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Farming Statistics Provisional crop areas, yields and livestock populations At June 2019 - 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 2019. 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 19 December 2019. Wales do not produce provisional results. Therefore, crop areas and livestock numbers for 2018 (with the exception of cattle) have been carried forward for Wales to allow UK totals to be calculated for 2019. 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 to just over 17.5 million hectares. The area of total crops and permanent grassland have also seen increases, whereas uncropped arable land has seen a 15.4% decrease.

Crop yields and production (Tables 3 - 4)

Provisional results for 2019 show higher yields for cereal and oilseed crops when compared with the varying yields and below average production seen in 2018. Yield changes were largely consistent across the regions of the UK.

Wheat

Wheat production in the UK increased by 20.1%, from 13.6 million tonnes in 2018 to 16.3 million tonnes in 2019. The UK yield of 9.0 tonnes per hectare is higher than the five year average of 8.3 tonnes per hectare.

Barley

Total barley production increased by 25.6%, from 6.5 million tonnes in 2018 to 8.2 million tonnes in 2019. The increase was largely due to a higher yield, which increased by 22.7%, from 5.7 tonnes per hectare in 2018 to 7.0 tonne per hectare in 2019. Winter and spring barley both saw increased levels of production in 2019.

Oats

The planted area of oats increased by 6.1% to 182 thousand hectares. The UK yield increased by 19.9% to 6.0 tonnes per hectare and similar increases were seen in England, Scotland and Northern Ireland. This resulted in an estimated production increase of 27.2% to 1.1 million tonnes in 2019.

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Oilseed Rape

The provisional oilseed rape harvest has shown a decrease of 13.0% to just under 1.8 million tonnes in 2019. This was caused by a decrease of 9.2% in the planted area and a decrease in total oilseed rape yield of 4.2%, from 3.4 tonnes per hectare in 2018 to 3.3 tonnes per hectare in 2019. This is just below the five year average.

Horticultural crops (Tables 5 - 7)

In 2019 the total area of horticultural crops decreased by 0.9% to 163 thousand hectares. Vegetables and salad for human consumption make up the majority (70%) of this area and decreased by 1.2% to 115 thousand hectares in 2019.

Livestock (Tables 8 - 12)

The total number of cattle and calves in the UK fell by 1.4% in 2019 to 9.7 million. The female breeding herd accounts for over a third of the total cattle and stands at 3.4 million head in 2019.

For pigs, the female breeding herd in 2019 saw very little change, remaining at 409 thousand. Fattening pigs decreased slightly by 0.8% to just under 4.5 million head. The total number of pigs now stands at just under 5.0 million head, a decrease of 0.7%.

In 2019, the number of lambs in the UK remained almost unchanged at 16.6 million and the female breeding flock decreased by 1.2%. This led to a total UK sheep and lamb population of 33.6 million, a decrease of 0.6% compared to 2018.

Estimates for poultry, horses, goats, farmed deer and camelids will be included in the final publication provisionally scheduled for 19 December 2019.

Agricultural workforce (Table 13)

The total number of people working on agricultural holdings will be included in the final publication provisionally scheduled for 19 December 2019.

Key country level changes

<u>Figure 1</u> shows how the UK percentage change for certain items compares to the country level changes. Although all countries are showing an increase in wheat area, the increase seen in the wheat area in England has driven the larger UK level change. This is due to the majority (92%) of wheat being grown in England.

Figure 1: Percentage changes between 2018 and 2019 by UK country

	UK	England	Scotland	N. Ireland
	% change	% change	% change	% change
Wheat area	3.8	3.6	7.7	17.9
Potatoes area	3.6	3.4	4.1	8.7
Pigs	-0.7	0.5	0.8	-9.4
Sheep	-0.6	-1.7	1.1	-1.4
Cattle	-1.4	-1.7	-1.6	-0.5

Note: Wales do not produce provisional results for crop areas or livestock numbers. Therefore 2018 figures for Wales are used to calculate provisional UK totals for 2019.

Data uses, next publications, survey methodology and feedback (pages 18 - 24)

Information on how each of the UK countries run their surveys can be found on pages 18 to 24 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 2019 the total utilised agricultural area in the UK was just over 17.5 million hectares, covering 72% of the UK land area. Figure 2 shows that the total utilised agricultural area has remained between 17 and 18 million hectares since 2000.

