



Department
for Environment
Food & Rural Affairs



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Farming Statistics

Final crop areas and cattle, sheep and pig populations

At 1 June 2017 - England

This release contains the final estimates of crop areas and livestock numbers on commercial agricultural holdings in England on 1 June 2017. The results in this release are final and will not be updated. Results are not yet available for the areas of owned and rented land, poultry, horses, goats, farmed deer, camelids and labour numbers. These will be published on 26 October 2017.

Approximately 55 thousand commercial holdings were asked to complete the survey and results are based on almost 17 thousand responses, representing a response rate of 67%. Commercial holdings are those farms with a significant level of activity. A full definition can be found in the methodology section on page 16. The key results are given below.

Agricultural land use and ownership ([Tables 1-2](#))

The utilised agricultural area (UAA) in England increased by 0.6% between 2016 and 2017 and now stands at almost 9.1 million hectares. The total croppable area accounts for just over half (54%) of UAA and has increased by 1.2% to 4.9 million hectares in 2017. Permanent grassland accounts for an additional 41% of UAA and has remained unchanged at 3.8 million hectares in 2017.

Estimates of the areas of land owned and rented will be published on 26 October 2017.

Crops ([Tables 3-6](#))

The total area of arable crops increased by 1.5% since to 2016, and now stands at just over 3.9 million hectares in 2017. Cereals and oilseed crops account for the majority (82%) of the total arable crop area. The area of cereal crops increased by 1.6% and is now almost 2.7 million hectares in 2017. This was mainly due to a 16% increase in the area of spring sown barley which rose to 482 thousand hectares in 2017. The areas of wheat and winter barley both decreased between 2016 and 2017, falling to under 1.65 million hectares and 361 thousand hectares respectively.

The area of oilseed crops decreased by 3.7%, falling from 571 thousand hectares in 2016 to 550 thousand hectares in 2017. This was mainly due to a 3.6% decrease in the area of winter oilseed rape, which accounts for the majority (94%) of all oilseed crops.

The area of horticultural crops accounts for 140 thousand hectares of land and has increased by 2.9% in 2017. This was driven mainly by the 3.3% increase in the area used to grow vegetables and salad for human consumption, which accounts for 68% of the total horticultural area.

Enquiries on this publication to: Janine Horsfall and Sarah Thompson, Farming Statistics, Department for Environment, Food and Rural Affairs, Room 201, Foss House, Kings Pool, 1-2 Peasholme Green, York YO1 7PX
Tel: 03000 600170. Email: farming-statistics@defra.gsi.gov.uk.

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Cattle ([Table 7](#))

The total number of cattle and calves in England is 5.4 million in June 2017, showing almost no change since 2016. The total breeding herd remained at almost 1.9 million in 2017 with little change to the beef or dairy breeding herds.

Pigs ([Table 8](#))

In 2017, the total number of pigs in England increased by 1.5% to almost 4.0 million animals. The increase was mainly driven by the rise in the number of fattening pigs, up 1.7% to 3.6 million in 2017. The number of breeding pigs remained almost unchanged in 2017 at 416 thousand animals. When considered alongside the confidence intervals displayed in the results table these changes are not statistically significant.

Sheep ([Table 9](#))

The total number of sheep and lambs increased by 3.1%, from almost 15.3 million in 2016 to just under 15.8 million in 2017. The female breeding flock increased by 3.8% to nearly 7.4 million and the number of lambs increased by 2.6% to 8.0 million.

Poultry ([Table 10](#))

Estimates of the poultry population will be published on 26 October 2017.

Other livestock ([Table 11](#))

Estimates of the number of horses, goats, farmed deer and camelids in England will be published on 26 October 2017.

Agricultural workforce ([Table 12](#))

The size of the agricultural workforce in England will be published on 26 October 2017.

Survey methodology ([Pages 16-17](#))

For information on how the survey is run and details of data analysis and accuracy of results please see the methodology section on pages 16 and 17 at the end of this release.

Other surveys and next publications due ([Page 18](#))

Further information on the next publications due from the results of the June Agricultural Survey can be found on page 18. This includes both England and UK publications.

Defra is extremely grateful to the many farmers who complete the June Survey questionnaire each year. The support of farmers enables the Department to produce timely figures on the latest trends which are important for the Department's business and the industry's market operations.

Detailed results

Utilised agricultural area

The utilised agricultural area includes all arable and horticultural crops, uncropped arable land, land used for outdoor pigs, temporary and permanent grassland and common rough grazing. The total utilised agricultural area in England is almost 9.1 million hectares in 2017.

