



14 December 2017

Figure Farm Accounts in England – Results from the Farm Business Survey 2016/17

This release provides further detail behind the income results published on 26th October 2017. There has been a minor revision to the poultry results since the October publication. The results are sourced from the 2016/17 Farm Business Survey which covers the 2016 harvest and includes the 2016 Basic Payment. Figures are for March/February years with the most recent year shown therefore ending February 2017.

Detailed tables can be found [here](#). The results examine farm incomes, outputs and costs for farm types, farm sizes, regions and economic performance groups along with enterprise level gross margins, balance sheet data and flow of fund statements. Section 4 provides detailed analysis of diversified activities on farms.

Forecasts of income by farm type for the year ending February 2018 and covering the 2017 harvest will be published in February 2018. These can be found at:

<https://www.gov.uk/government/collections/farm-business-survey>

Key results

- In 2016/17, average Farm Business Income increased across all farm types except for specialist poultry farms. A key driver was the exchange rate which led to firmer prices for a number of commodities plus a 19 percent increase in the Basic Payment.
- Despite higher prices, crop output fell on cereal and general cropping farms due to lower yields. These falls were more than offset by lower input costs with average incomes increasing by 22 and 12 percent respectively.
- On dairy farms average incomes increased by 14 percent. Firmer beef prices and a reduction in costs offset the lower milk prices and reduced production of milk.
- On lowland grazing livestock farms, a 33 percent increase in average incomes was driven by firmer beef prices, increased output from cropping and the Basic Payment. On LFA grazing livestock farms higher output from cattle together with an increase in the Basic Payment, led to a 42 percent increase in average income to £27,000.
- Average agri-environment payments were lower in 2016/17 across all farm types apart from LFA Grazing Livestock. This reflects a decline in the number of agreements plus some payments still to be received at the end of the accounting period.
- Total income from diversified activities in 2016/17 was £620 million, an 8 percent increase from 2015/16 (£580 million in 2015/16). Diversified enterprises accounted for 29 percent of total farm business income in 2016/17 although there were wide variations between farms.

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Background

Farm Accounts in England is the primary publication from the Farm Business Survey. It provides information on farm incomes, outputs and costs for the various farm types, farm sizes, regions and economic performance. This publication also includes detailed information on farm diversification. Data on farm succession was not collected in 2016/17. The most recent results on farm succession can be found in the 2015/16 publication [here](#).

The main income measure used is Farm Business Income. For non-corporate businesses, Farm Business Income represents the financial return to all unpaid labour on the farm (farmers and spouses, non-principal partners 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. Farm Business Income is essentially the same as Net Profit, which, as a standard financial accounting measure of income, is used widely within and outside agriculture.

Further information on the Farm Business Survey covering survey methodology, accuracy and reliability can be found in the [survey details](#) section of this publication.

Revisions

We have revised one of the 2016/17 income figures that were published on [26th October 2017](#). The revision is due to the receipt of updated survey data for a poultry farm which resulted in a minor change to the average income for that farm type.

Table A: Revisions to average Farm Business Income (£ per farm)

	As published on 26th October 2017	Updated on 14 th December 2017
At current prices		
Cereals	43,100	43,100
General cropping	70,100	70,100
Dairy	50,000	50,000
Lowland Grazing Livestock	16,100	16,100
LFA Grazing Livestock	27,000	27,000
Pigs	57,800	57,800
Poultry	54,000	54,200
Mixed	28,800	28,800
Horticulture	43,800	43,800
All farms	38,000	38,000

Source: Farm Business Survey, England

Detailed results

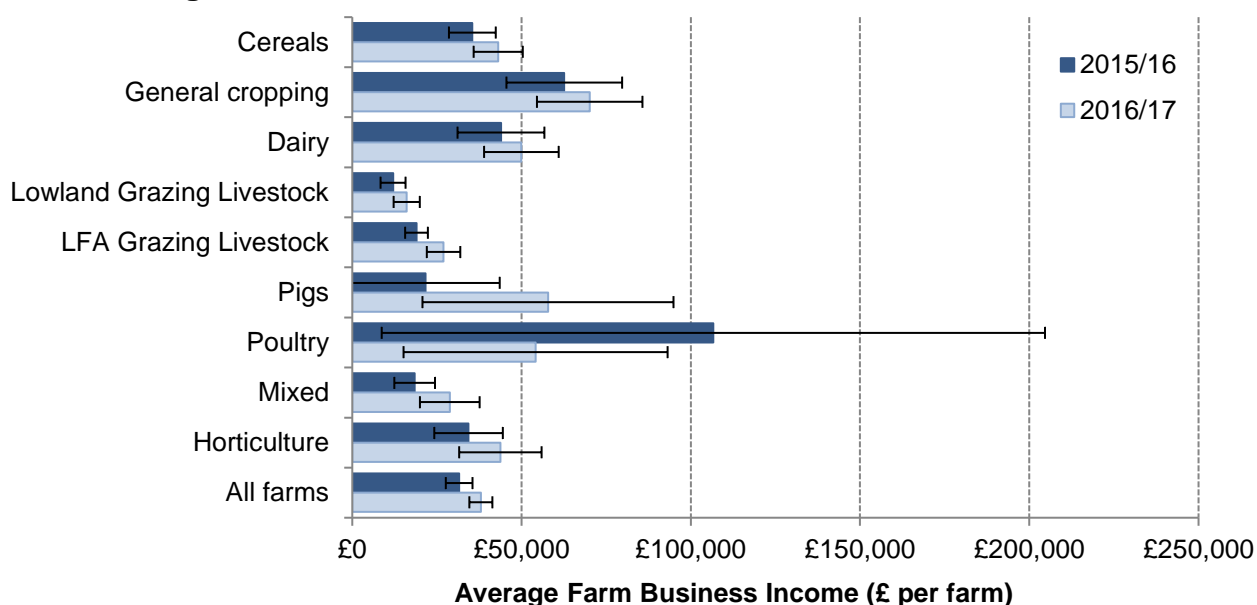
Figures are for March/February years with the most recent year shown ending February 2017. This covered the **2016** harvest and includes the Basic Payment due in the 2016/17 accounting year.

1 Overview across all farm types

Average Farm Business Income across all farm types was £38,000 in 2016/17, 20 percent higher than in 2015/16. The key driver was the exchange rate which increased farm gate prices for several commodities, particularly cereals, oilseeds, beef, lamb and pork. Across all farm types the Basic Payment¹ was 19 percent higher than the previous year due to the pound weakening against the euro.

Figure 1 shows average Farm Business Income by farm type together with 95% confidence intervals as error bars. These show the range of values that may apply to the figures. Further details on accuracy or results can be found [here](#).

Figure 1: Average Farm Business Income by farm type with 95% confidence intervals, England 2015/16 and 2016/17

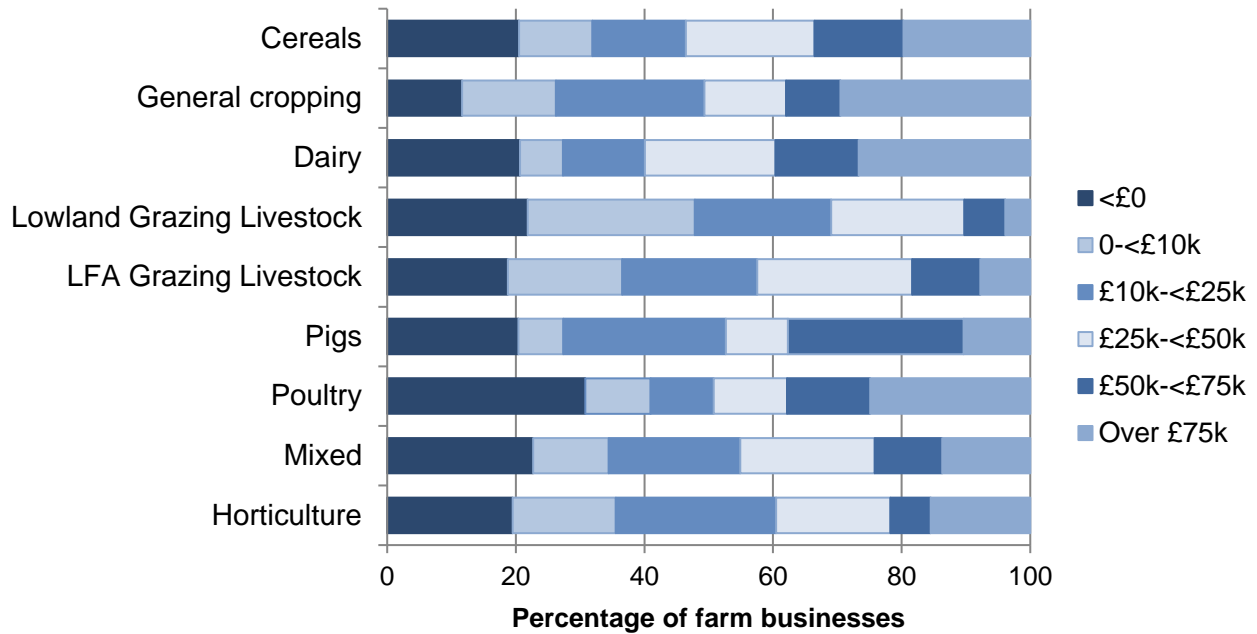


Source: Farm Business Survey, England

Farm Business Income varies both between (Figure 1) and within farm types (Figure 2). The variation in incomes within farm types reflects a number of factors such as size, location, soil type etc. Within some farm types there is also a wide range of agricultural activities undertaken; e.g. horticulture includes specialist glasshouse farms, specialist fruit, specialist hardy nursery stock and market garden vegetable producers who may experience large differences in their production costs and outputs.

¹ Estimates have been made for some farms where full payment details are not yet available.

Figure 2: Distribution of Farm Business Income by farm type, 2016/17



Source: Farm Business Survey, England

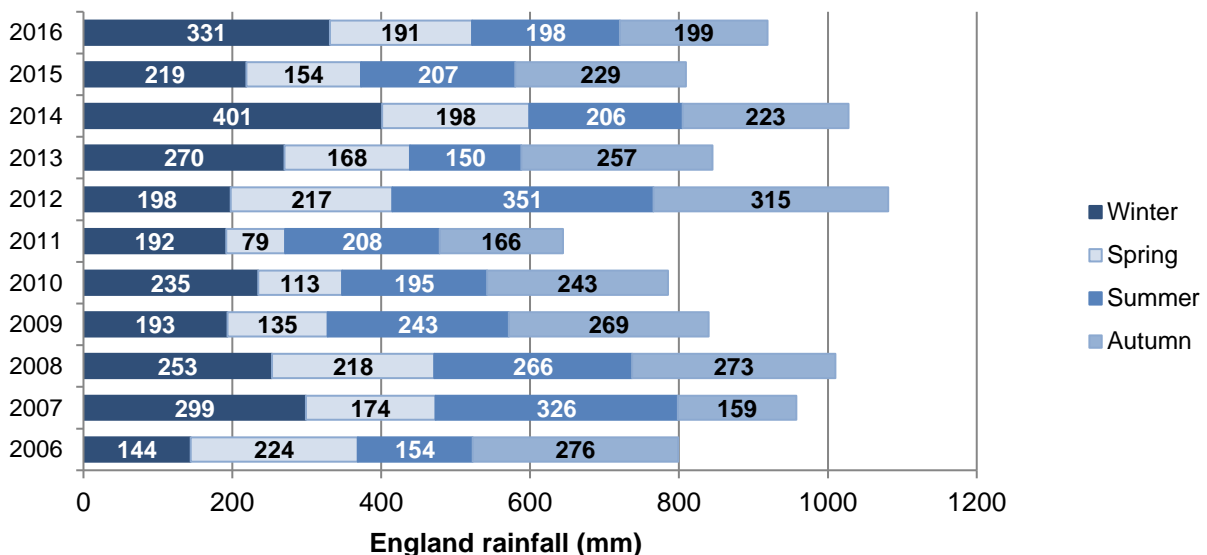
Over a fifth of cereal, dairy, lowland grazing livestock, mixed and poultry farms failed to make a profit in 2016/17. Around a quarter of dairy and poultry farms and 30 percent of general cropping farms had an income of more than £75,000.

2 Weather

September and October 2015 were generally settled allowing good progress to be made with autumn cultivations and crop establishment in most regions. Grazing conditions were also favourable for ewe condition at tupping. November was mild and wet, and brought several autumn storms which continued into December bringing record rainfall totals and severe flooding in many northern and western parts of the UK (Figure 3).