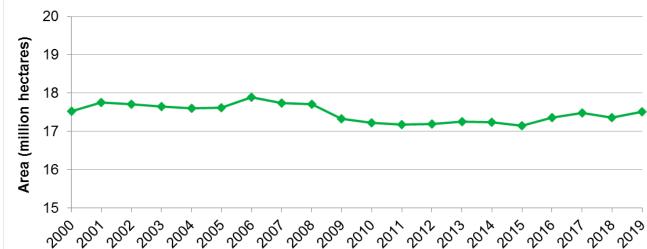


Figure 2: Total utilised agricultural area at 1 June 2000 to 2019

Croppable area

Croppable area consists of cereals, oilseed, potatoes, other arable crops, horticultural crops, uncropped arable land and temporary grass. In 2019, the croppable area rose by 0.7% to 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 2018 and 2019, however some categories did see large value changes (Table 1). The largest proportional change in area was uncropped arable land which decreased by 15.4%, however it still only accounts for 4% of the total croppable area. Potatoes saw the largest increase of 3.6%.

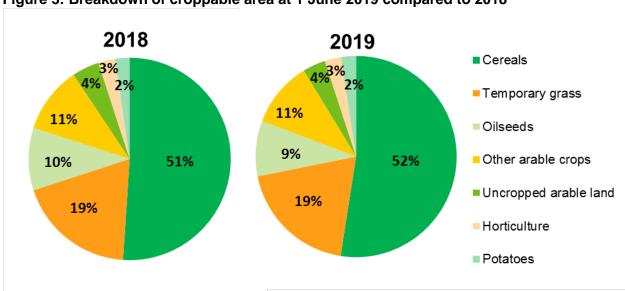


Figure 3: Breakdown of croppable area at 1 June 2019 compared to 2018

Cereals and oilseeds

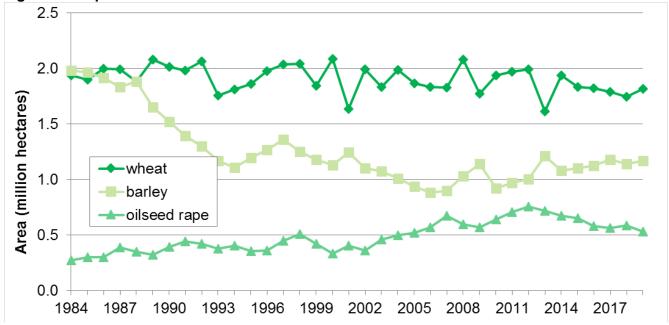


Figure 4: Crop areas in the UK between 1984 and 2019

<u>Figure 4</u> 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, there has been a modest increase over the last 5 years and the total barley area now stands at 1.2 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, and now stands at 529 thousand hectares.

As a whole, yields for all cereal crops are similar to, and in some cases are exceeding, those seen during the peak harvest of 2015. Varying yields were seen in 2018 resulting in below average production but provisional results for 2019 show higher and more consistent yields across regions of the UK. The overall yield for total cereals is showing a 17.9% increase from 6.8 tonnes per hectare in 2018 to 8.0 tonnes per hectare in 2019. As a result of the increase in yield, total cereal production has increased by 21.9% to 25.7 million tonnes.

As expected the yields for individual crops differ greatly (Figure 5). The provisional UK wheat yield in 2019 is 9.0 tonnes per hectare which matches the previously seen peak in 2015. This is an increase of 15.7% on the 2018 level and is above the five year average. The UK barley yield has exceeded that seen in 2015 and now sits at 7.0 tonnes per hectare. Yields for oilseed rape show a small decrease of 4.2% on the 2018 level of 3.4 tonnes per hectare to now stand at an estimated 3.3 tonnes per hectare, which is just below the five year average of 3.6 tonnes per hectare.