Figure 1: Total utilised agricultural area at 1 June 2000 to 2017

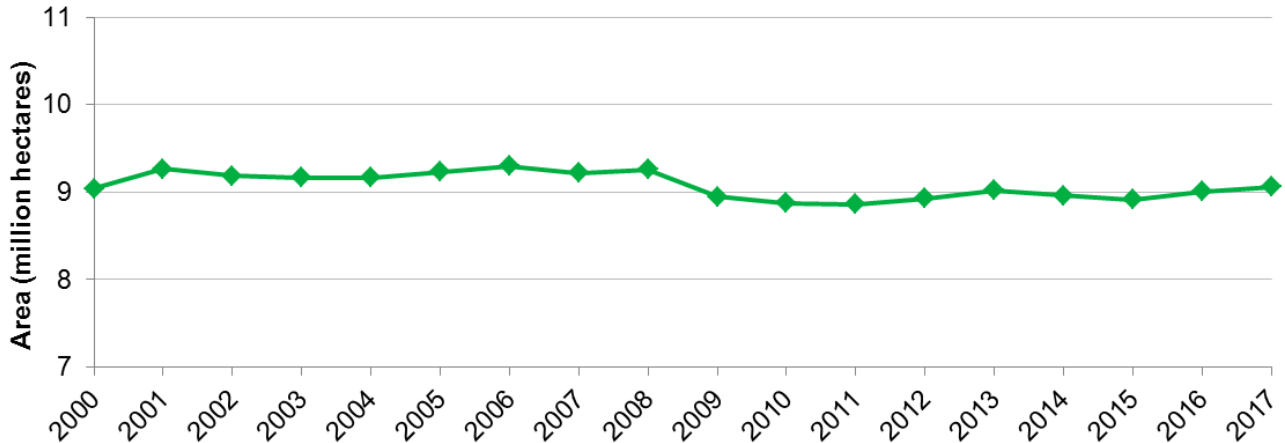


Figure 1 shows that the utilised agricultural area in England has remained stable around the 9 million hectare mark since 2000. The small drop seen between 2008 and 2009 is a result of register improvements made ahead of the 2010 Census which removed holdings that no longer have agricultural activity.

Croppable area

The area of land available for cropping increased by 1.2%, from 4.8 million hectares in 2016 to almost 4.9 million in 2017. The croppable area consists of cereals, oilseeds, potatoes, other arable crops, horticultural crops, uncropped arable land and temporary grassland.

Figure 2: Total croppable area at 1 June 2017 compared to 2016

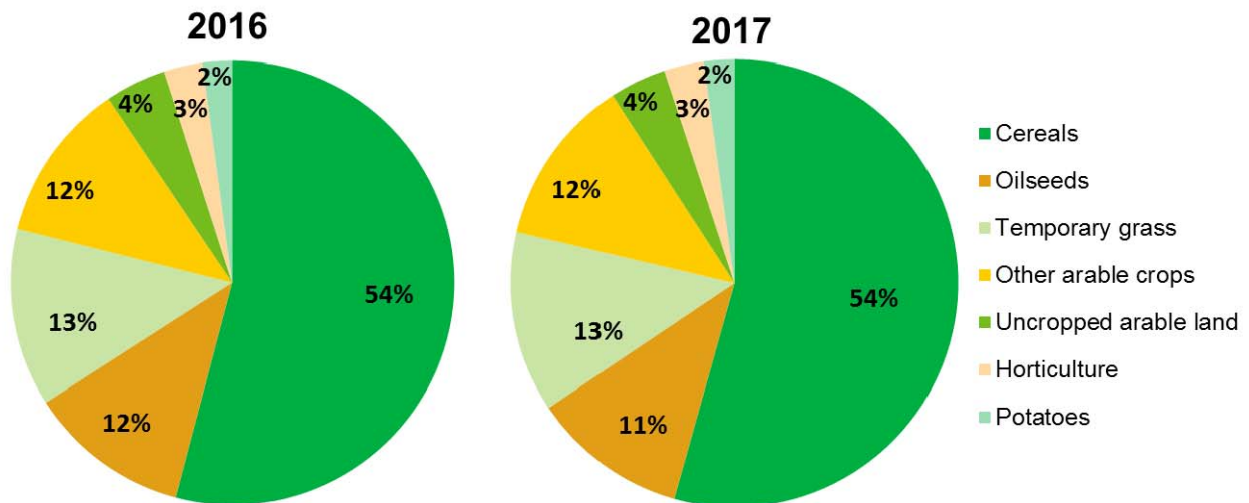


Figure 2 on the previous page shows that on the whole the proportion of croppable land used for each purpose remained similar between 2016 and 2017; however some categories did see value changes. In particular the area of uncropped arable land decreased by 7.5%, from 216 thousand hectares in 2016 to 200 thousand hectares in 2017. However it still accounts for 4% of the total croppable area.

