



Department
for Environment
Food & Rural Affairs



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Farming Statistics

Provisional crop areas, yields and livestock populations At June 2016 - United Kingdom

This release contains provisional estimates for land use, crop areas and livestock populations on agricultural holdings in the UK and the size of the UK cereals and oilseed rape harvest for 2016. Results are not yet available for poultry, horses, goats, farmed deer, camelids and labour numbers. These will be published with the final results, provisionally scheduled for 15 December 2016. Wales do not produce provisional results and Scotland will not publish their results until later this month. Therefore, crop areas and livestock numbers for 2015 (with the exception of cattle) have been carried forward for both countries to allow UK totals to be calculated for 2016.

The key results are given below.

Agricultural land and arable crop areas ([Tables 1 - 2](#))

The total utilised agricultural area (UAA) in the UK has increased by 0.4% to just over 17.2 million hectares. The area of total crops has decreased by 0.2%, helping to offset the 18% increase in uncropped arable land.

Crop yields and production ([Tables 3 - 4](#))

Wheat: UK wheat yields decreased by 12%, falling from 9.0 tonnes per hectare in 2015 to 7.9 tonnes per hectare in 2016. 2014 and 2015 were exceptionally high yielding years for wheat and the 2016 figure is more in line with short term averages.

Barley: Yields fell by almost the same percentage as wheat, dropping 12% from 6.7 tonnes per hectare in 2015 to 5.9 tonnes per hectare in 2016. The provisional production estimate for 2016 is 6.7 million tonnes. Winter planted barley saw a minor decrease in area and as a result of yield reductions production estimates for winter planted barley are down 16% to 2.8 million tonnes. The spring planted barley area increased (3.9%) but the reduced yields meant that production has fallen 6.6% to 3.7 million tonnes.

Oats: Areas of oats had the largest proportional increase of the major cereal crops rising by 7.6% to 141 thousand hectares. However, a reduced yield meant the estimated production increased by 4.5% to 0.8 million tonnes in 2016.

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Oilseed rape: The provisional oilseed rape harvest has shown a decrease of 30% to 1.8 million tonnes in 2016. This decrease in production has been a result of an 11% decrease in the planted area and a 22% decrease in total oilseed rape yield from 3.9 tonnes per hectare in 2015 to 3.1 tonnes per hectare in 2016.

Horticultural crops ([Tables 5 - 7](#))

In 2016 the total area of horticultural crops decreased by 7.8% to 160 thousand hectares. Vegetables and salad for human consumption make up the majority (69%) of this area and decreased by 9.5% to 111 thousand hectares in 2016.

Livestock ([Tables 8 - 12](#))

The total number of cattle and calves in the UK increased by 1.1% in 2016 to just over 10 million. The breeding herd increased by 0.6% to almost 3.5 million, largely due to the 1.2% increase in the beef herd.

Fattening pigs increased by 2.5% in 2016 and along with a 1.8% increase in the female breeding herd, the total number of pigs rose by 2.3% to 4.8 million.

The UK population of sheep and lambs increased by 0.5% in 2016 to 33.5 million animals. This was largely due to a 0.6% increase in the number of lambs, which now stands at 16.6 million.

Estimates for poultry, horses, goats, farmed deer and camelids will be included in the final publication provisionally scheduled for 15 December 2016.

Agricultural workforce ([Table 13](#))

The total number of people working on agricultural holdings will be included in the final publication provisionally scheduled for 15 December 2016.

Key country level changes

[Figure 1](#) shows how the UK percentage change for certain items compares to the country level changes. The small decrease seen in the wheat area in England has driven the larger UK level change, offsetting the increase in Northern Ireland. This is due to the largest proportion of this crop being grown in England.

Figure 1: Percentage changes between 2015 and 2016 by UK country

	UK % change	England % change	N. Ireland % change
Wheat area	-0.5%	-0.5%	6.5%
Potatoes area	6.2%	8.1%	3.6%
Pigs	2.3%	2.2%	4.5%
Sheep	0.5%	0.9%	1.4%
Cattle	1.1%	0.8%	3.5%

Note: Wales do not produce provisional results for crop areas or livestock numbers and Scottish estimates are not available until later in the month this year. Therefore 2015 figures for Wales and Scotland are used to calculate provisional UK totals for 2016.

Data uses, next publications and survey methodology ([pages 18 - 23](#))

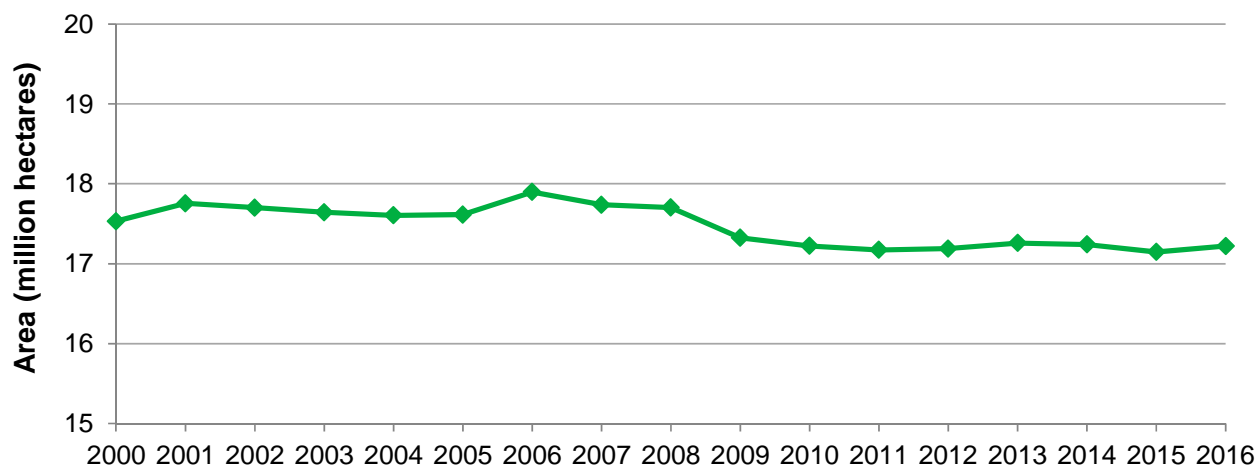
Information on how each of the UK countries run their surveys can be found on pages 18 to 23 along with data uses and upcoming publication dates.

Detailed results

Utilised agricultural area

The utilised agricultural area is made up of all arable and horticultural crops, uncropped arable land, land used for outdoor pigs, temporary and permanent grassland and common rough grazing. In June 2016 the total utilised agricultural area in the UK was just over 17.2 million hectares, covering 71% of the UK land area. [Figure 2](#) shows that the total utilised agricultural area has remained between 17 and 18 million hectares since 2000.

