



Published 17 August 2017

Farming Statistics – provisional arable crop areas at 1 June 2017 England

This release contains the first results from the 2017 June Survey of Agriculture and Horticulture. Provisional estimates are included for the main cereal, oilseed and uncropped arable land areas on commercial holdings on 1 June 2017 broken down by English region.

Whilst the figures give a good indication of trends, they may be subject to amendment as further survey responses come in and more data are validated. Final results will be published on 14 September 2017. Results in this publication relate to commercial holdings in England. Commercial holdings are those farms with a significant level of farming activity. A full definition can be found in the methodology section on page 9.

The key results are given below.

Cereals ([pages 3 - 4](#))

- The area of wheat in England in 2017 is 1.64 million hectares. This is a 2.5% decrease compared with 2016.
- The total area of barley increased by 6.0% between 2016 and 2017. Winter barley fell by 4.0% to 361 thousand hectares and spring barley increased by 15% to 478 thousand hectares.
- The area of oats in England increased by 17% to 120 thousand hectares in 2017.

Oilseed rape ([page 5](#))

- Oilseed rape decreased by 3.8% in 2017 to 522 thousand hectares. This was largely due to a 3.8% decrease in the winter sown area to 514 thousand hectares, which accounts for 98% of the total oilseed rape area.
- Spring oilseed rape also decreased in 2017 and now stands at 8 thousand hectares.

Uncropped arable land ([page 6](#))

- Uncropped arable land decreased by 11%, from 216 thousand hectares in 2016 to 193 thousand hectares in 2017.

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Regional areas ([page 8](#))

- All the areas mentioned above are broken down by English region and are available in table 3.

Survey methodology ([pages 9 - 10](#))

For information on how the survey is run and details of data analysis and accuracy of results please see the methodology section on pages 9 and 10 towards the end of this release.

Other survey results and publications ([page 11](#))

This release contains first estimates from the Survey of Agriculture and Horticulture carried out in June 2017. These provisional estimates are published early in response to users' needs for improved information on key crop areas. Full results for England and the UK will be published in the coming months and more details relating to publication dates and contents can be found on page 11.

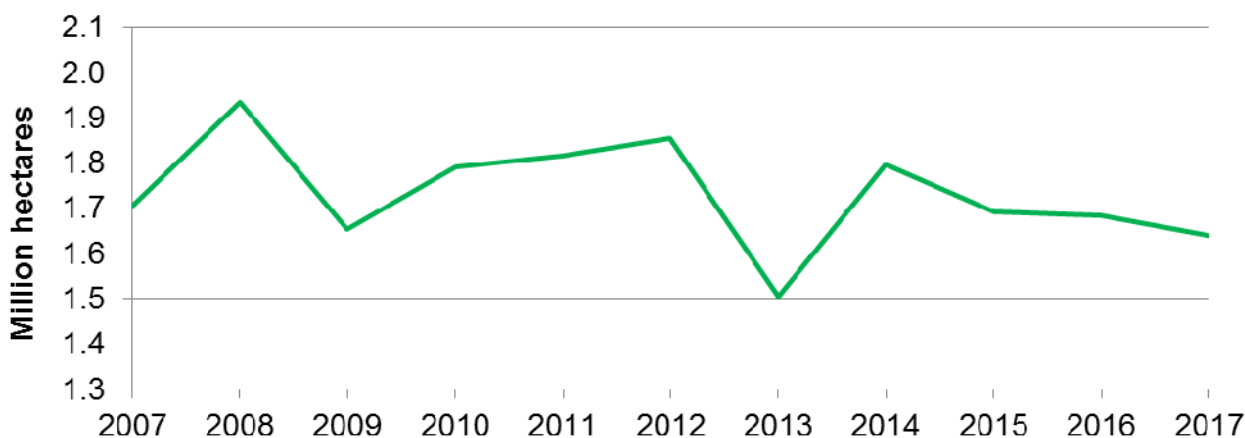
Defra is extremely grateful to the many farmers who complete the June Survey questionnaire each year. The support of farmers enables the Department to produce timely figures on the latest trends which are important for the Department's business and the industry's market operations.

Detailed results

Cereals – *Wheat*

The 2017 provisional wheat area estimate for England is 1.64 million hectares, a decrease of 2.5% compared to 2016 (Figure 1).