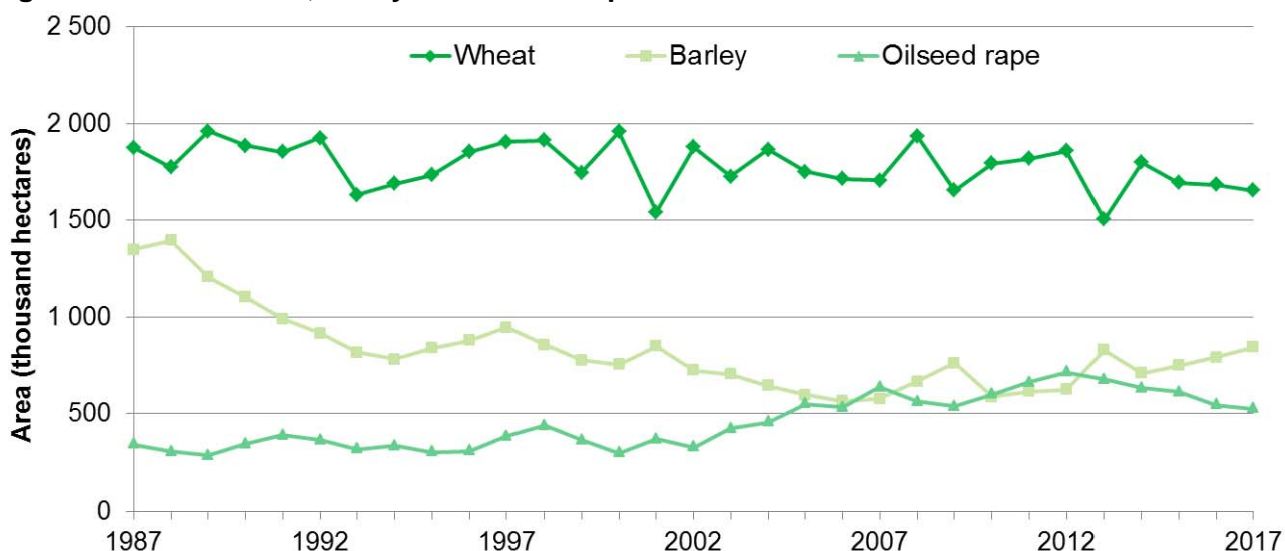
With the exception of oilseed crops which decreased in area in 2017, all other components of the croppable area saw increases. The increases seen in cereals (1.6%), potatoes (3.9%), other arable crops (5.6%), horticultural crops (2.9%) and temporary grassland (2.0%) more than offset the decreases in oilseed crops and uncropped arable land.

Cereals and oilseeds

The total area of cereal crops in England increased by 1.6% between 2016 and 2017 to almost 2.7 million hectares.

The area of wheat decreased by 1.9% between 2016 and 2017 and now stands at just below 1.7 million hectares. However, wheat continues to be the most popular crop grown in England and accounts for 62% of the total cereal area. Historically the area of wheat has fluctuated between approximately 1.5 and 2.0 million hectares over the past 30 years (Figure 3).

Figure 3: Area of wheat, barley and oilseed rape at 1 June 1987 to 2017

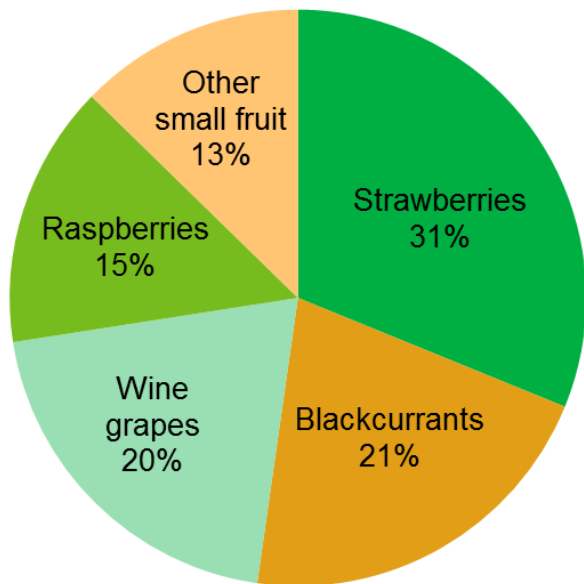


In contrast to the wheat area which has decreased in each of the past three years, barley has increased in area for the third year running. The increase in total barley area was due to a 16% increase in the spring sown barley area, which has seen an increase in popularity in recent years increasing from 53% of the total barley area in 2016 to 57% in 2017. The winter sown barley area decreased by 3.9% to 361 thousand hectares in 2017.

The total area of oilseed rape fell for the fifth year running, decreasing by 3.6% from 543 thousand hectares in 2016 to 523 thousand hectares in 2017. The decrease was due to a 3.6% reduction in the area of winter sown oilseed rape which accounts for 98% of the total oilseed rape area and now stands at 515 thousand hectares. Spring oilseed rape saw a larger proportional decrease of 5.9% in 2017. However, at 8 thousand hectares this only accounts for 2% of the total oilseed area and is the second smallest area of the spring sown crop seen in the past decade.