Figure 2: Total utilised agricultural area at 1 June 2000 to 2016

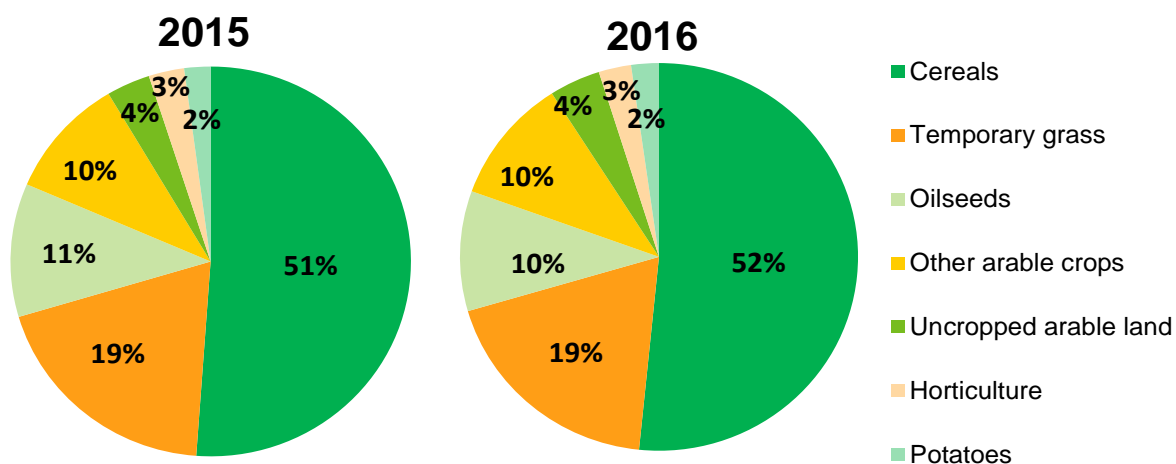


Croppable area

Croppable area consists of cereals, oilseed, potatoes, other arable crops, horticultural crops, uncropped arable land and temporary grass. In 2016, the croppable area remained almost unchanged at just under 6.1 million hectares. This represents over a third of the UK utilised agricultural area.

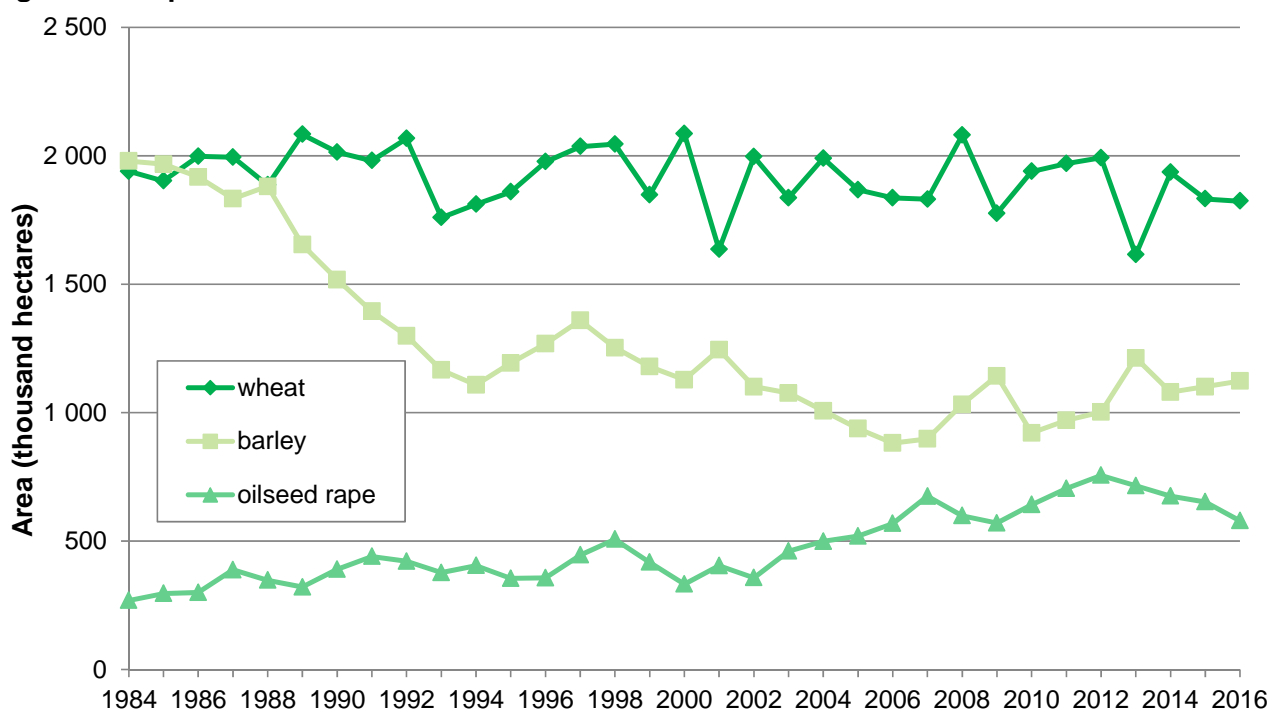
[Figure 3](#) shows that on the whole the proportion of croppable land used for each purpose remained similar between 2015 and 2016, however some categories did see large value changes ([Table 1](#)). The largest proportional change in area was uncropped arable land which increased by 18%. Oilseeds saw the largest decrease of 9.4%.