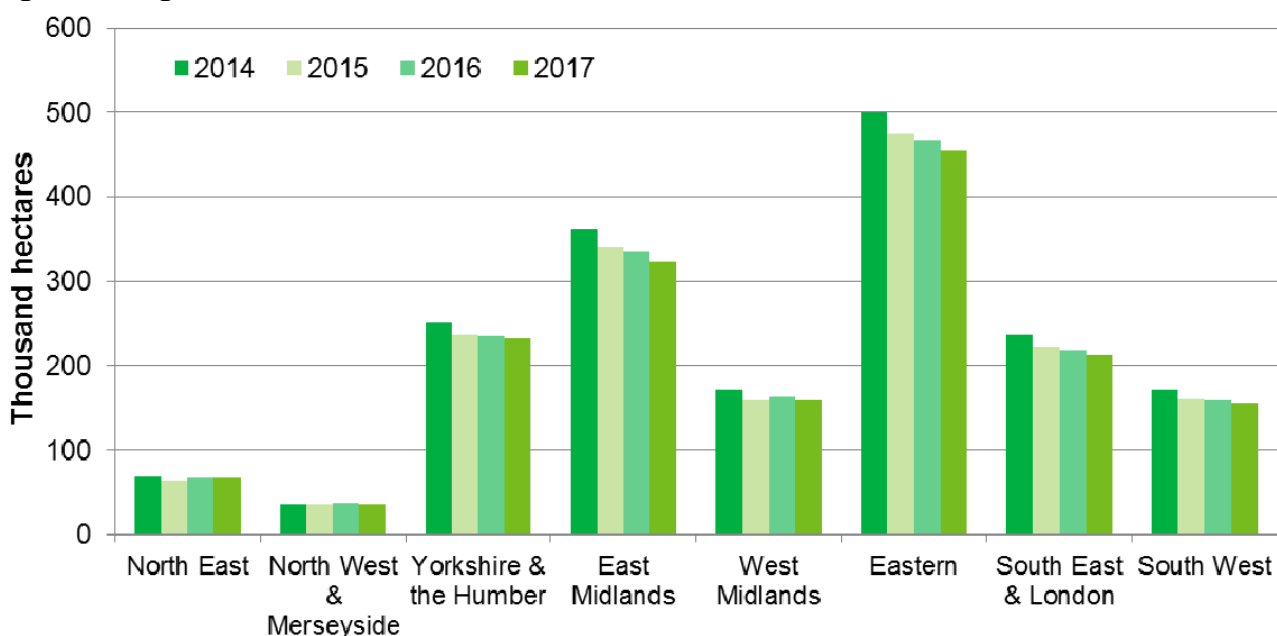
Figure 1: June wheat area: 2007 to 2017 ^(a)



(a) Figures for 2007 and 2008 are for all holdings. Figures from 2009 onwards relate to commercial holdings only. For further information please see the methodology section on page 9.

All of the English regions saw a decrease in wheat area (Figure 2). The proportional changes in area varied by region, ranging from a 0.3% decrease in the North East to a 3.7% decrease in the East Midlands. The Eastern region and the East Midlands grow almost half of the wheat in the country, accounting for 28% and 20% of the total area respectively.

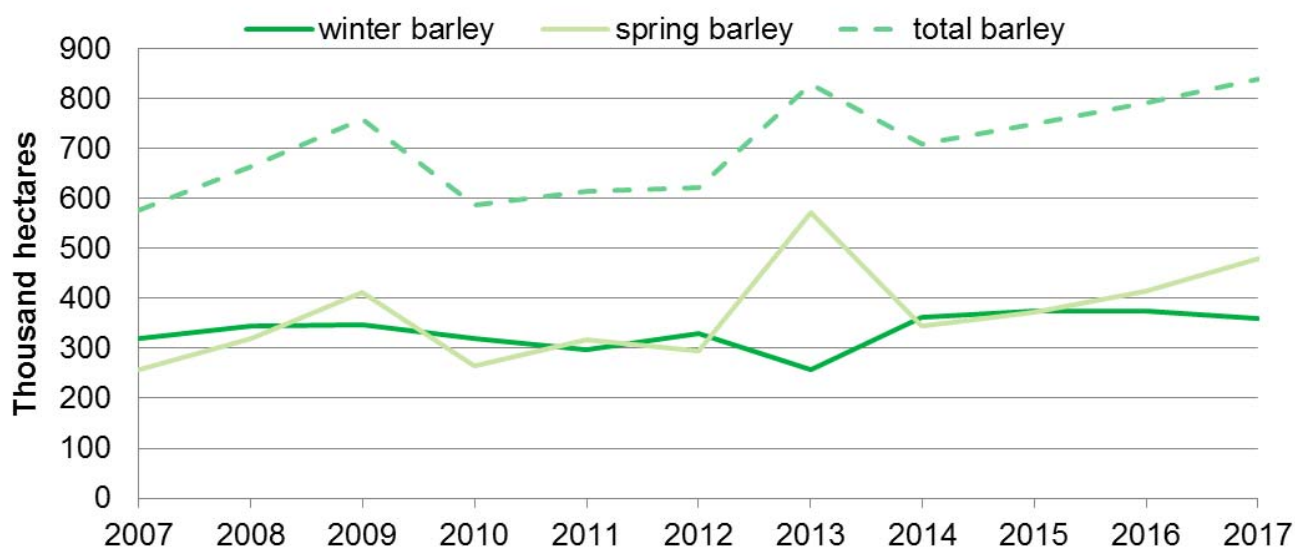
Figure 2: Regional wheat areas: 2014 to 2017



