



15 December 2016

Farm Accounts in England – Results from the Farm Business Survey 2015/16

This release provides further detail behind the income results published on 27th October 2016. There have been some minor revisions to these results since the October publication. The results are sourced from the 2015/16 Farm Business Survey which covers the 2015 harvest and includes the 2015 Basic Payment. Figures are for March/February years with the most recent year shown therefore ending February 2016. The results examine farm incomes, outputs and costs for farm types, farm sizes and regions.

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.

Forecasts of income by farm type for the year ending February 2017 and covering the 2016 harvest will be published in February 2017. These can be found at:

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

Key results

- In 2015/16, average Farm Business Income fell across all farm types except general cropping, horticulture and grazing livestock farms in the Less Favoured Area (LFA).
- On cereal farms, lower prices for key commodities such as wheat, barley and oilseed rape drove the fall in incomes. On general cropping farms these price falls were mitigated by improved yields and prices for potatoes.
- On dairy farms, the lower average income reflects the full impact of lower milk prices which started to fall in March 2014. The average farmgate milk price was 18% lower in 2015/16 compared to the previous 12 months.
- On lowland grazing livestock farms, lower incomes were driven by a reduced output from cattle and sheep. On LFA grazing livestock farms higher output from cattle together with an increase in the Basic Payment driven by higher payment rates for moorland and SDA land compared to the Single Payment, led to a higher average income.
- On specialist pig farms, increased throughput was offset by higher costs and lower prices for pig meat. Average incomes on specialist poultry farms fell due to a reduced output for both eggs and poultry meat.

Enquiries to: Selina Matthews, Department for Environment, Food and Rural Affairs

Tel: ++ 44 (0)208 026 4060, email: FBS.queries@defra.gsi.gov.uk

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- Across all farm types the Basic Payment was around 5% lower than the Single Payment of 2014/15 due to a change in the pound/euro exchange rate. Estimates have been made for some farms where full payment details are not yet available.

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 and succession plans.

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.

Detailed tables covering income, outputs and costs can be found [here](#). Enterprise level gross margins are also provided.

Revisions

We have revised some of the 2015/16 income figures that were published on [27th October 2016](#). The revisions are due to the receipt of updated survey data affecting dairy farms which resulted in the need to recalculate the survey weights and results.

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

	As published on 27 th October 2015/16	Updated on 11 th December 2015/16
At current prices		
Cereals	35,600	35,500
General cropping	62,900	62,600
Dairy	42,300	43,900
Lowland Grazing Livestock	12,000	12,000
LFA Grazing Livestock	19,100	19,000
Pigs	22,000	21,600
Poultry	106,800	106,700
Mixed	17,900	18,400
Horticulture	35,100	34,400
All farms	31,400	31,600

Source: Farm Business Survey, England

Detailed results

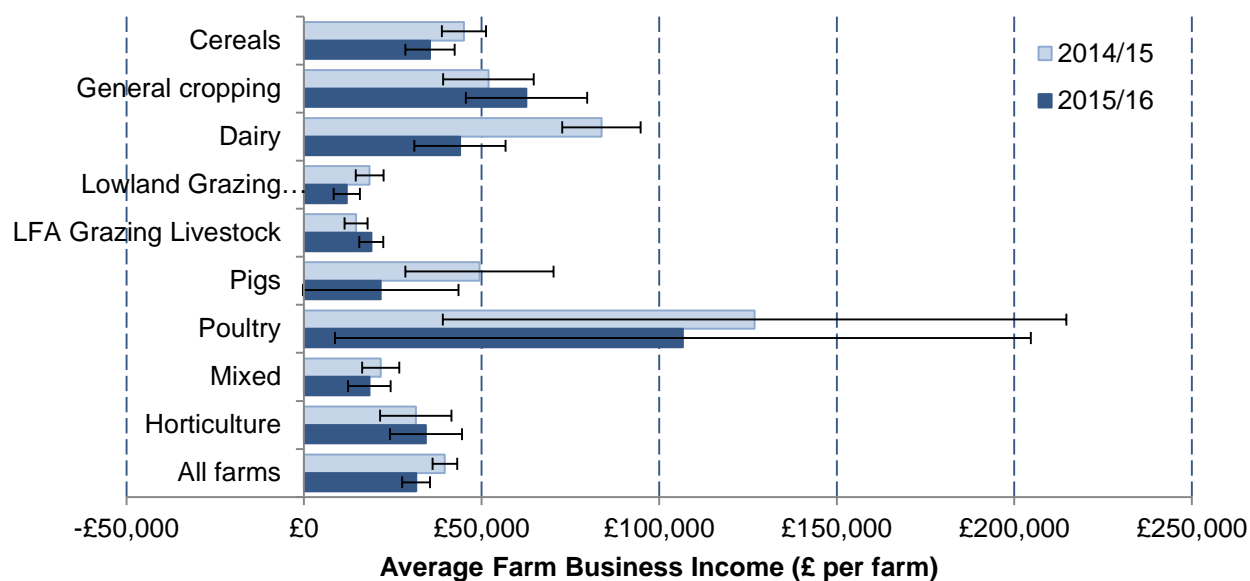
Figures are for March/February years with the most recent year shown ending February 2016. This covered the **2015** harvest and includes the Basic Payment due in the 2015/16 accounting year.

1 Overview across all farm types

Average Farm Business Income across all farm types was £31,600 in 2015/16, 20% lower than in 2014/15. The key driver behind this fall was lower farm gate prices across most commodities, particularly cereals, oilseeds and milk as domestic markets responded to reduced global demand and the change in the exchange rate. Input costs were also lower, particularly feed, but in most cases the fall was not sufficient to offset the lower output. Across all farm types the Basic Payment¹ was around 5% lower than the Single Payment of 2014/15 due to the pound strengthening 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 2014/15 and 2015/16

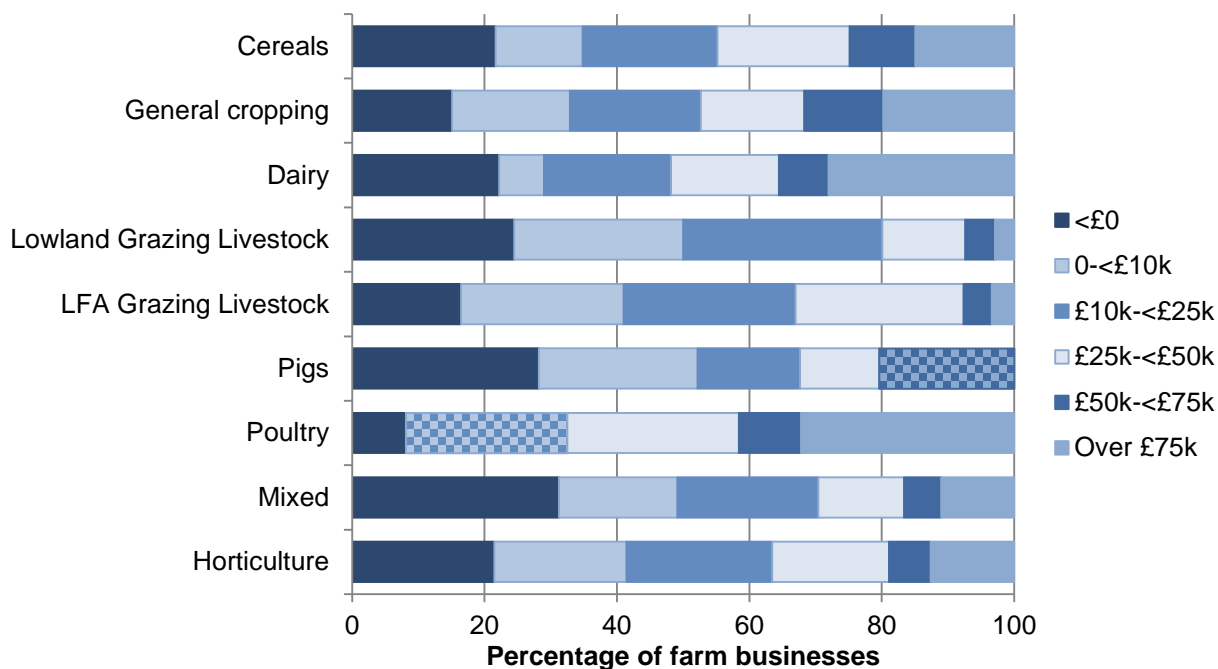


Source: Farm Business Survey, England

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, 2015/16



Source: Farm Business Survey, England

Over a fifth of cereal, dairy, pig, lowland grazing livestock, mixed and horticulture farms failed to make a profit in 2015/16 and around 70% of mixed and LFA grazing livestock farms generated incomes below £25,000. Over a quarter of dairy farms and almost a third of specialist poultry farms had an income of more than £75,000.

2 Weather

Autumn 2014 was warmer than average² (Figure 3), the third warmest on record since 1910. September was a particularly dry month which helped with the remaining harvest (Figure 4). Establishment of winter cereal and oilseed crops was generally good, although there were a number of incidences of winter oilseed rape being affected by slug damage and disease.

Temperatures in December, January and February were around average. Some significant storms were experienced in mid-December, mid-January and late February in the north. Snowfalls in the second half of January caused some disruption. The north west of the country experienced the wettest weather whilst eastern counties were the driest.

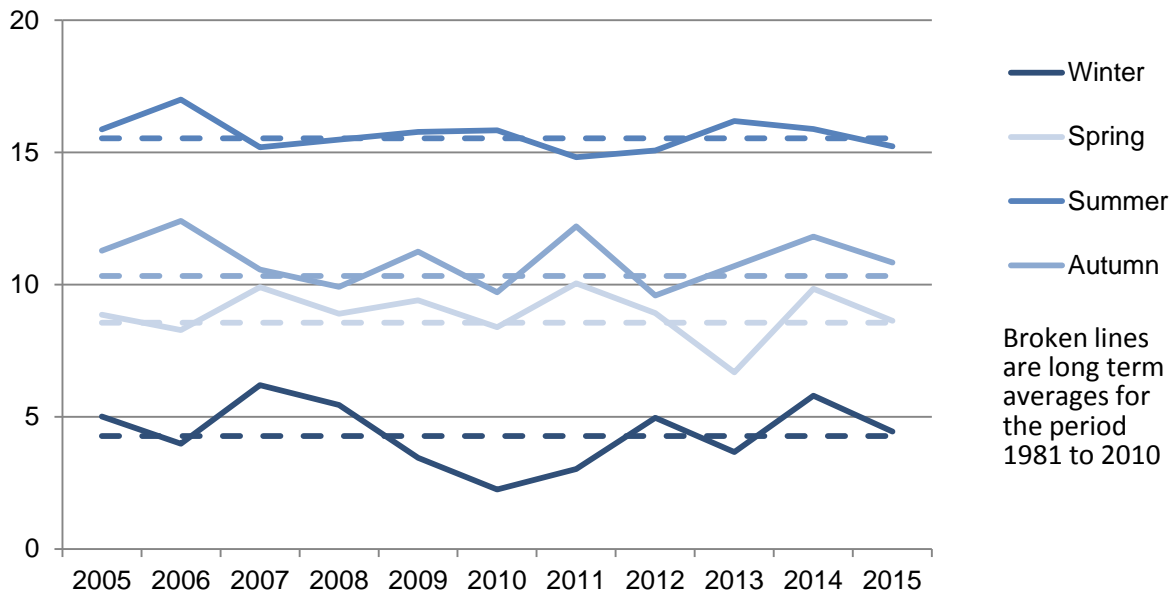
Spring 2015 saw average temperatures throughout March, but April was dryer and warmer than average. Sunshine amounts were above average in March (120%), well above average in April (144%) and slightly below average in May (94%). April 2015 was the sunniest recorded in the UK since 1929. May was wet and cool. The North West saw above average rainfall across all three months. The weather during spring calving was kind to suckler herds despite the cool May temperatures. Sheep farmers reported a good trouble-free lambing with high output.

