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# Farming Statistics Final crop areas, yields, livestock populations and agricultural workforce At June 2019 - United Kingdom

This release contains the final estimates for land use, crop areas, livestock populations, the agricultural workforce on agricultural holdings in the UK and the size of the UK cereals and oilseed rape harvest for 2019. These results replace those provisional results published on 10 October 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 increased by 1.0% to 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)

Final results for 2019 show higher and more consistent yields across the regions of the UK. This has resulted in increased cereal production in 2019, compared with 2018 when varying yields were seen resulting in below average production.

## Wheat

A 15.2% increase in the wheat yield to 8.9 tonnes per hectare and a 3.9% increase in planted area resulted in a 19.7% increase in wheat production, from 13.6 million tonnes in 2018 to 16.2 million tonnes in 2019.

## **Barley**

Winter and spring barley both saw increased levels of production in 2019. Spring barley production increased by 15.7% in 2019 to 4.5 million tonnes and production of winter barley increased by 35.4% in 2019 to 3.6 million tonnes. The combined total yield for barley sits at 6.9 tonnes per hectare for 2019, above the five year average of 6.2 tonnes per hectare.

## **Oats**

The planted area of oats increased by 6.0% to 182 thousand hectares. The UK yield increased by 19.3% to 5.9 tonnes per hectare and this resulted in a large estimated UK production increase of 26.5% to 1.1 million tonnes in 2019.

**Enquiries on this publication to** Sarah Thompson (crop areas and livestock numbers) or Caitlin Clark (cereal and oilseed production and yields), Farming Statistics, Department for Environment, Food and Rural Affairs. Tel: 03000 600170, email: <a href="mailto:farming-statistics@defra.gov.uk">farming-statistics@defra.gov.uk</a>.

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## Oilseed Rape

The oilseed rape harvest has shown a decrease of 12.9% to 1.8 million tonnes in 2019. There was a decrease of 9.2% in the planted area, and a decrease in total oilseed rape yield of 4.1% to 3.3 tonnes per hectare in 2019. This is below the five year average of 3.6 tonnes per hectare.

# Horticultural crops (Tables 5 - 7)

In 2019 the total area of horticultural crops decreased by 1.0% to 163 thousand hectares. Vegetables and salad for human consumption make up the majority (70%) of this area and saw a decrease of 1.2% to 115 thousand hectares in 2019.

# Livestock (Tables 8 - 12)

The total number of cattle and calves in the UK fell by 1.5% 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 an increase of 1.0% compared to 2018, and with fattening pigs also increasing by 1.3% to 4.6 million head, the total number of pigs increased by 1.3% and now stands at almost 5.1 million head.

Total sheep and lambs in the UK decreased by 0.6% in 2019, to 33.6 million animals. This was largely due to a 1.5% decrease in the number of female breeding flock, which now stands at just over 16 million.

Total poultry decreased by 0.8% to 187 million birds in 2019. This decrease was largely due to the 2.0% fall in broiler numbers (table chickens) to 121 million birds, which accounted for almost two thirds of the total.

# Agricultural workforce (Table 13)

The total number of people working on agricultural holdings in the UK in 2019 fell by 0.3% to 476 thousand.

# **Key country level changes**

<u>Figure 1</u> shows how the UK percentage change for certain items compares to the country level changes. Although Wales is showing a large decrease in potatoes area, this has been offset by the increase seen in the potato area in England resulting in the UK total increasing. This is due to the largest proportion of this crop being grown in England.

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

	UK	England	Scotland	N. Ireland	Wales
<u>.                                  </u>	% change	% change	% change	% change	% change
Wheat area	3.9	3.6	7.7	18.4	5.3
Potatoes area	2.7	3.4	4.1	4.9	-28.8
Pigs	1.3	0.5	0.8	6.4	5.3
Sheep	-0.6	-1.7	1.1	-1.0	0.0
Cattle	-1.5	-1.7	-1.6	-1.1	-1.3

Data uses, next publications and 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.

