Department for Environment Food & Rural Affairs

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Farm Business Income by type of farm in England, 2016/17

Data on farm business incomes are used to monitor and evaluate Government and EU policies and to inform wider research into the economic performance, productivity and competitiveness of the agricultural industry. The data are provided to the EU as part of the Farm Accountancy Data Network (FADN) and are widely used by the industry for benchmarking.

This release provides survey results of Farm Business Income for 2016/17 covering the **2016 harvest** and including the 2016 Basic Payment (which is included within total farm output and therefore contributes to Farm Business Income). These results replace the forecast estimates published on 28 February 2017. All figures are for March/February years. A time series showing this and other measures of income can be found here.

A more detailed analysis of the results will be published on 14 December 2017 in Farm Accounts in England see https://www.gov.uk/government/collections/farm-business-survey. Forecasts of income by farm type for the year ending February 2018 and covering the 2017 harvest will be published in February 2018.

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 as well as an increase in the value of the Basic Payment.
- Despite higher prices, crop output fell on cereal and general cropping farms due to lower yields. However 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.
- The average Basic Payment in 2016/17 was around £28,000, a 19 percent increase on the previous year due to the weaker pound at the end of September 2016. Estimates have been made for some farms where final payment details are not yet available.

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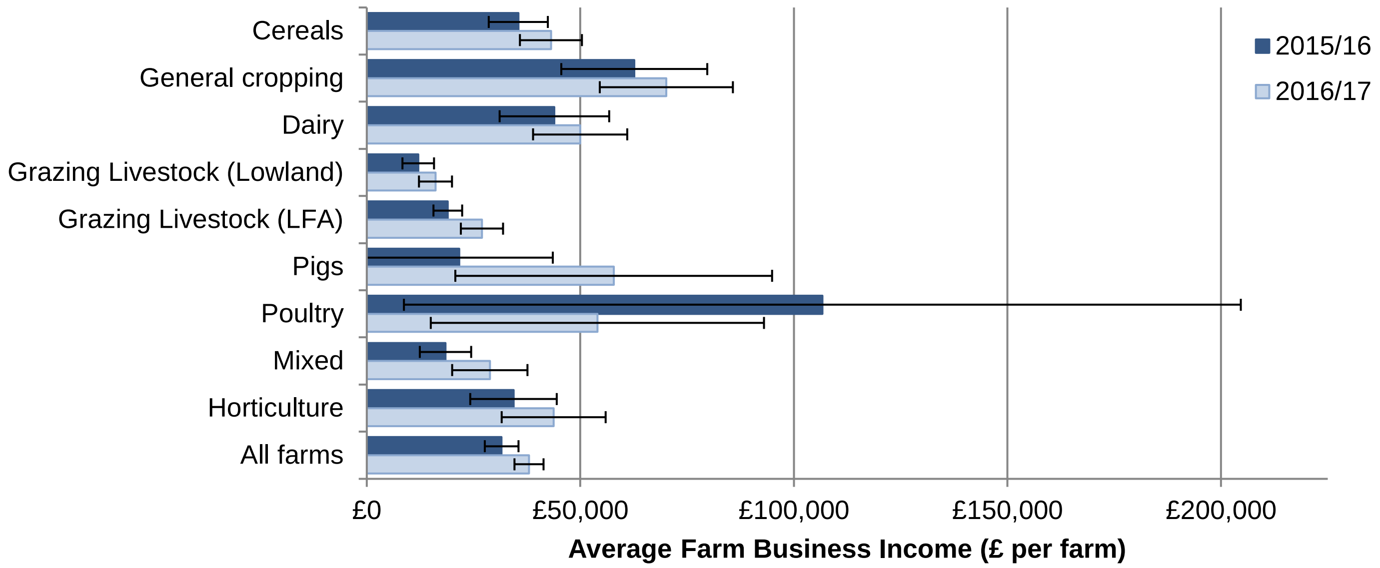
SUMMARY BY FARM TYPE