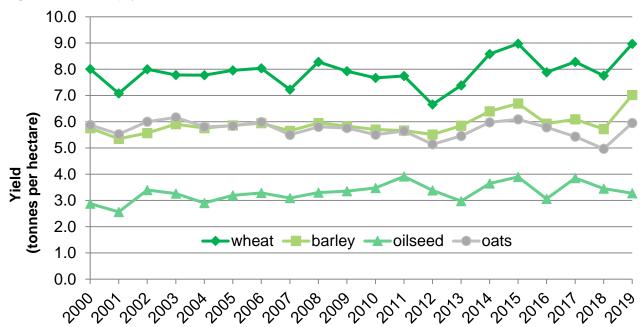


Figure 5: UK crop yields between 2000 and 2019

Wheat

Wheat production in the UK increased by 20.1%, from 13.6 million tonnes in 2018 to 16.3 million tonnes in 2019. The UK yield of 9.0 tonnes per hectare is higher than the five year average of 8.3 tonnes per hectare. The increased yield combined with a 3.8% increase in area, led to the increased production in 2019.

Barley

Winter and spring barley both saw increased levels of production in 2019 when compared with 2018. Spring barley increased by 19.1% in 2019 to 4.6 million tonnes. A 5.0% decrease in the area was more than offset by a 25.4% increase in the spring barley yield which rose from 5.2 tonnes per hectare to 6.5 tonnes per hectare. Winter barley production increased by 35.3% to 3.5 million tonnes in 2019. This is explained by an increase in the winter barley area of 16.9% to 452 thousand hectares, as well as a higher yield of 7.9 tonnes per hectare in 2019. The combined total yield for barley sits at 7.0 tonnes per hectare for 2019, above the five year average of 6.2 tonnes per hectare.

Oats

The planted area of oats increased by 6.1% to 182 thousand hectares. The UK yield increased by 19.9% to 6.0 tonnes per hectare and similar increases were seen in England, Scotland and Northern Ireland. This resulted in an estimated production increase of 27.2% to 1.1 million tonnes in 2019.

The combined effect of changes in areas planted and the achieved yields can be seen in the production estimates in <u>figure 6</u> and <u>table 4</u>.

18
16
14
12
10
8
6
4
2017

Five year average (2014-2018)

Figure 6: Estimates of crop production in the UK: 2017 to 2019

Oilseed Rape

0

Wheat

The provisional oilseed rape harvest has shown a decrease of 13.0% to just under 1.8 million tonnes in 2019. This was caused by a decrease of 9.2% in the planted area and a decrease in total oilseed rape yield of 4.2%, from 3.4 tonnes per hectare in 2018 to 3.3 tonnes per hectare in 2019. This is just below the five year average.

Spring barley

Oats

Winter barley

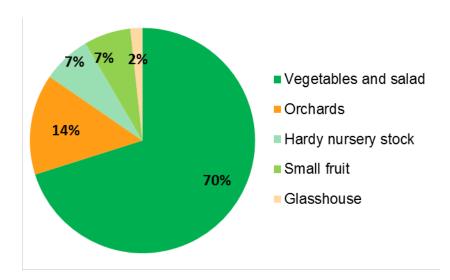
Minor cereal crops

Grain production from the minor cereal crops (rye, mixed corn and triticale) comprises only 0.7% of the UK total cereal estimate and provisional estimates for the 2019 harvest of minor crops 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 0.9% between 2018 and 2019 and now stands at 163 thousand hectares.

Figure 7: Breakdown of total horticultural area at 1 June 2019



The area of vegetables and salad for human consumption saw a small increase between 2018 and 2019 but still accounts for 70% of the total horticultural area (see Figure 7). Orchards and small fruit together account for a further 21% of the horticultural area with hardy nursery stock and glasshouse accounting for the remaining 7% and 2% respectively.

Oilseed

Cattle

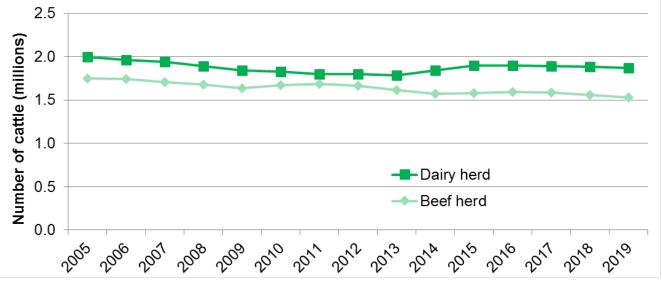


Figure 8: Dairy and beef herd numbers at June 2005 to 2019

In 2019, the total number of cattle and calves in the UK is 9.7 million head. The breeding herd accounts for over a third of total cattle and fell by 1.2% to 3.4 million in 2019. The beef and dairy herds have remained largely unchanged in recent years at approximately 1.5 and 1.9 million animals respectively (Figure 8).