Figure 3: Breakdown of croppable area at 1 June 2016 compared to 2015



Cereals and oilseeds

Figure 4: Crop areas in the UK between 1984 and 2016



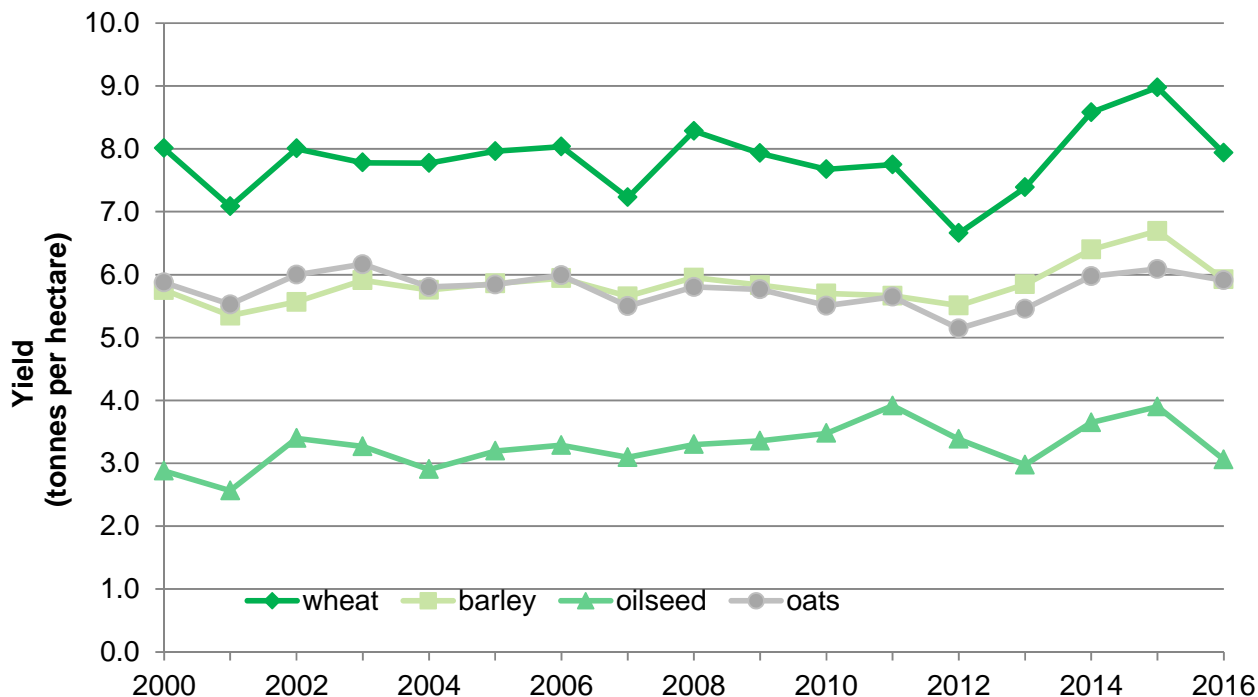
[Figure 4](#) shows the area of the three most popular crops grown in the UK; wheat, barley and oilseed rape. Since 1984 the wheat area has fluctuated between approximately 1.6 and 2.1 million hectares. The area of barley has declined considerably over the years. However, the last two years have seen modest increases and the total barley now stands at 1.1 million hectares. The oilseed rape area increased from 269 thousand hectares in 1984, reaching a peak of 756 thousand hectares in 2012. However since then the area has decreased every year and now stands at 579 thousand hectares.

As a whole, yields for all cereal crops are down from the peak of 2015. The overall yield for total cereals is showing a 12% decrease from 8.0 tonnes per hectare in 2015 to 7.1 tonnes per hectare in 2016. Heavy rains towards the end of the harvest in some regions resulted in problems with combining. However temperatures were above average in late August and early September.

As a result of the decrease in yield, total cereal production has decreased by 11% to 22.1 million tonnes. This is despite the 0.9% increase seen in the total cereals area.

As expected the yields for individual crops differ greatly ([Figure 5](#)). The UK wheat yield had been increasing in recent years and reached a peak in 2015 of 9.0 tonnes per hectare, the highest it has been in the past 25 years. The provisional 2016 estimate is a wheat yield of 7.9 tonnes per hectare, a decrease of 12% but remaining in line with longer term average. The UK barley yield also peaked in 2015 at 6.7 tonnes per hectare and has decreased by 12% to an estimated 5.9 tonnes per hectare in 2016. Yields for oilseed rape show the largest proportional decrease down over a fifth (22%) on the 2015 high of 3.9 tonnes per hectare to now stand at an estimated 3.1 tonnes per hectare. There are many reports of poor crops due to weeds especially blackgrass, poor drainage and disease.

Figure 5: UK crop yields between 2000 and 2016



Wheat

The decreased wheat yield and a 0.5% fall in area resulted in a 12% decrease in production, which fell from 16.4 million tonnes in 2015 to 14.5 million tonnes in 2016. Although lower than in 2014 and 2015 the wheat harvest is in line with the 5 year average of 14.7 million tonnes.

Barley

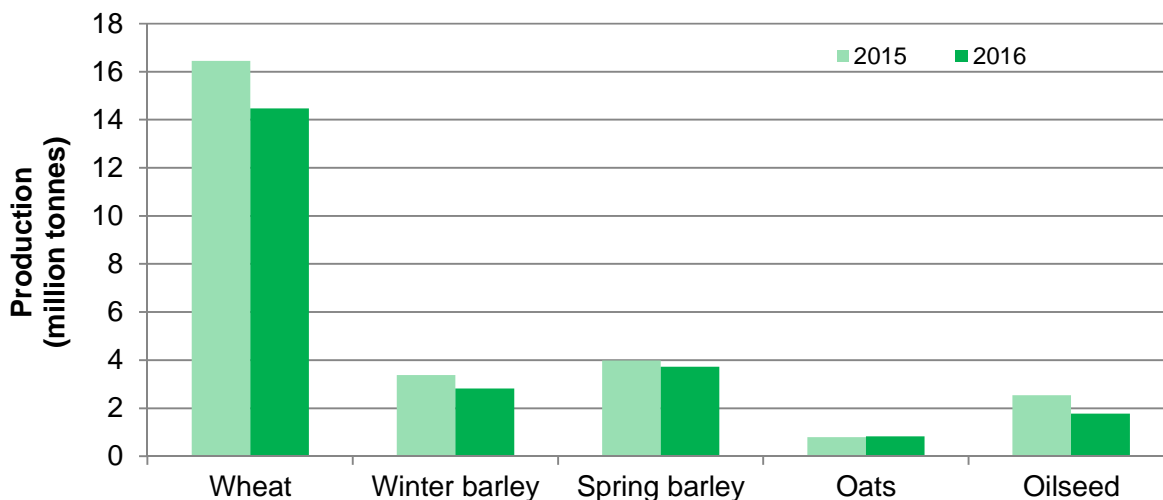
Winter and spring barley both saw decreased levels of production in 2016. Despite a 3.9% increase in the planted area of spring barley, production decreased by 6.6%, due to a 10% drop in yield to 5.4 tonnes per hectare. Winter barley areas remained roughly unchanged at 438 thousand hectares but yields decreased 16% to 6.4 tonnes per hectare leading to a 16% drop in production. However 2015 was an exceptionally well performing harvest and the 2016 yield of 6.4 is in line with values seen from 2009 to 2013 with the exception of 2011.

Oats

Oat production was the only major cereal crop to see an increase on the 2015 value, rising by 4.5% to 834 thousand tonnes. This was driven by increased areas planted in all parts of the UK and an 11% increase in yields in Scotland offsetting a decrease in yields of 6.7% in England.

The combined effect of changes in areas planted and the achieved yields can be seen in the production estimates in [figure 6](#) and [table 4](#).

Figure 6: Estimates of crop production in the UK between 2015 and 2016



Oilseed Rape

Yields of oilseed rape have fallen by 22% to 3.1 tonnes per hectare. Areas have also continued to decrease from a high of 756 thousand hectares in 2012 to now stand at 579 hectares. As a result production has decreased by an estimated 30%.