£43,100	↑ 22%	**Cereals** Despite firmer prices for cereals and oilseeds, crop output was around 7 percent lower, driven by lower yields and a shift to lower output crops. Variable costs were substantially lower with smaller falls in fixed costs.
£70,100	↑ 12%	**General cropping** A lower output for wheat, pulses and oilseed rape was largely offset by increases from potatoes and energy crops. Substantial reductions for fixed costs, notably labour and building depreciation.
£43,800	↑ 27%	**Horticulture** Output from agriculture increased due to a higher output for flowers, bulbs and nursery stock. Input costs also increased but to a lesser extent.
£57,800	↑ 167%	**Pigs** Despite firmer prices the output from pigs fell due to reduced throughput. Reduced costs, associated with this fall in production led to a net increase in average incomes. *Note that some of these changes are being driven by an increased proportion of contract rearing farms within the sample.*
£54,000	↓ 49%	**Poultry** A fall in output, driven by a lower throughput for poultrymeat was only partially offset by higher output from egg laying enterprises. *These changes should be treated with caution due to the small sample size.*
£50,000	↑ 14%	**Dairy** Reduced output from milk (driven by lower prices and volume of production) was offset by increased output from the beef enterprise. Both fixed and variable costs were lower.
£16,100	↑ 33%	**Grazing livestock (lowland)** An increased output from cattle, driven primarily by an increase in the valuation change, was only partially offset by higher input costs. Crop output was also higher.
£27,000	↑ 42%	**Grazing livestock (LFA)** An increased output from cattle and sheep combined with a higher agri-environment and Basic Payment drove incomes up on these farms.
£28,800	↑ 56%	**Mixed** Increased output from agriculture, diversification and the Basic Payment were only partially offset by higher costs.

Figure 1: Average farm business income (£'s) by farm type, with 95% confidence intervals, England 2015/16 and 2016/17



The 95% confidence limits are shown as ranges around the averages. For more guidance on how to interpret these results, please see *Accuracy and reliability of results* in the Technical Note at the end of this Notice.

Detailed results

On **cereal farms**, average Farm Business Income increased by 22 percent in 2016/17 to £43,100 (Table 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 which were partially offset by higher prices resulting from the weaker pound. 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. This may reflect the greening requirements of the Basic Payment Scheme and/or strategies to deal with blackgrass. Agricultural fixed costs fell by around 2 percent with the greatest savings seen for machinery depreciation and rent. On average these farms failed to make a positive return from the agriculture cost centre (Figure 3). 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.

Average incomes on **general cropping farms** were 12 percent higher in 2016/17 at £70,100 (Table 1). 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 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. On average these farms achieved a positive return of just under £6,000 from the agriculture cost centre whilst in 2015/16 they broke even.

On **dairy farms**, average Farm Business Income increased by 14 percent to £50,000 (Table 1). 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. 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. 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. Of the fixed costs, reductions were greatest for labour, machinery depreciation and rent. The average income from the agriculture cost centre was slightly higher than the previous year. Output from diversification also increased, largely driven by an increase in food processing and retailing whilst the average Basic Payment for dairy farms was 21 percent higher than the previous year.

Table 1: Average Farm Business Income per farm (£/farm)

Average farm business income per farm (£/farm)