Pigs

The total number of pigs in the UK decreased by 0.7% in 2019 and now stands at just under 5 million animals. The female breeding herd remained unchanged at 409 thousand animals.

Sheep

In 2019, the number of lambs in the UK decreased slightly to 16.6 million and the female breeding flock decreased by 1.2%. This led to a total UK sheep and lamb population of 33.6 million, a decrease of 0.6% compared to 2018.

Comparisons to other EU countries

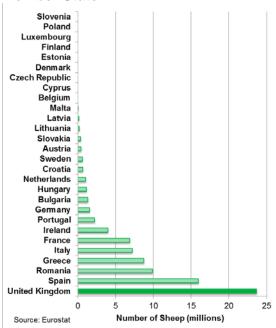
Data on livestock populations are collected each year under EU Regulation 1165/2008 (cattle, pigs and sheep) and 543/2009 (crops and land). Therefore, results can be compared across EU Member States. Data are available to search and download on the Eurostat website at http://ec.europa.eu/eurostat/web/agriculture/data/main-tables

According to the data from 2018, the UK is the 7th largest cereal producer, the largest producer of sheep and the 3rd largest producer of cattle of the EU 28 Member States. <u>Figures 9 to 11</u> below show the comparison of these activities across all Member States.

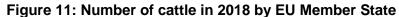
Figure 9: Cereal areas in 2018 by EU Member State

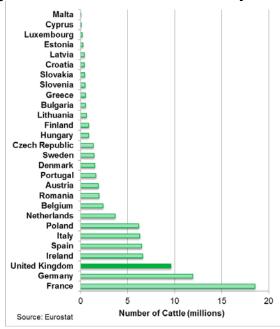
Malta Cyprus Luxembourg Slovenia Netherlands Portugal Ireland Belgium Estonia Croatia Latvia Slovakia Austria Greece Finland Sweden Lithuania Czech Republic Denmark Bulgaria Hungary United Kingdom Italy Romania Spain Germany Poland France 8 0 2 4 6 10 Cereals area (million hectares) Source: Eurostat

Figure 10: Number of sheep in 2018 by EU Member State



(data in figures 10 and 11 refer to December 2017, not June 2017)





Results Tables

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

Thousand hectares

	2017	2018	2019	% change 2019-18
Utilised agricultural area ^(a)	17 476	17 361	17 505	0.8
Total agricultural land (including common rough grazing)	18 835	18 703	18 808	0.6
Common rough grazing	1 198	1 195	1 197	0.2
Total area on agricultural holdings	17 637	17 509	17 611	0.6
Total croppable area	6 131	6 084	6 125	0.7
Total crops Arable crops Cereals Oilseeds Potatoes Other arable crops Horticultural crops Uncropped arable land (b)	4 745 4 577 3 181 590 145 661 168	4 667 4 502 3 106 609 140 647 167	4 716 4 552 3 214 547 145 647 163	1.0 1.1 3.5 -10.3 3.6 0.0 -0.9
Temporary grass under 5 years old	1 144	1 152	1 186	2.9
Permanent grassland (incl. rough grazing)	10 138	10 072	10 172	1.0
Grass over 5 years old Sole right rough grazing (c)	6 135 4 003	6 178 3 895	6 190 3 982	0.2 2.2
Other land on agricultural holdings	1 368	1 353	1 314	-2.9
Woodland Land used for outdoor pigs All other non-agricultural land	1 037 10 321	1 016 10 326	1 021 10 282	0.5 -0.1 -13.5

⁽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

			rnousand nectares	
	2017	2018	2019	% change 2019-18
Total arable crops	4 577	4 502	4 552	1.1
Cereals	3 181	3 106	3 214	3.5
Wheat	1 792	1 748	1 815	3.8
Barley	1 177	1 138	1 166	2.4
winter	423	387	452	16.9
spring	754	751	714	-5.0
Oats	161	171	182	6.1
Minor cereals (a)	52	49	52	6.0
Oilseed crops	590	609	547	-10.3
Oilseed rape	562	583	529	-9.2
winter	554	575	525	-8.8
spring	9	8	5	-43.4
Linseed	26	25	15	-38.1
Borage	1	2	2	38.0
Potatoes	145	140	145	3.6
Other (non-horticultural) crops	661	647	647	0.0
Sugar beet (not for stock feeding)	111	114	108	-5.6
Field beans	193	155	137	-11.4
Peas for harvesting dry	40	38	41	7.5
Maize (incl. fodder and grain maize) Root crops, brassicas and fodder beet for	197	221	226	2.3
stock feeding	42	45	55	22.9
Other crops for stock feeding (b)	39	41	43	5.2
All other arable crops (c)	39	33	37	10.8