Barley

The total area of barley increased by 6.0%, from 791 thousand hectares in 2016 to 839 thousand hectares in 2017. Winter barley fell by 4.0% to 361 thousand hectares. However this was more than offset by a 15% increase in the area of spring sown barley which is 478 thousand hectares in 2017. This resulted in the spring sown barley increasing to account for 57% of the total barley area and winter sown falling to 43% (Figure 3).

Figure 3: June barley areas: 2007 to 2017 ^(a)



(a) Figures for 2007 and 2008 are for all holdings. Figures from 2009 onwards relate to commercial holdings only. For further information please see the methodology section on page 9.

Oats

The area of oats in England increased from 102 thousand hectares in 2016 to 120 thousand hectares in 2017. This is an increase of 17% and the second highest area of oats planted over the past 30 years.

Cereal production

An estimated 70% of the winter barley and 75% of the winter oilseed rape crop had been harvested by 3 August 2017. The winter oilseed rape harvest is ahead of the five year average. Yield reports are variable but early indications suggest yields are close to the farm average. At time of publication the winter wheat harvest has not started in earnest. There is insufficient information to give an overview of wheat yields and quality at this stage.

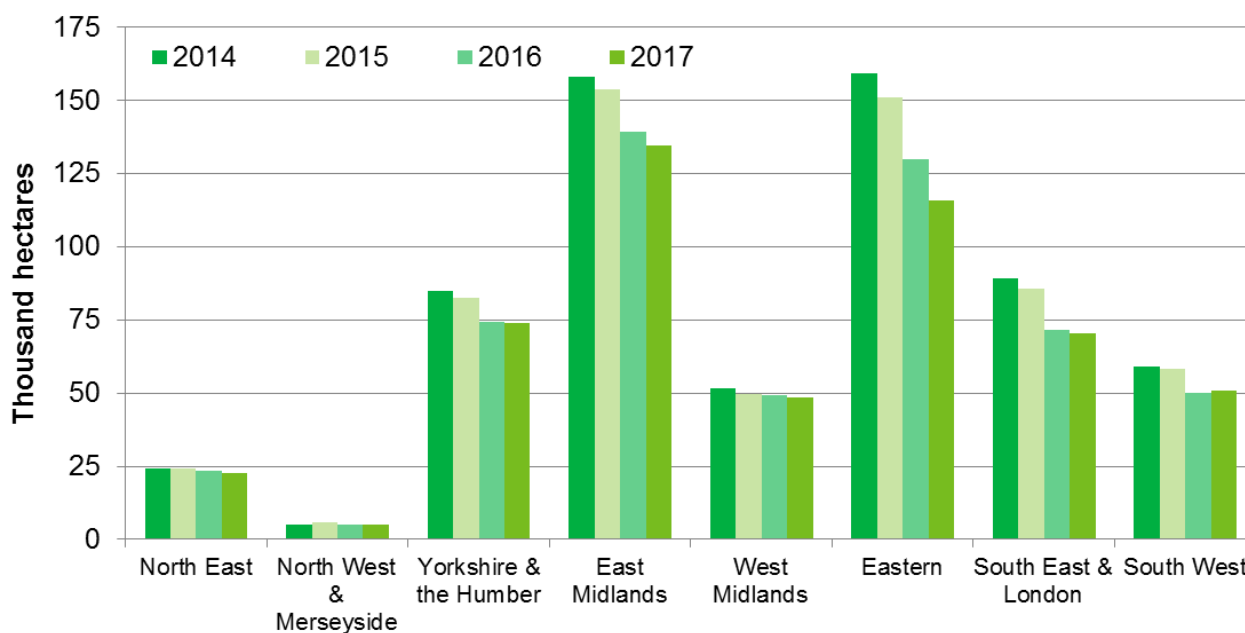
The first official Defra harvest estimates for wheat and barley will be published on 5 October 2017, with results for the remaining cereal and oilseed rape crops included in the full UK provisional results which are published on 12 October 2017. Both publications will be available at: <https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/series/structure-of-the-agricultural-industry>.