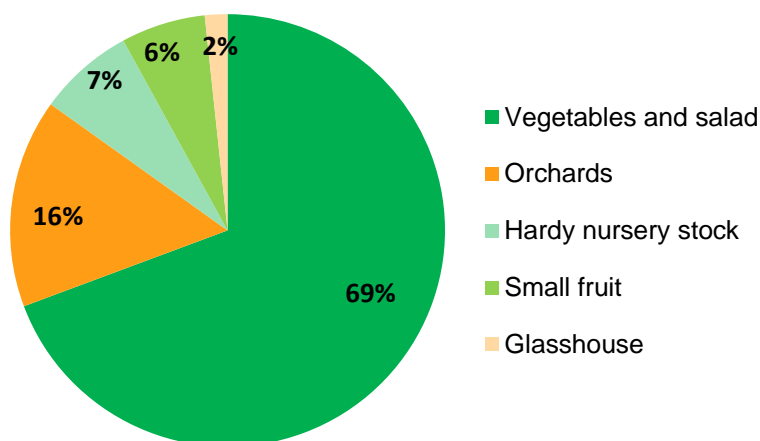
Minor cereal crops

Grain production from the minor cereal crops (rye, mixed corn and triticale) usually comprises between 0.5% and 0.6% of the UK total cereal estimate. Provisional estimates for the 2016 harvest fit into this range, however, minor crop estimates are not considered as reliable as the other surveyed crops as outlined in the methodology.

Horticultural crops

The total area of horticultural crops saw a decrease of 7.8% between 2015 and 2016 and now stands at 160 thousand hectares.

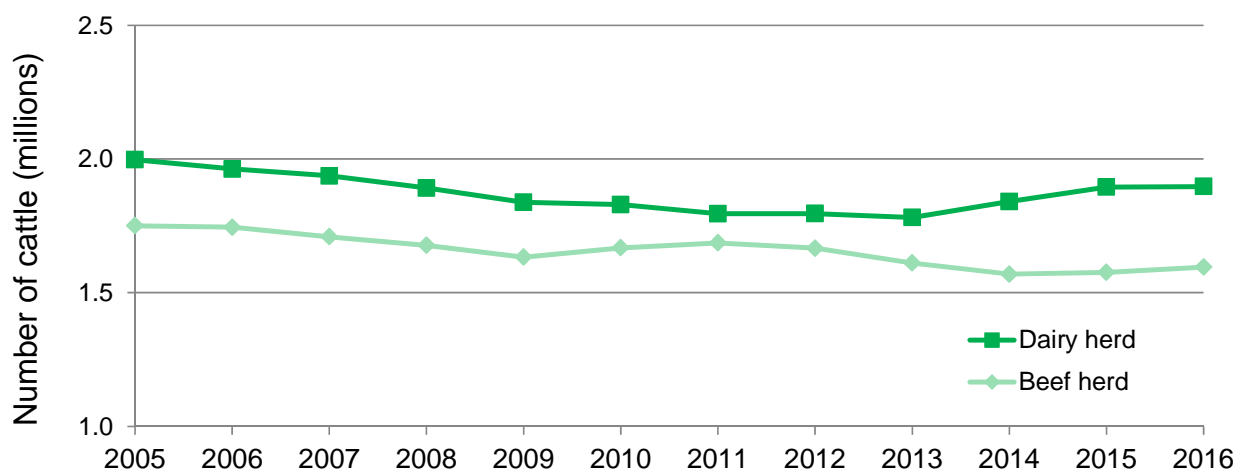
Figure 7: Breakdown of total horticultural area at 1 June 2016



The area of vegetables and salad for human consumption decreased by 9.5% between 2015 and 2016 and accounts for 69% of the total horticultural area (see [Figure 7](#)). Orchards and small fruit together account for a further 22% of the horticultural area with hardy nursery stock and glasshouse accounting for the remaining 7% and 2% respectively.

Cattle

Figure 8: Dairy and beef herd numbers at June 2005 to 2016



The total number of cattle and calves in the UK increased by 1.1% in 2016 to 10 million head. The breeding herd accounts for over a third of total cattle and increased by 0.6% to 3.5 million in 2016. This increase was almost entirely due to the 1.2% increase in the beef herd which now stands at almost 1.6 million head. The main dairy and beef herds are made up of female cattle aged 2 years or more that have calved.

Pigs

The total number of pigs in the UK increased by 2.3%, from 4.7 million animals in 2015 to 4.8 million in 2016. The main reason for this was the 2.5% increase in fattening pigs, largely due to the 2.4% increase in the England figures which account for 81% of the UK fatteners. The female breeding herd increased by 1.8% to 415 thousand animals.

Sheep

Sheep figures increased by 0.5% in 2016 to 33.5 million sheep and lambs in the UK, largely due to the 0.6% increase in the number of lambs. The female breeding flock showed a slight increase (0.4%) reaching almost 16.1 million head.

Comparisons to other EU countries

Data on livestock populations are collected each year under EU Regulation 1165/2008 (cattle, pigs and sheep) and 543/2009 (crops and land). Therefore, results can be compared across EU Member States. Data are available to search and download on the Eurostat website at <http://ec.europa.eu/eurostat/web/agriculture/data/main-tables>

According to the data from 2015, the UK is the 6th largest cereal producer, the largest producer of sheep and the 3rd largest producer of cattle of the EU 28 Member States. [Figures 9 to 11](#) below show the comparison of these activities across all Member States.

