Statistical First Release



Farm incomes in Wales, 2016-17

Average farm business income in Wales in 2016-17, and change since 2015-16 (at current prices)



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Dairy farms: Average income varied greatly in the past five years. A small fall in 2016-17 was preceded by a much larger fall from 2014-15 to 2015-16.

Cattle and sheep (LFA) farms: Average income was marginally higher than any year since 2011-12.

Cattle and sheep (lowland) farms: Despite the increase in 2016-17, average income remains below levels seen during 2008-09 to 2014-15.

It is important to see latest farm incomes in the context of longer term trends in farm incomes and market conditions. Farm incomes are the small difference between total output and total input, so can be volatile across years. Small changes in output or input (such as movements in input costs) can result in large percentage changes in farm income.

Farm income average values mask considerable variation in incomes at the farm level. Variation exists both between and within farm types, with farm-level factors influencing variations in production and costs (see <u>Section A</u>).



Figure A1: Variation in farm business income in 2016-17, by farm type % of farms in each income group

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13 December 2017 SFR 182/2017

About this release

Figures are presented on farm incomes in Wales for 2016-17 (up to March 2017).

These figures replace forecast estimates for 2016-17 published on 23 March 2017 and represent the results of the Wales Farm Business Survey for 2016-17.

Results largely exclude very small and part time holdings (see '<u>Notes</u>' for details).

(*) New analysis

New analysis on farm diversification is included in section B of the release.

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Importance of measuring farm incomes

Although agriculture makes a relatively small contribution to GDP ⁽¹⁾, around half of the food consumed in the UK is sourced from UK agriculture (with the rest imported into the UK from abroad) ⁽²⁾. Agriculture also has important impacts on the natural environment, with over 80 per cent of land in Wales used for agricultural purposes ⁽³⁾. Farm incomes show some volatility from year to year, influenced by prevailing agricultural (including weather related) and market conditions. There is also wide variation in farm incomes for individual farms, including for farms of the same type. Farm incomes provide an important measure of farm profitability and, in conjunction with other measures from the farm accounts, can inform on the performance and viability of farm businesses. (1) Agriculture, forestry and fishing together account for around 0.6% of UK GDP (source: <u>Office for National Statistics</u>).

(2) Source: Food statistics pocketbook, Defra.

(3) Source: June agricultural survey, Welsh Government

New features and analysis in this edition

- A new infographic on farm business income has been published on the Welsh Government <u>farm income statistics page</u>.
- New analysis on farm diversification is included in <u>section B</u> of the release. This includes analysis for different types of diversified activity, such as letting buildings for non-farming use and renewable energy.

Key points from other sections of this release

Section B (components of income and output):

• There is wide variation between farms in the extent that subsidy* contributes towards both farm business income and output.

* Subsidy is defined here as the basic / single farm payment plus agri-environment payments.

• The proportion of farms involved in some form of diversified activity increased in each of the past six years, to 38 per cent in 2016-17. But on average, the contribution of diversified activities towards both income and output could be considered to be small.

Section C (weather): Context provided for one of the factors that can affect farm incomes.

<u>Section D</u> (commodity prices):

- Considering annual averages for the past seven years, the average farm gate milk price in Wales was generally 1 to 2 pence per litre lower than the equivalent price in the UK (with a slightly larger gap of 2.6 pence per litre in 2016-17).
- <u>Section D</u> contains analysis of weekly prices for finished cattle (England & Wales) and finished lambs (Wales).

Section E (assets, liabilities and net worth):

- Average net worth for farms in Wales varies greatly with farm type, economic size and tenure.
- Considering farm assets and liabilities, there is a wide variation across farms in Wales in both their short-term and long-term financial positions.

Section A: Farm business income

This section considers trends in average farm business income by farm type, and how incomes vary around these averages.





(a) The vertical dashed line indicates how Standard Output coefficients were updated in 2012-13. This had an effect on both the survey population and classification of farms (see <u>Notes</u> for further details).
(b) LFA denotes Less Favoured Area (see <u>Notes</u> for further details).

						% change (2015-16
Farm type	2012-13	2013-14	2014-15	2015-16	2016-17	to 2016-17)
At current prices						
Dairy	45,100	77,000	70,200	32,800	31,300	-5%
Cattle & sheep (LFA)	21,600	19,200	22,100	21,900	23,100	6%
Cattle & sheep (lowland)	27,200	28,600	27,000	16,300	22,700	40%
All farm types	26,600	29,300	29,000	22,200	24,500	10%
In real terms at 2016-17 price	es (a)					
Dairy	47,900	80,200	71,900	33,500	31,300	-7%
Cattle & sheep (LFA)	22,900	20,000	22,700	22,300	23,100	3%
Cattle & sheep (lowland)	28,800	29,800	27,700	16,600	22,700	37%
All farm types	28,300	30,600	29,700	22,700	24,500	8%

Figure A3: Average farm business income b	y farm type in Wales, 2012-13 to 2016-17
Average farm business income per farm	£ per farm

Source: Farm Business Survey

(a) GDP deflators are used here to uprate figures for 2015-16 (and earlier) to 2016-17 prices.

Average farm business income in 2016-17, by farm type

'All farm types': Average farm business income for the combined 'all farm types' rose by 10 per cent at current prices (or 8 per cent in real terms) to £24,500 per farm from the previous year. One factor was that the basic farm payment* was, on average, 18 per cent higher than the previous year. This was due to the fall in the value of the pound and therefore the weaker exchange rate when 2016 payment rates in sterling were determined at end September 2016. The total funding available for the basic farm payment in the UK is received in €, therefore there is an exchange rate effect when this amount is converted into sterling.

* Basic farm payment is defined in <u>section B</u> of this release.

Farm income measures

For non-corporate businesses, **farm business income** represents the financial return to all unpaid workers (farmers, 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 includes some 'notional' items, such as depreciation of farm assets (eg machinery) and changes in the value of breeding livestock.

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. However, 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, and accurately describes its composition;
- is intuitively recognisable to users as a measure of farm income.

Importantly, farm business income does not include other sources of household income from outside the farm business (such as other employment of the farmer or spouse outside of the farm).

Farm business income is the headline measure of farm incomes in Wales. Data for other measures of income (**net farm income** and **cash income**) is published in a spreadsheet alongside this release on the Welsh Government <u>farm income statistics page</u>.

Dairy farms: Average farm business income fell by 5 per cent at current prices (or 7 per cent in real terms) to £31,300 per farm from the previous year. This 5 per cent fall in 2016-17 follows a sharp drop in 2015-16 from the two better years for average dairy incomes in 2013-14 and 2014-15. Farm gate milk prices are one factor which can affect income on dairy farms. A seven-year low in UK farm gate milk prices was reached in June 2016; prices at this time were similar to prices seen in the early to mid 2000s (particularly when considering prices in real terms). The average price then increased each month from June 2016 to March 2017. Over the past 20 years, the highest prices were seen in 2013-14, but average prices have been markedly lower since. In the past seven years, the average farm gate milk price in Wales was generally 1 to 2 pence per litre lower than the equivalent price in the UK (with a slightly higher gap of 2.6 pence per litre in 2016-17). Around the Wales average, there has been a wide variation in milk price paid to farmers in Wales (see <u>section D</u> for further milk price analysis).

On dairy farms, a rise in both the average basic farm payment and animal disease compensation receipts was offset by higher agricultural costs. Purchased feed and fodder costs rose marginally, which had an impact as feed costs generally account for around half of variable costs on dairy farms. Fertiliser costs were 17 per cent lower than the previous year; lower fertiliser prices were a factor. The average basic farm payment (in £) was 11 per cent higher than the previous year.