Figure 3: Rainfall in England (mm), 2006 – 2016

Seasons: Winter=Dec-Feb, Spring=Mar-May, Summer=June-Aug, Autumn=Sep-Nov

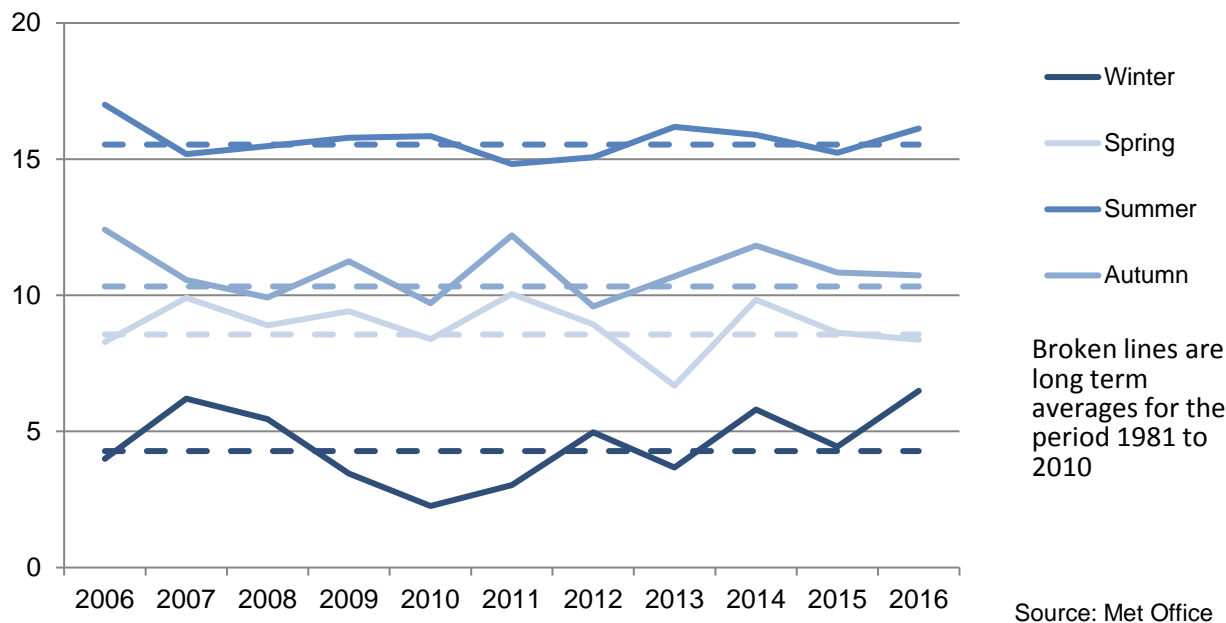


Winter 2015/16 was the third-warmest for the UK since 1910 (Figure 4) and the second wettest. This had a detrimental effect on autumn sown crops particularly those on heavy waterlogged soils. In northern England large areas of cereal and vegetable crops were written off.

Figure 4: Mean temperature (°C), England 2006 - 2016

Seasons: Winter=Dec-Feb, Spring=Mar-May, Summer=June-Aug, Autumn=Sep-Nov

England mean temperature (°c)



Source: Met Office

Spring 2016 saw temperatures and rainfall overall very close to the seasonal average². However, March was wet in the south and east, with over 150 percent of average rainfall in many areas. There were reports of some sugar beet fields being sprayed off after poor establishment, heavy rain and compaction.

Summer 2016 began with a very cloudy and wet June over most of England and Wales, whilst July and the first half of August were characterized by a changeable westerly Atlantic flow with a succession of fronts crossing the UK. The second half of August was more settled, and hot at times, particularly in East Anglia and the South East.

Summer rainfall totals were above average for most areas, with the exception of southern England. June was exceptionally wet in East Anglia and the South East with some areas having more than twice the normal rainfall. July floods across the East of England caused some localised crop damage, mostly on heavier land and in the South East disappointing yields for oilseed rape were attributed to a combination of the weather and Cabbage Stem Flea Beetle. The harvest in the West Midlands was significantly later than in the South and South East due to the unfortunate timing of rain showers, meaning harvest was protracted. For some farmers, this led to subsequent challenges for autumn cultivations and establishment of crops for the 2017 harvest.

Summer sunshine totals were slightly below average except in parts of eastern England. More settled weather in the second half of August allowed harvest to progress in most

² Where average temperature and rainfall are referred to these relate to the period 1981-2010.

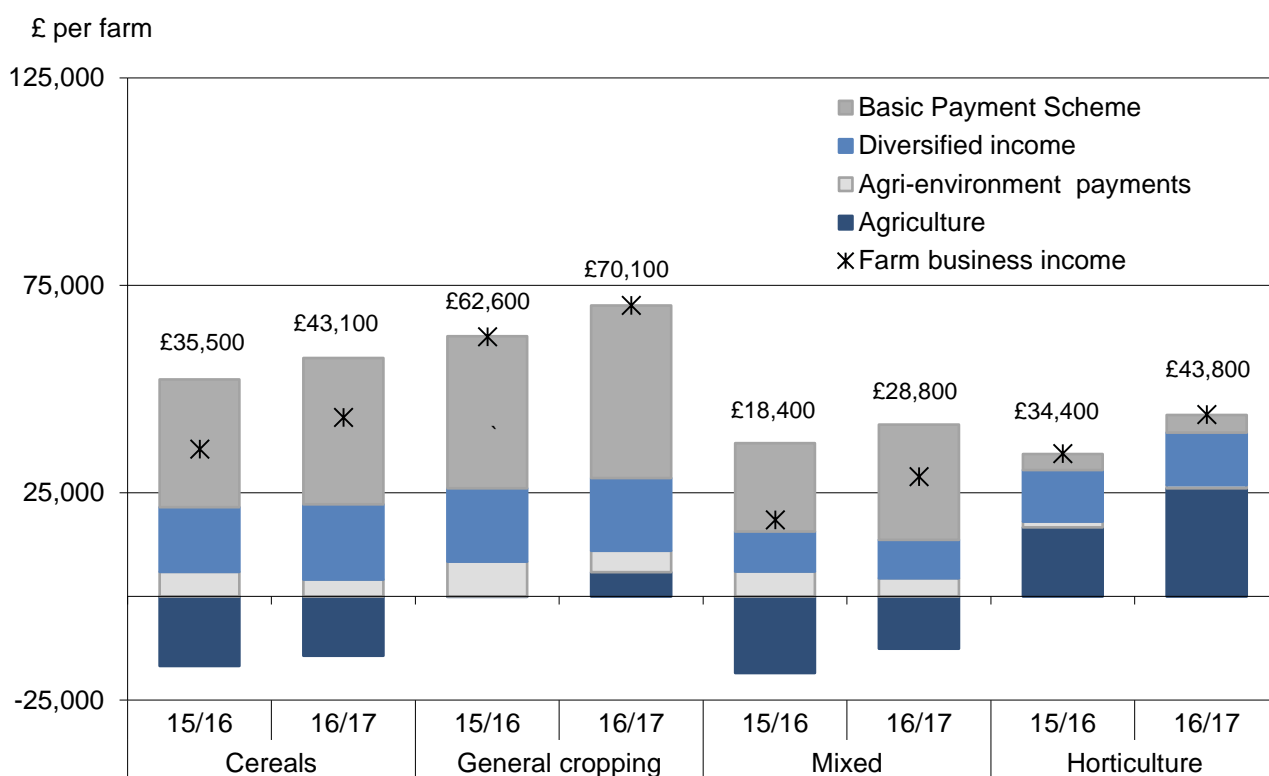
areas and crop drying was kept to a minimum. Yields were generally lower due to the wet winter and lack of June sunshine. Grazing conditions were not ideal meaning that cattle and lambs were slow to finish and were kept over until 2017. In Northern regions yields of conserved forage were reported to be high but quality was poor.

September 2016 was a notably warm month and whilst October was very dry, temperatures were mostly near average. November was often cold and sunny, especially in the north, but had an unsettled spell mid-month, particularly in the south. Autumn rainfall totals were below normal over most of the UK whilst sunshine totals were slightly above average in most parts of the country. Autumn grazing conditions were generally poor due to the lack of rainfall.

3 Results by Farm Type

The following section provides detailed results for each farm type. Where table numbers are referred to in the text, these can be found within the dataset spreadsheet at: <https://www.gov.uk/government/statistics/farm-accounts-in-england>

Figure 5: Average Farm Business Income for cropping farms, broken down by cost centres 2015/16 and 2016/17



Source: Farm Business Survey, England

The figures in bold above each column are the average Farm Business Income per farm. Farm Business Income can be lower than the total height of the bars where average income from agriculture is below zero.

Farm Business Income can be considered as comprising income from four different 'segments' (i.e. cost centres) of the business: agriculture, agri-environment, diversification and the basic payment. However, as the methodology³ to allocate costs to each of these segments involves a degree of estimation, results should be interpreted with caution.

³ Details of this methodology can be found at <https://www.gov.uk/farm-business-survey-technical-notes-and-guidance#fbs-documents>

3.1 Cereal farms

On cereal farms, average Farm Business Income increased by 22 percent in 2016/17 to £35,500 ([Table 5.1](#)). This was primarily driven by a reduction in costs, particularly crop variable costs which were 11 percent lower than the previous year. Total crop output fell by around 7 percent driven by lower yields for cereals, pulses and oilseed rape ([Table B](#) and [Table 11](#)), which were partially offset by higher prices resulting from the weaker pound ([Figure 6](#)). There was also a slight shift in cropping patterns for the 2016 harvest with a greater proportion of either lower value or lower yielding crops such as barley and pulses ([Table 6.1](#)) This may reflect the greening requirements of the Basic Payment Scheme and/or strategies to deal with blackgrass and will also partly account for the lower variable costs. Agricultural fixed costs fell by around 2 percent ([Table 5.2](#)) with the greatest savings seen for machinery depreciation and rent. Diversified activities, particularly renting out buildings, continue to represent a major source of income along with the Basic Payment which increased by 14 percent in 2016/17.

Table B: Average Crop yields, 2012-2016 (tonnes per hectare)

Crop	2012	2013	2014	2015	2016
Wheat (England)	6.7	7.4	8.6	9.0	7.9
Winter Barley (England)	6.4	6.4	7.1	7.6	6.4
Spring Barley (England)	5.0	5.6	5.8	6.2	5.7
Winter Oilseed rape (England)	3.4	3.1	3.7	3.9	3.1
Potatoes (UK)	37.0	45.0	47.0	49.0	44.8
Sugar beet (UK)	61.0	72.0	80.0	68.8	66.2

Source: Defra

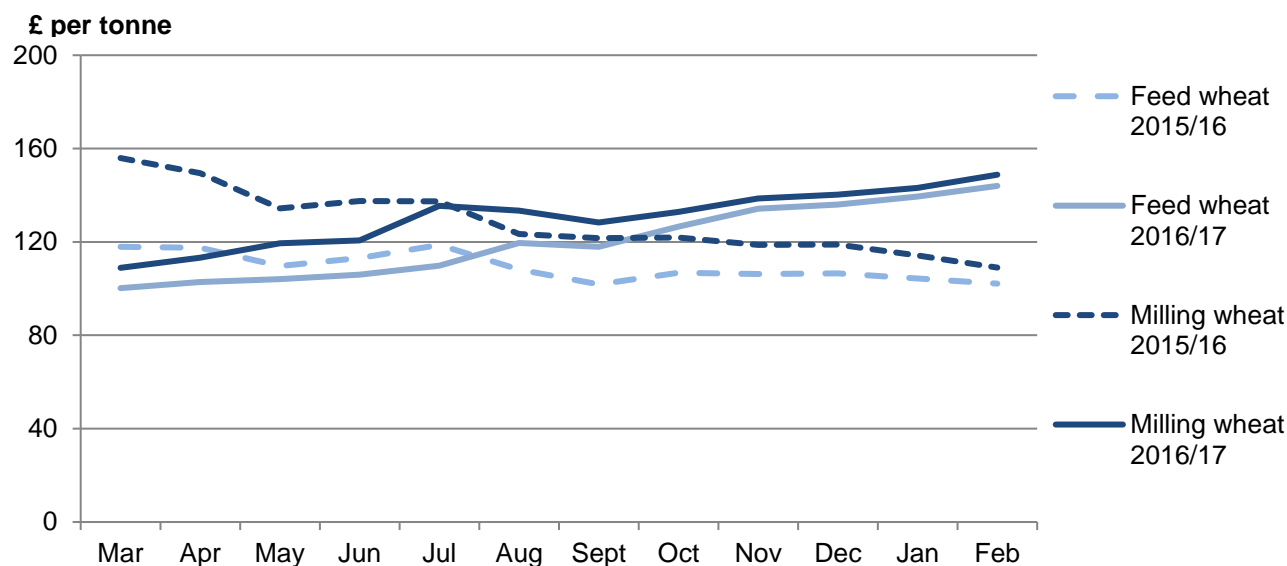
Within the performance groups, both low and medium performers on average failed to generate a positive income from farming⁴ activities in 2015/16 and 2016/17 ([Table 7.2](#)). Overall in 2016/17, 63 percent of cereal farms failed to generate a positive income from farming activities.

Figure 7 shows the proportion of winter wheat grown in England for the 2016 harvest within different bands of production costs⁵. Around 12 percent of growers either broke even or made a positive return from winter wheat in 2016/17. The average production cost for winter wheat was approximately £164 per tonne whilst the average selling price was around £131 per tonne.

⁴ Excludes income from the Basic Payment Scheme, Agri-environment and diversified activities.