# 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 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.

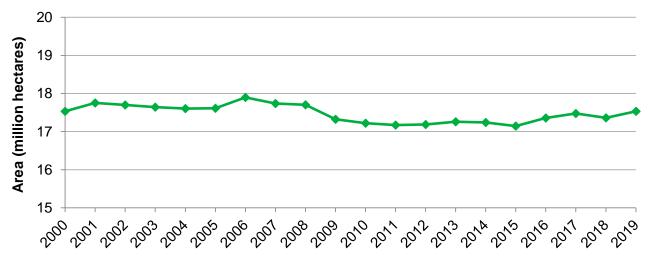


Figure 2: Total utilised agricultural area at 1 June 2000 to 2019

## 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 0.8% to 6.1 million hectares. This represents over a third of the UK utilised agricultural area.

<u>Figure 3</u> 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 (<u>Table 1</u>). 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. Temporary grass saw the largest proportional increase of 3.6%.

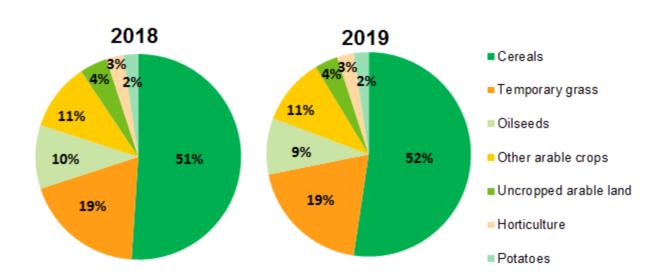


Figure 3: Breakdown of croppable area at 1 June 2019 compared to 2018

## Cereals and oilseeds

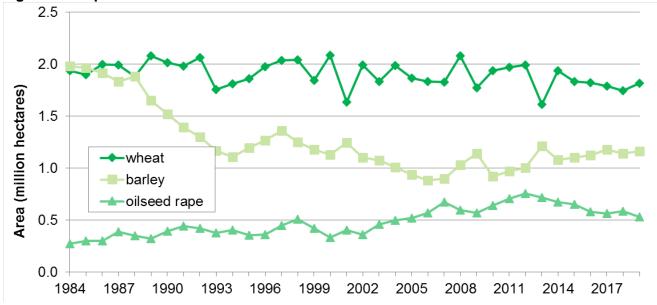


Figure 4: Crop areas in the UK between 1984 and 2019

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 2019 has seen an increase of 2.1% to almost 1.2 million hectares, compared to 1.1 million hectares in 2018. The oilseed rape area increased from 269 thousand hectares in 1984, reaching a peak of 756 thousand hectares in 2012. Since then the area has decreased each year until 2018 when an increase of 3.7% to 583 thousand hectares was seen. In 2019, the area has once again seen a decrease of 9.2% to 530 thousand hectares.

As a whole, yields for cereal crops are similar to, and in some cases are exceeding, those seen during the peak harvest of 2015. The overall yield for total cereals is showing a 17.1% increase from 6.8 tonnes per hectare in 2018 to 7.9 tonnes per hectare in 2019. The 2018 harvest was affected by the weather (high rainfall in spring and a long dry spell with high temperatures in the summer) causing varying yields across regions of the UK. As a result of the increase in yield in 2019, total cereal production has increased by 21.0% to 25.5 million tonnes.

As expected, the yields for individual crops differ (Figure 5). The UK wheat yield reached a peak in 2015 of 9.0 tonnes per hectare, the highest it has been in the past 25 years. 2019 has seen a similar wheat yield of 8.9 tonnes per hectare, an increase of 15.2% on the 2018 level, and above the five year average of 8.3 tonnes per hectare. The UK barley yield previously peaked in 2015 at 6.7 tonnes per hectare, but was surpassed in 2019 with a yield of 6.9 tonnes per hectare. Yields for oilseed rape in 2019 show a decrease of 4.1% on the 2018 figure and now stands at an estimated 3.3 tonnes per hectare, which is below the five year average of 3.6 tonnes per hectare.