Oilseed rape

The total area of oilseed rape fell for the fifth year running, decreasing by 3.8% from 543 thousand hectares in 2016 to 522 thousand hectares in 2017. This was largely due to a 3.8% decrease in the winter sown area which stands at 514 thousand hectares and accounts for 98% of the total oilseed area.

The spring sown area of oilseed also decreased between 2016 and 2017, falling by 4.3%. However, at 8 thousand hectares this accounts for just 2% of the total oilseed rape area and represents the second smallest area of spring oilseed planted for the last 20 years.

Figure 4: Regional oilseed rape areas: 2014 to 2017



The changes in total oilseed area vary across regions (Figure 4). The majority of regions saw a decrease in area with the exception of the South West and the North West & Merseyside which rose by 1.6% and 4.8% respectively. The largest fall was in the Eastern region where the total oilseed area decreased by 10.9%. This equates to a reduction in area of 14 thousand hectares in the region.

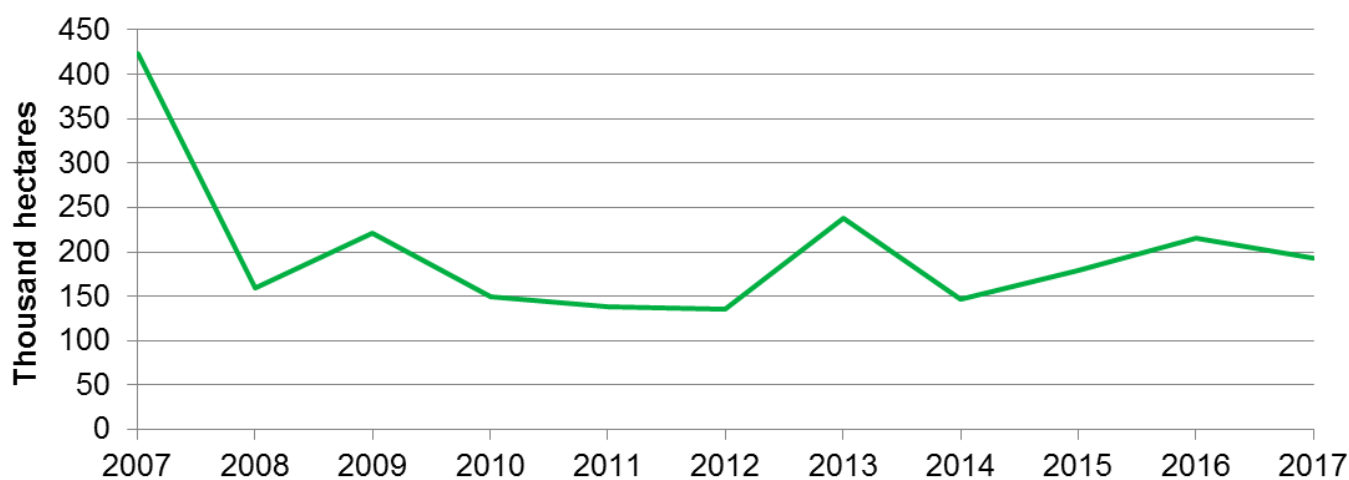
The largest proportion of oilseed rape is produced in the East Midlands and the Eastern region. Between them these regions account for almost half (48%) of the total oilseed area in England.

Uncropped arable land

The total area used for the main cereal and oilseed crops mentioned in this release is almost unchanged between 2016 and 2017, remaining at 3.1 million hectares.

The provisional estimate of uncropped arable land in England is 193 thousand hectares at 1 June 2017. This is a decrease of 11% since 2016 and equates to 24 thousand hectares less land being left out of production (Figure 5).

Figure 5: Uncropped arable land area: 2007 to 2017 ^(a)
(Includes bare fallow, uncropped set-aside (2007 to 2008) and arable land not in production)



(a) Figures for 2007 and 2008 are for all holdings. Figures from 2009 onwards relate to commercial holdings only. For further information please see the methodology section on page 9.