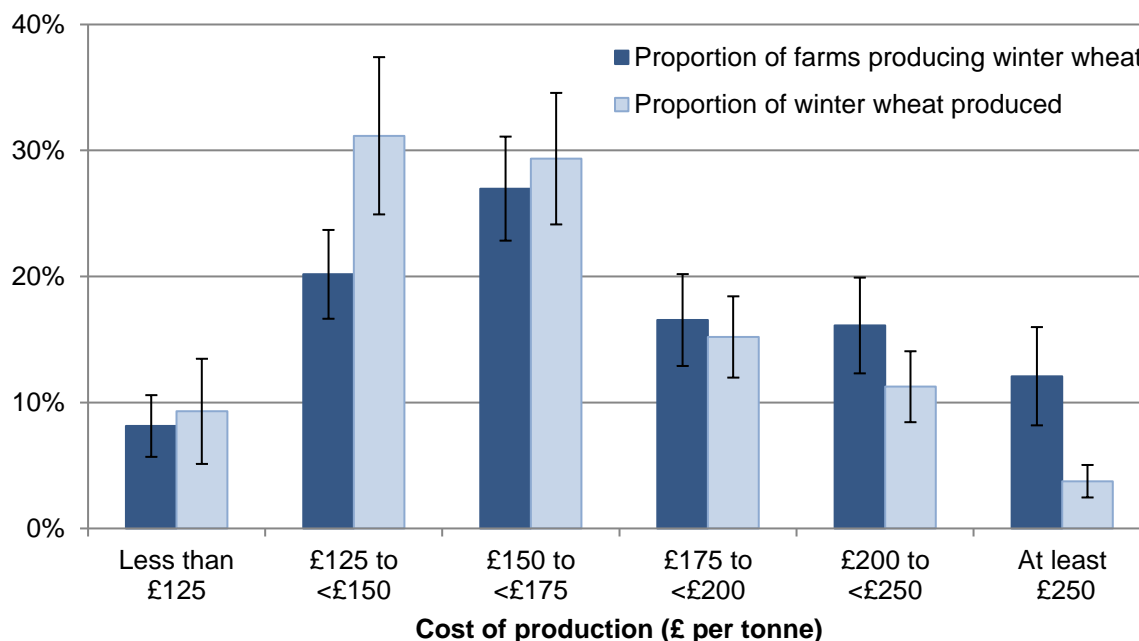
⁵ The costs are on a full economic basis including an imputed charge for any unpaid labour (including that of the farmer and spouse), as well as an imputed rental charge for owner occupied land. The value of any straw has been deducted from the costs so that the data presented here reflects the price of grain required to break even. Note also that this analysis covers only winter wheat and excludes organic and in-conversion wheat.

Figure 6: Average UK wheat prices, March 2015 to February 2017



Source: Agriculture and Horticulture Development Board (Cereals and Oilseeds)

Figure 7: Proportion of winter wheat produced by cost of production⁵, 2016 harvest



Source: Farm Business Survey, England

Note: This analysis covers only winter wheat and excludes wheat that is organic or in-conversion.

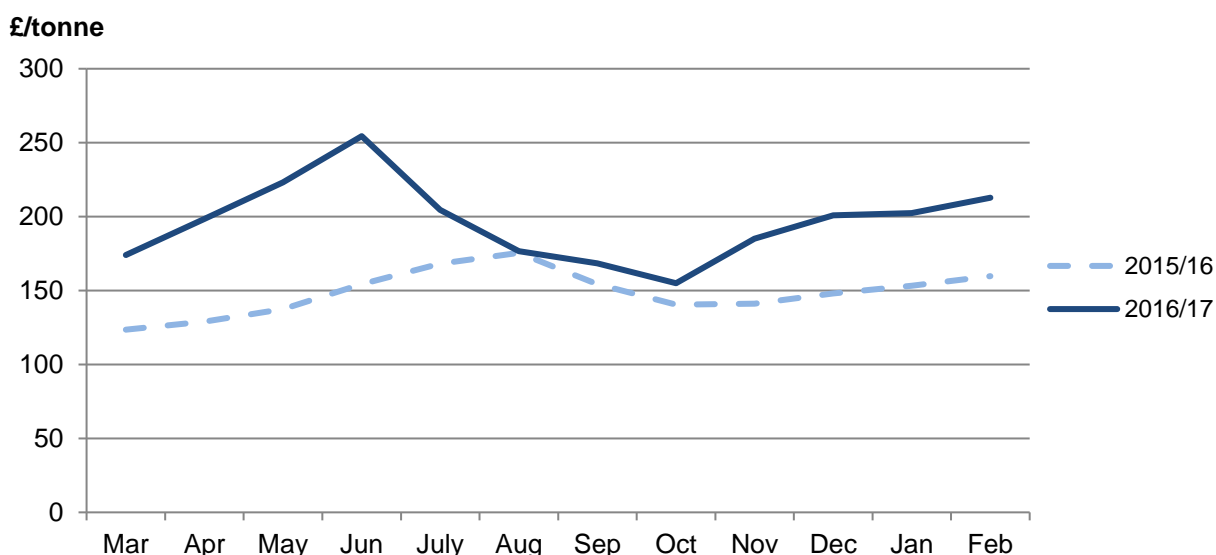
For the 2015 harvest the average cost of production was £143 per tonne whilst the average selling price was approximately £114 per tonne. In that year around 8 percent of growers covered their production costs.

3.2 General cropping farms

Average incomes on general cropping farms were 12 percent higher in 2016/17 at £70,100 ([Table 5.3](#)). Average farm business output was slightly lower (2 percent) as a small fall in crop output combined with lower output from both diversified and agri-environment activities were largely offset by a 13 percent increase in the Basic Payment. Within the cropping enterprises, lower output from cereals, oilseed rape and pulses were partially

offset by higher output from potatoes and energy crops. These reflect an increased crop area and in the case of potatoes higher prices (Figure 8) which were partially offset by lower yields. Variable costs were broadly unchanged but there were substantial reductions to fixed costs, notably labour and building depreciation with smaller falls for water, power, interest payments and other general costs. Around 55 percent of general cropping farms failed to make a positive income from agricultural activities. However, on average general cropping farms achieved a positive return of just under £6,000 from the agriculture cost centre whilst in 2015/16 they broke even.

Figure 8: Average potato maincrop prices, UK - March 2015 to February 2017



Source: Agriculture and Horticulture Development Board

There was a 13 percent increase in net income from the Basic Payment but a fall from agri-environment activities ([Table 5.3](#)). Diversified activities were broadly unchanged.

When comparing farm performance groups (based on the ratio of outputs to inputs, including unpaid labour) average Farm Business Income for the lowest 25 percent remained negative in 2016/17. However the average income of the medium performers increased by over two thirds from £34,900 to £58,700 (see [Table 7.4](#)). Both the low and medium performers failed to generate a positive income from the agriculture cost centre.

3.3 Mixed farms

Average incomes on mixed farms increased by 56 percent between 2015/16 and 2016/17 to £28,800 ([Table 5.15](#)). An increase in total farm business output was driven by both higher crop and livestock output together with an increased output for diversified activities. Of these, renewable energy and food processing and retailing saw the largest increases ([Table 5.16](#)). The Basic Payment was also around 30 percent higher. Both variable and fixed costs were around 10 percent higher with the largest increases seen for feed, labour and machinery costs. As with many of the other farm types, output from agri-environment activities was lower than the previous year. On average, mixed farms failed to generate a positive return from agriculture; by performance group the highest 25 percent of performers on average made a profit from farming activities ([Table 7.16](#)), whilst on average the middle 50 percent and lowest 25 percent failed to generate a profit. Some of the differences noted are likely to be due to slightly different farms in this farm type compared to last year. This is because relatively small changes to cropping and

stocking on farms that don't have a strongly dominant enterprise (as these are) can result in individual farms switching designated farm types between years.

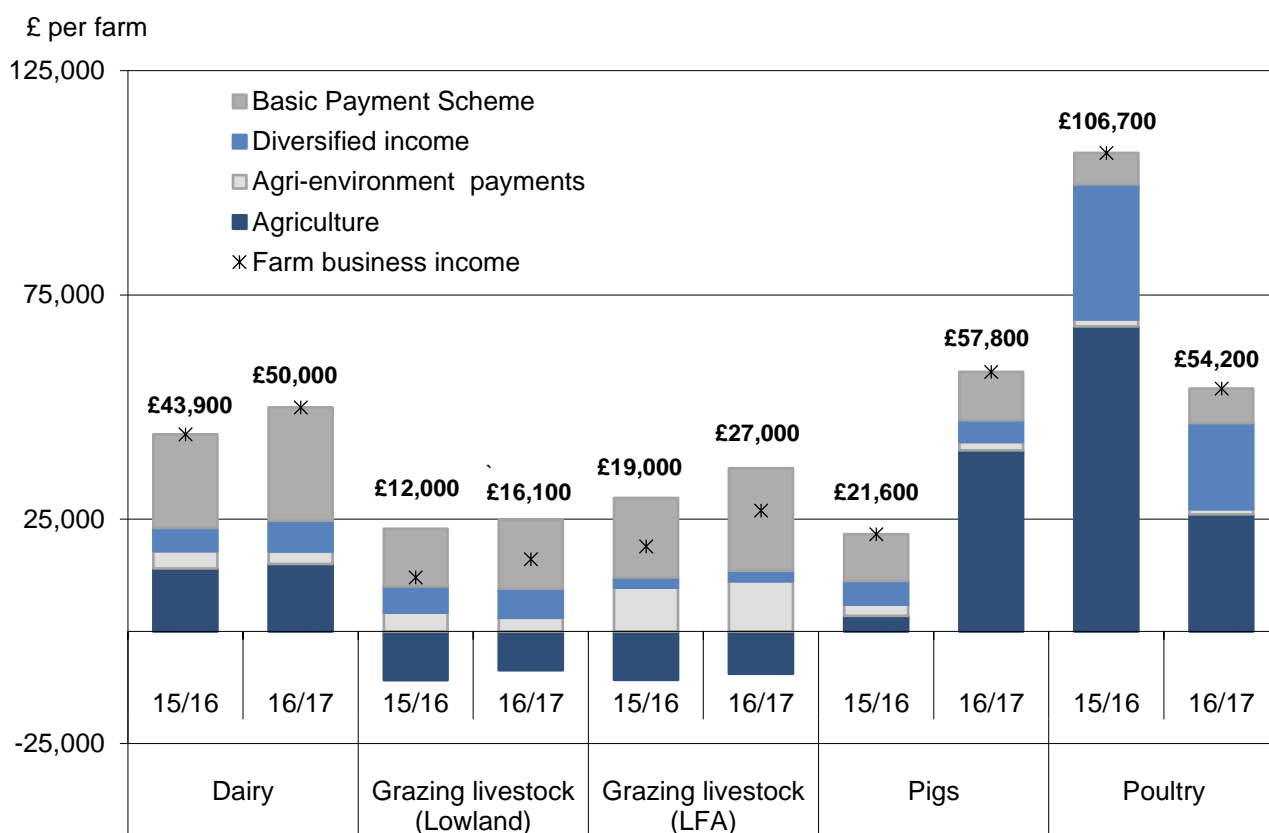
3.4 Horticulture farms

Farms in the horticulture sample cover the three main sectors of fruit, vegetables and non-edibles, grown both under cover and in the open. The incomes presented are the average across all of these sectors.

On horticulture farms, average incomes increased by 27 percent to £43,800 (Table 5.17) with virtually all of this increase being accounted for by the agriculture cost centre which increased from £16,700 to £26,100. This was largely due to higher output for flowers, bulbs and nursery stock and to a lesser extent fruit (Table 5.18). There was also a substantial increase in miscellaneous output. Both variable and fixed costs were also higher, the most notable of these being seeds and young plants, other crop costs, labour, water, electricity and other general costs.

Diversified output increased by over a third with food processing and retailing accounting for most of the increase. However associated costs increased by a similar amount meaning that the net income from this cost centre increased by just 2 percent in 2016/17. Note that the nature of this sector and the size of the sample means that individual farms can strongly influence the results.

Figure 9: Farm Business Income broken down by cost centre for livestock farms 2015/16 and 2016/17



Source: Farm Business Survey, England

The figures in bold above each column are the average Farm Business Income per farm. Farm Business Income can be lower than the total height of the bars where average income from agriculture is below zero.

3.5 Dairy farms

On dairy farms, average Farm Business Income increased by 14 percent to £50,000 ([Table 5.5](#)). Within the agriculture cost centre, milk prices and production fell by around 5 percent and 7 percent respectively, which is in line with UK National Statistics (Figure 10). The fall in output from milk was partially offset by a substantial increase in enterprise output from other cattle driven by an increase in the closing value of cattle as prices firmed towards the end of the year. The average yield per cow fell by 6 percent to 7,800 litres ([Table 14.2](#)) whilst average herd size increased slightly compared to 2015/16 ([Table C](#)). Agricultural costs (both fixed and variable) were also lower, particularly purchased feed and fodder, which accounts for around half of the variable costs on these farms, and fertiliser ([Table 5.6](#) and Figure 11). Of the fixed costs, reductions were greatest for labour, machinery depreciation and rent. The average Basic Payment was 21% higher than the previous year ([Table 5.5](#)).