Cattle & sheep (LFA) farms: Average farm business income rose by 6 per cent at current prices (or 3 per cent in real terms) to £23,100 per farm from the previous year. By a narrow margin, this was the highest average income for this farm type in the past five years. Rises in the average basic farm payment and in output from the sheep and wool enterprise were partly offset by higher costs. Like on dairy farms, there was an increase in costs of purchased feed and fodder, and a fall in

fertiliser costs. The basic farm payment is generally a more important component of income on cattle & sheep (LFA) farms than on other types of farms. The average basic farm payment (in \pounds) was 21 per cent higher than the previous year.

Cattle & sheep (lowland) farms: Average farm business income rose by 40 per cent at current prices (or 37 per cent in real terms) to £22,700 per farm, although this rise was from a low base in 2015-16. The average income in 2016-17 for cattle & sheep (lowland farms) remained lower than in any of the seven years 2008-09 to 2014-15. The average basic farm payment (in £) was 11 per cent higher than the previous year. The value of output from agricultural by-products (including fodder) rose. Agricultural costs were lower than the previous year. Unlike for the other two farm types discussed, costs of purchased feed and fodder fell for cattle & sheep (lowland) farms, from the previous year.

Variation in farm business income

The average values shown in figures A2 and A3 mask the considerable variation in incomes at the level of individual farms, both between and within farm types. One way of looking at the variation in incomes is to consider different income groups. Figure A4 below shows farms grouped by the level of their farm business income in the past five years, and also by farm type for 2016-17.

The level of income on a farm can be influenced by a range of physical, social and economic factors. The skill and business acumen of the farmer will play a role. The level of income will also depend on production costs and the circumstances of the farm (for example, the location, land quality, economic size of the farm, and types of activity undertaken). Incomes will also be affected by where a farm is in its business cycle. For example, a farm that has just invested to expand or improve may have a temporary low income until the benefits start to accrue.





- There has been wide variation around the average farm business income for 'all farm types', in each of the past five years. The percentage of farms with negative income rose each year from 2012-13 (to 22 per cent in 2015-16), then declining slightly to 20 per cent in 2016-17.
- In 2016-17, 28 per cent of dairy farms had a negative income compared with 17 per cent and 20 per cent for cattle & sheep farms (LFA and lowland respectively). In 2016-17, 27 per cent of dairy farms had a farm business income of more than £50,000. The value was 13 per cent for cattle & sheep farms (both LFA and lowland).

Section B: Components of income and output

This section aims to provide greater understanding of how income and output are generated on farms. The contributions of the different components of income and output, and the important variation between farms, are considered.

Points to remember while reading this section of the release

- Figures B1-B4 in this section show average contributions of different components and then variation between farms, firstly for income and then for output. It is important to consider the components of **both** income and output, as neither measure by itself gives a full picture.
- There are four components of farming businesses which are of particular interest (see 'Terms used in this section' below). In practice, it is difficult to separate out costs (and therefore identify income, or profit) for these components. Therefore a methodology was developed to allocate variable and fixed costs to these four components of the business (details available on gov.uk). The methodology to allocate costs involves a degree of estimation so results should be interpreted with caution.
- Variation by farm type has been analysed and described in text where possible. It has not been possible to visually display this data due to small numbers of farms in some categories.
- Figures B2 and B4 (showing the variation around average income and output) combine the basic / single farm payment and agri-environment payments into an 'all subsidies' category. This allows variation around the average for subsidies to be considered in a single chart.

Terms used in this section

Farm business output: Total value of all the output produced by the farm business in the accounting year.

The four components of income and output considered here are:

- 1. **Agriculture**: Income / output from agriculture, which includes compensation payments for animal disease and agricultural work done on another farm.
- 2. **Basic / single farm payment**: Under the EU Common Agricultural Policy (CAP), direct payments are made to farmers with the aim of ensuring a fair standard of living for farmers, and the availability of food supplies at reasonable prices. For 2015-16 onwards, this is known as the basic farm payment, and this replaced the single farm payment for 2014-15 and earlier years.
- 3. **Agri-environment payments**: Environmental subsidies are paid to farmers under the Glastir scheme of the Wales Rural Development Programme 2014-2020 (which is financed by the Welsh Government and the EU). Glastir is the sustainable land management scheme which pays for the delivery of specific environmental goods and services aimed at: 1) combating climate change; 2) improving water management; and 3) maintaining and enhancing biodiversity.
- 4. **Diversification:** The business use of farm resources for a non-agricultural purpose. This includes a wide range of activities, such as letting of buildings for non-farming use, renewable energy generation, tourism and use of farm land for sport or recreation. The definition of diversification used here (and all other statistics in this release) **excludes** other sources of household income from outside the farm business (such as other employment of the farmer or spouse outside of the farm).

Figure B1: Average farm business income and its components in Wales, by farm type and year (at current prices)



For **'all farm types'**, agriculture made a small negative contribution to farm business income in both 2015-16 and 2016-17. The average income from the basic farm payment increased in 2016-17, due to the fall in the value of the pound (please see <u>section A</u> for further information).

By farm type, 2016-17: Agriculture contributed around 40 per cent of average farm business income on dairy farms, made a smaller positive contribution on cattle & sheep (lowland) farms and was negative on cattle & sheep (LFA) farms. On average, both the basic farm payment and agrienvironment payments made a larger contribution to farm business income on cattle & sheep (LFA) farms than for the other two farm types shown.





(a) Categories 2 and 3 (basic / single farm payment and agri-environment payments, respectively) from Figure B1 above have been combined here to form an 'all subsidies' category.

In each of the past five years, there has been wide variation between farms in the contribution of subsidy towards farm business income. In 2016-17, 56 per cent of all farms either made a loss or would have done so without subsidy. In 2016-17, subsidy was a small component of farm business income (less than a quarter) on 5 per cent of all farms.

By farm type, 2016-17: 62 per cent of cattle & sheep (LFA) farms either made a loss or would have done so without subsidy, compared with 41 per cent of cattle & sheep (lowland) farms and 44 per cent of dairy farms. Subsidy contributed less than half of farm business income on 9 per cent of cattle & sheep (LFA) farms, compared with 38 per cent of dairy farms and 27 per cent of cattle & sheep (lowland) farms.

Figure B3: Average farm business output and its components in Wales, by farm type and year (at current prices)



On average, agriculture has a much greater contribution to farm business output than it does for farm business income (comparing figures B1 and B3). From figure B3, agriculture contributed around 80 per cent of average farm business output in each year, although varying slightly year to year. On average, agriculture has a much greater contribution to farm business output on dairy farms than on cattle & sheep (both LFA and lowland) farms.





(a) Categories 2 and 3 (basic / single farm payment and agri-environment payments, respectively) from Figure B3 above have been combined here to form an 'all subsidies' category.

In each of the past five years, there has been wide variation between farms in the contribution of subsidy towards farm business output. In 2016-17, 14 per cent of farms had less than a tenth of their farm business output derived from subsidy, while 8 per cent of farms had more than half of their farm business output derived from subsidy.

By farm type, 2016-17: 74 per cent of dairy farms had less than a tenth of their farm business output derived from subsidy. This compares with just 1 per cent of cattle & sheep (LFA) farms and 11 per cent of cattle & sheep (lowland) farms. No dairy farms in the sample had more than 30% of their farm business output derived from subsidy, compared with 43 per cent of cattle & sheep (LFA) farms and 16 per cent of cattle & sheep (lowland) farms.