Fruit and vegetables

Figure 4: Breakdown of small fruit as at 1 June 2017



The total area of orchards and small fruit remained almost unchanged between 2016 and 2017 at 32 thousand hectares. Orchards account for 69% of this total and cover 22 thousand hectares in 2017, a decrease of 3.3% since 2016.

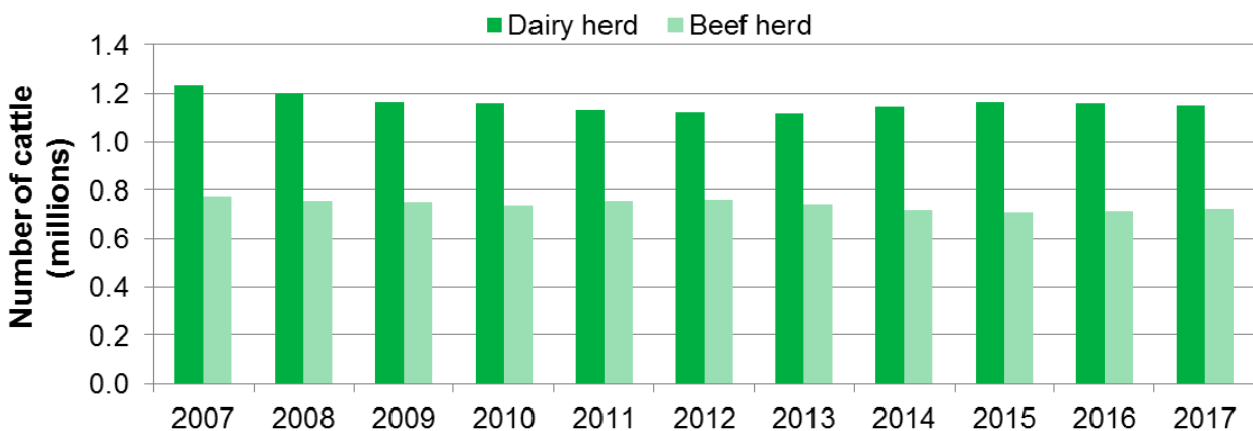
The remaining area of 9.8 thousand hectares is used to grow small fruit. This area increased by 6.5% since 2016 which offset the decrease in the orchard area. Figure 4 shows the breakdown of small fruit areas in 2017. The largest proportion of the small fruit area is used to grow strawberries (31%) with blackcurrants (21%) and wine grapes (20%) being the next most common small fruit crops.

The area used to grow vegetables for human consumption increased between 2016 and 2017, rising by 3.3% to 96 thousand hectares. The majority (67%) of this area is used to grow other vegetables and salad and this area increased by 3.0%, from 62 thousand hectares in 2016 to 64 thousand in 2017. The second largest area is vining peas which saw an increase of 6.0% from 25 thousand hectares in 2016 to 27 thousand in 2017.

Cattle

The total number of cattle and calves in England remained almost unchanged between 2016 and 2017 at 5.4 million animals. The female breeding herd continues to account for just over a third (35%) of this total.