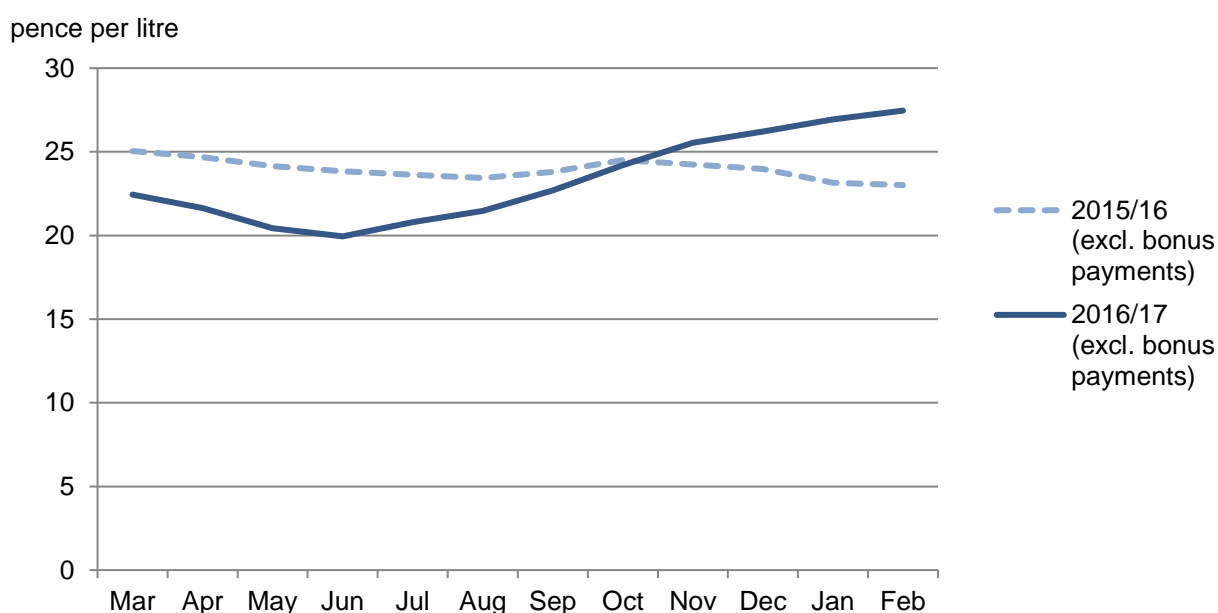
Table C: Average herd size for dairy cows ^(a), England 2012-2016

	2012	2013	2014	2015	2016
Cattle Tracing scheme (all holdings)	82	84	89	89	90
Cattle Tracing Scheme (holdings with >= 10 dairy cows)	131	134	142	143	146
Farm Business Survey (specialist dairy farms)	156	165	172	172	174

Sources: Cattle Tracing Scheme (CTS), Farm Business Survey England

(a) Dairy cows are defined as female dairy cows over 2 years old with offspring from the CTS

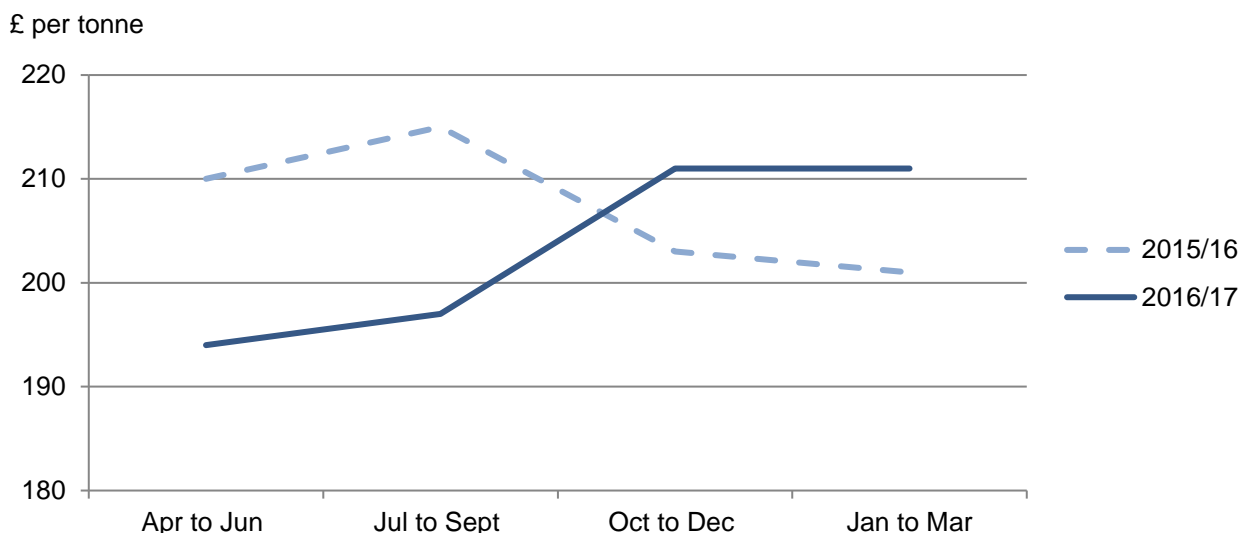
Figure 10: Average farm gate milk prices (UK) - March 2015 to February 2017



Source: Milk prices surveys Defra, RESAS, DAERA

Whilst around a fifth of dairy farms made a loss for the business as a whole in 2016/17 (Figure 2), 40 percent of dairy farms failed to generate a positive income from the agriculture cost centre. When analysed by performance bands the middle 50 percent of farms broke even from farming activities whilst the highest 25 percent of performers averaged an income of just over £100,000 ([Table 7.6](#)).

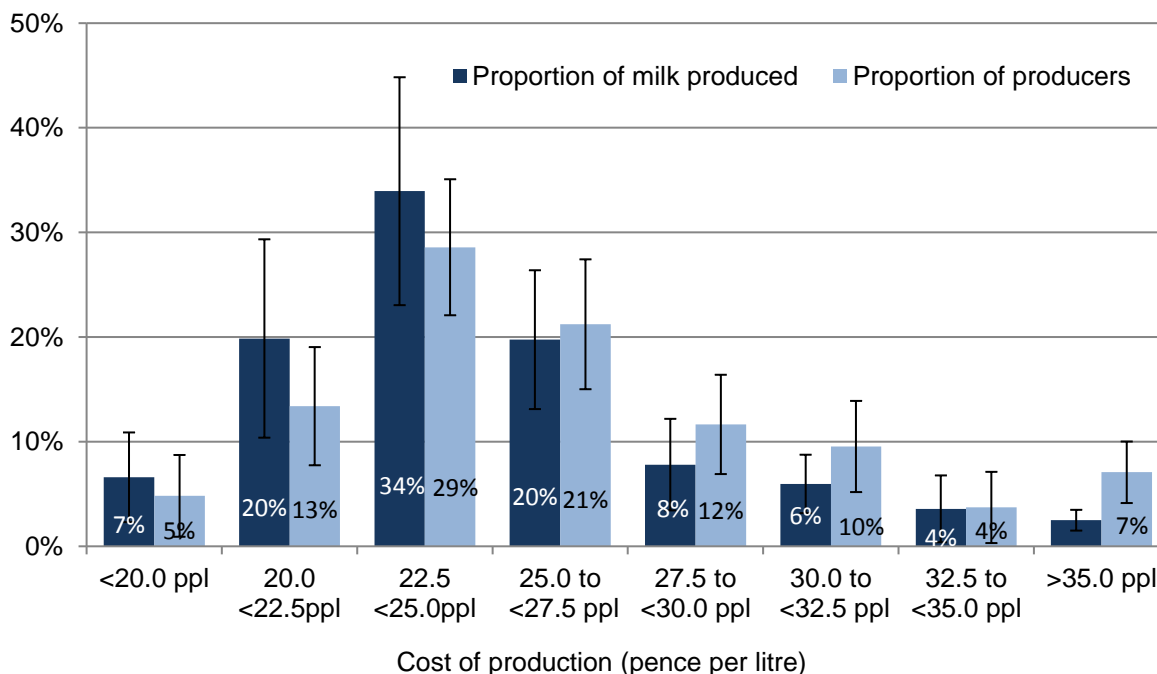
Figure 11: Average compound feed prices for Cattle and Calves: 2015/16 to 2016/17



Source: Defra, Average Compound Feed Prices by Main Livestock categories, Great Britain

Based on enterprise data from the FBS, the average price for milk sold was 24.1 pence per litre in 2016/17 whilst the average cost of production was 24.9 pence per litre. Note that the cost of production is on a full economic basis (see footnote to Figure 12) and is spread across all milk produced including any that is used on the farm. The distribution according to cost of production is shown in Figure 12. Around 47 percent of milk producers produced milk at a cost of less than 25 pence per litre, accounting for 60 percent of the milk produced in 2016/17.

Figure 12: Production costs ^(a) of milk, 2016/17



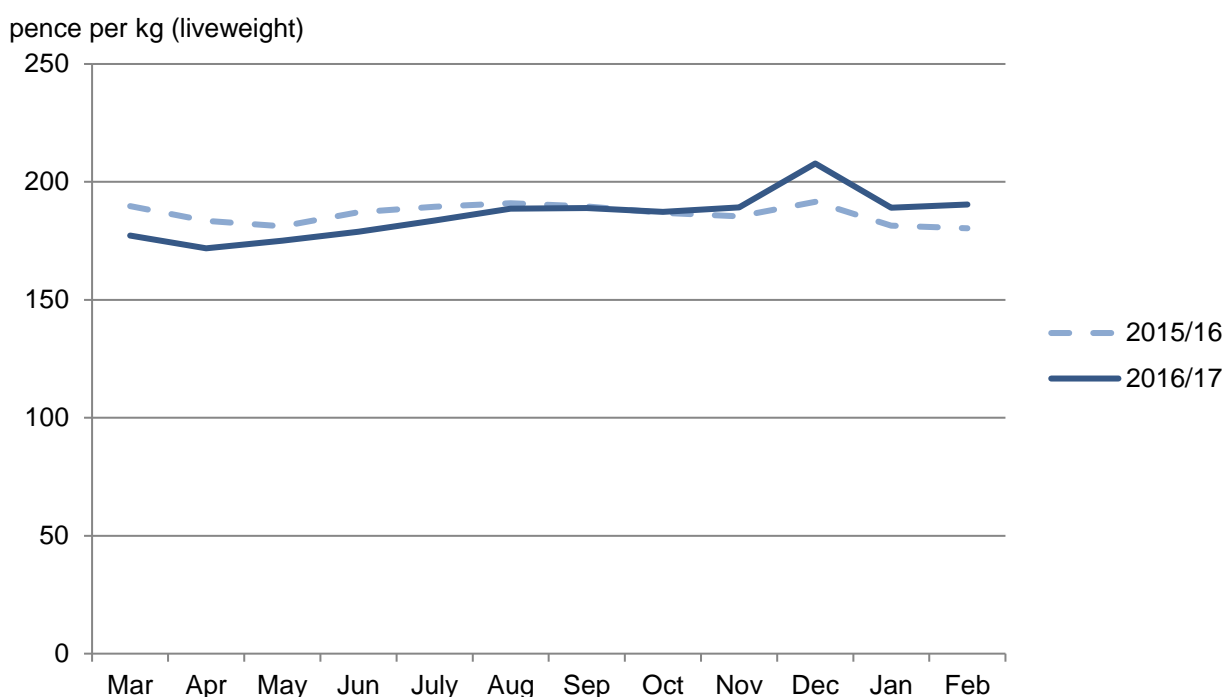
Source: Farm Business Survey, England

(a) Production costs shown here include all financial aspects of dairy enterprises such as any unpaid labour (including that of the farmer and spouse), herd depreciation and an estimated rental equivalent for land that is owned. An allowance is also made for non-milk revenue, most of which is from the sale of dairy calves, which is applied as a reduction to cost. This is to take into account the value of by-products from milk production. As a result, the production costs here represent the price that would have to be paid on all milk produced for dairy enterprises to break even.

3.6 Grazing livestock farms (lowland)

Average incomes increased by a third on lowland grazing livestock farms to £16,100 (Table 5.7). An increase in the closing valuation for cattle almost entirely accounted for a 17 percent increase in output for beef enterprises whilst output from sheep enterprises was similar to the previous year. Crop output was also higher, driven by an increased tillage area and firmer prices for cereals and oilseed rape. These increases in output were offset to some extent by higher costs (both fixed and variable). Although on average these farms failed to generate a positive return from their farming activities, their losses were reduced compared to the previous year (Table 5.7). This, combined with the higher Basic Payment and increased income from diversified output (primarily rental income) led to a 33 percent increase in average income.

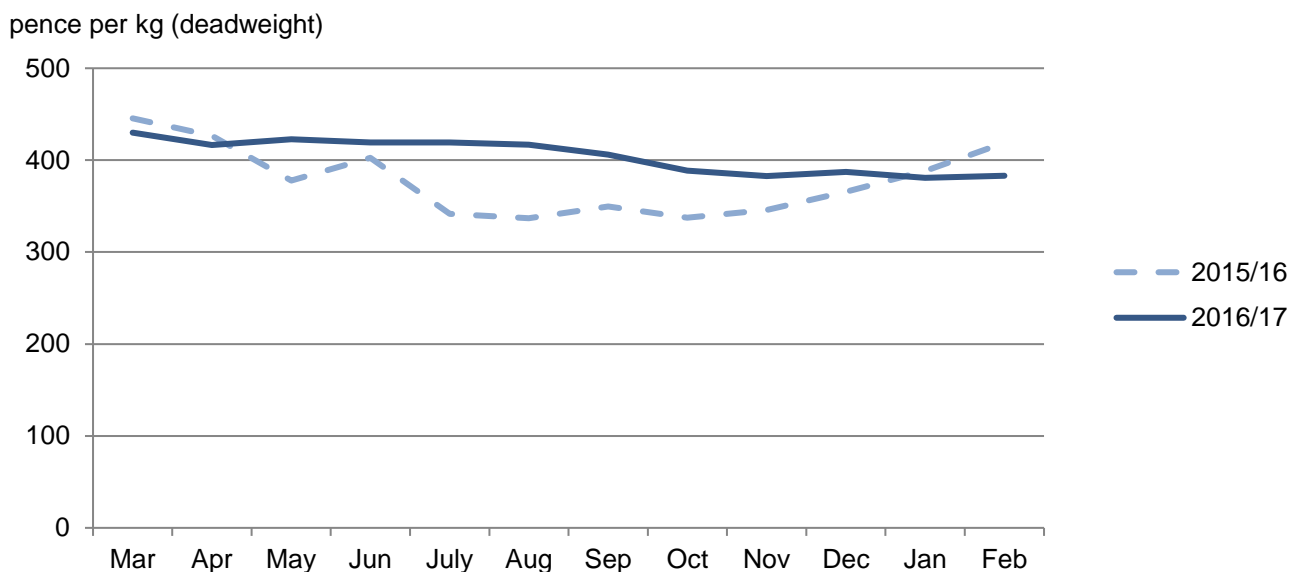
Figure 13: GB Average price for clean cattle (liveweight) – March 2015 to February 2017



Source: Agriculture and Horticulture Development Board (Meat Services)

On average both low and medium performers failed to make a positive return from agriculture (Table 7.8) in both 2015/16 and 2016/17, with the low performers also failing to generate a positive return for the business as a whole in both years. The top 25 percent of performers made an average of £6,700 on their agricultural activities and an overall income of £51,200.