Farm Type	2011/12[a]	2012/13	2012/13[b]	2013/14	2014/15	2015/16	2016/17	Annual % Change 2016/17 / 2015/16
At current prices								
Cereals	93,700	68,200	67,700	49,600	45,000	35,500	43,100	22%
General cropping	100,500	91,500	89,200	67,600	52,000	62,600	70,100	12%
Dairy	86,600	51,200	52,600	87,800	83,800	43,900	50,000	14%
Grazing livestock (Lowland)	32,000	16,300	16,100	15,100	18,500	12,000	16,100	33%
Grazing livestock (LFA)	29,200	19,700	18,700	14,500	14,600	19,000	27,000	42%
Specialist pigs	38,100	40,900	41,700	65,200	49,400	21,600	57,800 (d)	167%
Specialist poultry	46,400	94,200	90,200	157,200	126,800	106,700	54,000 (d)	-49%
Mixed	74,100	38,100	37,300	29,600	21,600	18,400	28,800	56%
Horticulture	52,800	30,100	25,800	33,900	31,500	34,400	43,800	27%
All types	**66,200**	**46,600**	**44,900**	**43,100**	**39,600**	**31,600**	**38,000**	**20%**
In real terms at 2016/17 prices[c]								
Cereals	101,000	72,500	72,000	51,600	46,200	36,200	43,100	19%
General cropping	108,300	97,300	94,700	70,500	53,300	63,900	70,100	10%
Dairy	93,300	54,400	55,800	91,500	85,900	44,800	50,000	11%
Grazing livestock (Lowland)	34,500	17,300	17,100	15,700	18,900	12,300	16,100	31%
Grazing livestock (LFA)	31,500	20,900	19,900	15,100	15,000	19,400	27,000	39%
Specialist pigs	41,100	43,400	44,300	67,900	50,700	22,100	57,800 (d)	162%
Specialist poultry	50,000	100,100	95,900	163,800	130,000	108,800	54,000 (d)	-50%
Mixed	79,900	40,500	39,600	30,900	22,100	18,800	28,800	53%
Horticulture	56,900	32,000	27,400	35,300	32,300	35,000	43,800	25%
All types	**71,400**	**49,600**	**47,700**	**44,900**	**40,600**	**32,200**	**38,000**	**18%**

(a) Farm typology based on 2007 standard output coefficients
(b) Farm typology based on 2010 standard output coefficients
(c) Uses GDP deflator
(d) The sample size for specialist pig and poultry farms are relatively small with average incomes subject to greater variation. There is one influential pig farm in the sample in 2016/17. If this is excluded from the results average FBI for specialist pig farms would have increased by 87% to £39,500. There also continues to be an influential poultry farm. Further details on the impact of this farm can be found on page 10.

On **lowland grazing livestock farms** average farm incomes increased by 33 percent albeit from a low base. 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. 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 to £16,100 (Table 1).

For **grazing livestock farms** in the **less favoured area** (LFA), farm business output was 16 percent higher due to an increased output from both agriculture and agri-environment activities together with a 29 percent increase in the average Basic Payment. Higher output from both the sheep and beef enterprises was driven primarily by the valuation change plus firmer prices for fat and store lambs as well as breeding sheep. These increases, which were only partially offset by higher costs, led to a 42 percent increase in average Farm Business Income to £27,000 (Table 1).

For both these 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.

Average incomes on **mixed farms** increased by 56 percent between 2015/16 and 2016/17 to £28,800 (Table 1). 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. 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 **horticulture farms,** average incomes increased by 29 percent to £44,300 (Table 1). Agriculture output increased, largely due to a higher output for flowers, bulbs and nursery stock and to a lesser extent for fruit. 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. The net income from this cost centre increased by 5 percent in 2016/17.