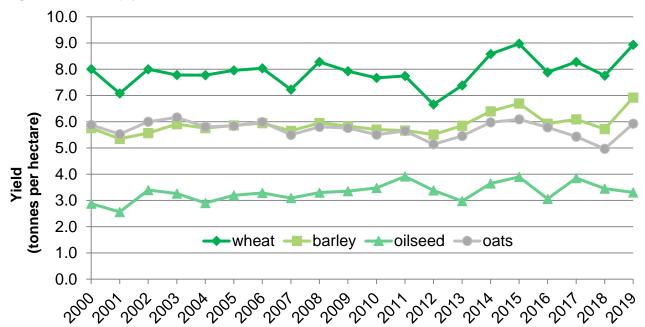


Figure 5: UK crop yields between 2000 and 2019

## Wheat

A 15.2% increase in the wheat yield to 8.9 tonnes per hectare and a 3.9% increase in planted area resulted in a 19.7% increase in wheat production, from 13.6 million tonnes in 2018 to 16.2 million tonnes in 2019.

## **Barley**

Winter and spring barley both saw increased levels of production in 2019. A 15.7% increase in the production of spring barley in 2019 to 4.5 million tonnes, despite a 5.6% decrease in the planted area, was caused by a 22.5% increase in the spring barley yield from 5.2 tonnes per hectare in 2018 to 6.3 tonnes per hectare in 2019. Winter barley production rose by 35.4% to 3.6 million tonnes in 2019; this is explained by a combination of an increase in both the winter barley area of 17.1% to 453 thousand hectares, and a yield of 7.8 tonnes per hectare in 2019 compared to 6.8 tonnes per hectare in 2018. The combined total yield for barley sits at 6.9 tonnes per hectare for 2019, above the five year average of 6.2 tonnes per hectare.

## **Oats**

The planted area of oats increased by 6.0% to 182 thousand hectares. The UK yield increased by 19.3% to 5.9 tonnes per hectare, largely explained by an increase in the England yield of 22.6%. This resulted in a large estimated production increase of 26.5% 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>.

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

Winter barley

## Oilseed Rape

Wheat

The oilseed rape harvest has shown a decrease of 12.9% to 1.8 million tonnes in 2019. There was both a decrease of 9.2% in the planted area, and a decrease in total oilseed rape yield of 4.1%, from 3.4 tonnes per hectare in 2018 to 3.3 tonnes per hectare in 2019. This is below the five year average of 3.6 tonnes per hectare.

Spring barley

Oats

## 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. Estimates of the 2019 harvest of minor cereal 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 1.0% between 2018 and 2019 and now stands at 163 thousand hectares.

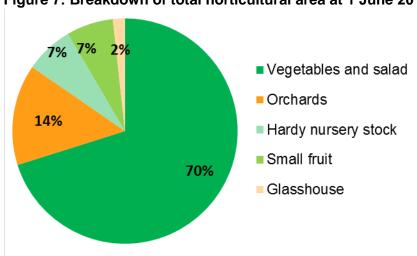


Figure 7: Breakdown of total horticultural area at 1 June 2019

The area of vegetables and salad for human consumption remained virtually unchanged between 2018 and 2019 and 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

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 both seen decreases and stand at approximately 1.5 and 1.9 million animals respectively (Figure 8).