Figure 14: UK Deadweight Standard Quality Quotation (SQQ)^(a) price – March 2015 to February 2017



Source: Agriculture and Horticulture Development Board (Meat Services)

(a) The Deadweight SQQ is for lamb carcasses falling in the 12-21.5 kg weight bracket.

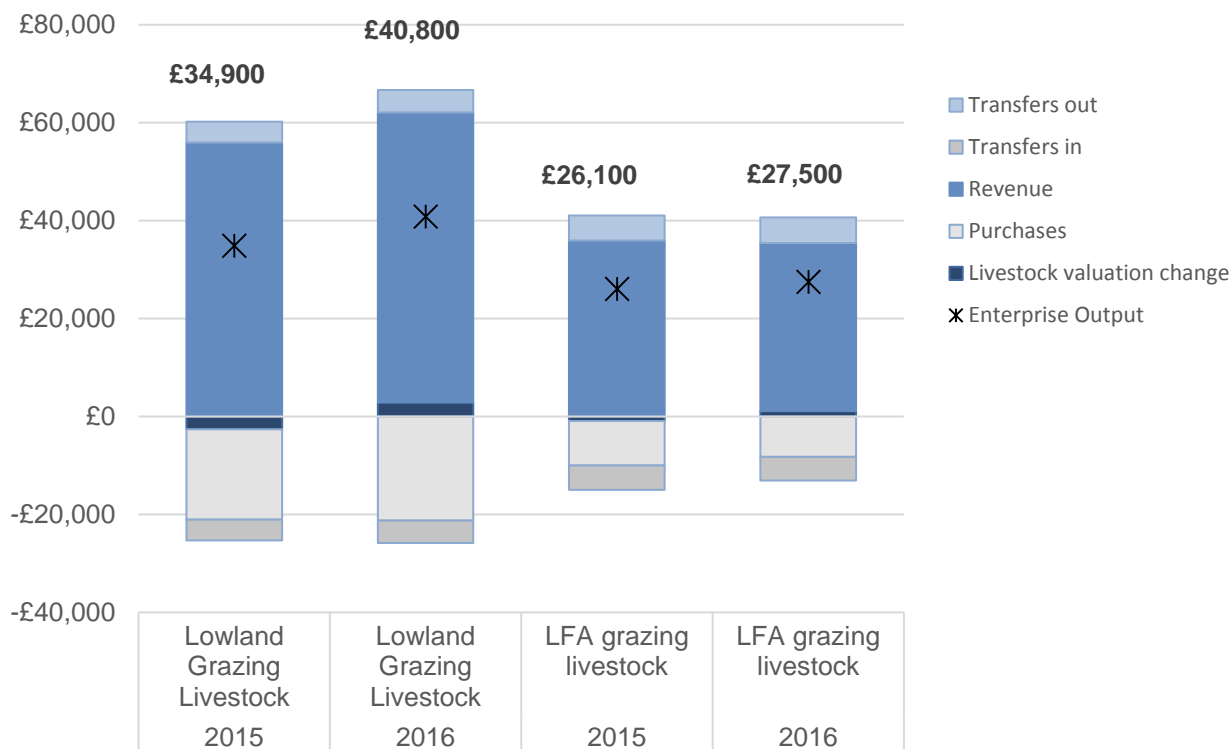
3.7 Grazing livestock farms (LFA)

For grazing livestock farms in the less favoured area (LFA), farm business output was 16 percent higher due to an increase in output from both agricultural and agri-environment activities together with a 29 percent increase in the average Basic Payment ([Table 5.9](#)). Higher output for both the sheep and beef enterprises was driven primarily by the valuation change (see below) plus firmer prices for fat and store lambs as well as breeding sheep ([Table 5.10](#)). These increases, which were only partially offset by higher costs, led to a 42 percent increase in average Farm Business Income to £27,000. On average, each of the performance groups failed to make a positive return from agriculture ([Table 7.10](#)) in 2016/17, whilst average Farm Business Income for the lowest 25 percent of performers was again below zero at -£6,700. Both medium and high performers averaged a positive farm business income.

For both grazing livestock farm types the difference between the livestock opening and closing valuations can have a considerable impact on incomes. In 2015/16, closing valuations for the beef herd and sheep flock were lower than opening valuations, thus decreasing the enterprise output. This was reversed in 2016/17 as livestock prices were higher than the year before, thus increasing the valuation across the year and increasing enterprise output.

Figure 15 shows the breakdown of enterprise output for other cattle on grazing livestock farms. In 2015/16 the valuation change was negative but in 2016/17 was positive. Although the valuation changes are relatively small (+/- £2600 on Lowland Grazing Farms) the difference between them accounts for most of the increase in enterprise output. Note that the valuation applies to growing livestock only and excludes any change in the value of breeding livestock.

Figure 15: Other Cattle¹ Enterprise Output Grazing Livestock Farms, 2015/16 and 2016/17



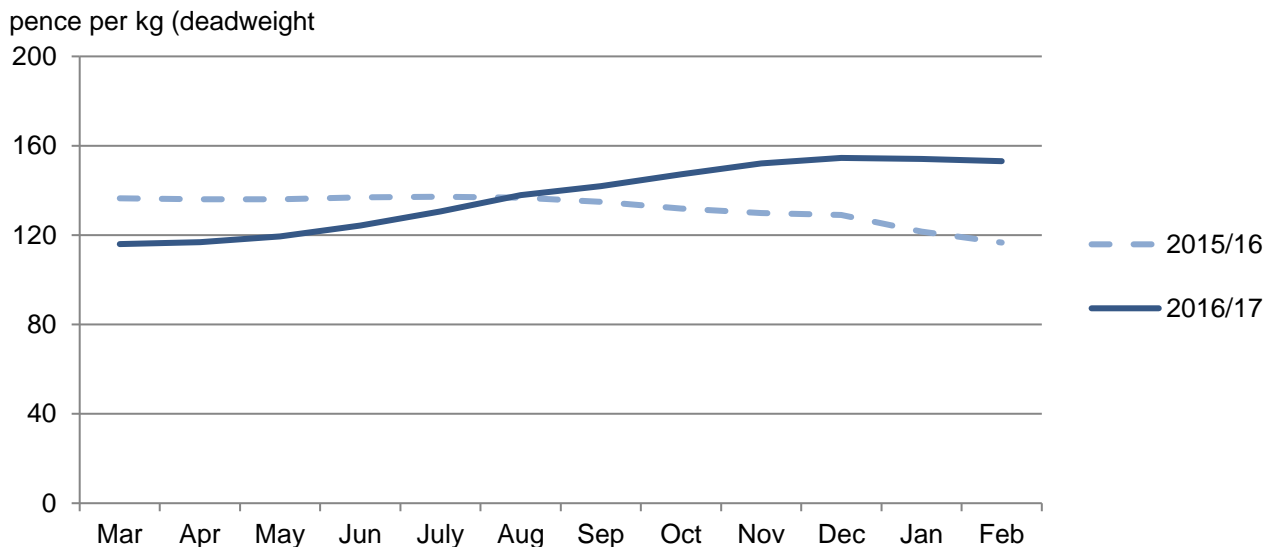
Source: Farm Business Survey, England
¹ All cattle on the farm apart from dairy cows

3.8 Specialist Pigs

The relatively small size of the sector and of the sample in the survey means that our estimates for this farm type are subject to greater levels of uncertainty than in other sectors.

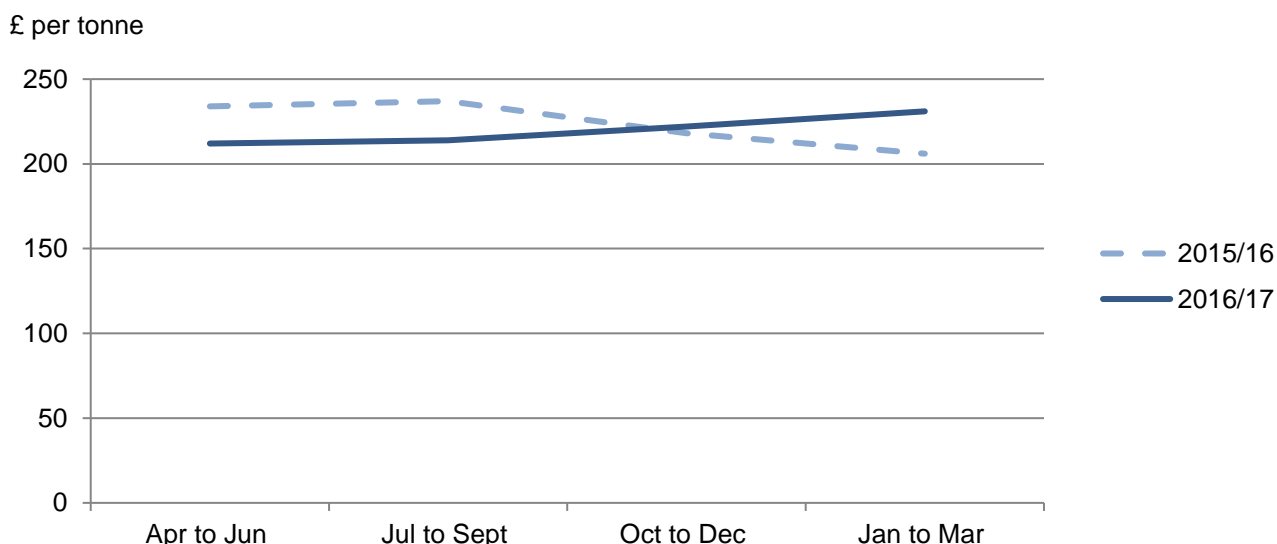
On specialist pig farms, average Farm Business Income more than doubled in 2016/17 from £21,600 to £57,800 per farm (Table 5.11). Pig prices firmed in the second half of 2016 (Figure 16) supported by tighter supplies and the weaker pound. This had a positive impact on closing valuations. Despite this, pig enterprise output was lower, due to a reduced throughput. The reduced output was more than offset by a substantial fall in both fixed and variable costs, particularly feed and to a lesser extent labour (Table 5.12). Note that this change may be the result of an increased proportion of farms contract rearing pigs within the sample. For these farms some of the input costs are not paid by the farmer. For those farms that did not contract rear pigs, enterprise output increased by more than a quarter in 2016/17. There was one particularly influential farm in the sample. Removing this farm from the results would reduce average Farm Business Income to £39,500.

Figure 16: GB Deadweight Average Pig Price (APP) – March 2015 to February 2017



Source: Agriculture and Horticulture Development Board (Meat Services)
 The All Pig Price (APP) series was introduced in April 2014. For more information measures see <https://pork.ahdb.org.uk/prices-stats/prices/>

Figure 17: Average compound feed prices for pigs: 2015/16 to 2016/17



Source: Defra, Average Compound Feed Prices by Main Livestock categories, Great Britain

3.9 Specialist Poultry

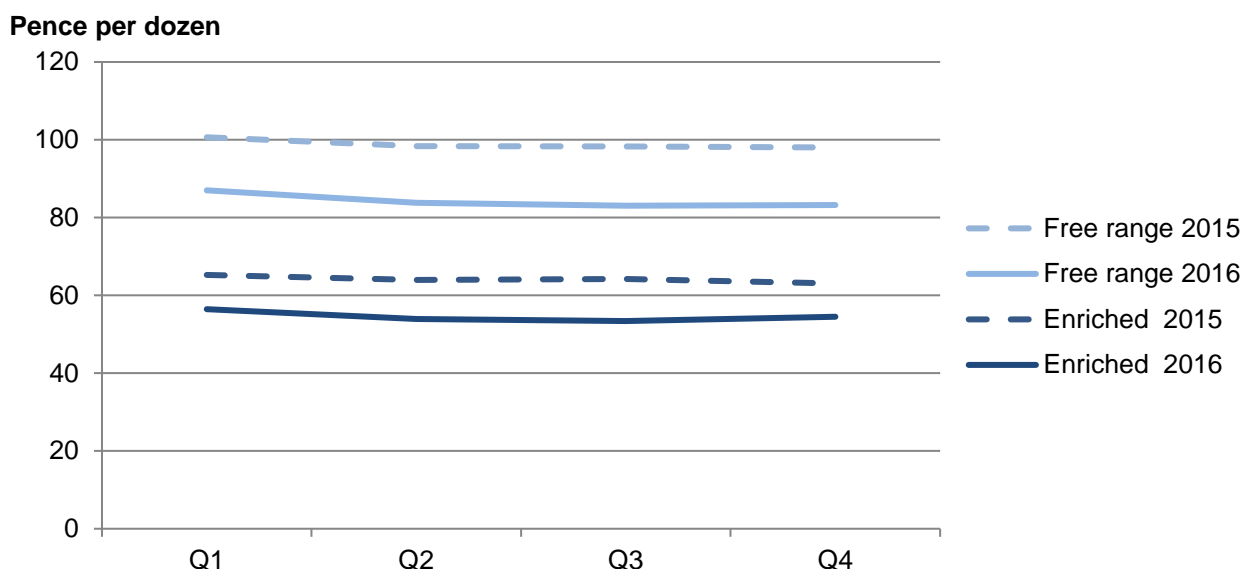
The relatively small size of the sector and of the sample in the survey means that our estimates for this farm type are subject to greater levels of uncertainty than in other sectors.