It is also useful to consider variation in farm business output by farm type, shown in figure B5 below.





There is wide variation between farms in their level of farm business output in each of the last five years. In 2016-17, 21 per cent of farms had a farm business output of less than £50k, while 6 per cent of farms had a farm business output of £400k or greater.

By farm type: In 2016-17, no dairy farms in the sample had a farm business output of less than £50k, while the equivalent values were around a quarter for cattle & sheep farms (both LFA and lowland). A quarter of dairy farms had a farm business output of £400k or more, while only 2 per cent of cattle and sheep (LFA) farms did.

For the farm business output groups shown in figure B5 above, figure B6 considers how farms of different economic sizes contribute differing amounts towards total farm business output in Wales.



Figure B6: Contribution of farms in each output group in Wales, 2016-17

Figure B6 shows that while 21 per cent of farms in Wales had a farm business output of less than £50k in 2016-17, this particular group of farms accounted for only 5 per cent of total farm business output in Wales. While just 6 per cent of farms had a farm business output of £400k or more, this group of farms contributed around a quarter of total farm business output in Wales.

Source: Farm Business Survey

Diversification

In recent years, it has become more commonplace for farms to supplement their incomes through sources other than conventional agricultural production. Through diversification, it may be possible to improve the economic viability of farm businesses. Some diversification activities can also provide benefits for the wider rural economy, such as encouraging and providing job opportunities.

Terms used in this section

Diversification: The business use of farm resources for a non-agricultural purpose. This includes a wide range of activities, such as letting of buildings for non-farming use, renewable energy generation, tourism and use of farm land for sport or recreation. The definition of diversification used here **excludes** agricultural work done on another farm (which is instead included under agricultural output). Also **excluded** here (and in all other statistics in this release) are other sources of household income from outside the farm business (such as other employment of the farmer or spouse outside of the farm).

'Letting buildings for non-farming use' includes a variety of arrangements for renting out buildings and land (for non-farming purposes). It does not include tourist accommodation and catering, which is included under a separate category.

'Tourism accommodation, catering, sport and recreation' includes camp / caravan sites, bed and breakfast, holiday cottages, and catering (eg farm house teas). It also includes shooting, fishing, nature trails, agricultural shows, equine activities, income from livery, sports, sheep dog trials etc.

'Renewable energy' includes power generating activities, wind turbines, solar power, anaerobic digesters and from 2014-15 onwards, renewable heat initiatives.

'Other diversified activities' includes activities such as processing / retailing of farm produce, non-agricultural hirework, receipts for training work or open days, and other miscellaneous output.

Using the definition of diversification above, Figure B7 shows the percentage of farms with diversified activities, and also the two most common forms of diversified activity on Welsh farms.

Figure B7: Percentage of farms with diversified activities, 2009-10 to 2016-17



(a) Separate results for renewable energy are only available from 2010-11 onwards. There could also be some recording issues in around 2010-11, when these activities were first recorded separately.

• The proportion of farms with any type of diversified activity increased each year from 2010-11, to 38 per cent in 2016-17.

• The proportion of farms which let buildings for non-farming use rose to 22 per cent in 2016-17, from a relatively consistent level in the previous seven years.

• The proportion of farms involved in renewable energy activities rose in each of the past six years, to 16 per cent in 2016-17. Renewable energy activities provide comparatively low income, when compared with some other types of diversified activity (as shown in figure B10).

Figures B8 and B9 display the variation between farms in how diversification contributes to income (B8) and then output (B9).



Figure B8: Variation in diversified income, as a share of farm business income (a)

(a) Excludes farms which had no diversified activities (5,900 such farms excluded in 2016-17).
(b) On farms, it is possible for diversified income to be larger than farm business income (and therefore contribute more than 100 per cent of farm business income). For example, if income from agriculture is strongly negative.

For farms which have diversified activities, there is a wide variation between these farms in how diversified income contributes towards overall farm business income. In 2016-17, 27 per cent of these farms generated at least a quarter of their income through diversified activities, up from 18 per cent in 2012-13. In 2016-17, for 22 per cent of farms involved in diversified activities, their farm business income and/or diversified income was negative.



Figure B9: Variation in diversified output, as a share of farm business output (a)

(a) Excludes farms which had no diversified activities (5,900 such farms excluded in 2016-17).

- For farms which have diversified activities, there is a trend towards diversification making a greater contribution to total farm business output (although the average contribution remains relatively small). There is also wide variation between these farms in how diversified output contributes towards overall farm business output.
- In just under half of the farms with diversified activities in 2016-17, the diversified activities contributed less than 5 per cent of output. In 2016-17, 11 per cent of farms generated more than a quarter of their farm business output through diversified activities, up from 5 per cent of farms in 2012-13.

We now consider the different types of diversified activities on farms, and how these different activities contribute towards farm income and output.

Figure B10: Diversified income for farms in Wales, by type of enterprise, 2016-17

The rows in the table only include data for those farms which have the particular enterprise.

			Total farm	Total income of	Contribution of the	Average
		Share	business	the diversified	diversified enterprise	income from
	Number	of	income for these	enterprise	towards farm	the enterprise
	of farms	farms	farms (£m)	(£m)	business income	(£ per farm)
Farm business income	9,600	100%	236			
Diversified income (a), of which:	3,700	38%	126	27	22%	7,400
1) letting buildings for non-farming use	2,100	22%	73	18	25%	8,800
2) tourist accommodation, catering,						
sport and recreation	600	7%	22	6	28%	9,300
3) renewable energy	1,600	16%	51	2	3%	1,100
4) other diversified activities	400	4%	18	1	7%	3,200
					Source: Farm Bu	usiness Survey

(a) The number and % of farms with each type of diversified activity does not add up to the total for all diversified activity. This is because some farms are involved in more than one type of diversified activity.

- In 2016-17, 3,700 farms generated £27 million of diversified income, and this contributed 22 per cent (on average) towards farm business income on these farms. For the same group of farms, the average income from diversified enterprises was £7,400 per farm.
- Letting buildings for non-farming use generated an average income of £8,800 per farm (for farms involved in this activity). In comparison, renewable energy activities generated £1,100 per farm (for those farms involved in renewable energy).

Figure B11: Diversified output for farms in Wales, by type of enterprise, 2016-17 (a)

The rows in the table only include data for those farms which have the particular enterprise.

			Total farm	Total output of	Contribution of the	Average
		Share	business output	the diversified	diversified enterprise	output from
	Number	of	for these farms	enterprise	towards farm	the enterprise
	of farms	farms	(£m)	(£m)	business output	(£ per farm)
Farm business output	9,600	100%	1,383			
Diversified output (a), of which:	3,700	38%	644	49	8%	13,400
1) letting buildings for non-farming use	2,100	22%	378	23	6%	10,800
2) tourist accommodation, catering,						
sport and recreation	600	7%	111	10	9%	16,200
3) renewable energy	1,600	16%	278	14	5%	9,000
4) other diversified activities	400	4%	60	2	3%	4,700

Source: Farm Business Survey

(a) The number and % of farms with each type of diversified activity does not add up to the total for all diversified activity. This is because some farms are involved in more than one type of diversified activity.

- In 2016-17, 3,700 farms generated £49 million of diversified output, and this contributed 8 per cent (on average) towards farm business output on these farms. For the same group of farms, the average output from diversified enterprises was £13,400 per farm.
- Letting buildings for non-farming use generated an average output of £10,800 per farm (for farms involved in this activity). In comparison, renewable energy activities generated £9,000 per farm (for farms involved in renewable energy).