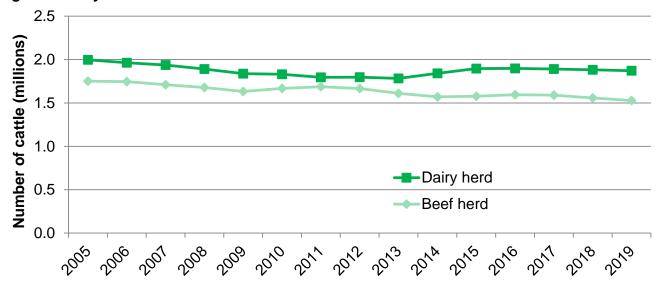


Figure 8: Dairy and beef herd numbers at June 2005 to 2019

# **Pigs**

The total number of pigs in the UK increased by 1.3% in 2019 and now stands at almost 5.1 million animals. The main reason for this was the 1.3% increase in fattening pigs, largely due to the 0.5% increase in the England figures which account for 80% of the UK fatteners.

# Sheep

In 2019, the total UK sheep and lamb population decreased by 0.6% to 33.6 million. The number of lambs in the UK increased by 0.3% to 16.7 million whereas the female breeding flock decreased by 1.5% to just over 16 million.

## **Poultry**

The total number of poultry in the UK decreased by 0.8% to 187 million birds in 2019 compared to 188 million in 2018. Laying and breeding fowl saw an increase of 2.1%, whilst table chickens decreased by 2.0% to 121 million birds.

## Other livestock

The number of goats and farmed deer in the UK increased between 2018 and 2019, rising by 2.8% and 11.5% respectively. The number of horses on agricultural holdings remained virtually unchanged at 250 thousand animals.

# Agricultural workforce

The total labour force on agricultural holdings in the UK decreased by 0.3% to 476 thousand in 2019. Farmers, business partners, directors and spouses account for the majority (63%) of the total labour force and increased by 0.9% to 299 thousand.

# Comparisons to other EU countries

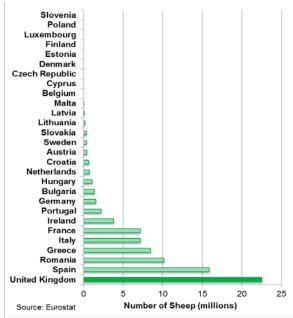
Data on livestock populations are collected each year under EU Regulation 1165/2008 (cattle, pigs and sheep) and 543/2009 (crops and land). Therefore, results can be compared across EU Member States. Data are available to search and download on the Eurostat website at <a href="http://ec.europa.eu/eurostat/web/agriculture/data/main-tables">http://ec.europa.eu/eur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

According to the data from 2018, the UK is the 7<sup>th</sup> largest cereal producer, the largest producer of sheep and the 3<sup>rd</sup> 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

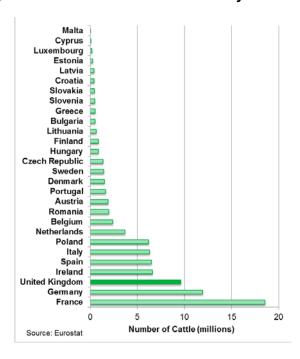
Malta Cyprus Luxembourg Slovenia Netherlands Portugal Ireland Belgium Estonia Croatia Latvia Slovakia Austria Greece Finland Sweden Lithuania Czech Republic Denmark Bulgaria Hungary United Kingdom Italy Romania Spain Germany Poland Cereals area (million hectares) Source: Eurostat

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



(data in figures 10 and 11 refer to December 2018, not June 2018)