Figure 5: Female dairy and beef herds at 1 June 2007 to 2017

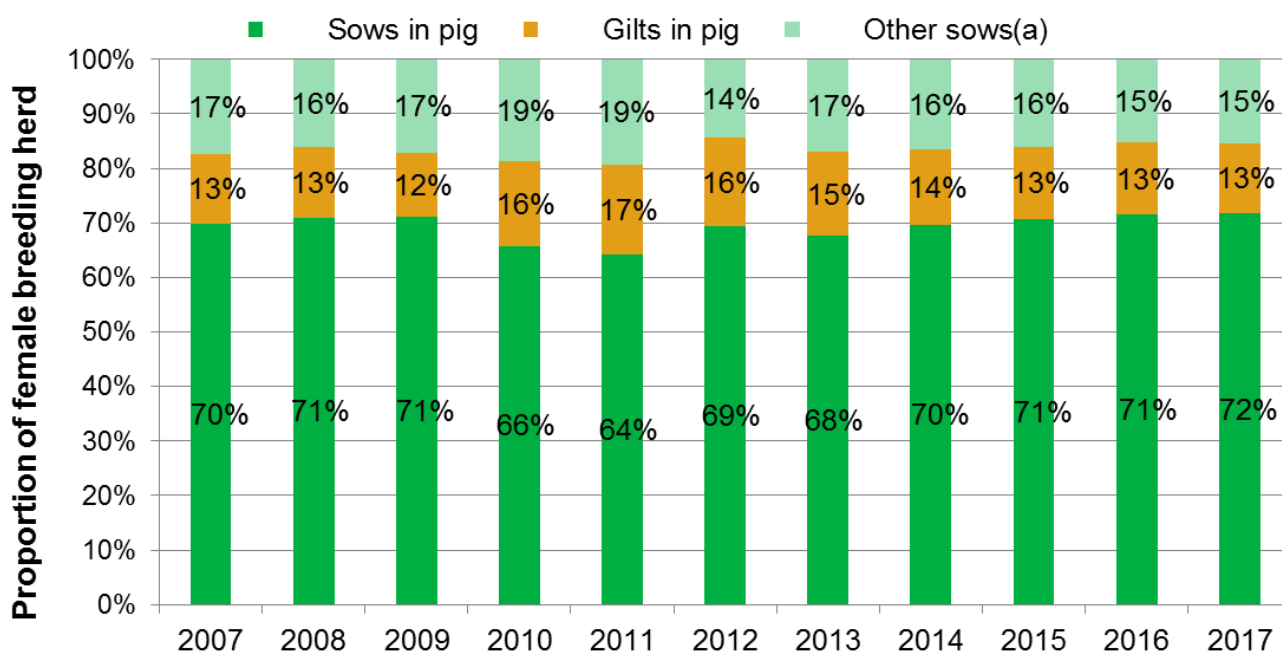


The breeding herd has remained stable for the last three years at almost 1.9 million animals. The dairy herd accounts for the majority (61%) of the breeding herd and remained almost unchanged in 2017 at almost 1.2 million animals. The beef herd was also stable between 2016 and 2017, remaining at 721 thousand animals (Figure 5).

Pigs

The total number of pigs in England increased by 1.5% from 3.91 million animals in 2016 to 3.97 million in 2017. This increase was driven by a 1.7% rise in the number of fattening pigs which account for 90% of all pigs. However it is worth noting that when considered alongside the 95% confidence intervals (see table 8) these changes are not statistically significant.

Figure 6: Breakdown of the female pig breeding herd 1 June 2007 to 2017



(a) Other sows are those either being suckled or dry sows kept for further breeding.

The female breeding herd remained almost unchanged between 2016 and 2017 at 334 thousand pigs. Figure 6 above shows how the female breeding herd is made up. Other breeding pigs were also stable at 82 thousand in 2017.

Sheep

The total number of sheep and lambs in England increased by 3.1%, from 15.3 million in 2016 to almost 15.8 million in 2017. Lambs account for just over half (51%) of all sheep and increased by 2.6% from 7.8 million in 2016 to 8.0 million in 2017. The female breeding flock account for a further 47% and increased by 3.8% to almost 7.4 million sheep in 2017.

Results tables

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

	Thousand hectares					
	2015	2016	2017	% change 2017-16	June 2017 confidence interval	Indicator
Utilised agricultural area ^(a)	8 912	9 006	9 061	0.6	+/- 71	✓✓✓
Total agricultural area	9 391	9 520	9 575	0.6	+/- 71	✓✓✓
Common rough grazing ^(b)	399	399	399	0.0	-	
Total area on agricultural holdings	8 992	9 121	9 176	0.6	+/- 71	✓✓✓
Total croppable area	4 809	4 836	4 894	1.2	+/- 43	✓✓✓
Total crops	3 984	3 993	4 054	1.5	+/- 40	✓✓✓
Arable crops	3 834	3 857	3 914	1.5	+/- 39	✓✓✓
Cereals	2 573	2 617	2 660	1.6	+/- 32	✓✓✓
Oilseeds	629	571	550	-3.7	+/- 16	✓✓✓
Potatoes	96	104	108	3.9	+/- 5	✓✓✓
Other crops	535	564	596	5.6	+/- 15	✓✓✓
Horticultural crops	150	136	140	2.9	+/- 7	✓✓
Uncropped arable land ^(c)	179	216	200	-7.5	+/- 11	✓✓
Temporary grass under 5 years old	646	627	640	2.0	+/- 13	✓✓✓
Permanent grassland (incl. rough grazing)	3 695	3 760	3 757	-0.1	+/- 55	✓✓✓
Grass over 5 years old	3 231	3 282	3 279	-0.1	+/- 45	✓✓✓
Sole right rough grazing ^(d)	464	479	479	0.0	+/- 31	✓✓
Other land on agricultural holdings	488	524	525	0.2	+/- 13	✓✓✓
Woodland	348	370	369	-0.5	+/- 12	✓✓✓
Land used for outdoor pigs	9	10	10	-1.9	+/- 1	✓
All other non-agricultural land	131	143	146	2.1	+/- 6	✓✓✓

(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) This area is an estimate of total common land in England. The vast majority is eligible for grazing and claimed upon under the Basic Payment Scheme (BPS) but isn't necessarily used for grazing. The area was last revised in 2011.

(c) Includes all arable land not in production, including bare fallow, game strips, wild bird cover and game cover.