⁽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
	2015	2016	2017	2018	2019	% change 2019-18
Cereals ^(a)	8.0	7.0	7.2	6.8	8.0	17.9
Wheat	9.0	7.9	8.3	7.8	9.0	15.7
Barley	6.7	5.9	6.1	5.7	7.0	22.7
winter	7.7	6.4	7.0	6.8	7.9	15.8
spring	6.0	5.6	5.6	5.2	6.5	25.4
Oats	6.1	5.8	5.4	5.0	6.0	19.9
Minor cereals (b)	3.5	2.7	2.3	3.5	3.3	-6.3
Oilseed rape ^(c)	3.9	3.1	3.9	3.4	3.3	-4.2

⁽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

					Thou	sand tonnes
	2015	2016	2017	2018	2019	% change 2019-18
Cereals ^(a)	24 734	21 967	22 999	21 085	25 712	21.9
Wheat	16 444	14 383	14 837	13 555	16 283	20.1
Barley	7 370	6 655	7 169	6 510	8 180	25.6
winter	3 382	2 823	2 948	2 623	3 548	35.3
spring	3 988	3 832	4 220	3 887	4 631	19.1
Oats	799	816	875	850	1 082	27.2
Minor cereals (b)	122	110	119	169	168	-0.6
Oilseed rape ^(c)	2 542	1 775	2 167	2 012	1 750	-13.0

⁽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 % change 2017 2018 2019 2019-18 **Total fruit and vegetables** 152 150 149 -0.8 Orchards (a) 24.4 23.9 23.6 -1.2 Small fruit (b) (c) 10.7 10.6 11.0 3.8 Strawberries 3.1 3.0 2.9 -2.8 Other small fruit (incl. gooseberries and 7.6 7.6 8.0 6.4 blackberries) Vegetables and salad for human 117 116 -1.2 115 consumption(b)(d) Peas and beans 39 39 40 3.5 78 75 All other vegetables and salad 77 -3.5

⁽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

			Thousa	and hectares
	2017	2018	2019	% change 2019-18
Total hardy nursery stock, bulbs and flowers (a)	12.5	11.7	11.4	-2.2
Hardy nursery stock	5.0	4.6	4.5	-2.7
Bulbs and flowers grown in the open	7.1	6.7	6.6	-1.9

⁽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
	2017	2018	2019	% change 2019-18
Total glasshouse area on 1 June (c)	2 807	2 867	2 827	-1.4
Vegetables, salad and fruit	2 098	2 225	2 219	-0.3
Flowers, foliage and other plants	546	465	478	2.9
Not in use on 1 June	136	153	106	-30.4

⁽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
	2017	2018	2019	% change 2019-18
Total cattle and calves	10 004	9 891	9 748	-1.4
All female cattle	7 240	7 167	7 082	-1.2
Aged 2 years or more	4 193	4 149	4 078	-1.7
Total breeding herd - Beef herd - Dairy herd	3 481 1 589 1 891	3 441 1 558 1 883	3 398 1 527 1 871	-1.2 -2.0 -0.6
Other female cattle - Beef - Dairy	712 366 346	708 378 330	680 387 293	-3.9 2.4 -11.2
Aged between 1 and 2 years - Beef - Dairy	1 464 898 567	1 443 921 522	1 437 914 523	-0.4 -0.8 0.2
Less than 1 year - Beef - Dairy	1 583 1 040 543	1 575 1 032 543	1 567 1 029 538	-0.5 -0.3 -1.0
All male cattle Aged 2 years or more Aged between 1 and 2 years Less than 1 year	2 763 355 1 051 1 357	2 723 355 1 035 1 333	2 666 356 1 014 1 297	-2.1 0.0 -2.1 -2.7