Section C: Weather

This section considers the mean temperature and average rainfall by season in Wales over the last decade. The section is intended to provide an insight into of one of the factors that can affect farm businesses and therefore farm incomes. The volatility of farm incomes from year to year can be influenced by adverse or extreme weather conditions.



Figure C1: Mean temperature in Wales (°C), 2008 to 2017 (a)

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

Broken lines show the long term averages for the period 1988 to 2017

(a) Mean temperature data is available for Spring and Summer 2017 but is not shown here, as this release relates to farm incomes and other data for the period up to March 2017.

Source: Met Office

On the back of a mild but wet autumn 2015 / winter 2016 and later housing of stock, the year began with good levels of quality forage stocks in store. The start of 2016 saw a drier than normal

season, resulting in average spring and summer growing conditions and an acceptable harvest for crops. A wetter end to the summer 2016 made it difficult for some cereal growers although a drier autumn extended the grazing season for some. A mild wet winter followed resulting in some animal respiratory issues.¹

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

Broken lines show the long term averages for the period 1988 to 2017 mm Winter 2,000 1,800 1,600 1,400 1,200 1,000 800 600 400 200 0 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017

Figure C2: Rainfall in Wales (mm), 2008 to 2017 (a)





2008 2009 2010 2011 2012 2013 2014 2015 2016 2017



mm Annual totals 2,000 1,800 1,600 1.400 1,200 1,000 800 600 400 200 0 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017

Source: Met Office

(a) Rainfall data is available for Spring and Summer 2017 but is not shown here, as this release relates to farm incomes and other data for the period up to March 2017.

¹ Source: <u>Aberystwyth University farm income booklet</u>

Section D: Commodity prices

The prices received by farmers for their products, in conjunction with wider market conditions, can have a large effect on farm business income and output. Figure D1 shows official statistics for UK farm gate milk prices over a 20 year period (Wales milk prices are not available from this source).

Figure D1: Average farm gate milk prices (UK) – 20 year trend (March 1997 to March 2017)



Source: UK milk price statistics (published by Defra)

A seven-year low in UK farm gate milk prices was reached in June 2016; prices at this time were similar to prices seen in the early to mid 2000s (particularly when considering prices in real terms). The average price increased each month from June 2016 to March 2017. Over the past 20 years, the highest prices were seen in 2013-14, but average prices have been markedly lower since.

Farm gate milk price: the price paid by dairy processors to farms for their milk. After milk leaves the farm, it will go for processing before being sold to retailers.

The wide variation in farm gate milk prices received by farms in Wales is shown in Figure D2 below. This is shown in terms of the share of production sold at different prices.

Figure D2: Variation in farm gate milk prices in Wales, 2009-10 to 2016-17 (at current prices) (a) (b)

Percentage of milk produced on Welsh farms which was sold in each price band

%

	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Price band (pence per litre)								
< 20p	12	2	*	*	*	*	29	21
20p < 22.5p	50	29	*	*	*	*	22	38
22.5p < 25p	26	59	13	7	*	*	31	28
25p < 27.5p	7	5	54	44	6	14	6	8
27.5p < 30p	*	*	25	36	18	47	6	*
30p+	*	*	6	12	76	36	5	*
Average price per litre	21.8p	23.3p	26.3p	26.7p	30.4p	29p	21.7p	21p

Source: Farm Business Survey

(a) The average milk price over a year has been calculated for each farm in the survey. Therefore the figures do not account for any variation in milk price or production within farms in the year. The average milk price for a farm each year has then been weighted up according to the farm's survey weight and share of milk production.

(b) Calculations exclude a small number of milk producing farms which produced less than 100,000 litres per year. * Value not shown as the figure is based on fewer than 5 farms (or no farms) from the sample. The chart below shows price band data, in pence per litre, for 2016-17 from figure D2.



The previous table shows the wide range of farm gate milk prices received for milk sold in Wales, in each year since 2009-10.

In 2016-17, 87 per cent of milk produced on farms in Wales was sold to processors for less than 25 pence per litre, up from 82 per cent in 2015-16 and just 3 per cent in 2014-15.

Five per cent of milk produced on farms in Wales was sold at 27.5 pence per litre or more in 2016-17, down from 11 per cent in 2015-16 and 83 per cent in 2014-15.

Figure D3 below compares the annual averages for farm gate milk prices in Wales and the UK. It should be noted that the data is derived from two different sources with differing methodologies, so there may some issues with comparing the two sources. Figure D3 suggests that in the past seven years, the average farm gate milk price in Wales was generally 1 to 2 pence per litre lower than the equivalent price in the UK (with a slightly larger gap of 2.6 pence per litre in 2016-17).





Source: <u>UK milk price statistics (published by Defra)</u>, Farm Business Survey (Wales prices) (a) Data for Wales excludes a small number of milk producing farms which produced less than 100,000 litres per year.

The following figures D4 and D5 show trends in milk production per farm and average dairy herd size for farms in Wales. Average milk production per farm was around 1 million litres per farm in both 2016-17 and 2015-16, having increased in the preceding three years. The rollout of the EU Milk Production Reduction scheme in 2016-17 may have been a factor in the level of production.

The average dairy herd size (number of dairy cows per farm) has gradually increased in the past seven years (from Cattle Tracing Scheme data). There has been little change in the total number of dairy cows across all farms in Wales, while there has been a decline in the number of farms which have dairy cows. However, there is wide variation between farms in how their individual dairy herd sizes have changed.

The impact of these Welsh trends is complex; farm gate milk price is influenced by supply and demand factors within the rest of the UK and in world markets.



Figure D4: Milk production per farm in Wales, 2009-10 to 2016-17 (a)

(a) The average excludes a small number of milk producing farms which produced less than 100,000 litres per year.

Figure D5: Average herd size for dairy cows (a) on farms in Wales, 2009 to 2016 (a)



Average dairy herd size per farm

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

Finished cattle and lamb prices

Many factors can influence prices for finished cattle and lambs, such as the production system, technical efficiency of the farmer, breed of animal, weather, supply and demand, strength of the pound, and the level of imports and exports.

The following figure D6 shows cattle prices for England and Wales combined, as there are too few finished cattle sales in auction markets in Wales to generate reliable prices data just for Wales.

Figure D6: Weekly prime cattle prices at auction markets in England and Wales, April 2013 to March 2017



Cattle have a longer production cycle than for lambs, and finished cattle are generally sold at between 12 months and 30 months old. This factor for cattle levels out supply throughout the year, therefore little seasonality can be seen in the prime cattle price.

The finished cattle price in 2016-17 was slightly lower than for 2015-16 in first part of year, while ending generally higher than 2015-16 in the latter part of the year.

As there are large enough numbers of finished lamb sales in Wales to generate reliable prices data, average lamb prices at Welsh auction markets are shown in Figure D7 below.

Figure D7: Weekly prime lamb (SQQ) (a) prices at auction markets in Wales, April 2013 to March 2017



Source: Agriculture and Horticulture Development Board (AHDB) – Meat Services (a) The liveweight SQQ (Standard Quality Quotation) is for lamb carcasses falling in the 12-21.5 kg weight bracket.

There is a large amount of seasonality in the finished lamb price. The highest prices are generally seen in late spring, falling prices during summer, with prices beginning to rise again gradually during autumn and continuing into winter. Finished lambs are generally sold at less than one year old and are usually born in late winter and spring, therefore there are supply and demand imbalances at different times of year.