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

Table 2: Areas of owned and rented land on commercial agricultural holdings on 1 June

	Thousand hectares					
	2015	2016	2017	% change 2017-16	June 2017 confidence interval	Indicator
Land owned	5 887	6 056	tba			
Land rented in for 1 year or more	2 984	3 020	tba			
Full Agricultural Tenancies	1 444	1 407	tba			
Farm Business Tenancies	1 125	1 193	tba			
Other agreements	415	420	tba			
Seasonally rented in land ^(a)	520	518	tba			
Seasonally let out land ^(a)	383	386	tba			

tba: to be announced. Estimates for owned and rented land areas will be published on 26 October 2017. The table has been included here to show historical results only.

(a) Land rented for less than 1 year, including grazing licenses.

Table 3: Arable crops on commercial agricultural holdings on 1 June

	Thousand hectares					
	2015	2016	2017	% change 2017-16	June 2017 confidence interval	Indicator
Total arable crops	3 834	3 857	3 914	1.5	+/- 39	✓✓✓
Cereals	2 573	2 617	2 660	1.6	+/- 32	✓✓✓
Wheat	1 693	1 684	1 652	-1.9	+/- 26	✓✓✓
Barley	748	791	842	6.5	+/- 17	✓✓✓
winter	376	376	361	-3.9	+/- 11	✓✓✓
spring	373	416	482	15.9	+/- 13	✓✓✓
Oats	98	102	121	18.1	+/- 7	✓✓
Rye, mixed corn and triticale	34	40	44	12.0	+/- 5	✓
Oilseed crops	629	571	550	-3.7	+/- 16	✓✓✓
Oilseed rape	611	543	523	-3.6	+/- 15	✓✓✓
winter	605	534	515	-3.6	+/- 15	✓✓✓
spring	6	9	8	-5.9	+/- 3	☒
Linseed	15	27	26	-3.3	+/- 4	✓
Borage	3	1	1	-38.7	+/- 1	☒
Potatoes	96	104	108	3.9	+/- 5	✓✓✓
Early crop (harvested on or before 31 July)	10	10	10	-1.5	+/- 1	✓
Main crop (harvested after 31 July)	86	94	98	4.5	+/- 5	✓✓✓
Other (non-horticultural) crops	535	564	596	5.6	+/- 15	✓✓✓
Sugar beet ^(a)	90	86	111	29.5	+/- 6	✓✓
Field beans	165	173	189	8.9	+/- 9	✓✓✓
Peas for harvesting dry	42	50	39	-21.6	+/- 5	✓
Maize	173	182	183	0.8	+/- 8	✓✓✓
- of which grain maize	8	8	8	2.2	+/- 2	☒
- of which fodder maize	132	122	118	-3.1	+/- 5	✓✓✓
- of which maize for anaerobic digestion	34	52	57	9.8	+/- 6	✓
Root crops, brassicas and fodder beet for stock feeding	23	25	24	-4.2	+/- 2	✓✓
Leguminous forage crops	12	14	16	15.1	+/- 3	✓
Other crops for stockfeeding	8	6	7	15.1	+/- 2	☒
All other arable crops	22	29	27	-6.1	+/- 3	✓
- of which short rotation coppice	3	3	3	1.4	+/- 1	☒
- of which miscanthus	7	7	7	4.4	+/- 1	✓
- of which crops for aromatic or medicinal use	4	5	2	-55.1	+/- 1	☒

(a) Not for stockfeeding.

Table 4: Fruit and vegetables grown in the open on commercial agricultural holdings on 1 June
Thousand hectares

	2015	2016	2017	% change 2017-16	June 2017 confidence interval	Indicator
Total fruit and vegetables	137	125	128	2.4	+/- 7	✓✓
Orchards ^(a)	24	23	22	-3.3	+/- 1	✓✓
Small fruit ^(b)	9.1	9.2	9.8	6.5	+/- 0.5	✓✓✓
Strawberries	3.3	3.3	3.1	-6.4	+/- 0.2	✓✓
Raspberries	1.1	1.2	1.5	24.2	+/- 0.2	✓
Blackcurrants	2.1	2.0	2.1	3.6	+/- 0.3	✓
Wine grapes	1.8	1.8	2.0	11.1	+/- 0.2	✓
Other small fruit (incl. gooseberries & blackberries)	0.8	1.0	1.2	25.7	+/- 0.1	✓
Vegetables and salad for human consumption ^(c)	104	93	96	3.3	+/- 7	✓✓
Vining peas for processing	28	25	27	6.0	+/- 3	✓
Other peas and beans	3	3	2	-8.2	+/- 1	☒
Culinary plants for human consumption (incl. herbs)	4	3	3	-2.3	+/- 2	☒
All other vegetables and salad	69	62	64	3.0	+/- 6	✓✓
- of which carrots	9	8	8	-1.9	+/- 2	✓
- of which onions	16	14	14	-3.5	+/- 3	✓