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

Figure 3: Mean temperature (°C), England 2005 - 2015

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

England mean temperature (°c)

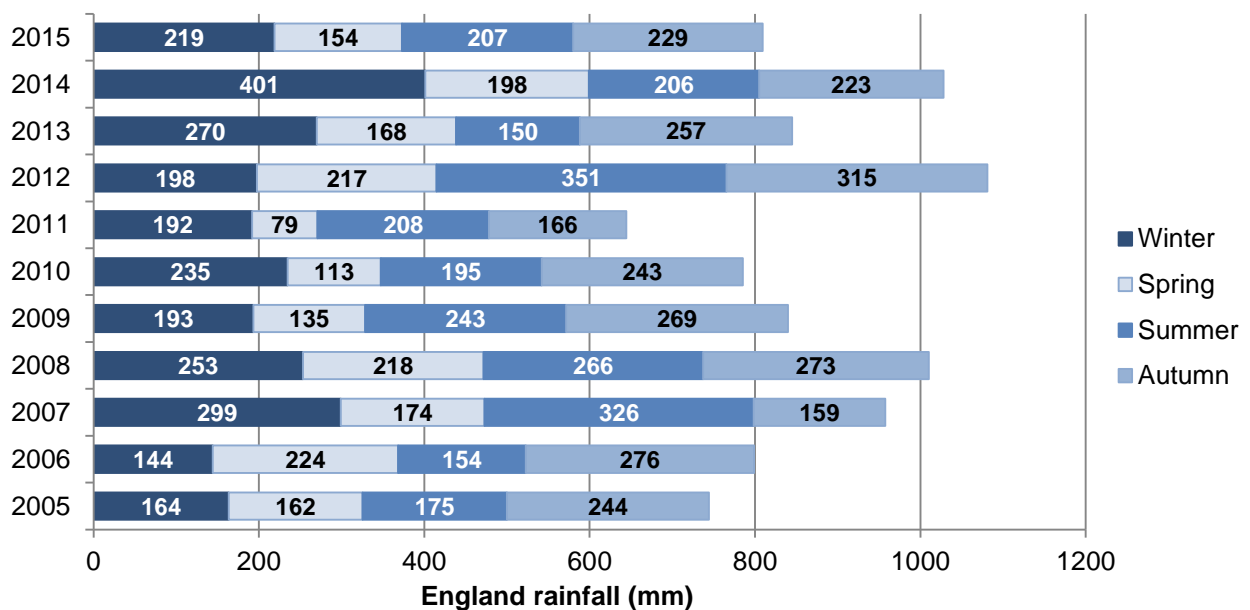


Source: Met Office

Temperatures in June, July and August 2015 were below average; the North West was cooler than eastern areas. June was drier than average, particularly in East Anglia and the London area. July and August were wetter than average, with parts of East Anglia and southern coastal counties receiving double the normal rainfall. Harvesting of cereals started earlier in some regions with little need for crop drying. However, the wet conditions in August impacted on the harvest in other areas with increased instances of downtime and crop drying. Overall, growing conditions were favourable with record yields reported for wheat and barley (Table B).

Figure 4: Rainfall in England (mm), 2005 – 2015

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



Source: Met Office

September 2015 saw below average temperatures, it was the coldest September since 1994. Temperatures in November were well above average, especially in southern England. Good progress was made on drilling crops for the 2016 harvest.

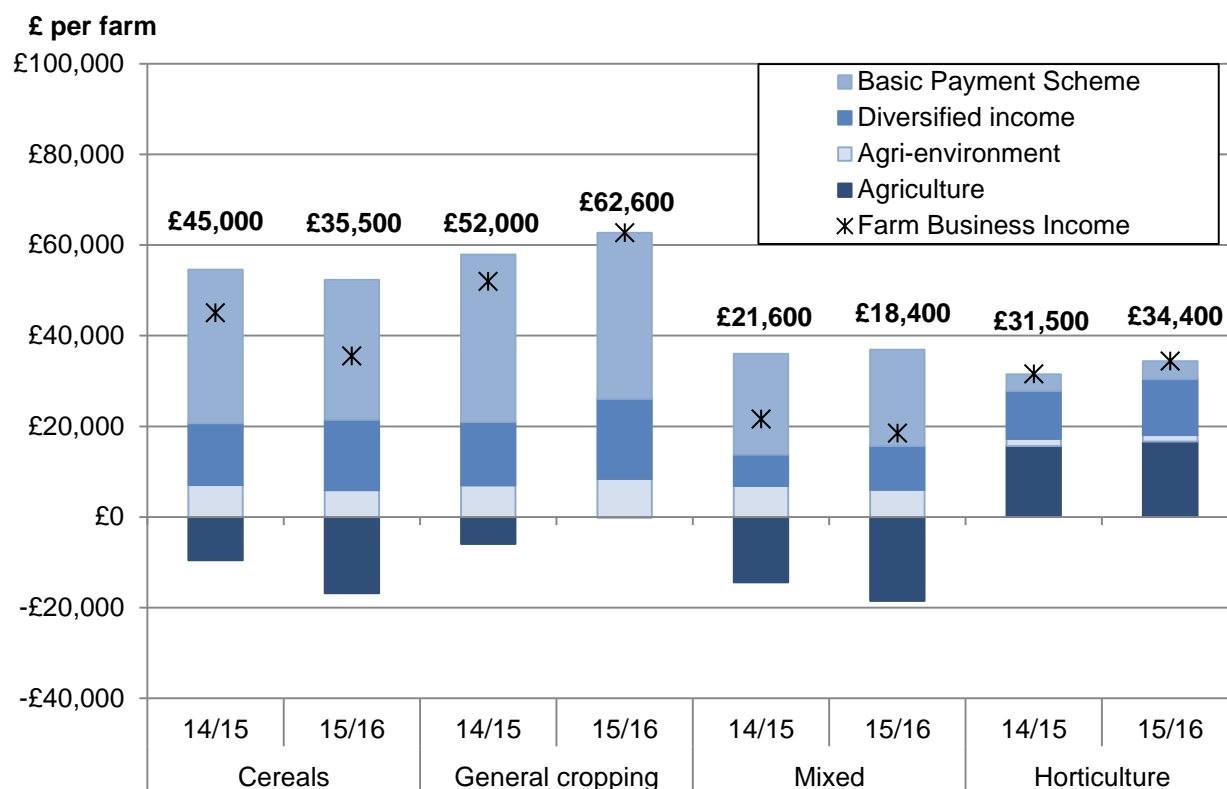
3 Results by Farm Type

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>

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.

Figure 5: Average Farm Business Income for cropping farms, broken down by cost centres 2014/15 and 2015/16



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.

3.1 Cereal farms

On cereal farms, average Farm Business Income fell by 21% in 2015/16 to £35,500 (Table 5.2). Despite higher yields for cereals, pulses and oilseed rape (Table B and Table 11), total crop output was around 6% lower (Table 5.2). This was driven by lower prices as a

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

result of plentiful global supplies, declining demand and a stronger pound. Crop variable costs were broadly unchanged with lower fertiliser costs being offset by small increases in seeds, crop protection and other crop costs. Agricultural fixed costs fell by around 3% [Table 5.2](#) largely due to lower fuel and machinery running costs. These were partially offset by higher bank charges and professional fees together with an increase in net interest payments.

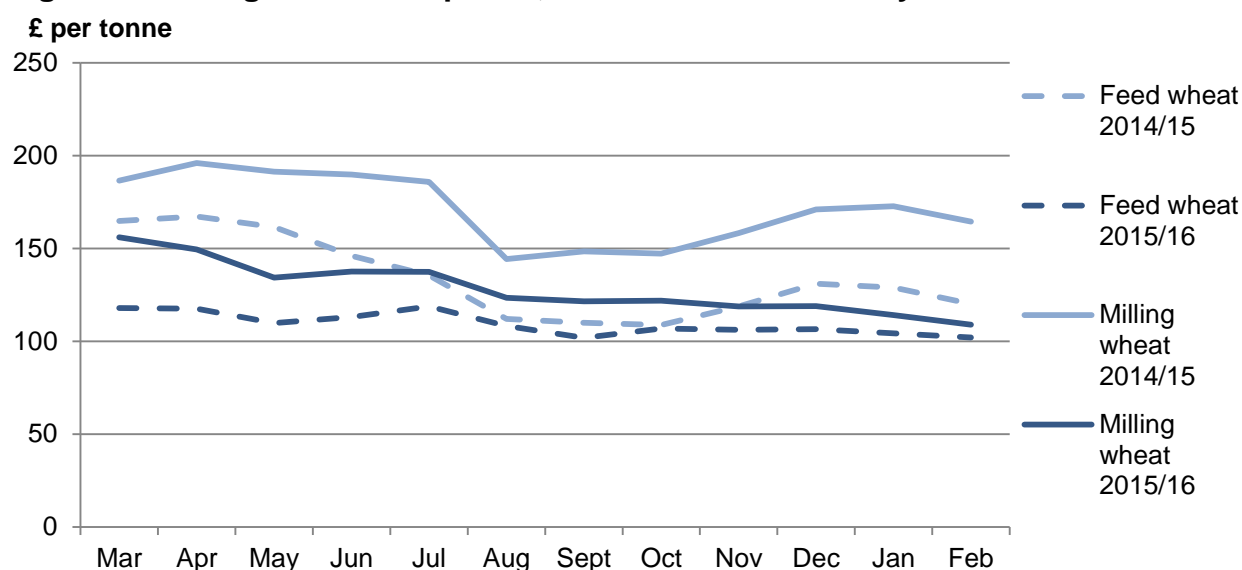
Within the performance groups, both low and medium performers on average failed to generate a positive income from farming⁴ activities in 2014/15 and 2015/16 ([Table 7.2](#)). Overall in 2015/16, 67% of cereal farms failed to generate a positive income from farming activities.