⁽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
	2017	2018	2019	% change 2019-18
Total pigs	4 969	5 012	4 977	-0.7
Breeding pigs	512	504	504	0.0
Female breeding herd	417	409	409	0.0
Sows in pig	297	289	292	0.8
Gilts in pig	55	58	57	-1.7
Other sows (a)	64	63	61	-2.5
Other breeding pigs	95	94	94	0.2
Boars being used for service	14	13	12	-6.1
Gilts intended for first time breeding	81	81	82	1.2
Fattening pigs (incl. barren sows)	4 457	4 509	4473	-0.8

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

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

	J			Thousands
	2017	2018	2019	% change 2019-18
Total sheep and lambs	34 832	33 781	33 569	-0.6
Female breeding flock	16 669	16 286	16 083	-1.2
Ewes intended for further breeding or for slaughter	13 762	13 572	13 454	-0.9
Ewes intended for first time breeding	2 907	2 714	2 629	-3.1
Other sheep and lambs	18 163	17 495	17 486	-0.1
Lambs under 1 year old	17 340	16 621	16 616	0.0
Rams	417	407	410	0.7
Other sheep 1 year and over	405	467	459	-1.6

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

				Thousands
	2017	2018	2019	% change 2019-18
Total poultry	181 818	188 442	tba	
Total breeding and laying fowl	52 939	53 623	tba	
Hens and pullets laying eggs for eating	39 510	39 852	tba	
Breeding flock	13 429	13 771	tba	
Table chickens (broilers)	117 619	123 946	tba	
Other poultry	11 260	10 872	tba	
Ducks	2 301	2 069	tba	
Geese	160	157	tba	
Turkeys	4 149	4 124	tba	
All other poultry	4 651	4 522	tba	

tba: to be announced. Estimates for poultry numbers will be published with the final results provisionally scheduled for 19 December 2019. The table has been included here to show historic results only.

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

Any livestock not recorded elsewhere (a)

- of which alpacas

- of which llamas

(a) Includes camelids, donkeys and mules.

Total other livestock

Horses

Farmed deer

Goats

% change 2017 2018 2019 2019-18 422 418 tba 105 108 tba 31 34 tba 258 tba 250

tba

tba

tba

Thousands

tba: to be announced. Estimates for poultry numbers will be published with the final results provisionally scheduled for 19 December 2019. The table has been included here to show historic results only.

27

13

2

26

9

2

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

Number of people (thousands) % change 2019 2017 2018 2019-18 Total number of people working on agricultural holdings 474 477 tba Farmers, partners, directors and spouses 294 296 tba Full time 141 145 tba Part time(c) 153 152 tba Regular employees, salaried managers and casual workers 180 181 tba Regular employees^{(a)(b)} na na na - Full time na na na - Part time(c) na na na Casual workers(b) na na na

tba: to be announced. Estimates for poultry numbers will be published with the final results provisionally scheduled for 19 December 2019. The table has been included here to show historic results only.

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

⁽b) From 2016 Wales no longer provide a breakdown for these categories, for more information please see their publication: http://gov.wales/statistics-and-research/survey-agricultural-horticulture/?lang=en

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

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

• 24 October 2019: Farming Statistics land use, livestock populations and agricultural workforce at 1 June 2019 – England.

UK Publications

• 19 December 2019: Farming Statistics final crop areas, yields, livestock populations and agricultural workforce at 1 June 2019 – 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 2019. 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 35 thousand 'commercial' holdings were asked to complete the survey in 2019. 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 <u>table 14</u> 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 2019 sample design

Stratum	Description	Sampling rate (%)	Population size
1	SLR < 0.5	16%	46 771
2	SLR >= 0.5 and < 1	22%	16 161
3	SLR >= 1 and < 2	36%	13 942
4	SLR >= 2 and < 3	52%	7 541
5	SLR >= 3 and < 5	72%	7 593
6	SLR >= 5	86%	7 847
10	SLR unknown	33%	7 737
All		32%	107 592

The results in this statistical release are based on responses from almost 22 thousand commercial holdings, representing a response rate of 62%.