For specialist poultry farms, average incomes fell by almost half to £54,000 ([Table 5.13](#)). Enterprise output from eggs increased by around 9 percent driven by a 20 percent increase in production and a small increase in price. This is in contrast to the trends seen in UK statistics that show a fall in egg prices over the same period (Figure 18) and a 3 percent increase in production. The key driver for lower incomes was a reduced

throughput of birds for poultry meat compared to 2015/16. Both variable and fixed costs fell, reflecting the lower numbers, particularly feed, other livestock costs, machinery and labour. There was also a substantial fall in the contribution of renewable energy to the diversification cost centre which was only partially offset by a smaller reduction in equivalent costs. Note that these changes should be treated with caution because of the small sample size and the range of enterprises covered by these farms. For example there are farms producing broilers, turkeys, ducks and geese and for laying flocks the systems cover organic and conventional free range enterprises as well as enriched cages.

The nature of this sector means that the income of individual farms can change considerably from year to year. These fluctuations impact directly on industry totals, but also make the results more difficult to verify. This, along with the relatively small size of the sector and of the sample in the survey, means that our estimates are subject to greater levels of uncertainty than in other sectors. A time series showing the impact of removing a particularly influential farm from the results can be found [here](#).

Figure 18: UK Quarterly Egg Packing Station prices- 2015 and 2016



Source: Quarterly UK Egg Packing Station Survey

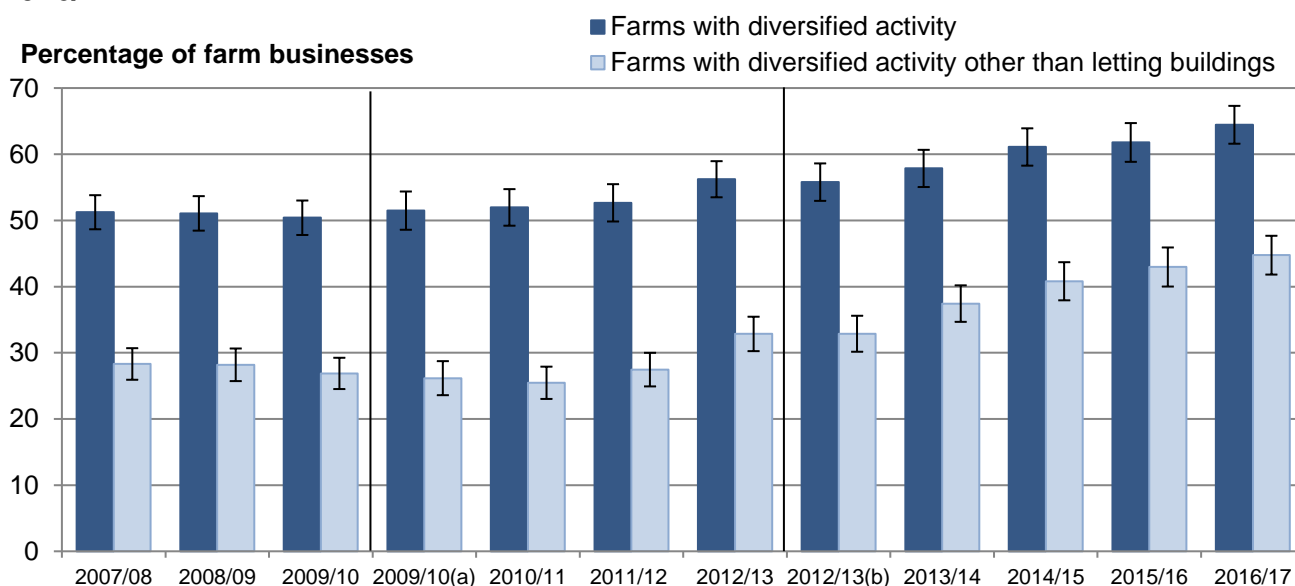
4 Diversification

A possible and rational response to the changing position of agriculture in the UK economy is for farmers to seek to enhance their income from sources other than conventional farming production through diversifying their business activities. Diversification is widely thought to offer considerable scope for improving the economic viability of many farm businesses. Many farm diversification activities can also provide benefits for the wider rural economy and community by, for example, encouraging and providing additional job opportunities.

Most farm businesses engage in other activities in addition to those carried out on their own farm, even if only hire work for another farmer. However, the definition of diversified activity adopted here excludes agricultural work on another farm and is restricted to non-agricultural work of an entrepreneurial nature on or off farm but which utilises farm resources.

Using this definition, 64 percent of farm businesses in England had some diversified activity in 2016/17, an increase of 2 percent from 2015/16. The main diversified activity is letting out buildings for non-agricultural use; when this is excluded, the proportion of farms with some other diversified activity was 45 percent for 2016/17 (Figure 19). The proportion of farms generating solar energy in 2016/17 was 20 percent, an increase of 2 percent from 2015/16. The proportion of farms generating other sources of renewable energy⁶ has remained the same at 9 percent.

Figure 19: Percentage of farms with diversified activities – England 2007/08 to 2016/17



Source: Farm Business Survey, England

(a) In 2010/11 changes were made to the minimum size threshold ($\geq 25,000\text{€}$) and also to the classification of farms. These changes were backdated to 2009/10. Previous years are not directly comparable. Prior to the 2010/11 campaign, the coverage of the FBS was restricted to those farms of size $\frac{1}{2}$ Standard Labour Requirement (SLR) or more.

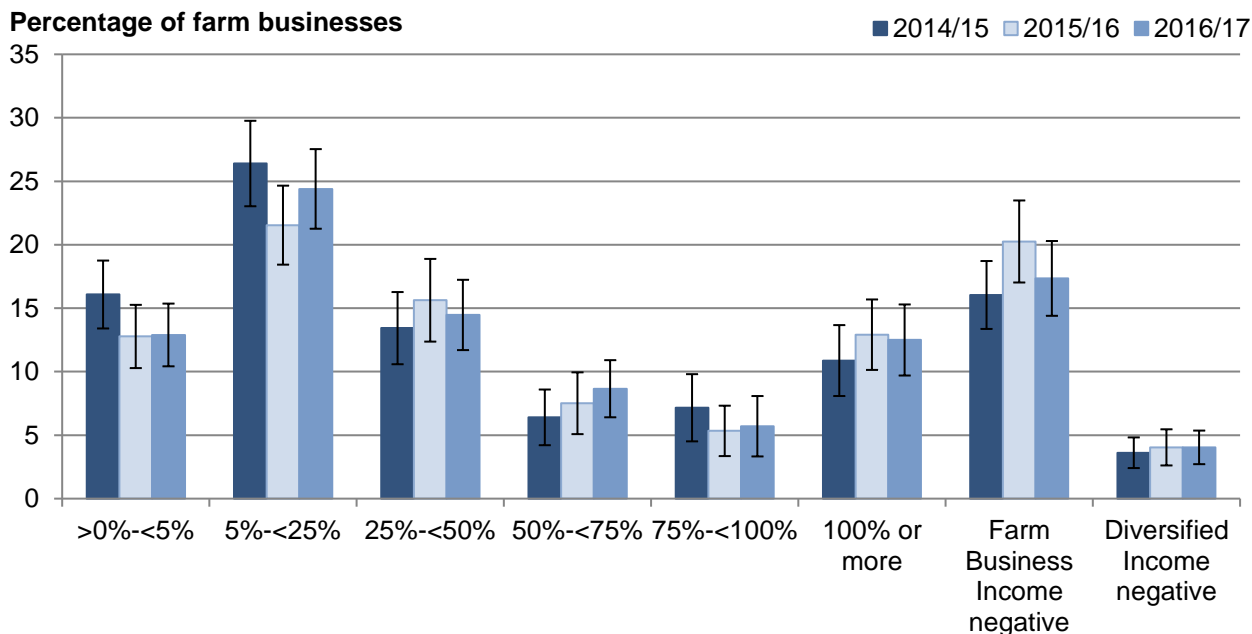
A revised weighting framework separating specialist poultry meat from specialist layers was implemented in 2012/13. These changes have now been backdated to 2009/10.

(b) Farm typology based on 2010 standard output coefficients. For 2009/10 to 2012/13 farm typology is based on 2007 standard output coefficients.

⁶ Other sources of renewable energy includes power generating, wind turbines, anaerobic digestion and renewable heat initiatives

Total income from diversified activities in 2016/17 was £620 million, an 8 percent increase from 2015/16 (£580 million in 2015/16). Diversified enterprises accounted for 29 percent of total farm business income in 2016/17 (£2,160 million) although there were wide variations between farms (Figure 20).

Figure 20: Distribution of farms according to proportion of Farm Business Income (FBI) from diversified enterprises — England 2014/15-2016/17



Excludes farms with no diversified activities
Source: Farm Business Survey, England

For 41 percent of businesses with diversified activities, income from these activities accounted for at least a quarter of the total Farm Business Income (the same as in 2015/16); for 27 percent of businesses, the income from diversification exceeded the income from the rest of the farm business (compared to 26 percent in 2015/16). For just over a fifth of farm businesses with diversified activities, their Farm Business Income and/or diversified income was negative. Farms without diversified enterprises have been excluded from this analysis.

A total of £620 million was generated from diversified activities by 36,600 farms. These farms had an average diversified enterprise income of £17,100 (Table D). Those letting out buildings generated 33 percent (£440 million) of their total farm business income (£1,330 million) from this activity whilst those farms with food processing and retailing enterprises generated 29 percent of their total farm business income (£50 million of £170 million) from this activity. Those farms generating renewable energy (excluding solar power), generated 8 percent of their total income (£20 million of £300 million) from this activity compared to 13 percent in the previous year.

Table D: Income from diversified enterprises — England 2016/17

	No. of farms	% of farms	Total farm business income for these farms (£m)	Income of diversified enterprise (£m)	Average enterprise income ^(a) (£/farm)
Farm Business income (incl. diversification)	56,700		2,160		
Farms which engage in:					
Diversified enterprises (all kinds)	36,600	64%	1,690	620	17,100
letting buildings for non-farming use	24,600	43%	1,330	440	17,900
processing/retailing of farm produce	5,200	9%	170	50	9,700
sport and recreation	7,200	13%	360	30	3,600
tourist accommodation and catering	3,400	6%	150	20	7,000
solar energy	11,100	20%	620	30	2,400
other sources of renewable energy ^(b)	5,200	9%	300	20	4,600
other diversified activities	4,700	8%	250	30	6,900

Source: Farm Business Survey, England

(a) Average here refers to the mean calculated over only those farms which had that enterprise

(b) Other sources of renewable energy includes power generating, wind turbines, anaerobic digestion and renewable heat initiatives.

Although more than half (64 percent) of all farms had a diversified activity, the total value of diversified enterprise output (£1,190 million) was only 8 percent of total farm business output (£15,670 million). For farms that engaged in any diversified enterprise, average enterprise output from diversification was £32,600 (Table E). For those farms with diversified enterprises, the output for these enterprises (£1,190 million) equated to 10 percent of their total farm output (£11,410 million). Letting buildings for non-farming use accounted for 51 percent of diversified output, while the contribution from tourism, sport and recreation, renewable energy and other diversified activities were relatively minor. On average, processing/retailing of farm produce generated the greatest output per farm (£27,900), whilst other renewable energy sources (excluding solar) generated £21,800 per farm.

Table E: Value of output from diversified enterprises - England 2016/17

	No. of farms	% of farms	Total farm business output for these farms (£m)	Output of diversified enterprise (£m)	Average diversified enterprise output ^(a) (£/farm)
Farm Business Output (incl. diversification)	56,700	100%	15,670		
Farms which engage in:					
Diversified enterprises (all kinds)	36,600	64%	11,410	1,190	32,600
letting buildings for non-farming use	24,600	43%	8,870	610	24,600
processing/retailing of farm produce	5,200	9%	1,240	140	27,900
sport and recreation	7,200	13%	2,510	90	12,400
tourist accommodation and catering	3,400	6%	1,080	60	18,500
solar energy	11,100	20%	4,700	80	7,200
other sources of renewable energy ^(b)	5,200	9%	2,230	110	21,800
other diversified activities	4,700	8%	1,650	100	20,400

Source: Farm Business Survey, England

(a) Average here refers to the mean calculated over farms which have that enterprise

(b) Other sources of renewable energy includes power generating, wind turbines, anaerobic digestion and renewable heat initiatives.

Survey details

Data on the income of farm businesses is used in conjunction with other information on the agricultural sector to help inform policy decisions (e.g. Reform of Pillar 1 and Pillar 2 of Common Agricultural Policy) and to help monitor and evaluate current policies relating to agriculture in the United Kingdom. It also informs wider research into the economic performance of the agricultural industry. The data are provided to the EU as part of the Farm Accountancy Data Network (FADN) and are also used widely by the industry for benchmarking purposes.

Survey content and methodology

The Farm Business Survey (FBS) is an annual survey providing information on the financial position and physical and economic performance of farm businesses in England. The sample of farm businesses covers all regions of England and all types of farming with the data being collected by face to face interview with farmers. Results are weighted to represent the full population of farm businesses that have at least 25 thousand Euros of standard output⁷ as recorded in the annual June Survey of Agriculture and Horticulture. In 2016, this accounted for approximately 56,700 farm businesses. In 2016 the sample was reduced from 1800 to 1750 farm businesses.