Table B: Average Crop yields, 2011-2015

Crop	Yield (tonnes per hectare)				
	2011	2012	2013	2014	2015
Wheat (England)	7.7	6.7	7.4	8.6	9.0
Winter Barley (England)	6.0	6.4	6.4	7.1	7.6
Spring Barley (England)	5.2	5.0	5.6	5.8	6.2
Winter Oilseed rape (England)	4.0	3.4	3.1	3.7	3.9
Potatoes (UK)	47.0	37.0	45.0	47.0	49.0
Sugar beet (UK)	75.0	61.0	72.0	80.0	68.8

Source: Defra

Figure 6: Average UK wheat prices, March 2014 to February 2016



Source: Defra, UK weekly commodity prices: cereals

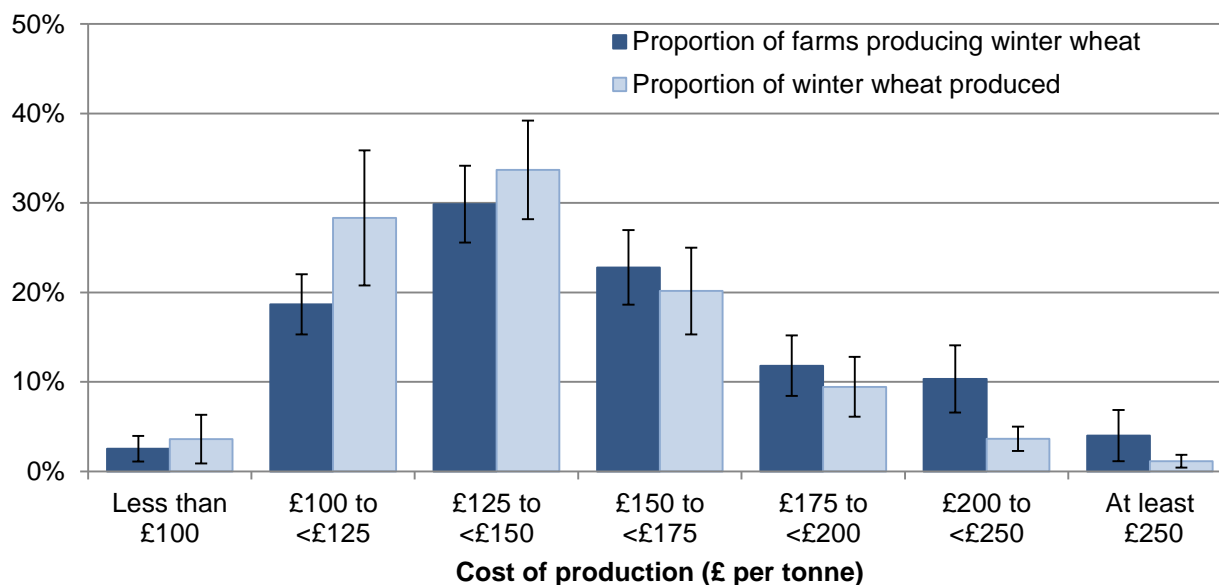
Figure 7 shows the proportion of winter wheat grown in England for the 2015 harvest within different bands of production costs⁵. The average production cost for winter wheat was approximately £143 per tonne whilst the average selling price was around £114 per tonne.

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.

Around 8% of growers either broke even or made a positive return from winter wheat in 2015/16. For the 2014 harvest the average cost of production was just under £157 per tonne whilst the average selling price was approximately £130 per tonne. In that year around 12% of growers covered their production costs.

Figure 7: Proportion of winter wheat produced by cost of production⁵, 2015 harvest



Source: Farm Business Survey, England

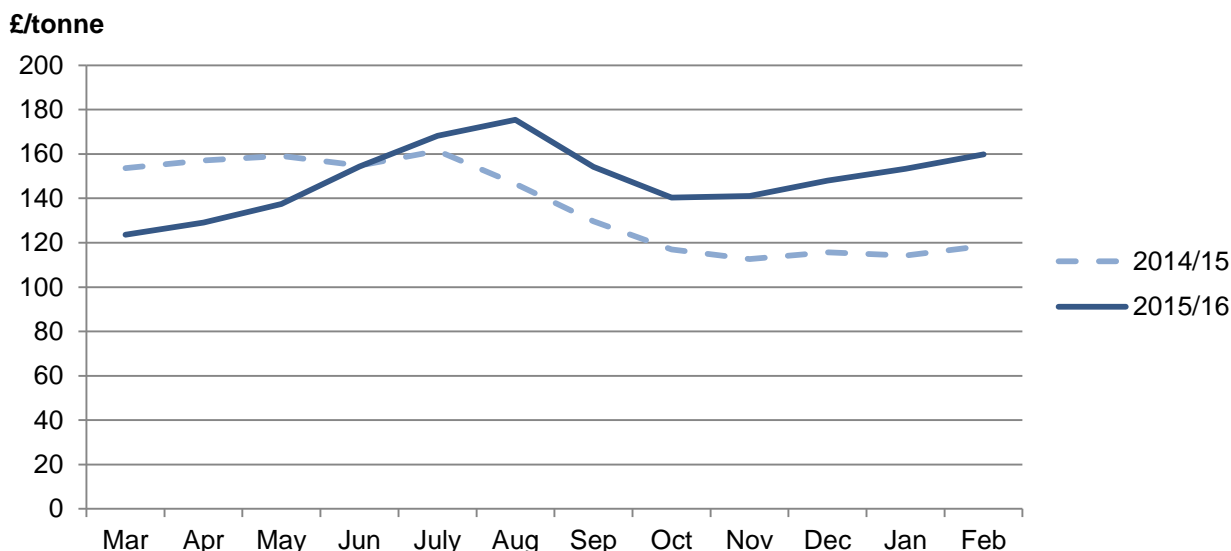
Note: This analysis covers only winter wheat and excludes organic and in-conversion wheat.

3.2 General cropping farms

Average incomes on general cropping farms were 21% higher in 2015/16 at £62,600 ([Table 5.3](#)). This increase was partially driven by an 8% increase in farmed area for this farm type ([Table 6.3](#)). Agricultural output per farm fell slightly but the associated agricultural costs were considerably lower meaning that for the agriculture cost centre these farms, on average, broke even. Lower output for wheat, oilseed rape and sugar beet was partially offset by increases from barley, pulses and potatoes; the latter increasing by 28% ([Table 5.4](#)). Variable costs were lower across all categories but particularly so for seed and fertiliser. Of the fixed costs, machinery (running costs and depreciation charges) saw the most significant falls, these being partially offset by higher interest charges, rent and depreciation of buildings ([Table 5.4](#)). The average Basic Payment was unchanged compared to the Single Payment of the previous year, reflecting the larger farm area; on a per hectare basis the Basic Payment was 7% lower than the Single Payment. There was an increase in the net contribution from agri-environment and diversified activities to Farm Business Income ([Table 5.3](#)).

When comparing farm performance groups (based on the ratio of outputs to inputs) average Farm Business Income for the lowest 25% of performers increased from -£22,700 in 2014/15 to -£10,700 in 2015/16 (see [Table 7.4](#)). For the highest 25% of performers the average income was 29% higher in 2015/16 (£185,500) than in 2014/15 (£143,400).

Figure 8: Average potato maincrop prices, UK - March 2013 to February 2015



Source: Agriculture and Horticulture Development Board

3.3 Mixed farms

Average incomes on mixed farms fell by 15% between 2014/15 and 2015/16 to £18,400 ([Table 5.15](#)). Total farm business output was unchanged as a lower agricultural output was offset by an increase from diversified activities, particularly rental income ([Table 5.16](#)). A fall in variable costs, driven by lower feed and fertiliser costs was more than cancelled out by higher fixed costs (labour, general farming and land and property costs) causing average incomes to fall. The average Basic Payment was around 4% less than the Single Payment in 2014/15 ([Table 5.15](#)). On average, mixed farms failed to generate a positive return from agriculture; by performance group the highest 25% of performers on average made a profit from the farming activities ([Table 7.16](#)), whilst on average the middle 50% and lowest 25% failed to generate a profit.

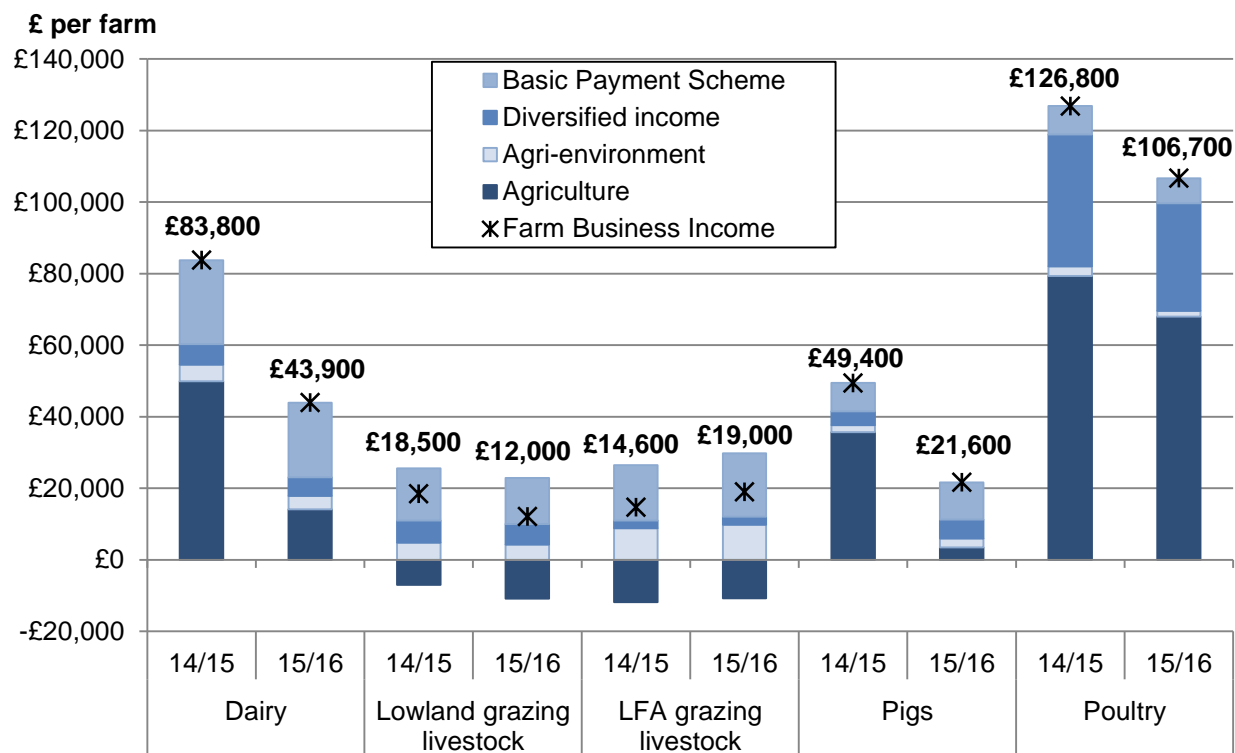
Some of the differences noted are likely to be due to slightly different farms in this type compared to last year. This is because relatively small changes to cropping and stocking on farms that don't have a strongly dominant enterprise (as these are) can result in individual farms switching designated 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 9% to £34,400 ([Table 5.17](#)). Although output from agriculture fell ([Table 5.18](#)), input costs, particularly fixed costs, were substantially lower. The most notable of these was a 23% decrease in regular labour costs; although there was a partial transfer of this cost to casual labour (15% increase). This meant that on average the agricultural share of Farm Business Income increased from £15,600 to £16,700. The net contribution of diversified activities to Farm Business Income increased to £12,400 ([Table 5.18](#)). This was driven by a reduction in associated costs which more than offset the lower output from this cost centre. 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 2014/15 and 2015/16



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 fell by around a half to £43,900 (Table 5.5). This was almost entirely due to a reduced milk output driven by an 18% fall in average price but partially offset by a higher volume. This is similar to the reduction seen across the UK for the same period based on national milk price statistics (Figure 10). The average yield per cow increased by 5% to 8,200 litres (Table 14.2) whilst average herd size was broadly unchanged compared to 2014/15 (Table C). Agricultural costs (both fixed and variable) were also lower, the most significant of these being a 11% reduction in purchased feed and fodder which generally account for more than half of variable costs on these farms (Table 5.6 and Figure 11). Of the fixed costs, lower machinery depreciation and running costs were the most significant. Average output from beef enterprises was also lower despite firmer prices for store and finished cattle for most of the year. This was due to a fall in the closing valuation which for some farms will have coincided with a dip in cattle prices. The average Basic Payment was 10% lower than the Single Payment of the previous year (Table 5.5).