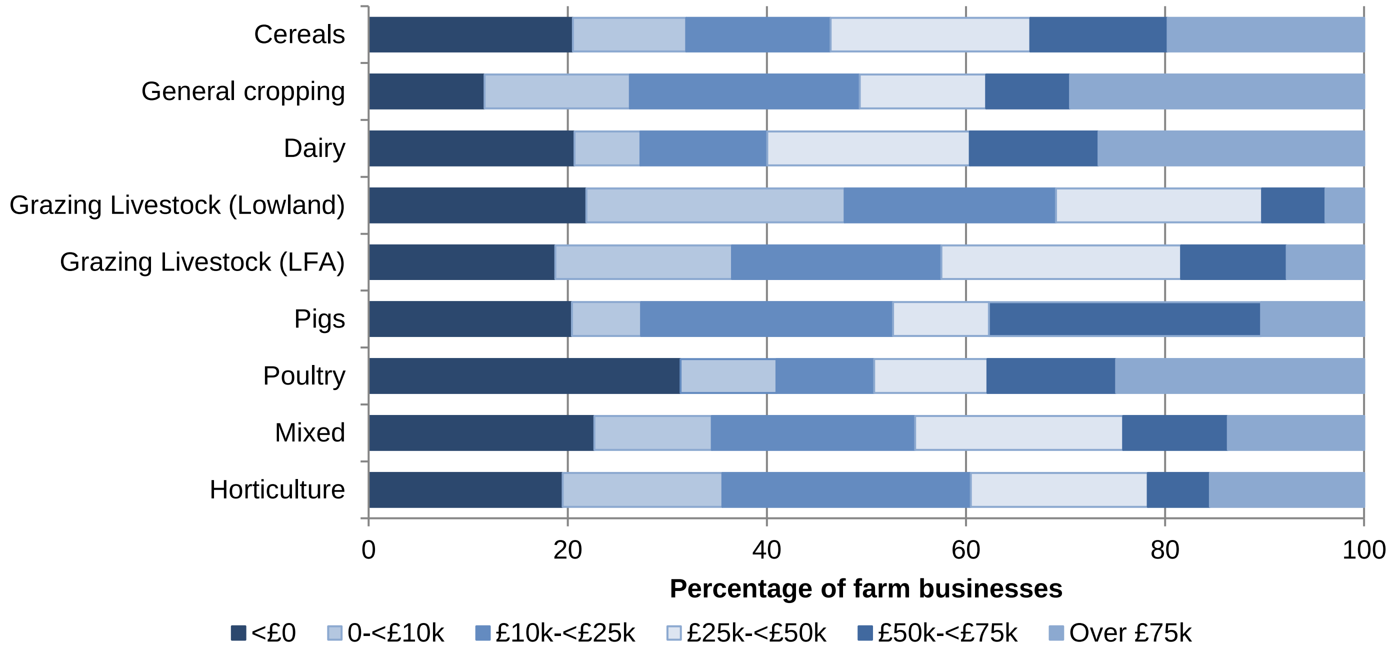
The FBS samples for both specialist pigs and specialist poultry farms are relatively small, meaning that individual farms can have a large influence on the results. Results for poultry farms including and excluding outliers can be found in the appendix here.

On **specialist pig farms,** average Farm Business Income more than doubled from £21,600 to £57,800 (Table 1). Pig prices firmed in the second half of 2016 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. 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.

For **specialist poultry farms,** average incomes fell by almost half to £54,000 (Table 1). 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 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. A time series showing the impact of removing a particularly influential farm from the results can be found here.

For more information about the weighting and reliability of results please see the annex and technical note at the end of this release.