Figure 9: Cereal areas in 2015 by EU Member State

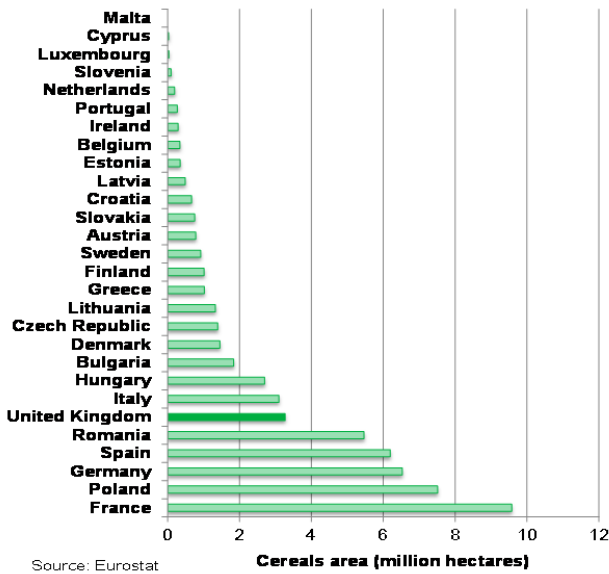
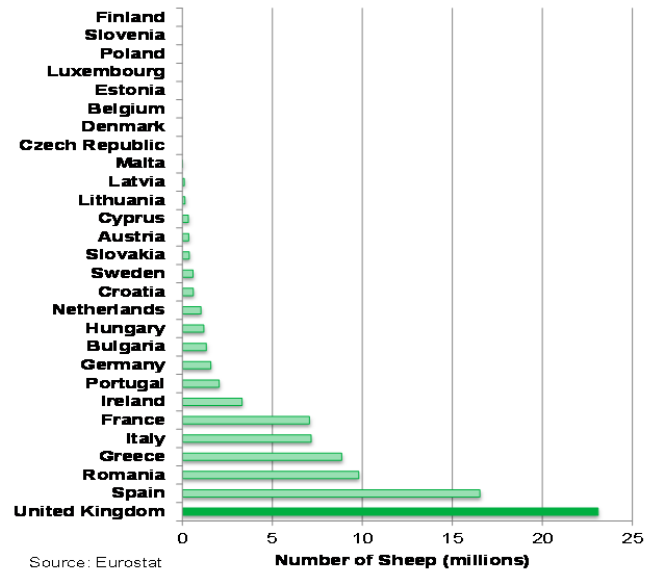
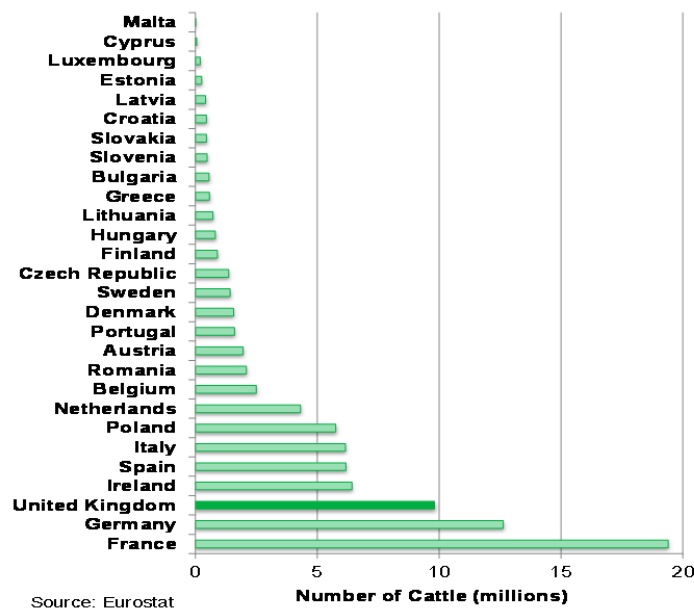


Figure 10: Number of sheep in 2015 by EU Member State



(data in figures 9 and 10 refer to December 2015, not June 2015)

Figure 11: Number of cattle in 2015 by EU Member State



Results Tables

Table 1: Summary of land use on agricultural holdings on 1 June

Thousand hectares

	2014	2015	2016	% change 2016-15
Utilised agricultural area ^(a)	17 240	17 147	17 222	0.4%
Total agricultural land (including common rough grazing)	18 456	18 428	18 538	0.6%
Common rough grazing	1 199	1 199	1 199	0.0%
Total area on agricultural holdings	17 257	17 229	17 339	0.6%
Total croppable area	6 278	6 059	6 064	0.1%
Total crops	4 722	4 679	4 667	-0.2%
Arable crops	4 559	4 505	4 507	0.1%
Cereals	3 179	3 100	3 129	0.9%
Oilseeds	691	670	608	-9.4%
Potatoes	141	129	136	6.2%
Other arable crops	548	606	634	4.6%
Horticultural crops	164	174	160	-7.8%
Uncropped arable land ^(b)	160	214	251	17.6%
Temporary grass under 5 years old	1 396	1 167	1 145	-1.9%
Permanent grassland (incl. rough grazing)	9 755	9 880	9 949	0.7%
Grass over 5 years old	5 824	6 078	6 130	0.9%
Sole right rough grazing ^(c)	3 930	3 801	3 819	0.5%
Other land on agricultural holdings	1 224	1 290	1 326	2.8%
Woodland	897	961	984	2.4%
Land used for outdoor pigs	8	9	10	12.5%
All other non-agricultural land	318	320	332	3.7%

(a) Includes all arable and horticultural crops, uncropped arable land, common rough grazing, temporary and permanent grassland and land used for outdoor pigs (excludes woodland and other non-agricultural land).

(b) Includes all arable land not in production, including GAEC12 land, game strips, wild bird cover and game cover.

(c) Classified as mountains, hills, heathland or moorland.

Table 2: Area of arable crops on agricultural holdings on 1 June

	Thousand hectares			
	2014	2015	2016	% change 2016-15
Total arable crops	4 559	4 505	4 507	0.1%
Cereals	3 179	3 100	3 129	0.9%
Wheat	1 936	1 832	1 824	-0.5%
Barley	1 080	1 101	1 123	2.0%
winter	429	442	438	-0.8%
spring	651	659	685	3.9%
Oats	137	131	141	7.6%
Minor cereals ^(a)	26	35	41	16.6%
Oilseed crops	691	670	608	-9.4%
Oilseed rape	675	652	579	-11.2%
winter	661	645	570	-11.8%
spring	14	7	9	36.6%
Linseed	15	15	27	81.6%
Borage	2	3	1	-54.1%
Potatoes	141	129	136	6.2%
Other (non-horticultural) crops	548	606	634	4.6%
Sugar beet (not for stock feeding)	116	90	86	-4.8%
Field beans	107	170	178	5.0%
Peas for harvesting dry	32	44	52	18.0%
Maize (incl. fodder and grain maize)	183	187	195	4.4%
Root crops, brassicas and fodder beet for stock feeding	39	41	43	4.1%
Other crops for stock feeding ^(b)	40	38	37	-1.1%
All other arable crops ^(c)	30	37	44	17.6%

(a) Minor cereals are a total of rye, mixed corn and triticale.

(b) Includes leguminous forage crops.

(c) Includes short rotation coppice, miscanthus and crops for aromatic or medicinal use.

Table 3: Yield of cereals and oilseed rape on agricultural holdings

	Tonnes per hectare					
	2012	2013	2014	2015	2016	% change 2016-15
Cereals^(a)	6.2	6.6	7.7	8.0	7.1	-11.5
Wheat	6.7	7.4	8.6	9.0	7.9	-11.6
Barley	5.5	5.8	6.4	6.7	5.9	-11.5
winter	6.4	6.4	7.2	7.7	6.4	-15.8
spring	5.0	5.7	5.9	6.0	5.4	-10.1
Oats	5.1	5.5	6.0	6.1	5.9	-2.9
Minor cereals ^(b)	4.0	4.4	5.0	3.5	3.2	-6.1
Oilseed rape^(c)	3.4	3.0	3.6	3.9	3.1	-21.5

(a) All cereal production estimates have been standardised to 14.5% moisture content.

(b) Minor cereals are a total of rye, mixed corn and triticale.

(c) Oilseed rape production estimates have been standardised to 9% moisture content.