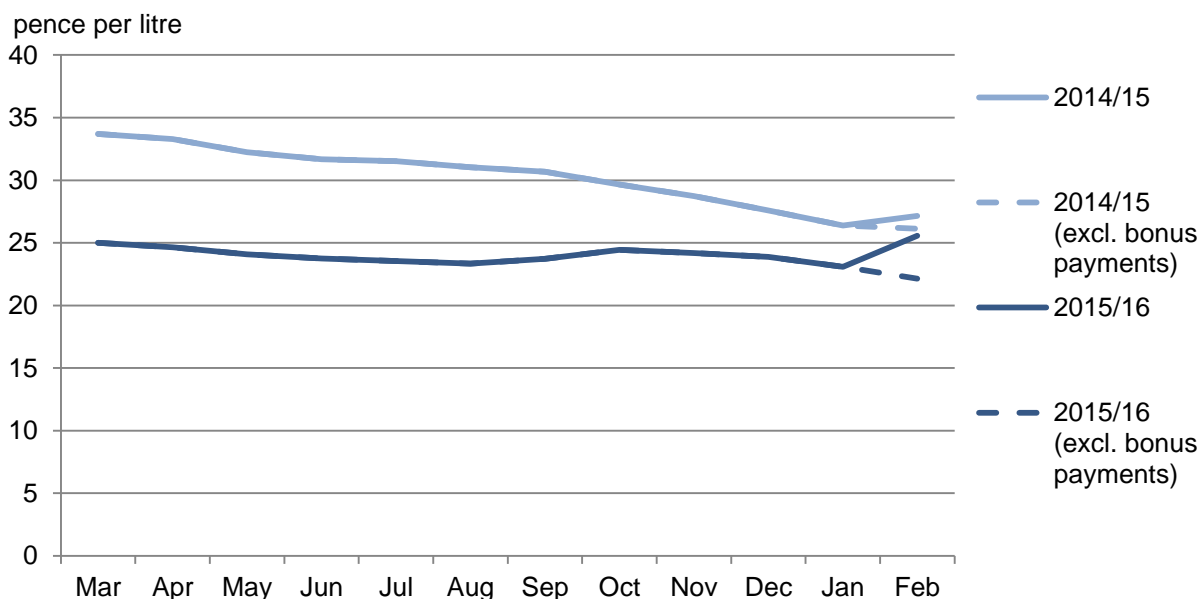
Table C: Average herd size for dairy cows^(a), England 2011-2015

	2011	2012	2013	2014	2015
Cattle Tracing scheme (all holdings)	79	82	84	89	89
Cattle Tracing Scheme (holdings with >= 10 dairy cows)	126	131	134	142	143
Farm Business Survey (specialist dairy farms)	148	156	165	172	172

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

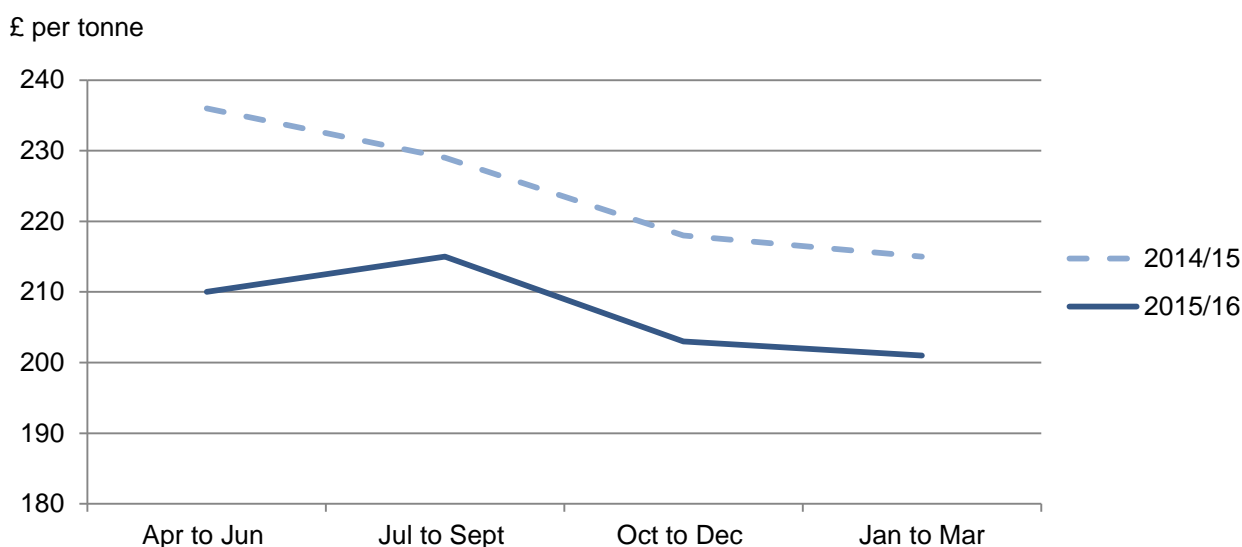
(a) Dairy cows are defined as female dairy cows over 2 years old with offspring from the CTS

Figure 10: Average farm gate milk prices (UK) - March 2014 to February 2016



Source: Milk prices surveys Defra, RERAD, DARD(NI)

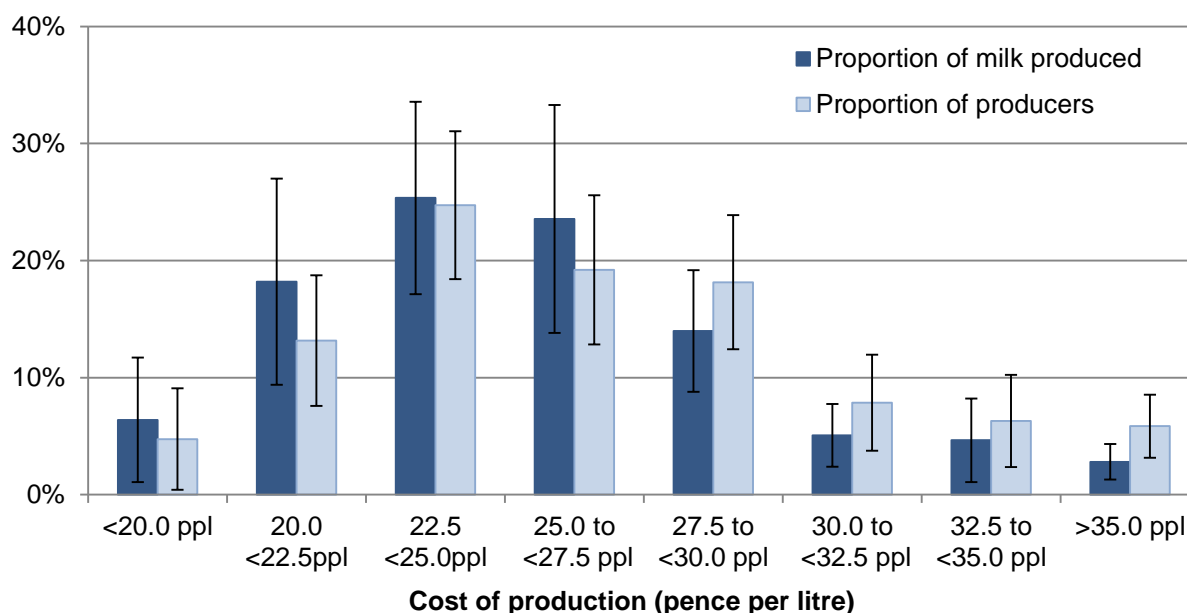
Figure 11: Average compound feed prices for Cattle and Calves: 201/415 to 2015/16



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 25.3 pence per litre in 2015/16 whilst the average cost of production was 25.5 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 80% of milk producers produced milk at a cost of less than 30 pence per litre, accounting for 87% of the milk produced in 2015/16.

Figure 12: Production costs ^(a) of milk, 2015/16



Source: Farm Business Survey, England

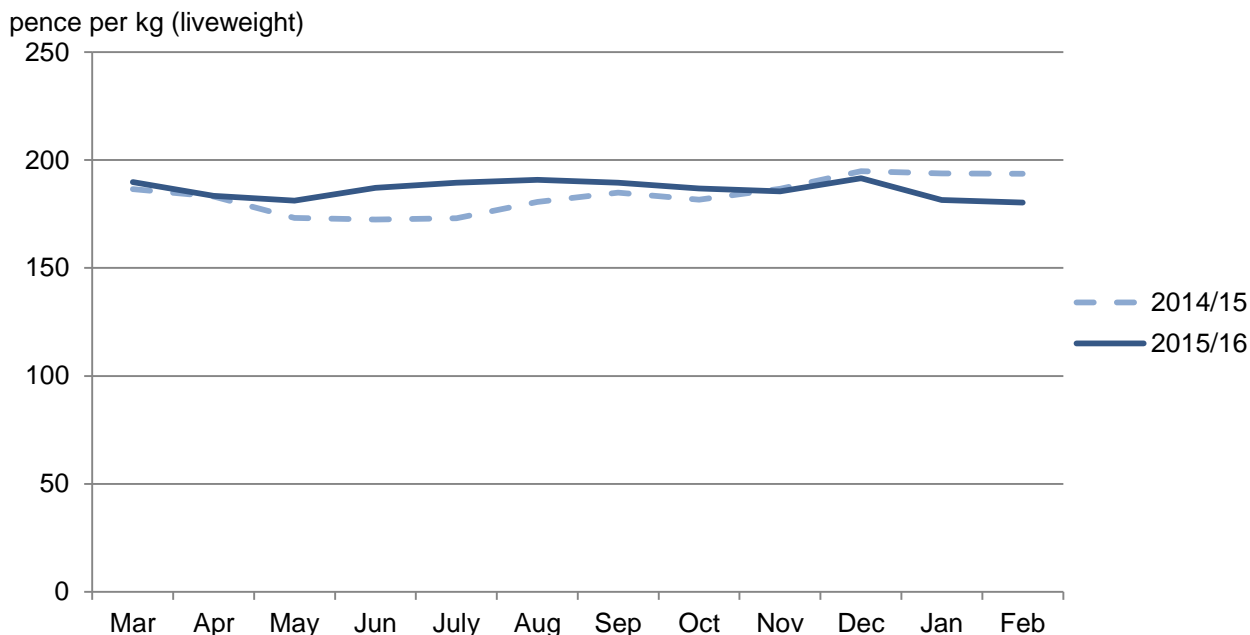
(a) Production costs shown here include all financial aspects of dairy enterprises such as any unpaid labour (including that of the farmer and spouse), herd depreciation and an estimated rental equivalent for land that is owned. An allowance is also made for non-milk revenue, most of which is from the 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 fell by 35% on lowland grazing livestock farms to £12,000 ([Table 5.7](#)). This is the lowest average income for this farm type since 2006/07. A fall in the closing valuation for cattle almost entirely accounted for a reduced output for beef enterprises. Output from sheep enterprises also fell as average prices for fat and store lambs as well as cull ewes, were lower than the previous year (Figure 14). These lower prices were due to plentiful domestic supplies of sheep meat whilst demand remained relatively stable. Crop output was also lower driven primarily by a fall in closing value for forage stocks and cultivations. A reduction in both fixed and variable agricultural costs ([Table 5.8](#)) was insufficient to offset the fall in output meaning that the net contribution of agricultural activities to farm business income fell to minus £10,800 ([Table 5.7](#)). The contribution from each of the other cost centres (agri-environment activities, diversification and the Basic Payment) was also lower, driving average incomes down further.