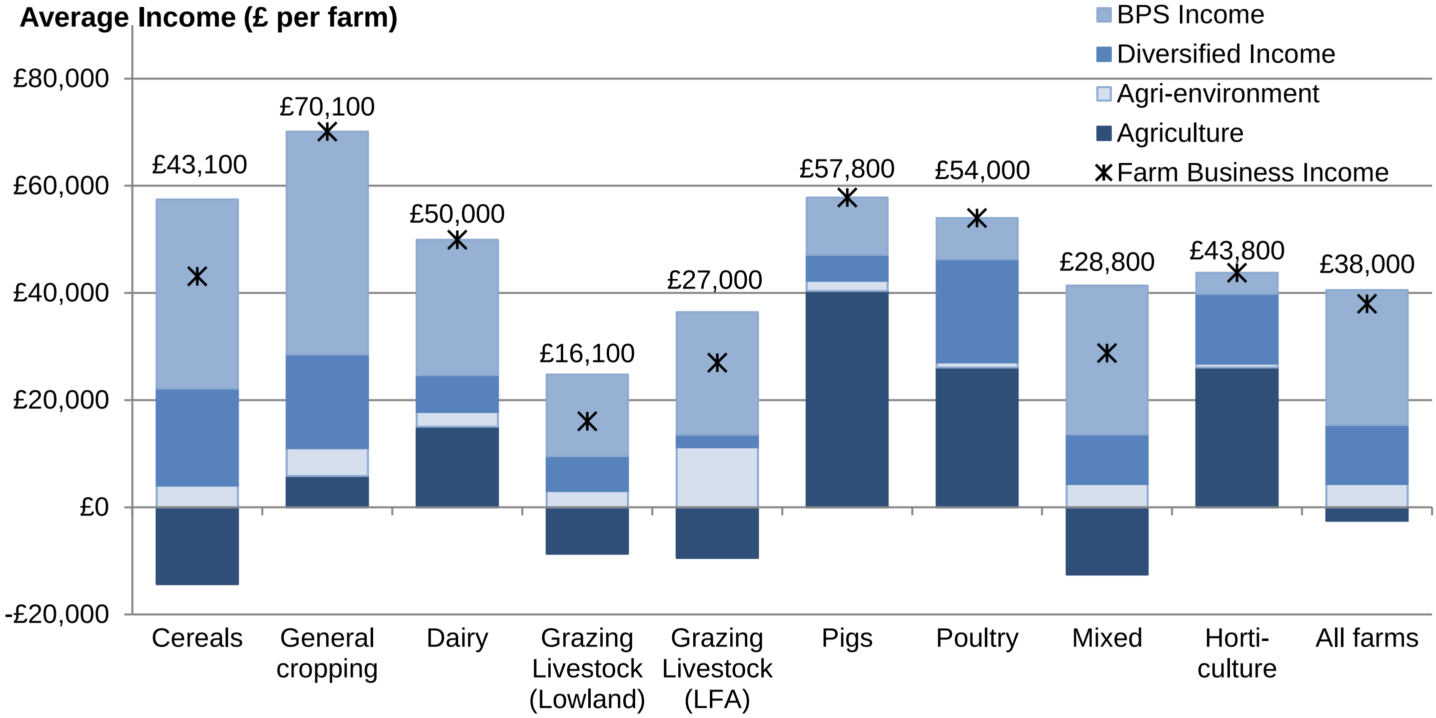
Figure 2: Distribution of Farm Business Income by farm type, 2016/17



The average values mask the considerable variability in incomes at the farm level both between and within farm types (Figure 2). 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.

The variation in incomes within farm type reflects different production costs between farms which are influenced by a number of factors such as size, location, soil type etc. More detailed analysis of farm incomes based on farm performance is provided in Farm Accounts in England. This will be updated with 2016/17 data on 14 December 2017 and published here.

Figure 3: Farm Business Income by Cost Centre[1] 2016/17



[1] The data shown are the averages across all farms in the sample including those that do not have any income within some of the cost centres. The resulting Farm Business Income is shown by the star and in text at the top of each column.

Farm Business Income can be broken down by cost centre (Figure 3) to illustrate the relative contribution to average total Farm Business Income (shown as text at the top of each column). The underlying data can be found in Table 2 in the annex to this Notice. Further information about the methodology adopted for allocating costs across cost centres can be found in Appendix 3 of Farm Accounts in England.

In 2016/17, the Basic Payment continued to account for a substantial proportion of average Farm Business Income for all farm types apart from horticulture, specialist pig and poultry farms. Across all farm types, the average Basic Payment received was approximately £28,000, 19 percent higher than the previous year reflecting the weaker pound when the conversion rate was set at the end of September 2016. Note that estimates have been made for farms that were yet to be paid.

On average, general cropping, dairy, pig, specialist poultry and horticulture farms generated a positive return from farming activities in 2016/17. On LFA grazing livestock farms income from agri-environmental activities is particularly important, contributing just under £10,000 per farm to the average Farm Business Income. These activities are of less significance for the other farm types, particularly the intensive livestock and horticulture sectors.

Annex

Table 2 provides the data used in Figure 3 in the main body of this release.