Results tables

Table 1: Area of arable crops and uncropped arable land ^(a)
Thousand hectares

Item	June 2015	June 2016	June 2017	% change 2017/2016	2017 95% confidence interval ('000 ha)	2017 Indicator
Wheat	1 693	1 684	1 641	-2.5	+/-26	✓✓✓
Barley	748	791	839	6.0	+/-18	✓✓✓
Winter barley	376	376	361	-4.0	+/-11	✓✓✓
Spring barley	373	416	478	15.1	+/-14	✓✓✓
Oats	98	102	120	17.1	+/-7	✓✓
Oilseed rape	611	543	522	-3.8	+/-15	✓✓✓
Winter oilseed rape	605	534	514	-3.8	+/-15	✓✓✓
Spring oilseed rape	6	9	8	-4.3	+/-3	☒
Uncropped arable land	179	216	193	-10.9	+/-10	✓✓

(a) Results relate to commercial holdings only. For further information please see the methodology section on page 9.

Table 2: Defra Survey estimates compared with industry estimates of arable crops areas and uncropped arable land ^(a)
Thousand hectares

Item	AHDB December 2015 ^(b)	Defra June 2016	AHDB December 2016 ^(b)	Defra June 2017	AHDB 2017 planting estimate ^(c)
Wheat	1 642	1 684	1 589	1 641	1 634
Barley	-	791	-	839	844
Winter barley	370	376	369	361	370
Spring barley	-	416	-	478	474
Oats	76	102	95	120	116
Oilseed rape	548	543	538	522	520
Winter oilseed rape	-	534	-	514	-
Spring oilseed rape	-	9	-	8	-
Uncropped arable land	-	216	-	193	-

(a) Results relate to commercial holdings only. Further details are given in the methodology section on page 9.

(b) The December figures are sourced from the AHDB planting survey. Further information can be found at: <https://cereals.ahdb.org.uk/media/1197581/winter-planting-survey-2016-results.pdf>.

(c) These estimates are from the 2017 AHDB planting survey and can be found here: <https://cereals.ahdb.org.uk/media/1268402/planting-variety-survey-2017-gb-final.pdf>.

Table 3: June 2017 provisional crop areas and uncropped arable land estimates by English region ^(a)

Region	Wheat			Winter barley		
	2016	2017	% change	2016	2017	% change
North East	68	67	-0.3	29	28	-1.4
North West & Merseyside	37	37	-1.9	16	16	-4.1
Yorkshire & the Humber	235	232	-1.2	71	69	-3.2
East Midlands	335	323	-3.7	49	46	-6.1
West Midlands	163	159	-2.8	35	33	-6.0
Eastern	468	454	-2.9	90	87	-3.1
South East (incl. London)	219	213	-2.6	36	35	-3.1
South West	159	157	-1.5	49	46	-5.5
England	1 684	1 641	-2.5	376	361	-4.0

Thousand hectares

Region	Spring barley			Oats		
	2016	2017	% change	2016	2017	% change
North East	12	14	10.7	8	10	18.1
North West & Merseyside	24	26	9.5	5	6	19.7
Yorkshire & the Humber	50	57	13.7	8	9	15.2
East Midlands	60	73	21.2	12	13	13.1
West Midlands	28	32	13.5	17	20	18.0
Eastern	89	103	15.4	12	16	31.6
South East (incl. London)	66	78	17.8	19	22	13.3
South West	85	95	11.8	21	24	13.1
England	416	478	15.1	102	120	17.1

Region	Oilseed rape			Uncropped arable land		
	2016	2017	% change	2016	2017	% change
North East	24	23	-3.7	10	9	-12.5
North West & Merseyside	5	5	4.8	5	4	-6.4
Yorkshire & the Humber	74	74	-0.7	30	25	-17.7
East Midlands	139	135	-3.4	38	33	-11.7
West Midlands	49	48	-1.2	17	15	-13.4
Eastern	130	116	-10.9	54	50	-7.2
South East (incl. London)	71	70	-1.5	38	34	-9.5
South West	50	51	1.6	24	22	-10.0
England	543	522	-3.8	216	193	-10.9

(a) Results relate to commercial holdings only. Further details are given in the methodology section on page 9.

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 4 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 4: 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 responses from 16.5 thousand commercial holdings, representing a response rate of 66%.

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 <=2.5%
✓✓	RSE >2.5 and <=5%
✓	RSE >5 and <=10%
☒	RSE >10 and <=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 3 relate to commercial holdings only. Further details can be seen in the methodology section on page 9.
- 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

- 14 September 2017: Farming Statistics final crop areas and cattle, sheep and pig populations at 1 June 2017 – England.
- 26 October 2017: Farming Statistics final land use, livestock populations and agricultural workforce at 1 June 2017 – England.

UK Publications

- 5 October 2017: Farming Statistics first estimates of 2017 wheat and barley production – United Kingdom.
- 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.