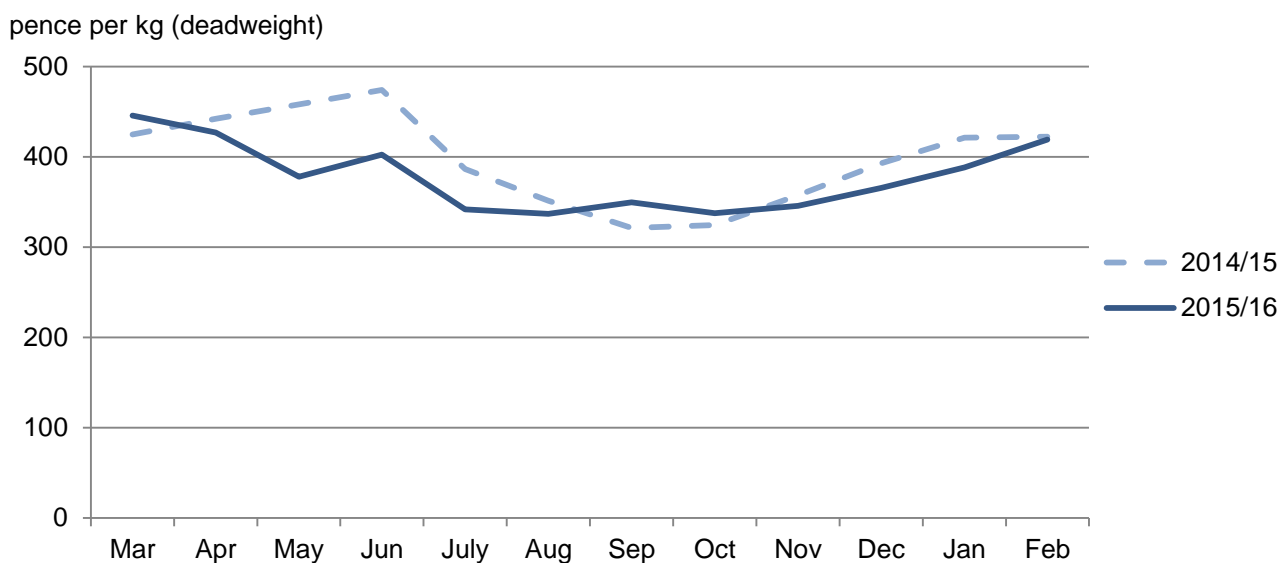
On average both low and medium performers failed to make a positive return from agriculture ([Table 7.8](#)) in both 2014/15 and 2015/16, with the low performers also failing to generate a positive return for the business as a whole in both years. The top 25 percent of performers made an average of £1,500 on their agricultural activities and an overall income of £42,000.

Figure 13: GB Average price for clean cattle (liveweight) – March 2014 to February 2016



Source: Agriculture and Horticulture Development Board (Meat Services)

Figure 14: UK Deadweight Standard Quality Quotation (SQQ)^(a) price – March 2014 to February 2016



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 slightly higher due to a moderate increase in output from both agricultural and agri-environment activities together with a 14% increase in the average Basic Payment, the latter being driven by the higher payment rate for land in the SDA ([Table 5.9](#)). Higher output from the beef enterprise was only partially offset by lower output from the sheep flock ([Table 5.10](#)). These increases combined with very slightly lower costs led to a 30% increase in average farm incomes to £19,000. On average, each of the performance

groups failed to make a positive return from agriculture ([Table 7.10](#)) in 2015/16, whilst average Farm Business Income for the lowest 25% of performers was again below zero at -£4,300.

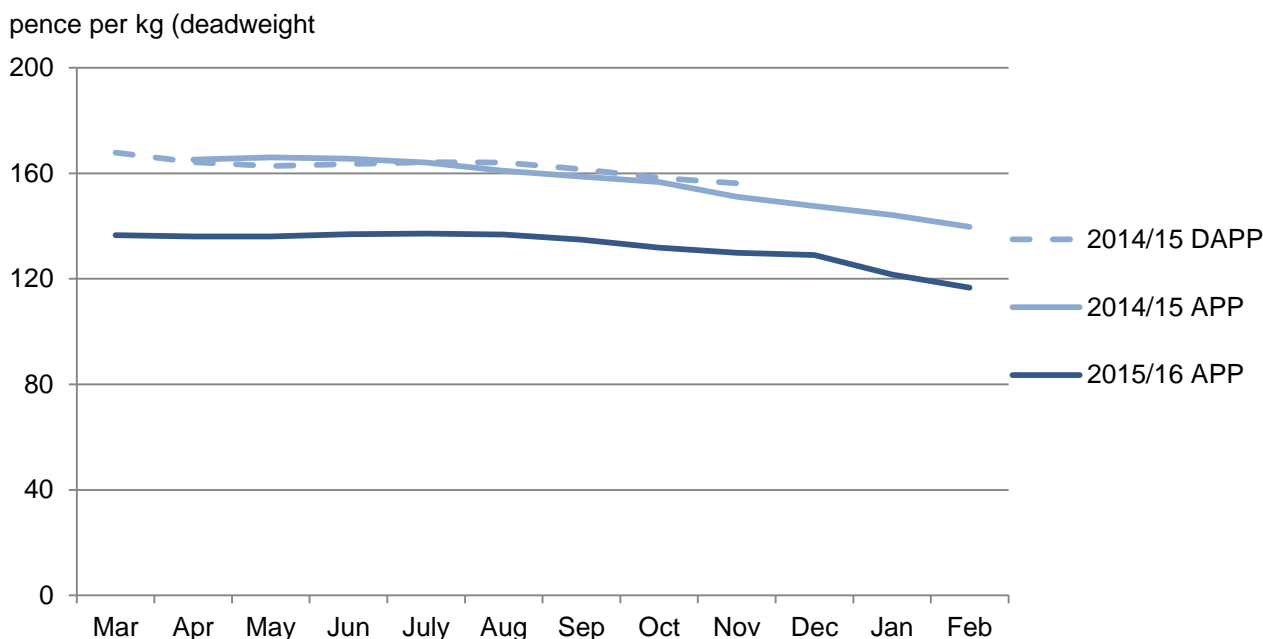
In 2014/15, closing valuations for the sheep flock were higher than opening valuations, thus increasing the enterprise output. This was reversed in 2015/16 as fat lamb, store and ewe prices were lower than the year before, thus reducing the valuation across the year and decreasing enterprise output.

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 fell by 56% in 2015/16 to £21,600 per farm ([Table 5.11](#)). Total farm business output was higher driven by an increase from the cropping enterprises and the Basic Payment as a result of a larger farm area ([Table 6.11](#)). Pig enterprise output was similar to the previous year as higher throughput offset lower prices for store and finished pigs (Figure 15). These changes to output resulted in considerably higher variable and fixed costs ([Table 5.12](#)), particularly purchased feed (Figure 16), contract charges, labour, machinery depreciation and general farming costs. There are two particularly influential farms in the sample driving the wider confidence intervals. However, removing these farms from the results has little overall impact on Farm Business Income.

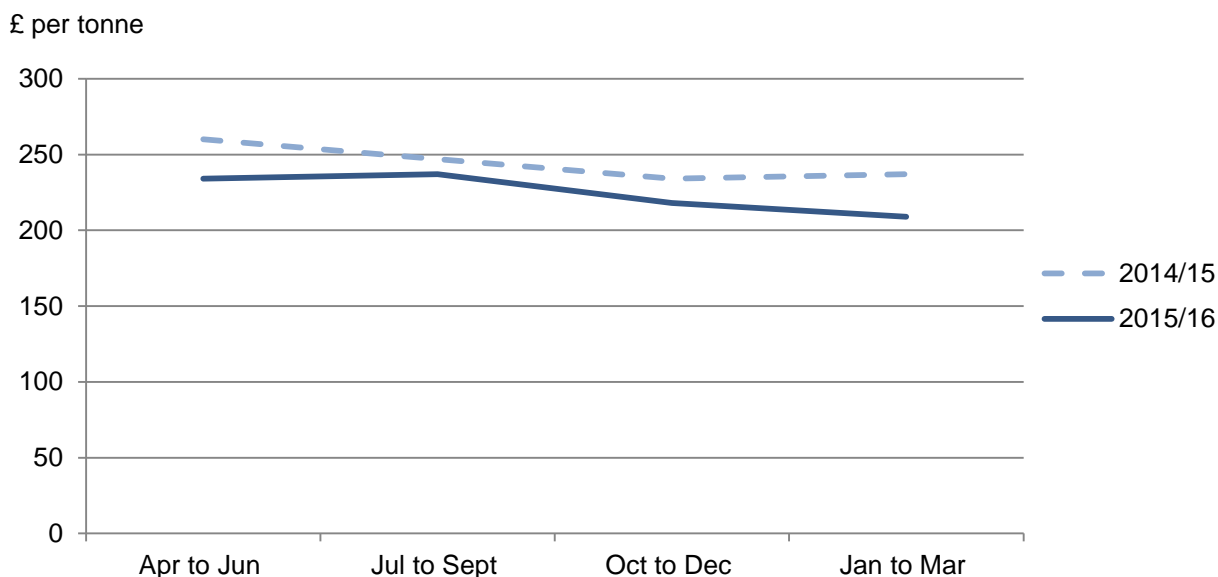
Figure 15: GB Deadweight Average Pig Price (DAPP and APP) – March 2013 to February 2015



Source: Agriculture and Horticulture Development Board (Meat Services)

The All Pig Price (APP) series was introduced in April 2014. For more information on these measures see http://pork.ahdb.org.uk/media/73607/pigpricereporting_14-1-15.pdf

