociation.org/marketreport (Accessed: 14 April 2017).

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