Figure 11: Number of cattle in 2018 by EU Member State



# **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 <sup>(a)</sup>	17 476	17 361	17 532	1.0
Total agricultural land (including common rough grazing)	18 835	18 703	18 849	0.8
Common rough grazing	1 198	1 195	1 197	0.2
Total area on agricultural holdings	17 637	17 509	17 652	0.8
Total croppable area	6 131	6 084	6 132	0.8
Total crops     Arable crops     Cereals     Oilseeds     Potatoes     Other arable crops     Horticultural crops  Uncropped arable land (b)  Temporary grass under 5 years old	4 745 4 577 3 181 590 145 661 168 241	4 667 4 502 3 106 609 140 647 165 265	4 714 4 551 3 211 547 144 649 163 224	1.0 1.1 3.4 -10.2 2.7 0.3 -1.0 -15.4
Permanent grassland (incl. rough grazing)  Grass over 5 years old  Sole right rough grazing (c)	10 138 6 135 4 003	<b>10 072</b> 6 178 3 895	10 193 6 207 3 986	<b>1.2</b> 0.5 2.4
Other land on agricultural holdings Woodland Land used for outdoor pigs All other non-agricultural land	1 368 1 037 10 321	<b>1 353</b> 1 016 10 326	1 328 1 033 10 284	-1.8 1.6 -0.1 -12.8

<sup>(</sup>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).

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

<sup>(</sup>c) Classified as mountains, hills, heathland or moorland.

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

Thousand hectares

			Thousand hectares		
	2017	2018	2019	% change 2019-18	
Total arable crops	4 577	4 502	4 551	1.1	
Cereals	3 181	3 106	3 211	3.4	
Wheat	1 792	1 748	1 816	3.9	
Barley	1 177	1 138	1 162	2.1	
winter	423	387	453	17.1	
spring	754	751	710	-5.6	
Oats	161	171	182	6.0	
Minor cereals (a)	52	49	51	5.3	
Oilseed crops	590	609	547	-10.2	
Oilseed rape	562	583	530	<b>-</b> 9.2	
winter	554	575	525	-8.7	
spring	9	8	5	-43.4	
Linseed	26	25	15	-38.1	
Borage	1	2	2	38.0	
Potatoes	145	140	144	2.7	
Other (non-horticultural) crops	661	647	649	0.3	
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	7.6	
Maize (incl. fodder and grain maize) Root crops, brassicas and fodder beet for	197	221	228	3.3	
stock feeding	42	45	56	24.6	
Other crops for stock feeding (b)	39	41	43	5.5	
All other arable crops (c)	39	33	36	7.6	

<sup>(</sup>a) Minor cereals are a total of rye, mixed corn and triticale.

<sup>(</sup>b) Includes leguminous forage crops.

<sup>(</sup>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 <sup>(a)</sup>	8.0	7.0	7.2	6.8	7.9	17.1
Wheat	9.0	7.9	8.3	7.8	8.9	15.2
Barley	6.7	5.9	6.1	5.7	6.9	21.1
winter	7.7	6.4	7.0	6.8	7.8	15.6
spring	6.0	5.6	5.6	5.2	6.3	22.5
Oats	6.1	5.8	5.4	5.0	5.9	19.3
Minor cereals (b)	3.5	2.7	2.3	3.5	3.3	-5.6
Oilseed rape <sup>(c)</sup>	3.9	3.1	3.9	3.4	3.3	-4.1

<sup>(</sup>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 <sup>(a)</sup>	24 734	21 967	22 999	21 085	25 517	21.0
Wheat	16 444	14 383	14 837	13 555	16 225	19.7
Barley	7 370	6 655	7 169	6 510	8 048	23.6
winter	3 382	2 823	2 948	2 623	3 551	35.4
spring	3 988	3 832	4 220	3 887	4 498	15.7
Oats	799	816	875	850	1 076	26.5
Minor cereals (b)	122	110	119	169	168	-0.6
Oilseed rape <sup>(c)</sup>	2 542	1 775	2 167	2 012	1 752	-12.9

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

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

<sup>(</sup>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 -0.9 Orchards (a) 24.4 23.9 23.6 -1.2 Small fruit (b) (c) 10.7 10.6 11.0 3.7 Strawberries 3.1 3.0 2.9 -2.9 Other small fruit (incl. gooseberries and 7.6 7.6 8.0 6.3 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 -3.6

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

<sup>(</sup>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.

<sup>(</sup>c) Small fruit includes crops grown in Spanish tunnels.