Figure 16: Average compound feed prices for pigs: 2014/15 to 2015/16



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

3.9 Specialist Poultry

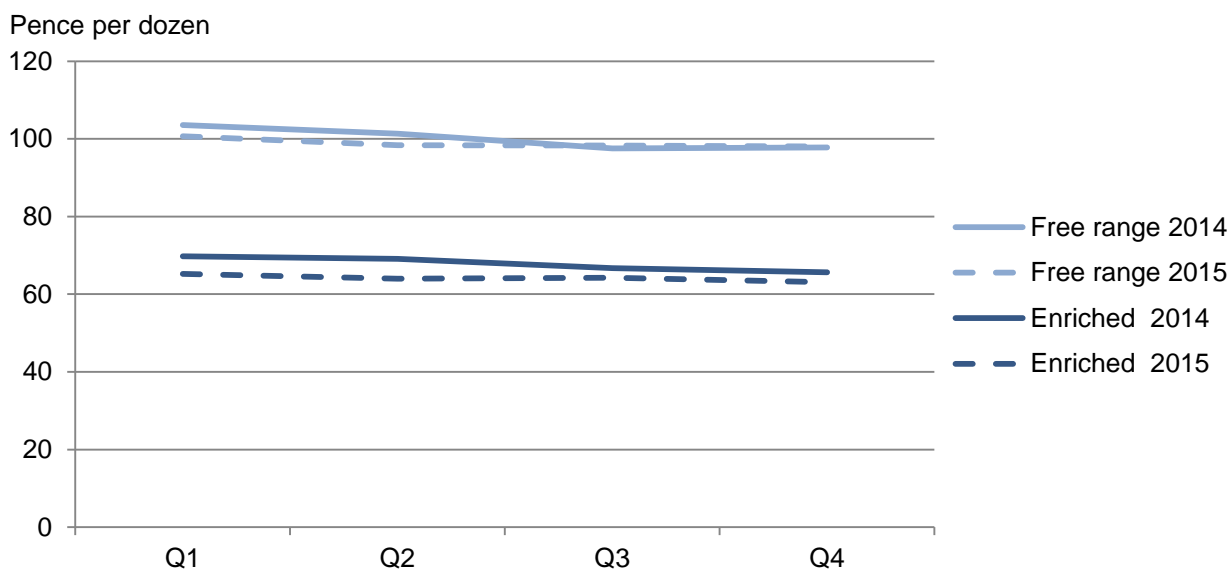
The relatively small size of the sector and of the sample in the survey means that our estimates for this farm type are subject to greater levels of uncertainty than in other sectors.

For specialist poultry farms, average incomes fell by 16% compared to 2014/15 as output from both the egg and broiler enterprises fell ([Table 5.14](#)). The average price for eggs increased by 5% on these farms but throughput was lower⁶. This is in contrast to the trends seen in UK statistics that show a fall in egg prices (Figure 17) but an increase in production over the same period. Output from poultry meat also fell as lower prices were partially offset by an increased throughput. Input costs were lower, particularly feed and other livestock costs. Note that these changes should be treated with caution because of the small sample. Removing a particularly influential farm from the results suggests that the average income for specialist poultry farms would have fallen by 33% between 2014/15 and 2015/16 from £83,600 to £56,100.

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. The 95% confidence intervals for the average Farm Business Income for poultry in 2015/16 are £8,700 - £204,600; we are 95% confident that this range contains the true average for poultry.

⁶ Some of the changes noted are due to changes in the composition of the sample. When considering just those farms that were in the sample in both years egg throughput increased by 6% whilst the average price was 1% lower in 2015/16.

Figure 17: UK Quarterly Egg Packing Station prices- 2014 and 2015



Source: Quarterly UK Egg Packing Station Survey

4 Diversification

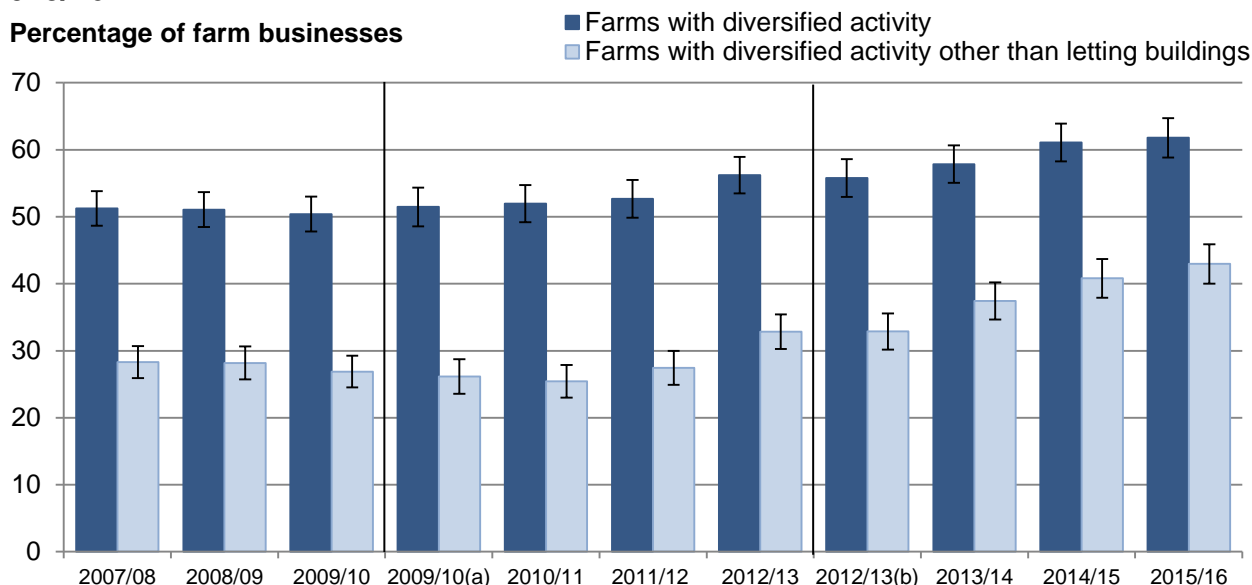
A possible and rational response to the changing position of agriculture in the UK economy is for farmers to seek to enhance their income from sources other than conventional farming production through diversifying their business activities. Diversification is widely thought to offer considerable scope 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, 62% of farm businesses in England had some diversified activity in 2015/16, very similar to 2014/15. 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 43% for 2015/16 (Figure 18). The proportion of farms generating renewable energy⁷ in 2015/16 was 23%, an increase of 5% from 2014/15 (Table D).

⁷ Renewable energy includes power generating, wind turbines, solar power, anaerobic digestion and renewable heat initiatives

Figure 18: Percentage of farms with diversified activities – England 2007/08 to 2015/16



Source: Farm Business Survey, England.

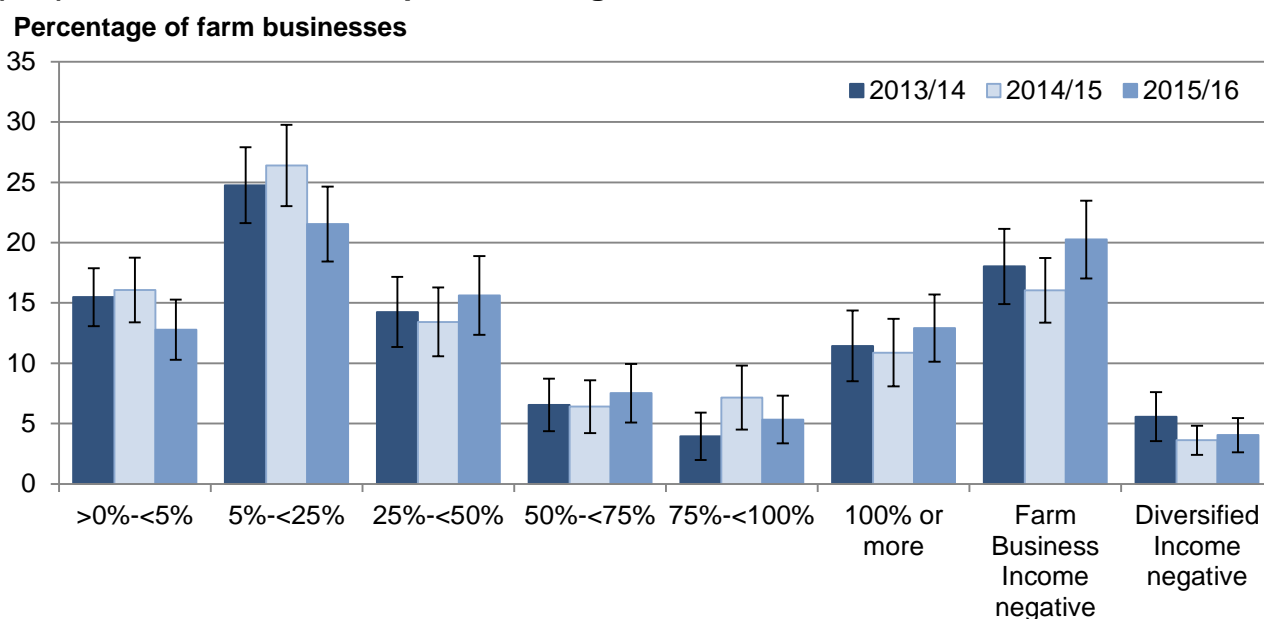
(a) In 2010/11 changes were made to the minimum size threshold ($\geq 25,000\text{€}$) and also to the classification of farms. These changes were backdated to 2009/10. Previous years are not directly comparable. Prior to the 2010/11 campaign, the coverage of the FBS was restricted to those farms of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

Total income from diversified activities in 2015/16 was £580 million, a 9% increase from 2014/15 (£530m in 2014/15). Diversified enterprises accounted for 32% of total Farm Business Income in 2015/16 (£1,780 million) although there were wide variations between farms (Figure 19).

Figure 19: Distribution of farms according to proportion of Farm Business Income (FBI) from diversified enterprises — England 2013/14-2015/16



Excludes farms with no diversified activities

Source: Farm Business Survey, England.

For 41% of businesses with diversified activities, income from these activities accounted for at least a quarter of the total Farm Business Income (compared to 38% in 2014/15); for 26% of businesses, the income from diversification exceeded the income from the rest of the farm business (compared to 24% in 2014/15). For nearly a quarter 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 £580m was generated from diversified activities by 34,900 farms. These farms had an average diversified enterprise income of £16,600 (Table D). Those letting out buildings generated 41% (£410m) of their total farm income (£1,000m) from this activity whilst those farms with food processing and retailing enterprises generated 42% of their total farm income (£50m of £120m) from this activity. Those farms generating renewable energy generated 9% of their total income (£60m of £650m) from these activities compared to 6% in the previous year.

Table D: Income from diversified enterprises — England 2015/16

	No. of farms	% of farms	Total farm income for these farms (£m)	Income of diversified enterprise (£m)	Average enterprise income (£/farm)
Farm Business income (incl. diversification)	56,500		1,780		
Farms which engage in:					
Diversified enterprises (all kinds)	34,900	62%	1,370	580	16,600
letting buildings for non-farming use	23,400	41%	1,000	410	17,400
processing/retailing of farm produce	5,200	9%	120	50	9,700
sport and recreation	7,300	13%	320	20	3,000
tourist accommodation and catering	3,300	6%	130	20	6,900
renewable energy	12,800	23%	650	60	4,400
other diversified activities	5,000	9%	210	20	4,200

Source: Farm Business Survey, England.

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

(b) Renewable energy includes power generating, wind turbines, solar power, anaerobic digestion and renewable heat initiatives.