For further information about the Farm Business Survey please see:

<https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/series/farm-business-survey>

Data analysis

The results from the FBS relate to farms which have a standard output of at least 25,000 Euros. Initial weights are applied to the FBS records based on the inverse sampling fraction for each design stratum (farm type by farm size). [Table H](#) shows the distribution of the sample compared with the distribution of businesses from the 2016 June Survey of Agriculture and Horticulture. These initial weights are then adjusted (using calibration weighting⁸) so that they can produce unbiased estimates of a number of different target variables.

Accuracy and reliability of the results

In common with other statistical surveys, the published estimates of income from the Farm Business Survey are subject to sampling error, as we are not surveying the whole population. We show error bars based on 95% confidence intervals for mean Farm Business Income as a measure of uncertainty that may apply to the estimated means. These error bars show the range of values that may apply to the figures. They mean that we are 95% confident that this range contains the true value. They are calculated as the standard errors (se) multiplied by 1.96 to give the 95% confidence interval (95% CI). Standard errors (and therefore confidence intervals) only give an indication of the sampling error. They do not reflect any other sources of survey errors, such as non-response bias.

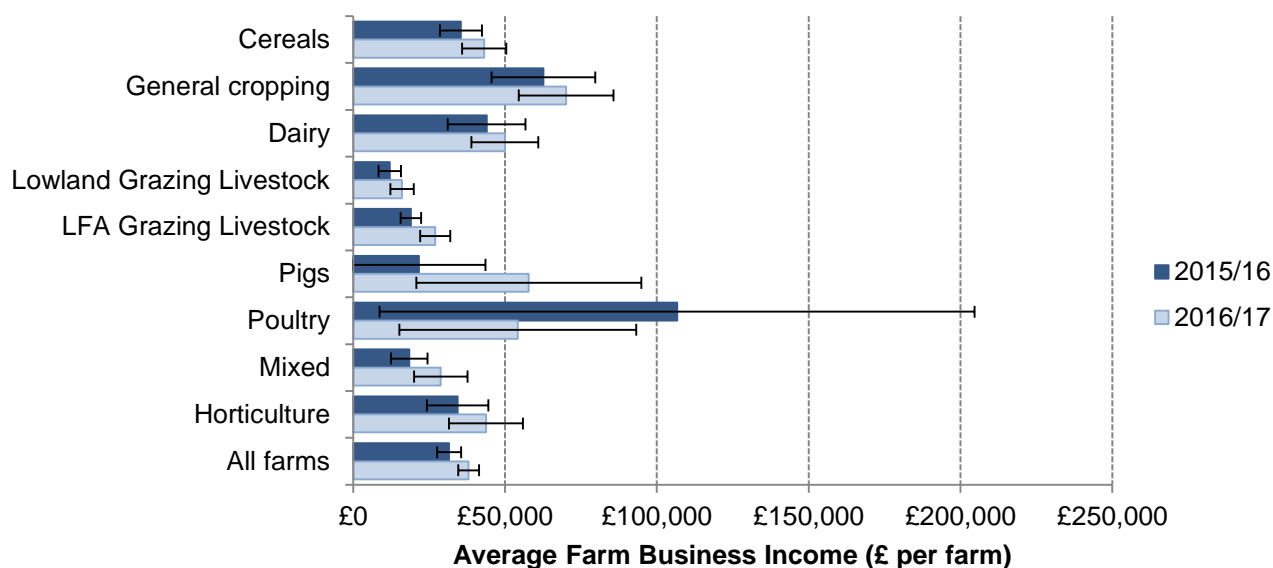
⁷ For a definition of standard output please see the UK classification document here <https://www.gov.uk/farm-business-survey-technical-notes-and-guidance>

⁸ Further information on calibration weighting can be found here: <https://www.gov.uk/farm-business-survey-technical-notes-and-guidance>

For the Farm Business Survey, the confidence limits shown are appropriate for comparing groups within the same year only; they should not be used for comparing with previous years since they do not allow for the fact that many of the same farms will have contributed to the Farm Business Survey in both years.

Figure 21 shows average Farm Business Income split by farm type, with 95% confidence limits as range bars around the averages. The smaller range of possible values that could apply to grazing livestock, dairy, cereal and mixed farms types reflects relatively large sample sizes and the relative homogeneity of these sectors in terms of the range of income levels across the farms in each of these types.

Figure 21: Average Farm Business Income by farm type, with 95% confidence limits, England 2015/16 and 2016/17



Source: Farm Business Survey, England

The range of values that could apply to general cropping and horticulture farm types reflect a more diverse range of agricultural activities, e.g. general cropping is made up of arable crop and field scale vegetable producers, while horticulture includes specialist fruit producers, hardy nursery stock and fruit and vegetables grown in glasshouses. As a result these sectors are less homogeneous in terms of income levels.

Confidence limits for specialist pig and poultry farms are affected by the relatively small samples and a huge range in scale of production. There is also one very influential poultry farm in the sample. Table F shows the results for this farm type including and excluding the influential farm that has been in the survey since 2012/13.

Table F: Average Farm business income for Poultry farms, including and excluding outlier

	Average FBI (£ per farm)		95% Confidence interval (£ per farm)	
	Including outliers	Excluding outliers	Including outliers	Excluding outliers
2012/13	90,200	76,000	± 43,100	± 36,000
2013/14	157,200	99,800	± 110,800	± 34,200
2014/15	126,800	83,600	± 87,800	± 38,500
2015/16	106,700	56,100	± 98,000	± 29,000
2016/17	54,000	37,600	± 39,000	± 23,000

Source: Farm Business Survey, England

Availability of results

Detailed tables covering income, outputs and costs for each farm type can be found here <https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/series/farm-business-survey>

Defra statistical notices can be viewed on the Food and Farming Statistics pages on the Defra website at <https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/statistics>. This site also shows details of future publications, with pre-announced dates.

User engagement

As part of our ongoing commitment to compliance with the Code of Practice for Official Statistics (<http://www.statisticsauthority.gov.uk/assessment/code-of-practice/index.html>), we wish to strengthen our engagement with users of these statistics and better understand the use made of them and the types of decisions that they inform. Consequently, we invite users to make contact to advise us of the use they do, or might, make of these statistics, and what their wishes are in terms of engagement. Feedback on this statistical release and enquiries about these statistics are also welcome.

Please contact Charles Mbakwe at fbs.queries@defra.gsi.gov.uk.

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Appendix 1: Classification of Survey Farms by Type of Farming and Size of Business

1. A revised classification of farm types was introduced in 2010/11 based on Standard Outputs, which caused changes to the distribution of farms by farm type. Further details of the revised classification and its effect on the FBS sample can be found at:

<https://www.gov.uk/farm-business-survey-technical-notes-and-guidance>

2. At the same time, the lower size threshold for the Farm Business Survey was changed from 0.5 Standard Labour Requirements (in annual full-time equivalents) to a standard output of 25,000 euros. Therefore, the results published here relate to farms for which the total standard output from cropping and stocking activities is at least 25,000 euros.

3. The Standard Labour Requirement (SLR) of a farm represents the normal labour requirement, in Full Time Equivalents, for all the enterprises on a farm under typical conditions. The SLR for a farm is calculated from standard coefficients applied to each enterprise on the farm. The standard coefficients represent the input of labour required per head of livestock or per hectare of crops for enterprises of average size and performance.

4. Farms in the sample are grouped by type of farm based on the EC system of classification defined by Commission Regulation 1242/2008 (with minor modifications to adapt it to United Kingdom conditions). This classification system uses Standard Outputs per hectare of crop area and per head of livestock estimated over a 5 year period. For 2013/14 (in line with the EU regulation), Standard Outputs were recalculated for the period 2008-2012 (referred to as 2010 Standard Outputs). Results shown in this publication for 2012/13 have been recalculated using 2010 Standard Outputs for comparability. Further information about the impact of the change from 2007 to 2010 Standard Outputs can be found at:

<https://www.gov.uk/farm-business-survey-technical-notes-and-guidance>

5. The Standard Output (SO) is a financial measure used to classify farm type. Standard outputs measure the total value of output of any one enterprise - per head for livestock and per hectare for crops. For crops, this is the main product (e.g. wheat, barley, peas) plus any by-product that is sold, for example straw. For livestock it is the value of the main product (milk, eggs, lamb, pork) plus the value of any secondary product (calf, wool) minus the cost of replacement. Until 2010, standard gross margins were used for the classification of farms. Standard outputs and standard gross margins differ in that no variable costs are deducted in the derivation of standard outputs. Each farm is assigned a total SO by aggregating the SOs for its agricultural enterprises. The farm is classified into a 'particular' type of farming by evaluating the proportion of its total SO deriving from different enterprises. In the EC typology the particular types are grouped into seventeen principal types. The latter are not entirely suitable for use in the United Kingdom and alternative groupings have therefore been adopted for the Farm Business Survey. [Table G](#) at the end of this appendix shows how the constituent EC particular types are grouped to give twenty main types and nine robust types.

6. The varied nature of the definitions used for the EC particular types of farming does not permit a simple description to be given of all of the main types adopted in the Survey but the chief characteristics may be summarised as follows:

Cereals	Farms on which cereals, oilseeds, peas and beans harvested dry account for over two-thirds of their total SO (holdings with more than two-thirds of their total SO in set-aside are excluded from the survey results).
General cropping	Farms with over two-thirds of their total SO in arable crops (including field scale vegetables) or a mixture of arable and horticultural crops; and holdings where arable crops account for more than one-third of total SO and no other grouping accounts for more than one-third.
Dairy	Farms where the dairy enterprise, including followers, accounts for over two-thirds of their total SO.
LFA grazing livestock	Farms with more than two-thirds of their total SO in cattle and sheep except holdings classified as dairy. A farm is classified as in the LFA if 50 percent or more of its total area is in the EC Less Favoured Area (both Disadvantaged and Severely Disadvantaged).
Lowland grazing livestock	Farms with more than two-thirds of their total SO in cattle and sheep except holdings classified as dairy. A farm is classified as "lowland" if less than 50 percent of its total area is in the EC Less Favoured Area.
Specialist pigs	Farms on which pigs account for over two-thirds of their total SO.
Specialist poultry	Farms on which poultry account for over two-thirds of their total SO.
Mixed farms	Farms where crops account for one-third, but less than two-thirds of total SO and livestock accounts for one-third, but less than two-thirds of total SO. It also includes holdings with mixtures of cattle and sheep and pigs and poultry and holdings where one or other of these groups is dominant, but does not account for more than two-thirds of the total SO.

7. The Less Favoured Areas (LFA) classification was established⁹ in 1975 as a means to provide support to mountainous and hill farming areas. Within the LFA are the Severely Disadvantaged Areas (SDA) and the Disadvantaged Areas (DA). The SDA are more environmentally challenging areas and largely upland in character. A map showing the LFA, SDA and DA can be seen in [Figure 22](#) at the end of this appendix.

⁹ Council Directive 75/268/EEC.

8. Farm business size in the United Kingdom is measured in Standard Labour Requirements (SLR) expressed in terms of full-time equivalents. Four size groups are defined for this report:

Part-time	(less than 1 SLR)
Small	(greater than or equal to 1 less than 2 SLRs)
Medium	(greater than or equal to 2 less than 3 SLRs)
Large	(greater than or equal to 3 SLRs)

9. The average economic and physical sizes of farms as estimated from the FBS sample and as recorded in the June Survey are shown according to type of farming and size in [Table H](#) at the end of this appendix. Such comparisons cannot be exact because there are some differences of detail between classification procedure in the FBS and that used in the analyses of holdings in the June Survey. In the analyses of the June Survey, standard outputs are applied to the cropping and stocking as recorded on the survey day whilst in the FBS they are applied to the hectares of crop and average numbers of livestock over the year as a whole. Moreover, in the FBS, the minimum unit is a whole farm business, which may comprise more than one holding, while in the June Survey the holdings making up a farm may be treated separately.
10. Economic performance for each farm is measured as the ratio between economic output (mainly sales revenue) and inputs (costs). The inputs for this calculation include an adjustment for unpaid manual labour. The higher the ratio, the higher the economic efficiency and performance. The farms are then ranked and allocated to performance bands based on economic performance percentiles:

Low performance band - bottom 25 percent of economic performers
Medium performance band - middle 50 percent of performers
High performance band - top 25 percent of performers.