The finished lamb price in Wales in the first part of 2016-17 was generally higher than in 2015-16. The lamb price did not then increase as much in winter (as had been seen in previous years), with prices in early 2017 ending lower than in the preceding three years.

Section E: Assets and liabilities

This section gives an overview of the financial strength of farms in Wales, by considering the assets, liabilities and net worth of these farms. This analysis was included for the first time in the previous edition of this statistical release (published in December 2016). We continue to welcome feedback from users of these statistics on how this analysis could be further developed.

Note that throughout this section, the average (mean) has been taken of the financial position at start and end of year (known as the opening valuation and closing valuation, respectively). This is to smooth out some of the volatility in the financial position of individual farms from year to year.

Figure E1: Average assets, liabilities and net worth for farms in Wales in 2016-17, by farm type, size and tenure Average per farm (£)



Figure E1 considers average assets, liabilities and net worth for three key variables: farm type, size and tenure. It is not possible (due to low sample size in some categories) to provide analysis of, for instance, asset and liabilities for different sizes of particular types of farm. There is very wide variation around the average values shown in figure E1.

On average, dairy farms have larger assets (and also liabilities) than cattle & sheep farms (both LFA and lowland). In 2016-17 (to the nearest £10,000), average net worth was £1.14 million on dairy farms in Wales, £990,000 on cattle & sheep (LFA) farms and £910,000 on cattle & sheep (lowland) farms. These values of average net worth for each farm type have all increased since 2015-16.

Analysing by size, average assets, liabilities and net worth all increase as the size of farm increases. As would be expected, fully tenanted farms have very little land and buildings, but also low average liabilities.

Terms used in this section

(1) Fixed assets (assets purchased for long-term use and not likely to be converted quickly into cash) are divided here into:

(a) Land and buildings of the farm business.

(b) Other fixed assets include breeding livestock, machinery and basic farm payment scheme entitlements for 2015-16 onwards (single farm payment for 2014-15 and earlier).

(2) Current assets includes trading livestock, cash and other short-term assets.

(3) Fixed liabilities includes mortgages and other secured long-term loans.

(4) Current liabilities includes overdrafts and short-term loans.

Total assets (what the business is worth) = (1) + (2)

Total liabilities (what the business owes) = (3) + (4)

Net worth (the owner's share of the business) = (1) + (2) - (3) - (4)

Economic size of farms is measured here in Standard Labour Requirements (SLR) and expressed in terms of full-time equivalents. The size groups used here are:

less than 1 SLR
greater than or equal to 1 and less than 2 SLRs
greater than or equal to 2 and less than 3 SLRs
greater than or equal to 3 and less than 5 SLRs
greater than or equal to 5 SLRs

Tenure indicates the balance between land on the farm that is owned or rented by the farmer. The following categories are used here:

Tenanted	100% rented
Mainly tenanted	Over half of the land on the farm is rented
Mainly owner occupied	Over half of the land on the farm is owner occupied
Owner occupied	100% owner occupied.

Figure E2: Variation in net worth for farms in Wales, 2016-17



Net worth subtracts the value of total liabilities from total assets, and represents the wealth of a farm if all of their liabilities were called in. Businesses with a higher net worth are likely to be more resilient, at least in the short term, to fluctuations in their income. Such farms can draw on these reserves to support the business if the financial position of the farm deteriorates.

 £250k - <£500k
 Figure E2 shows that there is extremely wide variation in net worth held by farms in Wales. In 2016-17, 8 per cent of farms had a net worth of less than £250k, while 10 per cent of farms had a net worth of greater than £2 million. Farm businesses with a high net worth account for a large share of total net worth for farms in Wales. The 4 per cent of farms with greater than £3 million net
 Survey

Source: Farm Business Survey

We now consider the variation in assets and liabilities held by farms in Wales.

Figure E3: Comparison of total assets and liabilities for farms in Wales, 20	16-17
Percentage (%) of farms in each grouping for total assets and total liabilities.	

		Total assets						
		£200k -	£500k -	£1m -				
Total liabilities	<£200k	<£500k	<£1m	<£2m	£2m+	Total		
£0 - <£10k	3	9	17	11	2	43		
£10k -<£50k	2	4	6	6	2	21		
£50k - <£200k	*	2	7	9	1	20		
£200k -<£500k	*	*	2	5	2	10		
£500k+	*	*	*	2	4	6		
Total	6	15	32	34	12	100		

* Value not shown as it is based on fewer than 5 farms (or no farms) from the sample.

Figure E3 helps when considering the **long term viability** of farm businesses in Wales. As an example to show how to read the table, 4 per cent of farm businesses in Wales had total assets of £2 million or greater and total liabilities of £500k or greater. Total liabilities provide a measure of the indebtedness and reflect the total debt (short and long term) of the farm business. High levels of liabilities will require consistent income flows (or sale of assets) to ensure that interest on borrowing can be paid. If total liabilities of a farm are too high (in relation to total assets), the farm could have difficulty in meeting its investment needs from earnings. On the other hand, increasing the levels of borrowing in order to invest in the farm can help to improve farm performance.

Figure E3 shows the wide variation in the long term financial position of farms in Wales; there are farms which appear in most areas of the table. 43 per cent of farms had total liabilities of zero to \pounds 10k, while 6 per cent of farms had total liabilities of \pounds 500k or greater. 12 per cent of farms had total assets of \pounds 2 million or greater, while 6 per cent of farms had total assets of less than \pounds 200k.

Figure E4: Comparison of current assets and liabilities for farms in Wales, 2016-17

		Current assets						
		£25k -	£50k -	£100k -				
Current liabilities	<£25k	<£50k	<£100k	<£200k	£200k+	Total		
£0 - <£5k	8	12	14	6	3	43		
£5k - <£25k	6	6	7	5	2	26		
£25k -<£50k	2	3	3	3	1	12		
£50k -<£100k	2	2	3	2	*	10		
£100k+	*	1	2	3	2	8		
Total	18	24	31	18	9	100		
				Source	: Farm Bu	siness Survey		

Percentage (%) of farms in each grouping for current assets and current liabilities

* Value not shown as it is based on fewer than 5 farms (or no farms) from the sample.

Figure E4 helps when considering the **short term viability** of farm businesses in Wales. As an example to show how to read the table, 2 per cent of farm businesses in Wales had current assets of £200k or greater and current liabilities of £100k or greater. A large proportion of the assets on a farm, such as land or machinery, will typically have a monetary value that is difficult or costly to realise in the short term. Figure E4 gives an indication of the ability of farms in Wales to finance their immediate financial demands from their current assets, such as cash, savings or stock. If current liabilities are similar to or greater than current assets, the farm may be experiencing short term financial difficulties.

Table 4 shows the wide variation in the short term financial position of farms in Wales; there are farms which appear in all areas of the table. 43 per cent of farms had current liabilities of zero to £5k, while 8 per cent of farms had current liabilities of £100k or greater. 9 per cent of farms had current assets of £200k or greater, while 18 per cent of farms had current assets of zero to £25k.

We now consider the long term year trend in average assets, liabilities and net worth for farms in Wales. The vertical dashed lines indicate changes in methodology over the period (see Notes for details).

It should be noted that figure E5 below shows assets, liabilities and net worth at current prices, therefore does not account for inflation.