Table 2 Farm Business Income by Farm Type and Cost Centre (£/farm)[2]

Farm Type	Agriculture	Agri-environment payments	Diversified income	Basic Payment Scheme (BPS)	Farm business income
Cereals	-14,300	4,100	18,100	35,300	43,100
General cropping	5,800	5,200	17,500	41,600	70,100
Dairy	15,000	2,800	6,900	25,300	50,000
Grazing Livestock (Lowland)	-8,700	3,000	6,500	15,300	16,100
Grazing Livestock (LFA)	-9,400	11,200	2,400	22,800	27,000
Pigs	40,300	1,900	4,800	10,700	57,800
Poultry	26,100	900	19,200	7,700	54,000
Mixed	-12,600	4,300	9,300	27,700	28,800
Horticulture	26,100	700	13,000	3,900	43,800
All farms	**-2,500**	**4,300**	**11,000**	**25,200**	**38,000**

[2] Figures may not appear to add to totals due to rounding

Availability of results

All Defra statistical notices can be viewed on the Gov.UK site at:
https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/statistics.

Results from the Farm Business Survey including time series in spreadsheet format can be found at:
https://www.gov.uk/government/collections/farm-business-survey

Revisions

Forecasts of Farm Business Income for 2016/17 were published in February 2017. These forecasts were based on information available in early February 2017 for prices, animal populations, marketings, crop areas, yields and input costs and were intended as a broad indication of how incomes for each farm type were expected to move compared with 2015/16.

The outturns published here are based on actual survey results from the Farm Business Survey 2016/17. Except for dairy farms, all of the forecasts were within the confidence intervals of the survey out turns. Average income for dairy farms was higher than expected. This was due to a larger increase in the valuation change for other cattle than expected and a greater reduction in costs, particularly feed.

TABLE 3 Revisions to Farm Business Income by Type of Farm in England

Average farm business income per farm (£/farm)

Farm Type	2016/17 February 2017 Forecast	October 2017 Outturn	95% Confidence Limits	Change
At current prices				
Cereals	38,000	43,100	+/- 7,300	5,100
General cropping	77,500	70,100	+/- 15,600	-7,400
Dairy	22,500	50,000	+/- 11,000	27,500
Grazing livestock (Lowland)	19,000	16,100	+/- 3,900	-2,900
Grazing livestock (LFA)	24,500	27,000	+/- 4,900	2,500
Specialist pigs	57,000	57,800	+/- 37,100	800
Specialist poultry	74,000	54,000	+/- 39,000	-20,000
Mixed	29,000	28,800	+/- 8,800	-200