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/system/uploads/attachment_data/file/182225/defra-stats-foodfarm-landuselivestock-june-results-BovineRegisters.pdf

Crop areas and cattle, sheep and pig populations from the England 2019 June Survey were published on 26 September 2019 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

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 22,700 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 28,600 holdings), a sample of around 40 per cent (10,300) 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 84 per cent of land-use data, 100 per cent of cattle data, and 66 per cent of other data. Final June 2019 results for Scotland were published on 8 October 2019 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 9699, (telephone: 0300 244 9699, email: agric.stats@gov.scot).

Wales

Wales do not produce provisional results for crop areas and livestock numbers so 2018 figures for Wales have been carried forward to allow UK totals to be calculated for 2019. Final results for Wales will be published by the Welsh Government in November 2019 at: www.wales.gov.uk/statistics. The publication date has not been finalised. For further details contact Agricultural Statistics, Welsh Government, Cathays Park, Cardiff, CF10 3NQ (telephone: 03000 252244).

Northern Ireland

In 2019 the Northern Ireland Agricultural and Horticultural Survey was conducted as a sample survey. A total of 20,200 forms were issued with provisional results based on 10,000 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. Final results will be published on 28 November 2019 by the Department of Agriculture, Environment and Rural Affairs for Northern Ireland, Dundonald House, Belfast, BT4 3SB (telephone: Belfast (028) 905 25450).

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 1,916 farms (43% response rate) across the country (see <u>table 15</u>).

Table 15: Provisional response rate for Cereal and Oilseed Rape Production Survey 2019 by

region

English region	Number sampled	Number of responses	Response rate (%)
North East	203	76	37%
North West and Merseyside	280	112	40%
Yorkshire and the Humber	673	305	45%
East Midlands	696	303	44%
West Midlands	551	229	42%
Eastern	829	356	43%
South East and London	483	205	42%
South West	764	330	43%
Total	4479	1916	43%

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

Wales do not produce provisional yield estimates for cereal and oilseed rape crops so 2018 figures for Wales have been carried forward to allow UK totals to be calculated for 2019. Final results for Wales will be published by the Welsh Government in November 2019 at: www.wales.gov.uk/statistics. The publication date has not been finalised. For further details contact Agricultural Statistics, Welsh Government, Cathays Park, Cardiff, CF10 3NQ (telephone: 03000 252244).

Scotland

The 2019 estimates of production are based on provisional crop areas from the 2019 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 2019 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 from 2018 to 2019 is applied to the 2018 estimate of mixed corn yield. Correspondingly the proportionate change in English wheat yield is applied to the 2018 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 120 holdings that reported a rye area in their June survey return. To date, useable returns have been received from 41 holdings; a response rate of 34% which is lower than the response rate of the survey as a whole of 43% at the time of processing the results for the provisional estimate.

Of these 41 returns, 11 reported some cereal production from their rye crop. In the remaining 30 holdings all the rye was harvested wholecrop. Based on this small sample an England estimate of yield and production for rye is included in the minor cereals category in this release. Not unexpectedly the confidence intervals around these estimates are much larger than the main cereal crops.

Scotland estimate areas for triticale, mixed corn and rye but do not estimate forecast yields due to the very small areas grown. Estimated England yields are applied.

Northern Ireland estimate areas for mixed corn and triticale but do not estimate forecast yields due to the very small areas grown. Estimated England 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 2018 harvest, bought in grain and crops harvested as wholecrop for silage.

National Statistics Status

National Statistics status means that our statistics meet the highest standards of trustworthiness, quality and public value, and it is our responsibility to maintain compliance with these standards.

The continued designation of these statistics as National Statistics was confirmed in 2014 following a <u>full assessment</u> by the UK Statistics Authority against the <u>Code of Practice for Statistics</u>.

Since the last review of these statistics in 2014, we have continued to comply with the Code of Practice for Statistics, and have made improvements including:

- Reviewed and amended the validation checks carried out on response data including validation against new administrative data sources to better assure ourselves of the quality of the statistics.
- Enhanced trustworthiness by removing pre-release access

Feedback

We welcome feedback and any thoughts to improve the publication further. Please send any feedback to: farming-statistics@defra.gov.uk. Suggested questions to help you structure your feedback are below but all feedback is welcome:

- How relevant is the current content of the publication to your needs as a user?
- What purpose do you require the data for?
- Which data do you find most useful?
- Is there any content that you did not find useful?
- Do you have any suggestions for further development of this release; including additional content, presentation and any other thoughts?

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