Source: Farm Business Survey

From the mid-1990s to mid-2000s (at current prices), there was little change seen in average assets, liabilities and net worth for farms in Wales. From the mid-2000s, there were annual increases in the average value of assets and net worth, largely driven by increases in the asset value of land and buildings. There were also annual increases in average liabilities since the mid-2000s. There could be many reasons for these trends since the mid-2000s; one possible factor could be the capitalisation of single payment entitlements into land values from 2005 onwards.

Finally in this section, we consider the rate of return on capital employed in farms, by calculating average farm business income as a percentage of average net worth. This expression represents the annual return that all unpaid workers (farmer, spouses and others with an entrepreneurial interest in the farm business) obtain for their manual and managerial labour, and all of their investment into the farm business. This represents the return to the whole business and does not take into account how many business partners there are. This is just one way that rate of return on capital could be calculated; there are other ways also.





- Figure E6 shows that average farm business income is a relatively small percentage of net worth, although the rate of returns in farming could be considered to be favourable (when compared with other investment opportunities).
- The impact of the fall in average farm business income on dairy farms after 2014 can also be seen, with the annual rate of return on capital for dairy farms falling to 2.8 per cent in 2016-17 (from 3.2 per cent in 2015-16 and 7.4 per cent in 2014-15).

Glossary

Costs are divided into two types: variable costs and fixed costs

- Variable costs are costs that are readily allocated to an enterprise and which will vary in approximately direct proportion to the scale of the enterprise. Examples of variable costs are fertilisers, pesticides, seed, concentrate feeding stuffs (purchased or home-grown), and purchased fodder.
- **Fixed costs** are those costs which either cannot readily be allocated to a specific enterprise or do not vary with small changes in the scale of the individual enterprise. Examples of fixed costs are labour (including payments in kind), machinery repairs and depreciation, rent and rates, general expenses, and interest payments.

Enterprise: an identifiable sector of the farm business, such as a dairy enterprise.

Farm gate price: the price received by producers (farms) for their agricultural products. Once these agricultural products leave the farm, they may go for secondary processing. For instance, after milk leaves the farm, it will go for processing before being sold to retailers.

Other terms are defined as they are used throughout this statistical release, in the relevant section:

- Farm business income
- Farm business output, and components of income and output
- Diversification
- Assets, liabilities & net worth

Notes

Accounting years

The figures for 2016-17 presented in this release cover the accounting years ending between 31st December 2016 and 31st March 2017 and as such reflect farming conditions between January 2016 and March 2017.

Average farm incomes

When the term 'average' is used to describe farm income (and other) measures in this release, this means that the mean (not median or mode) has been taken of the weighted farm data.

Less Favoured Area (LFA)

Throughout this statistical release, the abbreviation LFA is used to denote Less Favoured Area (LFA). This classification was established² 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. The following map shows the LFA, SDA and DA in the United Kingdom then figure F1 shows values and percentages for these areas by UK country.

² Council Directive 75/268/EEC



				Northern	
Farm type	Wales	England	Scotland	Ireland	UK
Area (million hectares)					
Severely Disadvantaged Area (SDA)	1.2	1.6	6.8	0.6	10.1
Disadvantaged Area (DA)	0.5	0.6	0.1	0.4	1.6
Less Favoured Area (LFA) = SDA + DA	1.6	2.2	6.9	0.9	11.7
Lowland	0.4	10.8	1.0	0.5	12.7
All land	2.1	13.0	7.9	1.4	24.4
% of all land					
Severely Disadvantaged Area (SDA)	56%	12%	86%	41%	42%
Disadvantaged Area (DA)	23%	5%	2%	26%	6%
Less Favoured Area (LFA) = SDA + DA	79%	17%	88%	67%	48%
Lowland	21%	83%	12%	33%	52%
All land	100%	100%	100%	100%	100%

Figure F1: Less Favoured Areas in the United Kingdom

Source: Land, Nature and Forestry Division, Welsh Government

Current prices and in real terms (2016-17 prices)

To show the effect of inflation, some results in this release at current prices (such as averages for farm business income, in Figure A3) have been uprated using GDP deflators to also show prices in real terms (at 2016-17 prices). The GDP deflator data used here is available from the <u>Office for</u> <u>National Statistics website</u>.

Disclosure control

To protect the confidentiality of farms who take part in the Farm Business Survey, results for a category are not shown if they rely on data for fewer than 5 farms (or no farms) from the sample.

Rounding

Farm income values shown in this release have been rounded to the nearest hundred pounds, therefore rounded values may not add up to totals. Calculations (such as percentage or actual change) have been made on unrounded values.

Methodology for apportioning components of income and output

There are four components of farming businesses which are of particular interest (also known as 'cost centres'): agriculture, basic / single farm payment, agri-environment payments and diversification. In practice, it is difficult to separate out costs (and therefore identify income, or profit) for these components. Therefore a methodology was developed to allocate variable and fixed costs to these four components of the business (details available on gov.uk). The methodology to allocate costs involves a degree of **estimation** so results should be **interpreted with caution**.

Farm type classification and Standard Outputs (SO)

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 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. For crops, this is the main product

(e.g. wheat, barley, peas) plus any by-product that is sold, for example straw. In other words, the SO of an agricultural product is the average monetary value of the agricultural output per unit at farm gate prices.

The classification of farm 'types' within the UK and EU is based on the calculation and use of SO coefficients for individual farm enterprises. The characteristics of farm types included in this release can be summarised as follows:

Dairy: Farms on which dairy cows account for more than two-thirds of the total SO.

Cattle and sheep: Farms which do not qualify as dairy farms but have more than two-thirds of their total SO from grazing livestock (cattle and sheep). They are divided into the following:

- Cattle and sheep (LFA): More than 50% of the land farmed is in the LFA.
- Cattle and sheep (lowland): Less than 50% of the land farmed is in the LFA.

Further details on the classification of farm types are available on gov.uk

SO coefficients have been updated within all Member States and are used to classify farms from 2013 onwards. As the threshold for inclusion within the Farm Business Survey in Wales is a minimum €25,000 of standard output, changes to standard output coefficients will have an effect on both the survey population as well as the classification of farms.

Within EU member states, SO coefficients are updated periodically. In the UK these are calculated for each NUTS1 region so Wales is calculated as one region. Averages are taken over a period of a number of years to reduce the impact of annual price fluctuations; those previously in use are averaged over the period 2005-2009 (referred to as 2007 SOs). Standard Outputs have now been recalculated for the period 2008-2012 (referred to as 2010 SOs).

In Figure A2 (on page 3 of this release), data for 2012-13 onwards is based on 2010 SOs, while data for 2011-12 and earlier is based on 2007 SOs. Due to this change in methodology, some caution should be exercised when making any comparisons of 2012-13 data onwards with earlier data.

Figure F2 below shows results for 2012-13 produced on the basis of both the 2007 SOs and 2010 SOs, showing the impact of the change in SOs.

Figure F2: Average farm business income in Wales in 2012-13 (on 2007 SO and 2010 SO basis)

Average farm business inc	£ per farm			
	2012-13	2012-13		
Farm type	(2007 SO)	(2010 SO)	Difference	
At current prices				
Dairy	45,100	45,100	0	
Cattle & sheep (LFA)	22,700	21,600	-1,100	
Cattle & sheep (lowland)	30,200	27,200	-3,000	
All farm types	28,200	26,600	-1,600	

Source: Farm Business Survey

Figure E5 (on page 22 of this release) shows estimates from the Farm Business Survey prior to 2009-10. Until 2010, standard gross margins (SGMs) were used for the classification of farms, and farms with a standard labour requirement (SLR) of less than 0.5 were excluded from the survey. From 2010 onwards, instead standard outputs were used to classify farm type and farms with a standard output of less than \in 25,000 were excluded from the survey. The difference between standard outputs and standard gross margins is that variable costs are not deducted in the derivation of standard outputs. A note describing the impact on the population by farm type as a result of the change from SGMs to SOs is available on gov.uk. These changes to methodology in 2010 will have an effect on both the survey population as well as the classification of farms, therefore some caution should be exercised when making any comparisons of 2009-10 data (onwards) with earlier years.