<sup>(</sup>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	
	2017	2018	2019	% change 2019-18
Total hardy nursery stock, bulbs and flowers (a)	12.5	11.7	11.4	-2.7
Hardy nursery stock	5.0	4.6	4.5	-3.1
Bulbs and flowers grown in the open	7.1	6.7	6.6	-2.0

<sup>(</sup>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	2 825	-1.5
Vegetables, salad and fruit <sup>(d)</sup>	2 098	2 225	2 217	-0.4
Flowers, foliage and other plants	546	465	476	2.3
Not in use on 1 June	136	153	106	-30.4

<sup>(</sup>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.

<sup>(</sup>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).

<sup>(</sup>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.

<sup>(</sup>d) In 2018 and 2019 there was not enough response data to produce robust estimates for Mushroom sheds in England and therefore the figure is excluded from the results and the total.

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	9 739	-1.5
All female cattle	7 240	7 167	7 077	-1.3
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	<b>1 464</b> 898 567	<b>1 443</b> 921 522	<b>1 435</b> 913 522	<b>-0.5</b> -0.9 0.1
Less than 1 year - Beef - Dairy	<b>1 583</b> 1 040 543	<b>1 575</b> 1 032 543	<b>1 563</b> 1 027 537	<b>-0.7</b> -0.5 -1.2
All male cattle  Aged 2 years or more  Aged between 1 and 2 years  Less than 1 year	<b>2 763</b> 355 1 051 1 357	2 723 355 1 035 1 333	<b>2 662</b> 356 1 012 1 294	-2.3 0.0 -2.2 -2.9

<sup>(</sup>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	5 078	1.3
Breeding pigs	512	504	509	1.2
Female breeding herd	417	409	413	1.0
Sows in pig	297	289	295	2.1
Gilts in pig	55	58	57	-1.1
Other sows (a)	64	63	61	-2.1
Other breeding pigs	95	94	96	1.9
Boars being used for service	14	13	12	-4.6
Gilts intended for first time breeding	81	81	84	2.9
Fattening pigs (incl. barren sows)	4 457	4 509	4 569	1.3

<sup>(</sup>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	33 580	-0.6
Female breeding flock	16 669	16 286	16 035	-1.5
Ewes intended for further breeding or for slaughter	13 762	13 572	13 440	-1.0
Ewes intended for first time breeding	2 907	2 714	2 595	-4.4
Other sheep and lambs	18 163	17 495	17 545	0.3
Lambs under 1 year old	17 340	16 621	16 672	0.3
Rams	417	407	412	1.2
Other sheep 1 year and over	405	467	460	-1.5

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

				Thousands
	2017	2018	2019	% change 2019-18
Total poultry	181 818	188 442	186 982	-0.8
Total breeding and laying fowl	52 939	53 623	54 732	2.1
Hens and pullets laying eggs for eating	39 510	39 852	41 535	4.2
Breeding flock	13 429	13 771	13 197	-4.2
Table chickens (broilers)	117 619	123 946	121 500	-2.0
Other poultry	11 260	10 872	10 750	-1.1
Ducks	2 301	2 069	1 890	-8.7
Geese	160	157	142	-9.5
Turkeys	4 149	4 124	3 942	-4.4
All other poultry	4 651	4 522	4 777	5.6

<sup>(</sup>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
	2017	2018	2019	% change 2019-18
Total other livestock	422	418	429	2.5
Goats	105	108	111	2.8
Farmed deer	31	34	38	11.5
Horses	258	250	250	0.1
Any livestock not recorded elsewhere (a)	27	26	29	12.6
- of which alpacas	13	9	11	17.5
- of which llamas	2	2	2	-0.8

<sup>(</sup>a) Includes camelids, donkeys and mules.