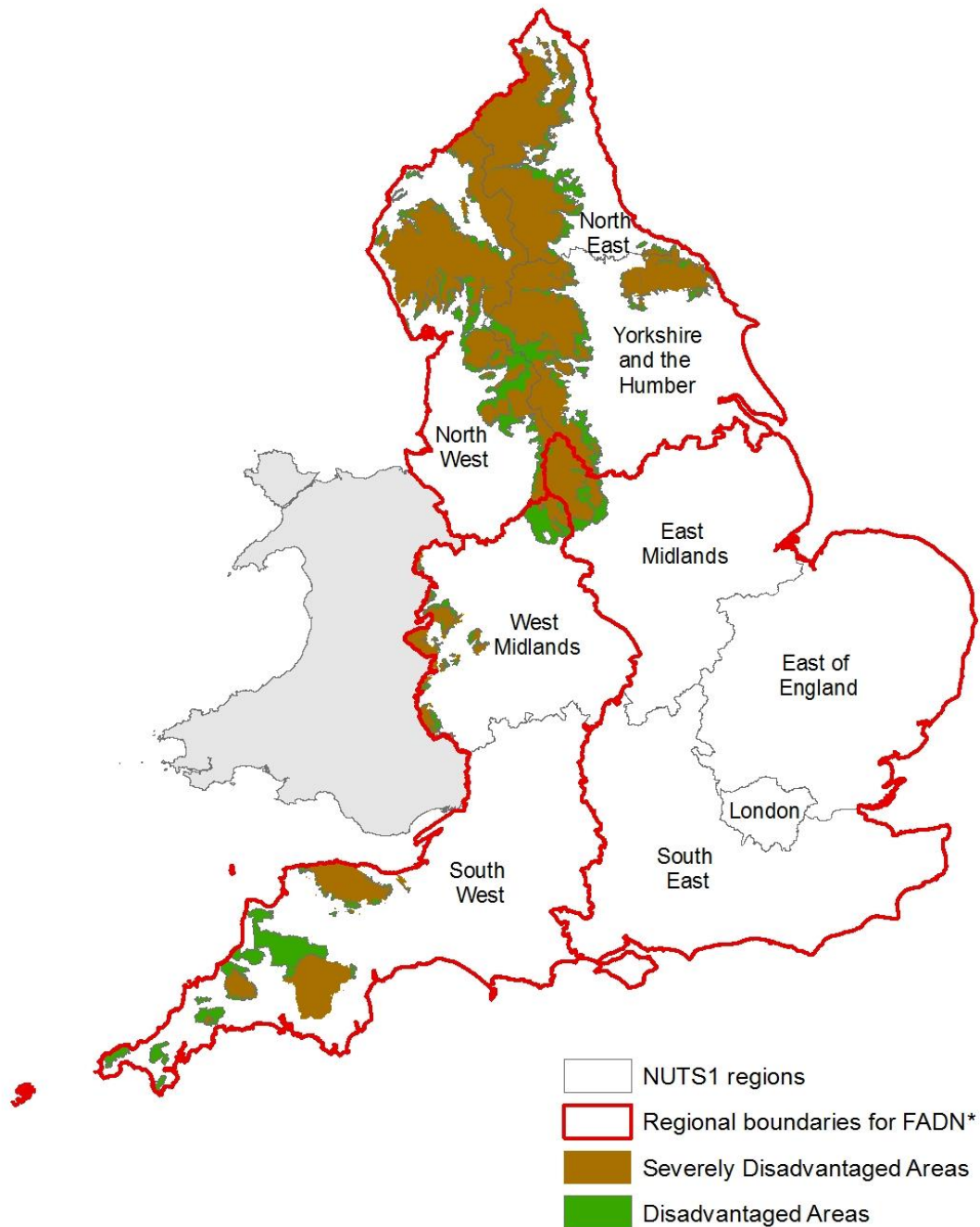
Table G: UK Farm Classification**UK FARM CLASSIFICATION SYSTEM (REVISED 2010): COMPOSITION OF ROBUST, MAIN AND OTHER FARM TYPES BY CONSTITUENT EC TYPE**

Robust types (a)	Main types	EC farm types
1. Cereals	1. Cereals	151
2. General cropping	2. General cropping	161, 162, 163, 166, 613, 614, 615, 616
3. Horticulture	3. Specialist fruit 4. Specialist glass 5. Specialist hardy nursery stock 6. Other horticulture	361 211, 212, 213 232 221, 222, 223, 231, 233, 351, 352, 353, 354, 362, 363, 364, 365, 380, 611, 612
4. Specialist pigs	7. Specialist pigs	511, 512, 513
5. Specialist poultry	8. Specialist poultry	521, 522, 523
6. Dairy	9. Dairy (LFA) 10. Dairy (Lowland)	450 (LFA) 450 (non-LFA)
7. LFA grazing livestock	11. Specialist sheep (SDA) 12. Specialist beef (SDA) 13. Mixed grazing livestock (SDA) 14. Various grazing livestock (DA)	481 (SDA) 460 (SDA) 470, 482, 483, 484 (SDA) 460, 470, 481, 482, 483, 484 (DA)
8. Lowland grazing livestock	15. Various grazing livestock (Lowland)	460, 470, 481, 482, 483, 484 (Lowland)
9. Mixed	16. Cropping and dairy 17. Cropping, cattle and sheep 18. Cropping, pigs and poultry 19. Cropping and mixed livestock 20. Mixed livestock	831, 832 833, 834 841 842, 843, 844 530, 731, 732, 741, 742
10. Non classifiable (b)	21. Non-classifiable holdings	900

(a) EC Typology described in Commission Regulation 1242/2008.

(b) Not included in Farm Business Survey results.

Figure 22: Regional boundaries used within tables



Farm Accountancy Data Network (FADN) regions:
 North: North East, North West, Yorkshire and the Humber
 West: West Midlands, South West
 East: East Midlands, East of England, South East and London

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Table H: Farm Business Survey 2016/17: Sample Characteristics – England by size groups^(a)

Type of Farming	Size	Number of Businesses in Sample	Number of Businesses at June Survey 2016	Average Size of Business by Standard Labour Requirement		Average Total Area (hectares)	
				Sample	June Survey 2016	Sample	June Survey 2016
Cereals	Part-Time	103	7,049	0.7	0.5	99	70
	Small	108	3,655	1.5	1.4	185	172
	Medium	67	1,655	2.5	2.4	270	276
	Large	75	2,188	5.3	5.5	539	592
	All Sizes	353	14,547	1.7	1.7	198	198
General Cropping	Part-Time	19	1,570	0.7	0.5	85	91
	Small	34	1,168	1.5	1.4	144	102
	Medium	17	706	2.4	2.5	201	161
	Large	83	1,772	9.6	9.7	544	402
	All Sizes	153	5,216	3.5	4.1	240	209
Dairy ^(b)	Part-Time	22	877	1.5	1.4	53	48
	Small	41	1,032	2.6	2.5	78	75
	Large	183	4,342	6.4	6.6	174	167
	All Sizes	246	6,251	5.4	5.2	150	135
Lowland Grazing Livestock ^(c)	Part-Time	45	4,890	0.7	0.7	61	47
	Small	86	3,976	1.5	1.4	85	75
	Medium	66	1,505	2.5	2.4	104	113
	Large	89	1,617	5.2	5.3	215	237
	All Sizes	286	11,988	1.8	1.8	96	90
LFA Grazing Livestock ^(c)	Part-Time	19	2,265	0.8	0.7	60	63
	Small	51	1,978	1.6	1.4	103	121
	Medium	56	992	2.4	2.4	177	212
	Large	80	1,211	5.4	4.9	352	460
	All Sizes	206	6,446	2.4	2.0	160	178
Specialist Pigs ^(d)	Part-Time	18	927	1.5	1.3	53	18
	Small	48	595	14.4	13.1	126	102
	Medium	66	1,522	5.8	5.9	68	51
	All Sizes	66	1,522	5.8	5.9	68	51
Specialist Poultry	Part-Time	10	401	0.4	0.5	23	16
	Small	11	263	1.5	1.5	37	26
	Medium	19	196	2.4	2.5	30	36
	Large	55	685	13.3	13.6	92	95
	All Sizes	95	1,545	6.4	6.7	57	55
Mixed	Part-Time	13	2,051	0.7	0.6	75	50
	Small	42	1,549	1.6	1.4	118	94
	Medium	43	909	2.4	2.5	133	149
	Large	72	1,633	6.1	6.7	301	356
	All Sizes	170	6,142	2.8	2.7	162	157
Horticulture	Part-Time	23	495	0.7	0.7	12	15
	Small	19	795	1.5	1.5	17	15
	Medium	16	507	2.3	2.4	14	19
	Large	130	1,290	15.3	16.2	61	90
	All Sizes	188	3,087	6.2	7.7	30	47
All Types	Part-Time	240	19,345	0.7	0.6	76	59
	Small	379	14,345	1.5	1.4	115	104
	Medium	329	7,721	2.5	2.4	148	154
	Large	815	15,333	7.5	7.9	279	293
	All Sizes	1,763	56,744	3.0	3.0	150	146

(a) The estimates shown in this publication are based on sample results weighted by type and by size.

(b) 'Part-Time' and 'Small' sizes merged due to very low respective sample numbers.

(c) Lowland Grazing Livestock and LFA Grazing Livestock farm types exclude specialist horse enterprises.

(d) 'Part-Time', 'Small' and 'Medium' sizes merged due to very low respective sample numbers.

Appendix 2: Notes on Tables: Definitions of Terms

FBS Survey Terms

1. **Accounting years:** To ensure consistency in harvest/crop year and commonality of subsidies within any one FBS year, only farms which have accounting years ending between 31 December and 30 April inclusive are allowed into the survey. (For Scotland, accounting years up to 31 May are allowed).

The FBS accounting year for an individual farm in the survey is normally the same as the tax year for that business (for convenience in compiling the account). The tax year will normally be chosen by the farmer, not the tax authorities.

Aggregate results are presented in terms of an accounting year ending at end-February, the approximate average of all farms in the FBS. Thus the results relate, on average, to March - February years

Business Outputs, Inputs, Costs and Income

2. **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. Note that prior to 2008/09 directors remuneration was not deducted in the calculation of farm business income. 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.
3. **Farm corporate income represents** the return on own capital invested in the farm business, to risk and to entrepreneurship. It is derived by deducting unpaid labour, both manual and managerial, from Farm Business Income. This allows the profitability of sole traders and partnerships to be compared directly with that of companies. Currently we are able to deduct an estimate of unpaid manual labour but not of unpaid managerial labour and so the data are only approximate. However, we plan to undertake a research project to produce a method for deriving an estimate of unpaid managerial labour, so that we can produce better data for this measure in future.
4. **Farm investment income** represents the return on *all* capital invested in the farm business *whether borrowed or not*, to risk and to entrepreneurship. It is a general measure of the profitability of farming as an activity rather than of a particular business. It is derived by adding net interest payments to Farm Corporate Income. Since currently the data for Farm Corporate income are only approximate, so too are the data for Farm Investment Income.

5. **Net Farm Income (NFI)** is intended as a consistent measure of the profitability of tenant-type farming¹⁰ which allows farms of different business organisation, tenure and indebtedness to be compared. It represents the return to the farmer and spouse alone for their manual and managerial labour and on the tenant-type capital¹¹ 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.

6. **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.
7. **Family farm income** is given in Tables 1.4, 2.4 and 3.4. It 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.

Cropping, Stocking and Labour Tables

8. **Utilised agricultural area** is the crop area, including fodder, set-aside land, temporary and permanent grass and rough grazing in sole occupation (but not

¹⁰ Tenant-type farming was never conceived of as including non-agricultural activities on farm (using farm resources) except perhaps for value added activities such as small-scale food processing, e.g. sales of farm produced butter and cream and retail sales of farm produced liquid milk. However, recent research has revealed that many of the more varied non-agricultural activities which have been increasing on farms over the years have been inadvertently included in the calculation of NFI, with the result that about three-quarters of non-agricultural activities on farm by value are currently included and one-quarter excluded, without any clear basis for this division. Although this means that the definition of NFI has become untenable on the current basis, it has been decided to continue with historical practice for reasons of continuity, rather than to change the definition, pending the introduction of a wider measure to include all on-farm business activities.

¹¹ 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.

shared rough grazing) i.e. the agricultural area of the farm. It includes bare land and forage let out for less than one year.

9. **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).
10. **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).
11. **Total area farmed** comprises the total area of the farm minus woodlands and buildings, etc. plus net land hired in.
12. **Adjusted utilised agricultural area** comprises the utilised agricultural area with rough grazing in sole occupation converted to a permanent pasture equivalent.
13. **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.
14. **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'*.
15. **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.

Outputs, Inputs and Farm Business Income Tables

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

(a) **Crop 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.

(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) **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 - see paragraph 17) 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.

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

17. **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 and rented keep.
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.

<i>Purchased and home-grown seeds</i>	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.
<i>Fertilizers</i>	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.
<i>Crop protection</i>	This includes costs of pre-emergent sprays, fungicides, herbicides, dusts and insecticides and other crop sprays.
<i>Other crop costs</i>	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).
<i>Total fixed costs</i>	These are the costs of labour, machinery, contract work, land and buildings, other general farming costs and depreciation.
<i>Labour (excluding farmer and spouse)</i>	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).
<i>Contract costs</i>	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.
<i>Machinery running costs</i>	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.

18. **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 5.

Balance Sheet Tables

19. **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.

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

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

22. **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.

Yields and Implied Output Prices

23. **Crop yields** are calculated as total production divided by crop area.
24. **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.

Flow of Funds Statement

25. **The Flow of Funds Statement** demonstrates how funds have been generated by the business (source of funds) and where these funds have been spent (disposal of funds). It shows the importance of Net Farm Income as a source of funds compared to other sources such as sales of property, changes in loans outstanding and other funds introduced (e.g. from a private source). To derive the amount of cash funds generated by the business a number of adjustments are made to net farm income; specifically depreciation, imputed costs and unpaid labour costs are added back to net farm income. The total cash sources are completed by adding in sales of property, changes in loans outstanding and transfers into the business of funds from outside. The disposals show how the funds have been spent, for example purchase of property and quotas, capital expenditure and private drawings. The difference between the sources and disposals is a surplus if total sources are greater than total disposals and a deficit if total disposals are greater than total sources.
26. **The reconciliation of the flow of funds** shows how the surplus or deficit has been distributed in terms of financial assets and financial liabilities, i.e. the change between the opening and closing valuations in terms of bank balance, cash-in-hand, debtors and creditors.