Users and uses of data on farm incomes

Data on farm 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 agriculture industry for benchmarking (comparing the performance of similar types of farms).

If the above paragraph does not accurately describe how you use the data, please contact us at stats.agric@gov.wales.

Key quality information

The farm incomes data used in this statistical release are derived from the annual Farm Business Survey (FBS). The survey is conducted on behalf of the Welsh Government by the Institute of Biological, Environmental and Rural Sciences (IBERS) at Aberystwyth University. The FBS collects detailed physical and financial information from approximately 550 farm businesses across Wales and covers all types of Welsh livestock farm. Highly trained researchers collect the data by visiting farms and requesting information from farmers. Only those farm types where there are more than 20 representative holdings in the survey sample are reported in this statistical release.

Statistics produced from the same data by IBERS may differ in some respects from those in this statistical release. The differences arise largely from:

- Weighting: the statistics in this release are weighted to be representative of the population (farm businesses with a Standard Output of at least €25,000). However, the statistics produced by IBERS are unweighted so are only representative of the farms included in the sample.
- Inter-year identical sample: Some of the statistics published by IBERS are for an interyear identical sample (farms included in the sample for two years in a row). Not every farm is included in the sample for two years in a row. Therefore the inter-year identical sample includes a smaller number of farms for each year, so the results for this group of farms may differ.

The sample for the Farm Business Survey is predominantly drawn from those farm businesses in Wales with a Standard Output (SO) of at least €25,000, based on activity recorded in the previous June Survey of Agriculture and Horticulture. The results reported here will not therefore be representative of very small and part-time holdings. Information on the survey sample, the survey population and % of the survey population sampled (by farm type and size) is shown in Figure F3.

Figure F3: Survey sample, survey population and	% of survey population sampled,
by farm type and size (a) (b) (c)	

	Spare time /					All farm
Farm type	part time	Small	Medium	Large	Verylarge	sizes
Survey sample (a) (b)						
Dairy	1	7	26	32	40	106
Cattle & sheep (LFA)	22	92	80	101	45	340
Cattle & sheep (lowland)	13	21	16	8	6	64
Other farm types (d)	12	9	6	10	3	40
All farm types	48	129	128	151	94	550
Survey population						
(farms with > €25,000 Standard C	Dutput) (a) (c)					
Dairy	47	238	322	419	420	1,446
Cattle & sheep (LFA)	1,160	1,982	1,289	1,306	908	6,645
Cattle & sheep (lowland)	371	386	178	158	98	1,191
Other farm types (d)	209	133	74	68	60	544
All farm types	1,787	2,739	1,863	1,951	1,486	9,826
% of survey population sampled						
Dairy	2.1	2.9	8.1	7.6	9.5	7.3
Cattle & sheep (LFA)	1.9	4.6	6.2	7.7	5.0	5.1
Cattle & sheep (lowland)	3.5	5.4	9.0	5.1	6.1	5.4
Other farm types (d)	5.7	6.8	8.1	14.7	5.0	7.4
All farm types	2.7	4.7	6.9	7.7	6.3	5.6

Sources: Farm Business Survey, June Survey of Agriculture and Horticulture

(a) The survey sample and survey population both exclude a small number of farms which have a standard output of of at least €25,000 but no agricultural activity. This small number of farms would have been categorised under the general cropping farm type.

(b) The survey sample shown is for the 2016-17 Farm Business Survey.

(c) The survey population (for 2016-17 Farm Business Survey) was from the 2015 June Survey of Agriculture and Horticulture.

(d) Other farm types includes cereals, general cropping, and mixed farms.

Each farm in the survey is given a weight to make the sample representative of the population. The weights are calculated using the 'inverse sampling fraction' method and use data on the number of farms by type and size from the previous June Survey of Agriculture and Horticulture.

Farm income measures exhibit some degree of volatility across years, influenced by prevailing market conditions. As all the measures of farm income include an element relating to profits, these measures in the agricultural sector are therefore more volatile than measures in other sectors (which are defined purely in terms of income from wages).

Comparison of final results for 2016-17 with previous forecasts

Forecast estimates for 2016-17 were previously published on 23 March 2017. It is useful to compare the final results for 2016-17 with the previous forecasts, and this comparison is made in Figure F4.

Figure F4: Comparison of final 2016-17 results for farm business income with previous forecasts

Average farm business in	£ per farm			
Farm type	2016-17 forecast (a) 2016-17 final (b)		Difference	
At current prices				
Dairy	24,500	31,300	6,600	
Cattle & sheep (LFA)	27,500	23,100	-4,500	
Cattle & sheep (lowland)	22,000	22,700	900	
All farm types	25,500	24,500	-1,200	

Source: Farm Business Survey

(a) Forecast figures published on 23 March 2017 in SDR 27/2017 (Forecasts of Farm Incomes in Wales, 2016-17)

(b) Final figures published on 13 December 2017 in SDR 182/2017 (Farm incomes in Wales, 2016-17).

Revision of income estimates for agriculture and diversification for 2015-16

In this edition of the release, some small revisions have been made to the allocation of costs for some enterprises. Figure F5 below shows the small impact of the revisions on average income from agriculture and income from diversification for 2015-16.

Figure F5: Impact of revisions to income estimates for agriculture and diversification, 2015-16

Average per farm

	Income from agriculture, 2015-16			Income from diversification, 2015-16		
	Previous	Revised figure		Previous	Revised figure	
Farm type	figure (a)	(b)	Difference	figure (a)	(b)	Difference
At current prices						
Dairy	15,700	15,200	-500	1,000	1,500	500
Cattle & sheep (LFA)	-3,800	-4,500	-700	2,800	3,500	700
Cattle & sheep (lowland)	1,400	1,400	0	1,200	1,200	0
All farm types	-600	-1,300	-700	2,300	3,000	700

Source: Farm Business Survey

f ner farm

(a) Published on 8 December 2016 in SFR 160/2016 (Farm incomes in Wales, 2015-16). (b) Revised figures for 2015-16 published on 13 December 2017 in SDR 182/2017 (Farm incomes in Wales, 2016-17).

Strengths and limitations of the Farm Business Survey

We strongly recommend that users of these statistics understand these strengths and limitations of the Farm Business Survey, in order to make appropriate use of any results from the survey.

Strengths

- The Farm Business Survey collects a broad range of detailed physical and financial ٠ information about farms in Wales. This allows a wide range of analyses to be conducted.
- The survey is representative of the main types of livestock farm seen in Wales (dairy, cattle and sheep).
- The Farm Business Survey has been carried out in Wales for many years. Therefore there are many years of data in which to monitor any structural changes in the farming industry, and fluctuations in farm incomes between years.

• Usually, between 90 and 95 per cent of farms remain in the survey sample from one year to the next. This allows analysis across years of the survey for identical samples.