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 474 477 476 -0.3 Farmers, partners, directors and spouses 294 296 299 0.9 Full time -0.1 141 145 144 Part time(c) 153 152 155 1.9 Regular employees, salaried managers and -2.3 casual workers 180 181 177 Regular employees(a)(b) na na na - Full time na na na - Part time(c) na na na Casual workers(b) na na na

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

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

<sup>(</sup>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/guidance/structure-of-the-agricultural-industry-survey-notes-and-guidance

# Other survey results and publications

Results from all the Defra farming surveys can be viewed on the Defra website via the following link: <a href="https://www.gov.uk/government/publications?publication\_filter\_option=statistics">https://www.gov.uk/government/publications?publication\_filter\_option=statistics</a>.

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. You can find these future publication dates at <a href="https://www.gov.uk/government/publications?publication\_filter\_option=statistics">https://www.gov.uk/government/publications?publication\_filter\_option=statistics</a>.

## **England Publications**

• The June Survey of Agriculture will be run as a census of all farms in 2020, as such our publication schedule has yet to be finalised.

## **UK Publications**

- October 2020: Farming Statistics provisional crop areas, yields, livestock populations at 1 June 2020 United Kingdom.
- December 2020: Farming Statistics final crop areas, yields, livestock populations and agricultural workforce at 1 June 2020 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/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: <a href="https://www.gov.uk/structure-of-the-agricultural-industry-survey-notes-and-guidance">https://www.gov.uk/structure-of-the-agricultural-industry-survey-notes-and-guidance</a>.

#### Scotland

The June Agricultural Census is conducted annually by the Scottish Government's Rural and Environmental Science Analytical Services division (RESAS). Data are requested from all holdings who submitted a Single Application Form (SAF) in the previous year, together with some other large businesses that would not be eligible for support payments. A sample of holdings which didn't submit a SAF or who didn't return a form last year were also sent a census form.

Data for the June census is collected from three sources:

Land data were extracted from the Single Application Form (SAF) database for around 22,700 holdings that are claiming under the Basic Payment Scheme (BPS). Holdings that submitted a SAF in 2019 were also sent a cut-down census form (21,400 forms) to collect the additional data on livestock and labour.

From the remaining holdings that did not complete a SAF in 2019, 10,300 (potentially including holdings that submitted a SAF for the first time in 2019) were sent a full census form covering land, livestock and labour.

RESAS categorises all agricultural holdings in Scotland as either a "Main" holding or a "Min" holding. A holding is a "Main" if it meets certain thresholds such as a certain area of land or a certain amount of animals. All "Main" holdings in Scotland are included in the census and if any did not complete a SAF they are automatically included in the sample for the full form. The remaining full forms are a sample of the "Min" holdings in Scotland. The smaller holdings are only surveyed once every four years to reduce the burden on the smaller farms. Holdings which have not received a form in the past four years are included in the sample for the Full Form.

All cattle data (including data on cattle breeds) were collected from the Cattle Tracing Scheme administrative source. Farmers are required by law to register any births, deaths and movements of their cattle to the British Cattle Movement service who maintain an online database. More information can be found online <a href="here">here</a>. By using this data source we effectively have 100 per cent coverage, even for those smaller holdings that were not selected for inclusion in the census.

The following table gives a breakdown for forms returned for each category of holding.

Land-use data was received for holdings covering 84 per cent of the total agricultural area, either from returned full census forms or the SAF (shaded grey).

Cattle data was received for 100 per cent of holdings with cattle, from the CTS.

Other data was received for holdings covering 66 per cent of the total agricultural area, from returned census forms (the final column in the table).