Table 4: Production of cereals and oilseed rape on agricultural holdings

	Thousand tonnes					
	2012	2013	2014	2015	2016	% change 2016-15
Cereals^(a)	19 515	20 084	24 468	24 734	22 086	-10.7
Wheat	13 261	11 921	16 606	16 444	14 467	-12.0
Barley	5 522	7 092	6 911	7 370	6 652	-9.7
winter	2 456	1 983	3 094	3 382	2 825	-16.5
spring	3 066	5 110	3 817	3 988	3 723	-6.6
Oats	627	964	820	799	834	4.5
Minor cereals ^(b)	105	107	131	122	133	9.5
Oilseed rape^(c)	2 557	2 128	2 460	2 542	1 771	-30.4

(a) All cereal production estimates have been standardised to 14.5% moisture content.

(b) Minor cereals are a total of rye, mixed corn and triticale.

(c) Oilseed rape production estimates have been standardised to 9% moisture content.

Table 5: Area of fruit and vegetables grown in the open on agricultural holdings on 1 June

	Thousand hectares			
	2014	2015	2016	% change 2016-15
Total fruit and vegetables	149	159	146	-7.8%
Orchards ^(a)	23.4	25.9	25.1	-3.2%
Small fruit ^{(b)(c)}	9.4	10.0	10.1	1.2%
Strawberries	3.1	3.3	3.3	-1.0%
Other small fruit (incl. gooseberries and blackberries)	6.2	6.6	6.8	2.3%
Vegetables and salad for human consumption ^{(b)(d)}	116	123	111	-9.5%
Peas and beans	38	40	36	-8.9%
All other vegetables and salad	78	83	75	-9.8%

(a) Includes both commercial and non-commercial. Commercial orchards are those from which growers intend to sell fruit.

(b) Due to the small areas grown, some UK countries do not collect data on individual crops in this category. For these countries the areas are included in this total estimate only. Therefore the total estimate does not always sum to the component parts.

(c) Small fruit includes crops grown in Spanish tunnels.

(d) These figures relate to land usage on 1 June and are not necessarily good indicators of annual production as more than one crop may be obtained in each season, a crop may overlap two seasons, or may be planted after 1 June.

Table 6: Area of hardy nursery stock on agricultural holdings on 1 June

	Thousand hectares			
	2014	2015	2016	% change 2016-15
Total hardy nursery stock, bulbs and flowers ^(a)	12.0	12.7	11.5	-10.0%
Hardy nursery stock	5.8	5.5	5.4	-2.7%
Bulbs and flowers grown in the open	5.9	6.8	5.7	-16.4%

(a) Due to the small areas grown, some UK countries do not collect data on individual crops in this category. For these countries the areas are included in this total estimate only. Therefore the total estimate does not always sum to the component parts.

Table 7: Area of glasshouses and protected crops on agricultural holdings on 1 June ^{(a) (b)}

	Hectares			
	2014	2015	2016	% change 2016-15
Total glasshouse area on 1 June ^(c)	2 594	2 667	2 683	0.6%
Vegetables, salad and fruit	1 869	1 930	1 993	3.3%
Flowers, foliage and other plants	568	529	523	-1.1%
Not in use on 1 June	127	179	139	-22.4%

(a) These figures relate to land usage on 1 June and are not necessarily good indicators of annual production as more than one crop may be obtained in each season, a crop may overlap two seasons, or may be planted after 1 June.

(b) 'Glasshouse' includes any fixed or mobile structure high enough to walk through, which is glazed or clad with film, rigid plastics or other glass substitutes. It excludes lights, low plastic tunnels, French and Spanish tunnels. These are reported as crops grown in the open (table 5).

(c) Due to the small areas grown, some UK countries do not collect data on individual crops in this category. For these countries the areas are included in this total estimate only. Therefore the total estimate does not always sum to the component parts.

Table 8: Cattle and calves on agricultural holdings on 1 June ^(a)

	Thousands			
	2014	2015	2016	% change 2016-15
Total cattle and calves	9 837	9 919	10 033	1.1%
All female cattle	7 100	7 188	7 250	0.9%
Aged 2 years or more	4 228	4 238	4 204	-0.8%
Total breeding herd	3 411	3 472	3 493	0.6%
- Beef herd	1 569	1 576	1 596	1.2%
- Dairy herd	1 841	1 895	1 897	0.1%
Other female cattle	817	767	712	-7.2%
- Beef	409	381	365	-4.0%
- Dairy	408	386	346	-10.3%
Aged between 1 and 2 years	1 373	1 379	1 442	4.6%
- Beef	834	834	872	4.6%
- Dairy	539	545	570	4.6%
Less than 1 year	1 499	1 570	1 603	2.1%
- Beef	936	980	1 015	3.6%
- Dairy	563	590	588	-0.4%
All male cattle	2 737	2 730	2 783	1.9%
Aged 2 years or more	424	388	364	-6.0%
Aged between 1 and 2 years	1 011	1 001	1 032	3.1%
Less than 1 year	1 302	1 342	1 386	3.3%

(a) These figures have been sourced from the Cattle Tracing System (CTS) in England, Wales and Scotland and the equivalent APHIS system in Northern Ireland.

Table 9: Pigs on agricultural holdings on 1 June

	Thousands			
	2014	2015	2016	% change 2016-15
Total pigs	4 815	4 739	4 849	2.3%
Breeding pigs	501	507	512	0.9%
Female breeding herd	406	408	415	1.8%
Sows in pig	282	285	293	2.7%
Gilts in pig	57	56	57	1.7%
Other sows ^(a)	67	66	65	-1.8%
Other breeding pigs	95	100	97	-2.6%
Boars being used for service	14	15	15	0.1%
Gilts intended for first time breeding	80	85	82	-3.1%
Fattening pigs (incl. barren sows)	4 315	4 232	4 337	2.5%

(a) Either being suckled or dry sows being kept for further breeding.

Table 10: Sheep and lambs on agricultural holdings on 1 June

	Thousands			
	2014	2015	2016	% change 2016-15
Total sheep and lambs	33 743	33 337	33 507	0.5%
Female breeding flock	16 026	16 024	16 092	0.4%
Ewes intended for further breeding or for slaughter	13 515	13 278	13 305	0.2%
Ewes intended for first time breeding	2 511	2 746	2 787	1.5%
Other sheep and lambs	17 717	17 313	17 414	0.6%
Lambs under 1 year old	16 936	16 528	16 624	0.6%
Rams	417	408	407	-0.2%
Other sheep 1 year and over	364	377	383	1.5%

Table 11: Poultry on agricultural holdings on 1 June ^(a)

	Thousands			
	2014	2015	2016	% change 2016-15
Total poultry	169 684	167 579	tba	
Total breeding and laying fowl	48 404	49 509	tba	
Hens and pullets laying eggs for eating	37 146	36 998	tba	
Breeding flock	11 258	12 511	tba	
Table chickens (broilers)	110 374	107 056	tba	
Other poultry	10 907	11 014	tba	
Ducks	1 998	2 237	tba	
Geese	103	143	tba	
Turkeys	3 772	4 322	tba	
All other poultry	5 033	4 312	tba	

tba: to be announced. Estimates for poultry numbers will be published with the final results provisionally scheduled for 15 December 2016. The table has been included here to show historic results only.