Limitations

- Given the need to control costs of the survey and the difficulty of recruiting farms, the sample for the Farm Business Survey is limited to 550 farms per year in Wales. This represents around 5 to 6 per cent of the survey population each year. This is a relatively small sample for the purposes of analysis. Average results per farm can be produced, but for any analysis produced there are always wide variations around average, which raises a number of issues:
 - With the wide variation in size of farms, on some occasions, considering the share of farms may not be the best approach. In general, a relatively small number of large farms contribute most of the agricultural production in Wales. It can often make sense to look at share of production or output, rather than share of farms, which can provide an extra complication when analysing results.
 - There is often more than one factor which can explain the variation between farms, and this usually includes farm size. It is often not possible (due to low sample size in some categories) to analyse data for more than one variable at a time, which can limit the usefulness of any analysis.
 - With the wide variation in size of farms, very large farms in the sample can have a large effect on averages; particularly when estimates for a category are based on a small number of responses.
- Farm business income considers the farm as a 'business unit'. Farm business income does
 not include other sources of household income from outside the farm business (such as
 other employment of the farmer or spouse outside of the farm). Therefore a wider range of
 data would need to be considered in order to take a view on the economic welfare of farm
 households. The last detailed study to be carried out in Wales on farm household incomes
 was the <u>2010 survey of farming households in Wales</u> by the Wales Rural Observatory.
- There are a number of important aspects of farm businesses that the Farm Business Survey cannot inform on. These aspects will mainly be the quality of land on the farm, the farmer's aims and objectives for the farm business, and the skill of the farmer.
- The Farm Business Survey predominantly includes farms with at least €25,000 standard output, and is not intended to be representative of small, part time and spare time farms (below this standard output threshold). Any users who are interested in data for small, part time and spare time farms should be aware of this point. It is worth noting that when considering the farm types included in the Farm Business Survey, the survey population (around 10,000 farms each year) represents 93 per cent of total standard output. Meanwhile, around 13,000 farms each year in these farm types but with less than €25,000 standard output (which are not surveyed) account for the other 7 per cent of standard output.
- Although the Farm Business Survey is representative of main livestock farm types in Wales, it
 is not as representative of some of the smaller agricultural sectors in Wales. The survey
 includes small numbers of cereal and general cropping farms, but not enough to be able to
 publish results for this particular farm type. Specialist poultry and specialist pig farms are

not surveyed, as there are very few farms from which to survey and obtain reliable results. Although cereal, general cropping, poultry and pig farms are relatively small sectors individually, when grouped together these farm types make up 18 per cent of total standard output for farms in Wales (when considering farms with a standard output of at least €25,000). This is a notable portion of the population which is not very well (or not) represented in the Farm Business Survey.

- As with any sample survey, results from Farm Business Survey will have a degree of sampling error because only part of the population is being used to estimate the value of a variable. The sampling error is the difference between the estimate derived from a sample survey and the 'true' value that would result if a census of the whole population were taken under the same conditions. Different samples will yield differing estimates for the same observation variable.
- **Non-sampling error** includes coverage error, non-response error, response error, processing error, estimation error and analysis error.
 - Any coverage errors in the Farm Business Survey will mainly be due to imperfections in the sampling frame – the June Survey of agriculture and horticulture. The June survey is used for sampling in the Farm Business Survey and also weighting of survey responses up to the survey population. The main limitations of the June agricultural survey can be read on the Welsh Government <u>June agricultural survey page</u>. In summary, maintaining an up to date register of farms is an issue, as are falling response rates (to government surveys in general). Dairy and beef cattle data is derived from the Cattle Tracing System (an administrative source) which is generally of good quality for the information that it holds, although it does not hold complete information on intended purposes for particular animals.
 - Coverage of particular sectors in the sampling frame can be difficult. For example there are currently difficulties recruiting small dairy farms, in light of the current market conditions in the dairy sector.
 - Minimising response (measurement) errors is the strongest area of quality management for the Farm Business Survey. Processing errors are regarded as low-risk because of the self-checking nature of much of the farm management account and the high proportion of farms for which between-year checks can be applied.
 - Although the Farm Business Survey is designed to impose as little burden as possible on participating farmers, it is seeking commercial and sensitive data which some farmers might find intrusive. In order to persuade farmers to take part, participating farmers receive a set of accounts for their farm and benchmarking results against other farms (where possible). However, the refusal rate is relatively high; of those farmers who are in scope, around 80% to 85% of those approached choose not to take part in the survey.
- The potential population of non-respondents may have quite different characteristics from the
 potential population of respondents. This could lead to bias in the estimates of the full
 population. Attempts are made to deal with this by recruiting new farms from a randomised list
 of farms of different types.

Well-being of Future Generations Act (WFG)

The Well-being of Future Generations Act 2015 is about improving the social, economic, environmental and cultural well-being of Wales. The Act puts in place seven well-being goals for Wales. These are for a more equal, prosperous, resilient, healthier and globally responsible Wales, with cohesive communities and a vibrant culture and thriving Welsh language. Under section (10)(1) of the Act, the Welsh Ministers must (a) publish indicators ("national indicators") that must be applied for the purpose of measuring progress towards the achievement of the Well-being goals, and (b) lay a copy of the national indicators before the National Assembly. The 46 national indicators were laid in March 2016.

Information on indicators and associated technical information - <u>How do you measure a nation's</u> progress? - <u>National Indicators</u>

Further information on the Well-being of Future Generations (Wales) Act 2015.

The statistics included in this release could also provide supporting narrative to the national indicators and be used by public services boards in relation to their local well-being assessments and local well-being plans.

Useful links

Unweighted results for Wales: Annual statistical results and the annual farm incomes booklet are published by <u>Aberystwyth University</u> on their website for many years. It should be noted that these results are based on unweighted data, so they only represent the sample, and not the whole population of farms. In particular, the farm incomes booklet includes:

- The profit and loss account, and a summarised balance sheet for a variety of farm types.
- Gross margin data for eight different types of farm enterprise.
- Production costs for four different types of farm output.

Welsh agriculture: More detailed statistics or other statistics about agriculture in Wales can be found below on the Welsh Government <u>farming statistics pages</u>.

England: The Department for Environment, Food and Rural Affairs (DEFRA) publish a variety of analysis from the Farm Business Survey for England on <u>gov.uk</u>. DEFRA published comparable results on farm business income by type of farm in England for 2016-17, on 26 October 2017, and are due to publish (the more detailed) farm account statistics for England in 2016-17 on 14 December 2017.

Technical notes: DEFRA publish technical information, notes and guidance for the Farm Business Survey for both England and Wales on <u>gov.uk</u>.

FarmBusinessSurvey.co.uk: Rural Business Research (RBR) - a consortium of six University Research Centres - carries out the Farm Business Survey in England on behalf of DEFRA. RBR publish a variety of data from the Farm Business Survey (for England and Wales).

Scotland: The <u>Scottish Government</u> publish annual estimates of Farm Business Income on their website.

Northern Ireland: The <u>Department of Agriculture, Environment and Rural Affairs</u> (DAERA) in Northern Ireland publish annual estimates of Farm Business Income.

UK: DEFRA publish farm income statistics for the UK and countries of the UK in the "<u>Agriculture in</u> <u>the UK</u>" publication (Chapter 3).

EU: Farm incomes data from UK countries are provided to the EU as part of the Farm Accountancy Data Network (FADN). Farm income statistics for EU member states is available from the <u>FADN</u> website.

Further details

The document is available at:

http://gov.wales/statistics-and-research/farm-incomes/?lang=en

Next update

The provisional publication date for the statistical release 'Farm income forecasts in Wales, 2017-18' is March 2018.

We want your feedback

We welcome any feedback on any aspect of these statistics, which can be provided by email to <u>stats.agric@gov.wales</u>.

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