Census type <sup>(1)</sup>	Total number	Number selected <sup>(2)</sup>	Number of returns <sup>(3)</sup>	Total area	Area of selected <sup>(2)</sup>	Area of returns <sup>(3</sup>
SAF	22,688	21,891	16,274	4,905,731	4,752,755	3,510,659
full form		497	321		69,573	50,256
part form		21,394	15,953		4,683,182	3,460,403
Non-SAF	28,604	10,929	5,478	753,895	424,082	245,853
full form		10,266	5,123		351,445	194,830
part form		663	355		72,637	51,022
Total	51,292	32,820	21,752	5,659,626	5,176,837	3,756,512

<sup>(1) &</sup>quot;SAF" refers to holdings where land-use data is available from the Single Application Form dataset. "Non-SAF" refers to holdings where land-use data is only available through the June Agricultural Census form (if at all).

- (2) The numbers selected are slightly lower than the total number eventually identified due to annual changes in the list of holdings.
- (3) The return numbers quoted here relate to the number of survey forms received. For SAF holdings this masks the fact that we effectively receive 100 per cent response for all land items. Cattle data, from the CTS database, is also effectively 100 per cent complete. Response rates based on these figures therefore relate to other livestock and employment data.

Full results for Scotland were published on 8th October 2019 by the Scottish Government Rural and Environment Science and Analytical Services (RESAS) division and are available at: <a href="https://www.gov.scot/publications/final-results-june-2019-agricultural-census/">https://www.gov.scot/publications/final-results-june-2019-agricultural-census/</a> Some of the data have since been amended slightly after that original publication.

Contact details - Saughton House (Q Spur), Broomhouse Drive, Edinburgh, EH11 3XD (telephone: 0300 244 9707, email: agric.stats@scotland.gsi.gov.uk).

## Wales

The Welsh population currently stands at around 25,000 active holdings. In 2019 a total of 11,100 survey forms were sent out. Final results were based on a response rate of 36%. Final results for Wales were published by the Welsh Government on 20 November 2019 at: <a href="https://gov.wales/survey-agriculture-and-horticulture">https://gov.wales/survey-agriculture-and-horticulture</a>

For further details contact Agricultural & Rural Affairs Statistics, Welsh Government, Cathays Park, Cardiff, CF10 3NQ (telephone: Cardiff 03000 255049). E-mail: <a href="mailto:stats.agric@gov.wales">stats.agric@gov.wales</a>

#### Northern Ireland

In 2019 the Northern Ireland Agricultural and Horticultural Survey was conducted as a sample survey. A total of 20,100 forms were issued with results based on 14,300 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 19<sup>th</sup> November 2019 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: https://www.daera-ni.gov.uk/articles/agricultural-census-northern-ireland

<sup>&</sup>quot;full form" refers to the long version of the census form covering land use, livestock (except cattle), and labour, designed for those not completing the SAF.

<sup>&</sup>quot;part form" refers to the short version of the census form covering livestock (except cattle), and labour, designed for those known to be completing the SAF.

# Methodology: Cereal and Oilseed Rape Production Survey

# **England**

Results are based on 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 results are based on responses from 2,371 farms (53% response rate) across the country (see <u>table 15</u>).

Table 15: Response rate for Cereal and Oilseed Rape Production Survey 2019 by region

English region	Number sampled	Number of responses	Response rate (%)
North East	202	104	51%
NOTHI Last	_	104	J170
North West and Merseyside	280	141	50%
Yorkshire and the Humber	676	380	56%
East Midlands	694	378	54%
West Midlands	551	287	52%
Eastern	832	432	52%
South East and London	483	251	52%
South West	766	398	52%
Total	4484	2371	53%

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 final regional results of the June 2019 Survey final results, along with the yields for the English regions bordering Wales. Final June 2019 results for Wales were published by the Welsh Government in November 2019 at: <a href="https://www.wales.gov.uk/statistics">www.wales.gov.uk/statistics</a>. 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 final 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 final 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 59 holdings; a response rate of 49% which is lower than the response rate of the survey as a whole of 53%.

Of these 59 returns, 48 were usable, and 17 reported some cereal production from their rye crop. In the remaining 31 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: <a href="mailto:farming-statistics@defra.gov.uk">farming-statistics@defra.gov.uk</a>. 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?