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

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

(c) 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 5: Hardy nursery stock on commercial agricultural holdings on 1 June

Hectares

	2015	2016	2017	% change 2017-16	June 2017 confidence interval	Indicator
Total hardy nursery stock, bulbs and flowers	11 266	9 998	10 982	9.8	+/- 792	✓✓
Christmas trees	1 897	2 137	1 980	-7.3	+/- 206	✓
Perennial herbaceous plants	354	358	327	-8.5	+/- 63	✓
Other hardy nursery stock	2 833	2 440	2 320	-4.9	+/- 150	✓✓
Bulbs and flowers grown in the open	6 182	5 063	6 355	25.5	+/- 747	✓

Table 6: Glasshouses and protected crops on commercial agricultural holdings on 1 June ^{(a) (b)}
Hectares

	2015	2016	2017	% change 2017-16	June 2017 confidence interval	Indicator
Total glasshouse area on 1 June	1 309	1 326	1 304	-1.7	+/- 66	✓✓
Vegetables, salad and fruit	671	733	697	-4.9	+/- 37	✓✓
Flowers, foliage and other plants	475	471	478	1.6	+/- 46	✓✓
Mushroom sheds	4	3	4	9.7	+/- 0.1	✓✓✓
Not in use on 1 June	159	119	125	5.0	+/- 31	☒

(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 4).

Table 7: Cattle and calves on agricultural holdings on 1 June ^(a)

	Thousands			
	2015	2016	2017	% change 2017-16
Total cattle and calves	5 385	5 429	5 418	-0.2
All female cattle	3 903	3 925	3 921	-0.1
Aged 2 years or more	2 295	2 274	2 265	-0.4
Total breeding herd	1 874	1 877	1 871	-0.3
- Beef herd	713	721	721	0.0
- Dairy herd	1 162	1 156	1 150	-0.5
Other female cattle	421	396	394	-0.6
- Beef	194	190	189	-0.5
- Dairy	227	207	205	-0.7
Aged between 1 and 2 years	759	789	799	1.4
- Beef	429	447	460	2.9
- Dairy	330	342	340	-0.6
Less than 1 year	849	863	856	-0.8
- Beef	495	510	529	3.8
- Dairy	354	353	327	-7.5
All male cattle	1 482	1 504	1 497	-0.5
Aged 2 years or more	212	200	193	-3.6
Aged between 1 and 2 years	549	559	572	2.2
Less than 1 year	721	744	732	-1.6

(a) These figures have been sourced from the Cattle Tracing System (CTS). Confidence intervals and confidence indicators are not appropriate for this table as the data include returns from all holdings with cattle so are not subject to survey error.

Table 8: Pigs on commercial agricultural holdings on 1 June

Thousands

	2015	2016	2017	% change 2017-16	June 2017 confidence interval	Indicator
Total pigs	3 826	3 911	3 969	1.5	+/- 159	✓✓✓
Breeding pigs	413	417	416	-0.1	+/- 20	✓✓✓
Female breeding herd	328	334	334	-0.2	+/- 18	✓✓
Sows in pig	232	239	240	0.2	+/- 15	✓✓
Gilts in pig	43	44	43	-2.9	+/- 8	✓
Other sows ^(a)	52	51	51	0.2	+/- 6	✓
Other breeding pigs	85	82	82	0.2	+/- 7	✓✓
Boars being used for service	13	13	11	-15.4	+/- 1	✓✓
Gilts intended for first time breeding	72	69	71	3.1	+/- 7	✓✓
Fattening pigs (incl. barren sows)	3 413	3 494	3 553	1.7	+/- 157	✓✓✓

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

Table 9: Sheep and lambs on commercial agricultural holdings on 1 June

Thousands

	2015	2016	2017	% change 2017-16	June 2017 confidence interval	Indicator
Total sheep and lambs	15 142	15 283	15 757	3.1	+/- 138	✓✓✓
Female breeding flock	7 057	7 114	7 385	3.8	+/- 82	✓✓✓
Ewes intended for further breeding	5 481	5 462	5 675	3.9	+/- 67	✓✓✓
Breeding ewes intended for slaughter	421	458	478	4.5	+/- 28	✓✓
Ewes intended for first time breeding	1 154	1 194	1 232	3.2	+/- 39	✓✓✓
Other sheep and lambs	8 085	8 169	8 372	2.5	+/- 111	✓✓✓
Lambs under 1 years old	7 716	7 794	8 001	2.6	+/- 110	✓✓✓
Rams	186	185	192	3.4	+/- 5	✓✓✓
Other sheep 1 year and over	182	189	179	-5.3	+/- 16	✓✓

Table 10: Poultry on commercial agricultural holdings on 1 June ^(a)