(a) Due to production cycles, subgroups within the poultry population are often volatile as the 'point in time' nature of the June Survey can lead to large variations in the numbers in each category.

Table 12: All other livestock on agricultural holdings on 1 June

	Thousands			
	2014	2015	2016	% change 2016-15
Total other livestock	453	437	tba	
Goats	100	101	tba	
Farmed deer	32	31	tba	
Horses	303	283	tba	
Any livestock not recorded elsewhere ^(a)	18	22	tba	
- of which alpacas	9	12	tba	
- of which llamas	2	2	tba	

tba: to be announced. Estimates for poultry numbers will be published with the final results provisionally scheduled for 15 December 2016. The table has been included here to show historic results only.

(a) Includes camelids, donkeys and mules.

Table 13: Number of people working on agricultural holdings on 1 June

	Number of people (thousands)			% change 2016-15
	2014	2015	2016	
Total number of people working on agricultural holdings	476	476	tba	
Farmers, partners, directors and spouses	294	294	tba	
Full time	140	142	tba	
Part time ^(a)	155	152	tba	
Regular employees, salaried managers and casual workers	181	183	tba	
Regular employees ^(b)	115	115	tba	
- Full time	72	73	tba	
- Part time ^(a)	43	43	tba	
Casual workers	66	67	tba	

tba: to be announced. Estimates for poultry numbers will be published with the final results provisionally scheduled for 15 December 2016. The table has been included here to show historic results only.

(a) Part time is defined as working less than 39 hours per week.

(b) Not all UK countries collect separate estimates for salaried managers. These figures are included with regular employees.

Data uses and users

Land

- Data on crop areas (both arable and horticultural) help us monitor the long term trends in cropping. Amongst many other things, this helps us assess the impacts of the abolition of formal set-aside.
- The data will enable us to assess how land areas vary across the UK regions and in different geographic areas (such as the Uplands, National Parks, and River Basin Districts).
- The cereals and oilseed rape harvest estimates are heavily used by the cereals industry to monitor the availability of grain throughout the year.
- Any changes in the agricultural sector also affect people. For many, it is their livelihood and a way of life.

Livestock

- Data from the June Survey help us monitor changes in livestock populations over time and the effects of e.g. CAP reform on the industry.
- The numbers are also used to make forecasts of meat and milk production to inform industry of the availability of supply which affects prices.
- Livestock distributions across the UK help assess the risk of veterinary disease and to control outbreaks.
- The data are also used heavily in calculations of the greenhouse gas and ammonia emissions inventories.

Results from the England June Survey of Agriculture and Horticulture also have a wide range of uses and users with requests for data being made on a daily basis. A document providing information of specific uses and users can be found via the following link:

<https://www.gov.uk/government/statistical-data-sets/structure-of-the-agricultural-industry-in-england-and-the-uk-at-june>.

Other survey results and publications

Results from all the Defra farming surveys can be viewed on the Defra website via the following link:

https://www.gov.uk/government/publications?publication_filter_option=statistics. This also contains details of future publication dates.

The next Farming Statistics publications due from the June Survey of Agriculture and the Cereal and Oilseed Rape Production Survey are shown below. Please note that the publication dates are provisional and subject to change.

England Publications

- 27 October 2016: Farming Statistics final land use, livestock populations and agricultural workforce at 1 June 2016 – England.

UK Publications

- 15 December 2016: Farming Statistics final crop areas, yields, livestock populations and agricultural workforce at 1 June 2016 – United Kingdom.

More detailed results from the June Survey can be found at:

<https://www.gov.uk/government/statistical-data-sets/structure-of-the-agricultural-industry-in-england-and-the-uk-at-june>. This includes various time series of crop areas and livestock numbers dating back as early as 1866 and detailed geographical breakdowns of the results.

Methodology: June Survey of Agriculture and Horticulture

Data on crop areas and livestock populations are collected in the June Survey of Agriculture and Horticulture carried out by each of the UK agriculture departments. The methodology adopted by each country is below.

England

England results are the final results from the June Survey of Agriculture and Horticulture in 2016. The June Survey of Agriculture and Horticulture was historically a postal survey run annually. However from 2011 onwards, the survey has been run predominantly online with an option for farmers to complete a paper form if they preferred.

Approximately 55 thousand 'commercial' holdings were asked to complete the survey in 2016. Commercial holdings are defined as those with significant levels of farming activity, i.e. holdings with more than five hectares of agricultural land, one hectare of orchards, 0.5 hectares of vegetables or 0.1 hectares of protected crops, or more than 10 cows, 50 pigs, 20 sheep, 20 goats or 1,000 poultry.

Checks were carried out to ensure the sample was representative across farm size. The size of a farm is determined by its Standard Labour Requirement (SLR). In the SLR system, each livestock type and land-use has a theoretical amount of labour required each year. This value is multiplied by the land area or livestock numbers and then summed to give the SLR for the holding. The SLR represents the typical number of full time workers required on the holding.

The small farms (those with low SLRs) were sampled at a lower rate and the sampling rate increased with farm size as in [table 14](#) below. This method minimises the burden on farmers whilst maximising the coverage. To improve the coverage of the pig and poultry sectors, a special data collection exercise was run to collect data from a central point for some of the largest companies.

Table 14: June 2016 sample design

Stratum	Description	Sampling rate (%)	Population size
1	SLR < 0.5	26	45 803
2	SLR >= 0.5 and < 1	58	16 796
3	SLR >= 1 and < 2	68	15 277
4	SLR >= 2 and < 3	73	8 527
5	SLR >= 3 and < 5	88	7 534
6	SLR >= 5	87	7 661
10	SLR unknown	47	6 366
All		51	107 964

The results in this statistical release are based on responses from almost 28 thousand commercial holdings, representing a response rate of 51%.

The data are subject to rigorous validation checks which identify inconsistencies within the data or large year-on-year changes. Any records that have not been cleaned by the results production stage are excluded from the analysis.

Population totals are estimated for each question on the survey to account for the non-sampled and non-responding holdings. This survey uses the technique known as ratio raising, in which the trend between the sample data and base data (previous year's data) is calculated for each stratum. The calculated ratio is then applied to the previous year's population data to give England level estimates.

For holdings where we do not have base data (new holdings or long-term non-responders) the sample estimates are raised according to the inverse sampling fraction.

Cattle results are sourced from the Cattle Tracing System (CTS). The data include returns from all holdings with cattle so are not subject to survey error. More information on the use of this administrative data can be found on the "survey notes and guidance" web page via the following link: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/182225/defra-stats-foodfarm-landuselivestock-june-results-BovineRegisters.pdf

Final crop areas and cattle, sheep and pig populations from the England 2016 June Survey were published on 15 September 2016 and can be viewed on our website via the following link: <https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/series/structure-of-the-agricultural-industry>.