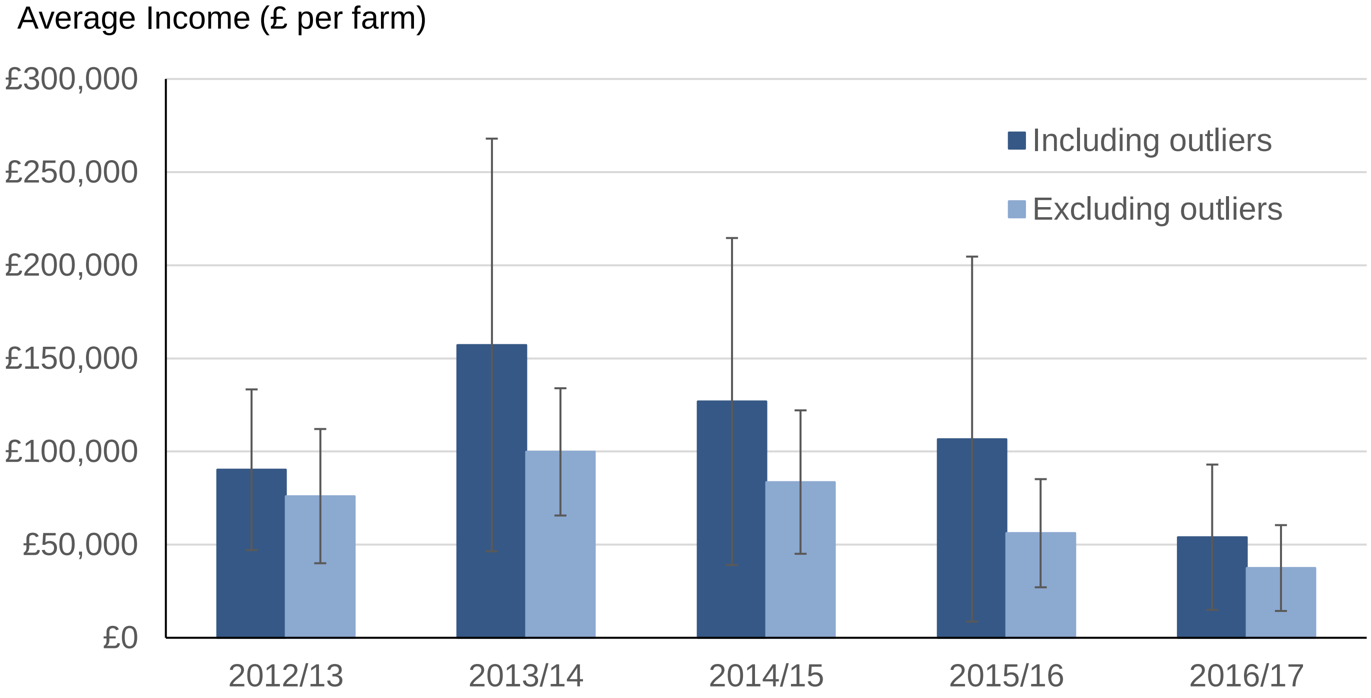
Poultry Influential points

The FBS sample for specialist poultry farms is relatively small, meaning that individual farms can have a large influence on the results. Table 4 and figure 4 show the results for this farm type including and excluding an influential farm that has been in the survey since 2012/13.

Table 4: Average Farm business income for Poultry farms, including and excluding outlier

	Average FBI		95% CI	
	Including outlier	Excluding outlier	Including outlier	Excluding outlier
2012/13	90,214	76,049	43,136	36,035
2013/14	157,203	99,800	110,772	34,155
2014/15	126,839	83,600	87,784	38,502
2015/16	106,670	56,140	97,972	29,033
2016/17	53,992	37,436	39,007	23,040

Figure 4: Average Farm business income for Poultry farms, including and excluding outliers



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.

Technical Note

Survey coverage and weighting

The Farm Business Survey (FBS) is an annual survey providing information on the financial position and physical and economic performance of commercial farm businesses in England. It covers all types of farming in all regions of the country and includes owner-occupied, tenanted and mixed tenure farms. The FBS only includes farm businesses with a Standard Output of at least €25,000, based on activity recorded in the previous June Survey of Agriculture and Horticulture. In 2016, this accounted for approximately 56,700 farm businesses. In 2016 the sample was reduced from1800 to 1750 farm businesses. Data are collected by face to face interviews with farmers, conducted by highly trained researchers.

Each record is given a weight to make the sample representative of the population. Initial weights are applied to the FBS records based on the inverse sampling fraction. These weights are then adjusted by calibrating certain totals to match published totals from other surveys[1] so that they can be used to produce unbiased estimators of a number of different target variables.

More detailed information about the Farm Business Survey and the data collected can be found at https://www.gov.uk/farm-business-survey-technical-notes-and-guidance

Farm type classification

From 2012/13, the classification of farms is based on 2010 standard output coefficients. The results published here are therefore not directly comparable with those published in earlier years. Results for 2012/13 are shown using 2010 and 2007 standard outputs to aid comparability. Please see the explanatory document on our web site for further details of these changes.

Farm Business Income

For non corporate businesses, Farm Business Income represents the financial return to all unpaid labour (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.

In essence Farm Business Income is the same as *Net Profit*, which as a standard financial accounting measure of income is used widely within and outside agriculture. Using the term *Farm Business Income* rather than *Net Profit*, gives an indication of the measure's farm management accounting rather than financial accounting origins, accurately describes its composition and is intuitively recognisable to users as a measure of farm income.

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 measuring 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 signify that we are 95% confident that this range contains the true value. They are calculated as the standard errors multiplied by 1.96 to give the 95% confidence interval.

- 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.

[1] Further information on calibration weighting can be found in the 'Statistical Issues' document here https://www.gov.uk/guidance/farm-business-survey-technical-notes-and-guidance

- 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 1 shows the presence of farms at opposite ends of the income scale.

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.

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.