	Thousands					
	2015	2016	2017	% change 2017-16	June 2017 confidence interval	Indicator
Total poultry	125 433	128 879	tba			
Total breeding and laying fowl	32 608	33 201	tba			
Hens and pullets laying eggs for eating	25 181	25 451	tba			
Breeding flock	7 426	7 750	tba			
Table chickens (broilers)	82 585	85 328	tba			
Other poultry	10 240	10 351	tba			
Ducks	2 078	1 832	tba			
Geese	139	148	tba			
Turkeys	4 010	3 890	tba			
All other poultry	4 013	4 480	tba			

tba: to be announced. Estimates for poultry numbers will be published on 26 October 2017. The table has been included here to show historical 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 11: All other livestock on commercial agricultural holdings on 1 June ^(a)

	Thousands					
	2015	2016	2017	% change 2017-16	June 2017 confidence interval	Indicator
Total other livestock	306	302	tba			
Goats	82	83	tba			
Farmed deer	20	21	tba			
Horses	185	177	tba			
Any livestock not recorded elsewhere ^(a)	19	22	tba			
- of which alpacas	11	11	tba			
- of which llamas	2	2	tba			

(a) Includes camelids, donkeys, mules and hinnies.

tba: to be announced. Estimates for other livestock numbers will be published on 26 October 2017. The table has been included here to show historical results only.

Table 12: Number of people working on commercial agricultural holdings on 1 June

	2015	2016	2017	% change 2017-16	June 2017 confidence interval	Thousands Indicator
Total number of people working on commercial agricultural holdings	305	302	tba			
Farmers, partners, directors and spouses	174	173	tba			
Full time	90	89	tba			
Part time ^(a)	84	84	tba			
Salaried managers	11	11	tba			
Full time	8	8	tba			
Part time ^(a)	3	3	tba			
Regular and casual workers	120	117	tba			
Regular workers	75	73	tba			
- Full time	47	47	tba			
- Part time ^(a)	28	27	tba			
Casual workers	45	44	tba			
- Male	29	29	tba			
- Female	16	15	tba			

tba: to be announced. Estimates for the agricultural workforce will be published on 26 October 2017. The table has been included here to show historical results only.

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

Survey methodology

Full details of the survey methodology are available on the website at:

<https://www.gov.uk/structure-of-the-agricultural-industry-survey-notes-and-guidance>.

A summary is given below.

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 25 thousand 'commercial' holdings were asked to complete the survey in 2017. 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 13 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 13: June 2017 sample design

Stratum	Description	Sampling rate (%)	Population size
1	SLR < 0.5	10%	50 057
2	SLR >= 0.5 and < 1	15%	15 585
3	SLR >= 1 and < 2	25%	15 061
4	SLR >= 2 and < 3	37%	7 992
5	SLR >= 3 and < 5	54%	7 786
6	SLR >= 5	67%	7 853
10	SLR unknown	47%	3 031
All		23%	107 365

The results in this statistical release are based on usable responses from almost 17 thousand commercial holdings, representing a response rate of 67%.

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.

Data analysis

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.

Confidence indicators

We calculate the standard error for all our estimated figures. The standard error is a measure of the variation in the data. Typically, large estimates also have large standard errors. The standard error divided by the estimated total gives the relative standard error (RSE). This is expressed as a percentage and is easier to interpret than the standard error. Low RSEs indicate greater reliability in the figures, whereas estimates with high RSEs should be treated with caution.

Tick based confidence indicators have been shown against the June 2017 figures, ranging from 3 ticks (good) to 1 cross (poor). The ranges relate to the relative standard errors (RSE) as follows:

- ✓✓✓ RSE \leq 2.5%
- ✓✓ RSE $>$ 2.5 and \leq 5%
- ✓ RSE $>$ 5 and \leq 10%
- ☒ RSE $>$ 10 and \leq 20%
- ☒ RSE $>$ 20%

We have also shown confidence intervals against the figures. They are based on the standard error multiplied by 1.96 which gives a 95% confidence interval. We are 95% confident that this interval contains the true value. The standard errors only give an indication of the sampling error. They do not take into account any other sources of survey errors, such as non-response bias or administrative data errors.

Data notes

- All figures in tables 1 to 12 relate to commercial holdings only with the exception of the cattle figures in table 7, which relate to all holdings. Further details on commercial holdings can be seen in the methodology section on page 16.
- All percentage changes are based on unrounded figures.
- Totals may not necessarily agree with the sum of their components due to rounding.

Data uses and users

Results from the June Survey of Agriculture and Horticulture 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

- 26 October 2017: Farming Statistics final land use, livestock populations and agricultural workforce at 1 June 2017 – England.

UK Publications

- 12 October 2017: Farming Statistics provisional crop areas, yields and livestock populations at 1 June 2017 – United Kingdom.
- 21 December 2017: Farming Statistics final crop areas, yields, livestock populations and agricultural workforce at 1 June 2017 – 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.