Although more than half (62%) of all farms had diversified activity, the total value of diversified enterprise output (£1,110m) was only 7% of total farm business output (£15,440 million). For farms that engaged in any diversified enterprise, average enterprise output from diversification was £32,000 (Table E). For those farms with diversified enterprises, the output for these enterprises (£1,110m) equated to 10% of their total farm output (£11,410m). Letting buildings for non-farming use accounted for 52% of diversified output, renewable energy accounted for 16% (14% in 2014/15), while the contribution from tourism, sport and recreation and other diversified activities were relatively minor. On average, letting buildings for non-farming use generated the greatest output per farm (£24,700), whilst renewable energy generated £13,700 per farm.

Table E: Value of output from diversified enterprises - England 2015/16

	No. of farms	% of farms	Total farm output for these farms (£m)	Output of diversified enterprise (£m)	Average diversified enterprise output ^(a) (£/farm)
Farm Business Output (incl. diversification)	56,500	100%	15,440		
Farms which engage in:					
Diversified enterprises (all kinds)	34,900	62%	11,410	1110	32,000
letting buildings for non-farming use	23,400	41%	8,370	580	24,700
processing/retailing of farm produce	5,200	9%	1,260	120	23,400
sport and recreation	7,300	13%	2,620	100	14,100
tourist accommodation and catering	3,300	6%	1,080	70	20,200
renewable energy ^(b)	12,800	23%	5,470	170	13,700
other diversified activities	5,000	9%	1,760	70	14,500

Source: Farm Business Survey, England

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

(b) Renewable energy includes power generating, wind turbines, solar power, anaerobic digestion and renewable heat initiatives.

5 Farm succession

Succession arrangements determine the transfer of responsibility and/or business ownership to subsequent generations. The presence of a successor is a key factor in business continuity and can influence approaches to management decisions and investment.

Succession can be a sensitive area for discussion within a survey predominantly focussed on financial performance. The majority of FBS co-operators (85% of the sample in 2015/16) provided information on succession arrangements (Table F). This was the same as in previous years. For 10% of the sample, either the farmer preferred not to provide the information or the interviewer thought such a discussion inappropriate (e.g. due to prior knowledge of family circumstances). For a further 4% the decision maker was not available.

Table F: Percentage of farm businesses responding to farm succession questions, England 2013/14 to 2015/16

	Percentage of farm businesses (%)		
	2013/14	2014/15	2015/16
Willing to respond	85	85	85
Not willing/not appropriate	10	11	10
Decision maker not seen	5	5	4

Source: Farm Business Survey, England.

Based on unweighted responses from 1889 farm businesses in 2013/14, 1880 businesses in 2014/15 and 1805 businesses in 2015/16.

Farmers were asked if there was a successor nominated to succeed with the running of the business. Responses were restricted to the following options:

- a) Nominated successor from within the family⁸.
- b) The business will continue, but from outside the family⁹.
- c) No nominated successor.
- d) Unsure of the intention at that time.
- e) It was too early in the family circumstances or business situation for an answer to be given.
- f) Successor(s) had been nominated but were unable to take over due to tenancy or other restrictions/issues.

For those farm businesses that agreed to answer questions on succession, over a third (37% in 2015/16) had a nominated successor (Table G). This was very similar to figures in 2013/14 and 2014/15. The successor was largely from within the family (34% in 2015/16); with a further 1% stating that the business would continue outside of the family. The remaining 2% had a nominated successor who was unable to take over due to tenancy or other issues.

For over a quarter of farm businesses (26% in 2015/16) there was no nominated successor. However for 29% of businesses it was too early to provide an answer and a further 9% were unsure of the intention at the time of asking.

Table G: Farm business succession arrangements, England 2013/14 to 2015/16^(a)

	Percentage of farm businesses (%)			95% Confidence Interval (%)		
	2013/14	2014/15	2015/16	2013/14	2014/15	2015/16
Successor nominated within family	34	35	34	±3	±3	±3
Successor nominated but unable to take over due to tenancy or other issues	2	2	2	±1	±1	±1
Business will continue but outside family	1	1	1	±0	±0	±1
Too early in family/business circumstances to answer	29	28	29	±3	±3	±3
No nominated successor	27	27	26	±3	±3	±3
Respondent unsure of succession arrangements	8	7	9	±2	±2	±2

Source: Farm Business Survey, England.

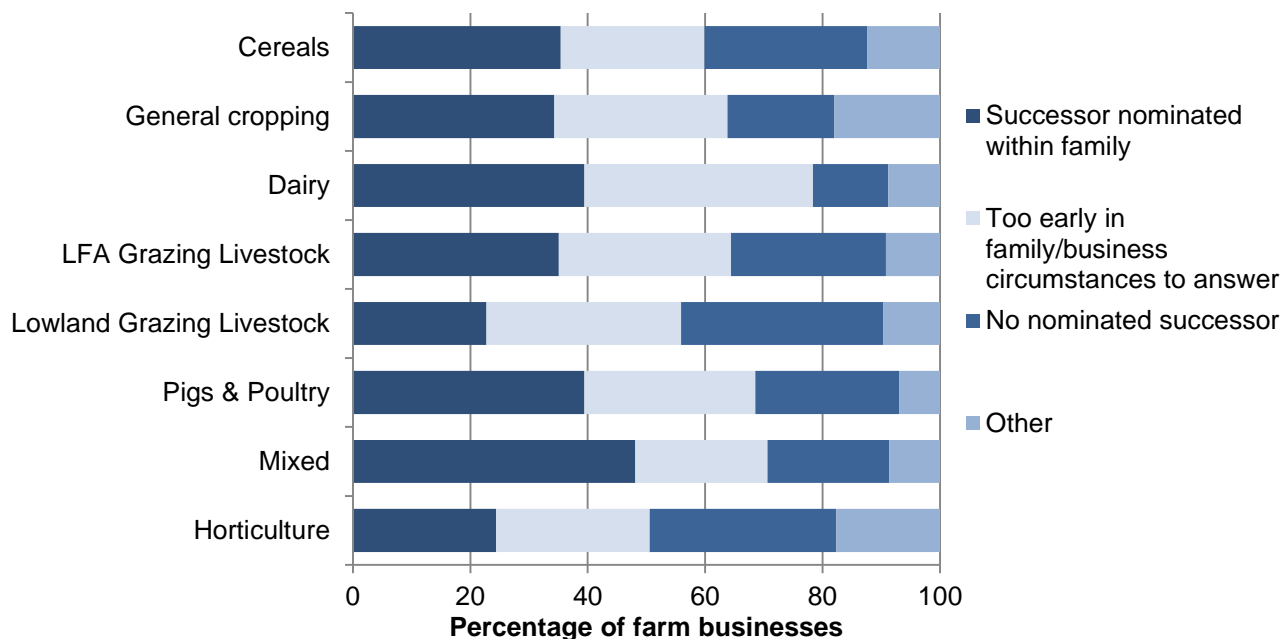
(a) Based on responses from 1603 farm businesses in 2013/14, 1595 businesses in 2014/15 and 1540 businesses in 2015/16 that were willing to respond to the question: "is there a successor(s) nominated to succeed with running of business"

Mixed farms (48%) were more likely than other farm types to have a nominated successor from within the family in 2015/16 (Figure 20). Horticulture (32%) and lowland grazing livestock (34%) were more likely to have no nominated successor than other farm types. Around a third (32%) of farmers aged 65 and over had no nominated successor (Figure 21).

⁸ Defined as direct family (e.g. husband, wife, son, daughter), family relative (e.g. brother, nephew, niece) or family "in-law" either via marriage or long term partnership (e.g. son/daughter-in law, if the daughter/son was not actively taking on the management of the business).

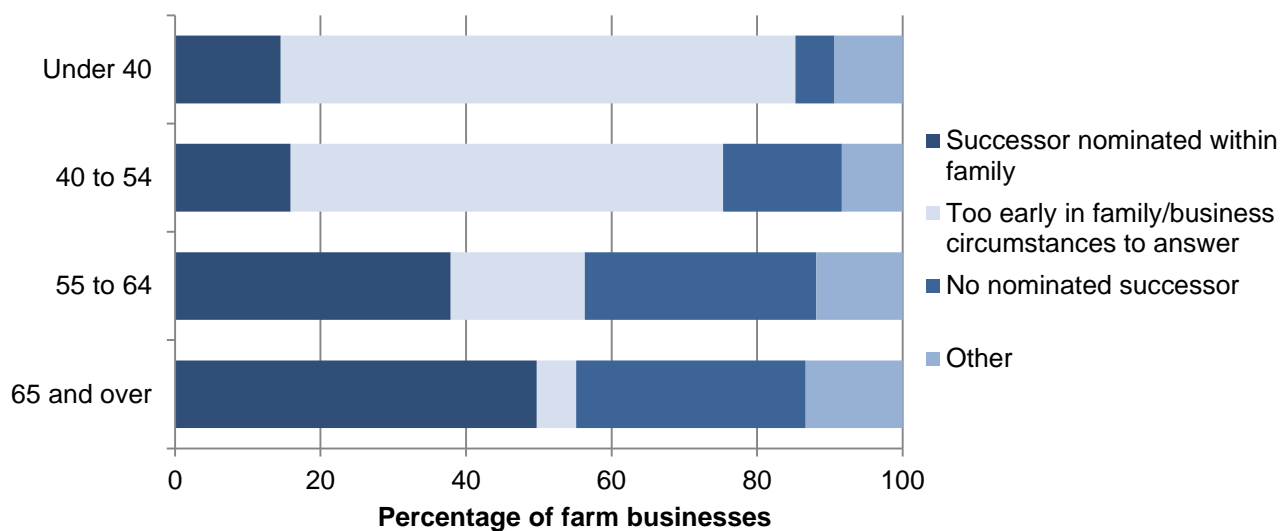
⁹ For example by third party sale, lease or contract farming arrangement of the whole farm business.

Figure 20: Succession arrangements by farm type, England 2015/16^(a)



Source: Farm Business Survey, England
 (a) Based on responses from 1540 farm businesses in 2015/16

Figure 21: Succession arrangements by age of farmer, England 2015/16^(a)



Source: Farm Business Survey, England.
 (a) Based on responses from 1540 farm businesses in 2015/16

For those farmers that confirmed that the business would be continuing either from within or outside the family, the third question addressed the farming background of the successor. For the majority (93% in 2015/16) the successor already had a farming background (Table H), largely unchanged from previous years. This was defined as having substantial prior experience¹⁰. For the remainder (7% in 2015/16) the successor was new to farming. This included first generation farmers and those with a limited farming background.

¹⁰ e.g. three years, which might include a period of higher education study, or a second generation farmer.

Table H: Background of nominated successor, England 2013/14 to 2015/16^(a)

	Percentage of farm businesses (%)			95% Confidence Interval (%)		
	2013/14	2014/15	2015/16	2013/14	2014/15	2015/16
Has a farming background	94	95	93	±3	±2	±3
New to farming	6	5	7	±3	±2	±3

Source: Farm Business Survey, England.

(a) Based on responses from the 634 farm businesses in 2013/14, 635 businesses in 2014/15 and 602 businesses in 2015/16 that reported that the business would continue from within or outside the family.