More details on the June Survey methodology can be found at: <https://www.gov.uk/structure-of-the-agricultural-industry-survey-notes-and-guidance>.

Scotland

This year with Scotland results not being published until later this month, crop areas and livestock numbers for 2015 have been carried forward to allow provisional UK totals to be calculated for 2016. However, as areas for cereals and oilseeds have already been published, provisional 2016 data has been used for these crops.

Data collection

The June Agricultural Census is conducted annually by the Scottish Government's Rural & Environment Science & Analytical Services (RESAS). Data for the June Census is collected from three sources:

- Land data extracted from the Single Application Form (SAF) database for around 25,000 holdings that were claiming Support Payments. These data are accurate as farmers can face penalties for supplying incorrect data. A cut-down survey form is sent to those holdings that completed a SAF in the previous year (as that year's SAF data were unavailable at the time census forms were issued) so that additional data on livestock and labour could be collected.
- From the remaining holdings who didn't complete a SAF in the previous year (around 27,000 holdings), a sample of between one quarter to one third of these holdings were sent a full census form covering land, livestock and labour.
- Cattle data for the census were obtained through the Cattle Tracing System (CTS), an administrative data source held by the British Cattle Movement Service (BCMS) which records cattle movements across Great Britain.

In terms of area, returns are received for around 90 per cent of land-use data, 100 per cent of cattle data, and 70 per cent of other data. Final June 2016 results for Scotland are scheduled for publication on 25 October 2016 by the Scottish Government Rural and Environment Science and Analytical Services (RESAS) division.

Contact details - Saughton House (Q Spur), Broomhouse Drive, Edinburgh, EH11 3XD (telephone: 0300 244 9709, email: agric.stats@scotland.gsi.gov.uk).

Wales

Wales do not produce provisional results for crop areas and livestock numbers so 2015 figures for Wales have been carried forward to allow UK totals to be calculated for 2016. Final results for Wales will be published by the Welsh Assembly Government in November 2016 at: www.wales.gov.uk/statistics. The publication date has not been finalised. For further details contact Agricultural Statistics, Welsh Government, Cathays Park, Cardiff, CF1 3NQ (telephone: Cardiff (02920) 825082).

Northern Ireland

In 2016 the Northern Ireland Agricultural and Horticultural Survey was conducted as a sample survey. A total of 20,100 forms were issued with provisional results based on 9,000 returned forms. Data for the cattle section is a complete census as it is extracted from the APHIS cattle tracing database. Data for the pig and poultry sections are also complete censuses extracted from the NI Annual Inventory of Pigs and Update of NI Bird Register respectively. Provisional results were published on 25 August 2016 by the Department of Agriculture, Environment and Rural Affairs for Northern Ireland, Dundonald House, Belfast, BT4 3SB (telephone: Belfast (02890) 525450) and are available on the internet at: www.daera-ni.gov.uk/topics/statistics/statistical-bulletins. Final results will be published on 24 November 2016.

Methodology: Cereal and Oilseed Rape Production Survey

England

Results are based on provisional results from the Cereal and Oilseed Rape Production Survey, a representative sample of cereal and oilseed rape growers across English regions and farm sizes. These provisional results are based on responses from 2,107 farms (60% response rate) across the country (see [table 15](#)).

Table 15: Provisional response rate for Cereal and Oilseed Rape Production Survey 2016 by region

English region	Number sampled	Number of responses	Response rate (%)
North East	171	81	47
North West and Merseyside	246	135	55
Yorkshire and the Humber	522	287	55
East Midlands	462	281	61
West Midlands	245	149	61
Eastern	885	585	66
South East and London	388	231	60
South West	581	358	62
Total	3500	2107	60

The Cereal and Oilseed Rape Production Survey gathers data on production tonnages and moisture content for the various cereal and oilseed rape crops and seeks confirmation of the planted areas for these crops gathered from the June Survey of Agriculture and Horticulture. All moisture contents are standardised to ensure production estimates are comparable. Cereal production estimates are standardised to 14.5% moisture content and oilseed rape to 9% moisture content, with production tonnages being adjusted accordingly. These data are then used to calculate regional yield estimates for each crop type. Yield estimates are applied to regional June crop areas to derive England production estimates for each of the cereal and oilseed rape crops.

Wales

No yield data were collected for Wales. The Welsh production figures have been estimated on a regional basis within Wales using the area estimates for wheat and barley from their June 2015 Survey along with the yields for the English regions bordering Wales.

Scotland

The 2016 estimates of production are based on provisional crop areas from the 2016 June Survey of Agriculture and Horticulture, along with crop yield estimates from discussions between Scottish Government analysts, industry experts and trade organisations

<http://www.gov.scot/Topics/Statistics/Browse/Agriculture-Fisheries/PubCerealHarvest>

Northern Ireland

Areas are based on provisional estimates from the 2016 June Survey of Agriculture and Horticulture. Production figures are based on yield estimates from the Northern Ireland Department of Agriculture, Environment and Rural Affairs.

Minor crops

The England cereals and oilseed production survey collects the same elements for rye as it does for the main cereal crops. Mixed corn and triticale are included in the minor cereals estimates of yield and

production in [tables 3](#) and [4](#). Mixed corn and triticale estimates are not derived from survey returns. The proportionate change in English winter barley yield since 2015 is applied to the 2015 estimate of mixed corn yield. Correspondently the proportionate change in English wheat yield is applied to the 2015 estimate of triticale. The derived yields are applied to the areas of mixed corn and triticale that have been estimated from England June survey returns.

England survey forms were sent to 75 holdings that reported a rye area in their June survey return. To date, useable returns have been received from 44 holdings; a response rate of 59% which is in line with the response rate of the survey as a whole of 60% at the time of processing the results for the provisional estimate.

Of these 44 returns 15 reported some cereal production from their rye crop. In the remaining 29 holdings all the rye was harvested wholecrop. Based on this small sample an England estimate of yield and production has been produced and included in minor cereals in this release. Not unexpectedly the confidence intervals around these estimates are much larger than main cereal crops. Yield estimates for rye, triticale and mixed corn will be published in the final release provisionally scheduled for 15 December 2016.

Scotland data includes triticale in the total cereals estimates. Mixed corn is estimated by Defra. Rye is currently excluded from the estimate.

Northern Ireland estimate areas for mixed corn and triticale but do not estimate forecast yields due to the very small areas grown. Estimated Great Britain yields are applied. Rye is not included.

Wales include the minor crops in their "other combinable cereals" category.

Data notes

The cereal production (tonnage) figures include tail corn, cereals still to be harvested for grain, grain to be crimped and cereals intended for seed production. The figures exclude crops which have become unfit for harvesting, carry over stocks from the 2015 harvest, bought in grain and crops harvested as wholecrop for silage.