Survey details

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 output¹¹ as recorded in the annual June Survey of Agriculture and Horticulture. In 2015, this accounted for approximately 56,500 farm businesses. In 2015 the sample was reduced from 1900 to 1800 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 J](#) shows the distribution of the sample compared with the distribution of businesses from the 2015 June Survey of Agriculture and Horticulture. These initial weights are then adjusted (calibration weighting¹²) 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.

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 22 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.

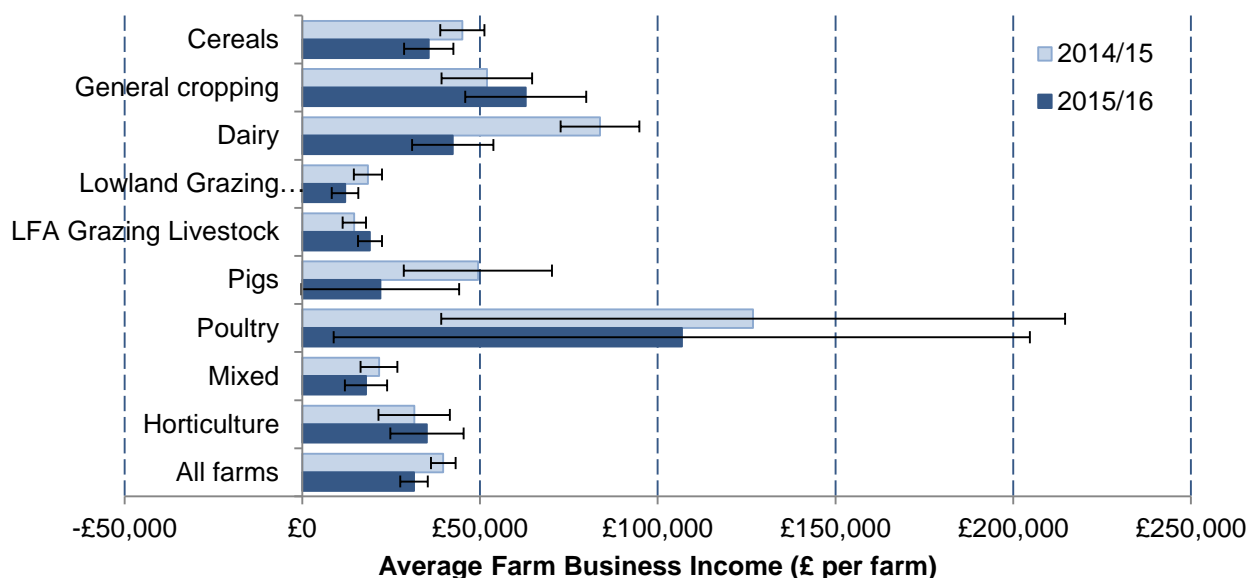
¹¹ For a definition of standard output please see the UK classification document here

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

¹² Further information on calibration weighting can be found here:

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

Figure 22: Average Farm Business Income by farm type, with 95% confidence limits, England 2014/15 and 2015/16



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. Figure 22 shows the presence of farms at opposite ends of the income scale. There is one very influential poultry farm in both 2014/15 and 2015/16. If this farm is excluded from the results, average Farm Business Income for poultry farms decreases by 33% between 2014/15 and 2015/16 from £83,600 to £56,300.

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 1](#) 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% 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% 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 established¹³ 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 21](#) at the end of this appendix. Further information about LFA classification can be found at <http://archive.defra.gov.uk/rural/countryside/uplands/land-classification.htm>

¹³ 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 J](#) 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% of economic performers
Medium performance band - middle 50% of performers
High performance band - top 25% of performers.

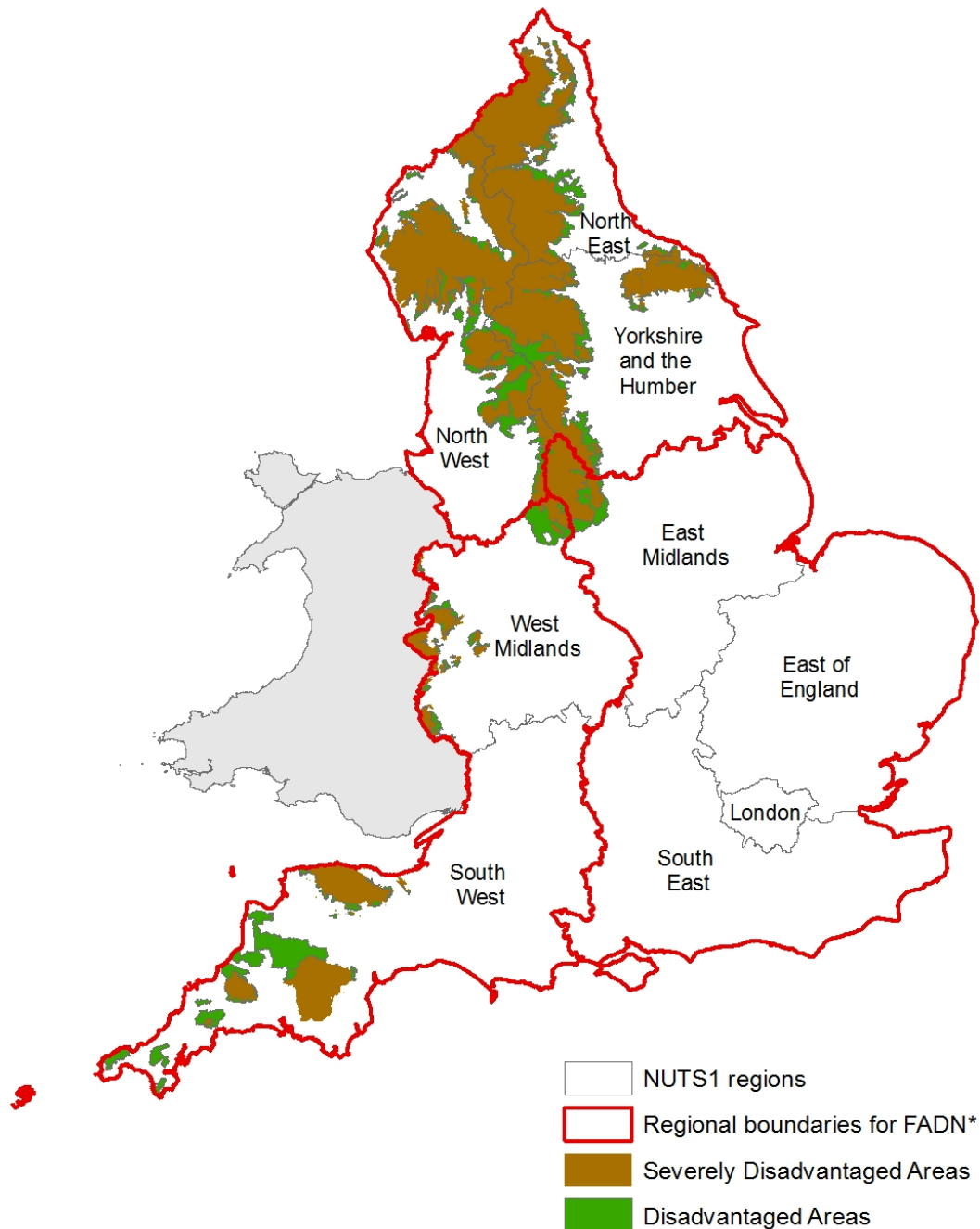
Table I: UK Farm Classification**UK FARM CLASSIFICATION SYSTEM (REVISED 2010): COMPOSITION OF ROBUST, MAIN AND OTHER FARM TYPES BY CONSTITUENT EC TYPE**

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 23: 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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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 farming¹⁴ 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 capital¹⁵ 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

¹⁴ 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.

¹⁵ 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.
<i>Land and building inputs</i>	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.

Table J: Farm Business Survey 2015/16: Sample Characteristics – England by size groups^(a)

Type of Farming	Size	Number of Businesses in Sample	Number of Businesses at June Survey 2015	Average Size of Business by Standard Labour Requirement		Average Total Area (hectares)	
				Sample	June Survey 2015	Sample	June Survey 2015
Cereals	Part-Time	100	6,479	0.7	0.5	100	77
	Small	110	3,770	1.5	1.4	189	167
	Medium	70	1,766	2.4	2.4	265	270
	Large	80	2,136	5.2	5.4	527	566
	All Sizes	360	14,151	1.8	1.7	207	199
General Cropping	Part-Time	15	1,603	0.6	0.5	81	79
	Small	34	1,088	1.5	1.4	133	101
	Medium	19	819	2.4	2.5	203	128
	Large	75	1,577	10.4	10.6	641	417
	All Sizes	143	5,087	3.5	4.1	252	196
Dairy	Part-Time	3	200	0.8	0.7	35	39
	Small	21	750	1.7	1.6	60	55
	Medium	48	1,122	2.6	2.5	82	78
	Large	183	4,434	6.3	6.5	172	167
	All Sizes	255	6,506	5.4	5.1	148	135
Lowland Grazing Livestock ^(b)	Part-Time	42	5,103	0.8	0.7	63	51
	Small	84	3,986	1.4	1.4	90	79
	Medium	69	1,537	2.4	2.4	99	120
	Large	90	1,546	5.0	5.3	231	250
	All Sizes	285	12,172	1.8	1.7	99	94
LFA Grazing Livestock ^(b)	Part-Time	15	2,291	0.7	0.7	62	59
	Small	62	2,004	1.5	1.4	101	115
	Medium	56	1,027	2.4	2.4	166	202
	Large	92	1,114	5.3	5.0	291	443
	All Sizes	225	6,436	2.2	1.9	140	166
Specialist Pigs	Part-Time	4	237	0.8	0.7	43	15
	Small	7	248	1.6	1.5	20	20
	Medium	4	128	2.3	2.6	50	40
	Large	47	609	13.0	13.0	130	99
	All Sizes	62	1,222	6.1	7.2	75	60
Specialist Poultry	Part-Time	10	355	0.3	0.5	15	17
	Small	12	275	1.6	1.5	22	31
	Medium	17	170	2.4	2.5	25	45
	Large	48	602	13.7	14.8	100	96
	All Sizes	87	1,402	6.8	7.1	55	57
Mixed	Part-Time	17	1,833	0.7	0.6	61	56
	Small	52	1,545	1.5	1.5	111	99
	Medium	43	923	2.4	2.5	134	145
	Large	83	1,617	6.0	6.7	298	347
	All Sizes	195	5,918	2.6	2.8	149	161
Horticulture	Part-Time	20	575	0.7	0.7	13	15
	Small	26	783	1.4	1.5	22	14
	Medium	18	849	2.4	2.4	16	19
	Large	129	1,368	14.8	16.6	69	94
	All Sizes	193	3,575	5.4	7.4	33	46
All Types	Part-Time	226	18,676	0.7	0.6	74	62
	Small	408	14,449	1.5	1.4	113	104
	Medium	344	8,341	2.4	2.4	150	147
	Large	827	15,003	7.4	8.1	279	286
	All Sizes	1,805	56,469	2.9	3.1	150	145

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

(b) Lowland grazing livestock and LFA grazing livestock farm types exclude specialist horse enterprises.