



Published 13 August 2015

Farming Statistics – provisional arable crop areas at 1 June 2015 England

This release contains the first results from the 2015 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 2015 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 17 September 2015. 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 decreased by 5.8% from 1.8 million hectares in 2014 to 1.7 million hectares in 2015.
- The total area of barley increased by 6.0% between 2014 and 2015. Winter barley increased by 3.9% to 377 thousand hectares and spring barley increased by 8.3% to 374 thousand hectares.
- The area of oats in England is 98 thousand hectares in 2015.

Oilseed rape ([page 5](#))

- Oilseed rape decreased by 2.9% in 2015 to 613 thousand hectares. This was largely due to a 1.9% decrease in the winter sown area to 606 thousand hectares, which accounts for 99% of the total oilseed rape area.
- Spring oilseed rape also decreased in 2015 to 7 thousand hectares. This is the smallest area of spring oilseed for the last 20 years.

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

- Uncropped arable land increased by 22%, from 146 thousand hectares in 2014 to 179 thousand hectares in 2015.

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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 2015. 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.

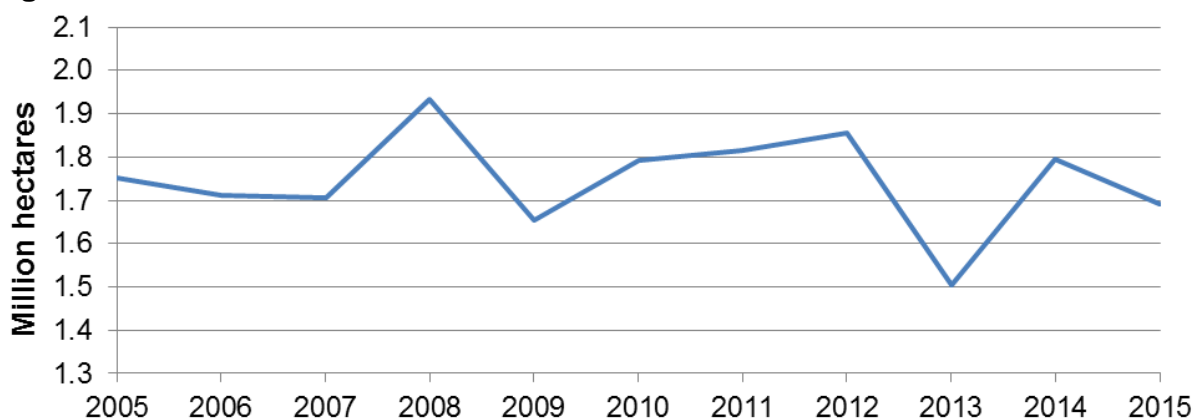
Defra is extremely grateful to the many farmers who complete the June Survey questionnaire each year. The support of farmers enables the Department to produce timely figures on the latest trends which are important for the Department's business and the industry's market operations.

Detailed results

Cereals – *Wheat*

The 2015 provisional wheat area estimate for England is 1.7 million hectares. This is a decrease of 5.8% from 1.8 million hectares in June 2014 (Figure 1).

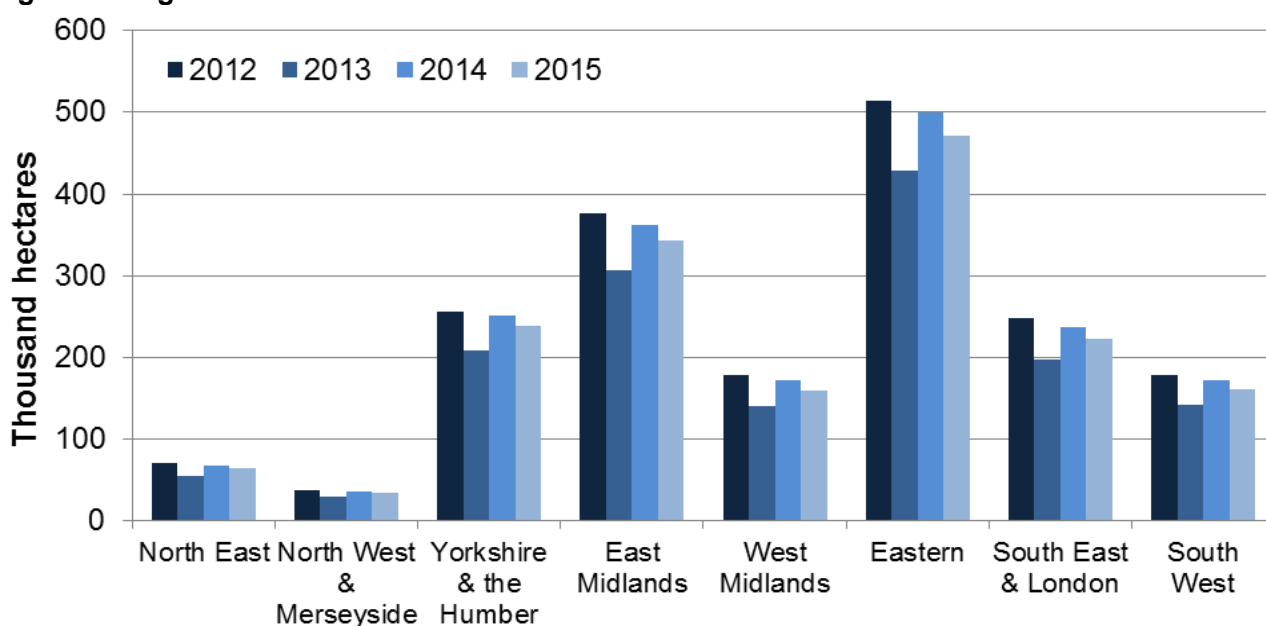
Figure 1: June wheat area: 2005 to 2015 ^(a)



(a) The figures from 2005 to 2008 are for all holdings. Figures for 2009 to 2015 are for commercial holdings only. For further information please see the methodology section on page 9.

The decrease in wheat area has been seen across all of the English regions (Figure 2) ranging from a 3.8% decrease in the North West & Merseyside to a 7.7% decrease in the West Midlands. However the Eastern region and the East Midlands still grow almost half of the wheat in the country, accounting for 28% and 20% of the total area respectively. These proportions are unchanged since 2014.

Figure 2: Regional wheat areas: 2012 to 2015

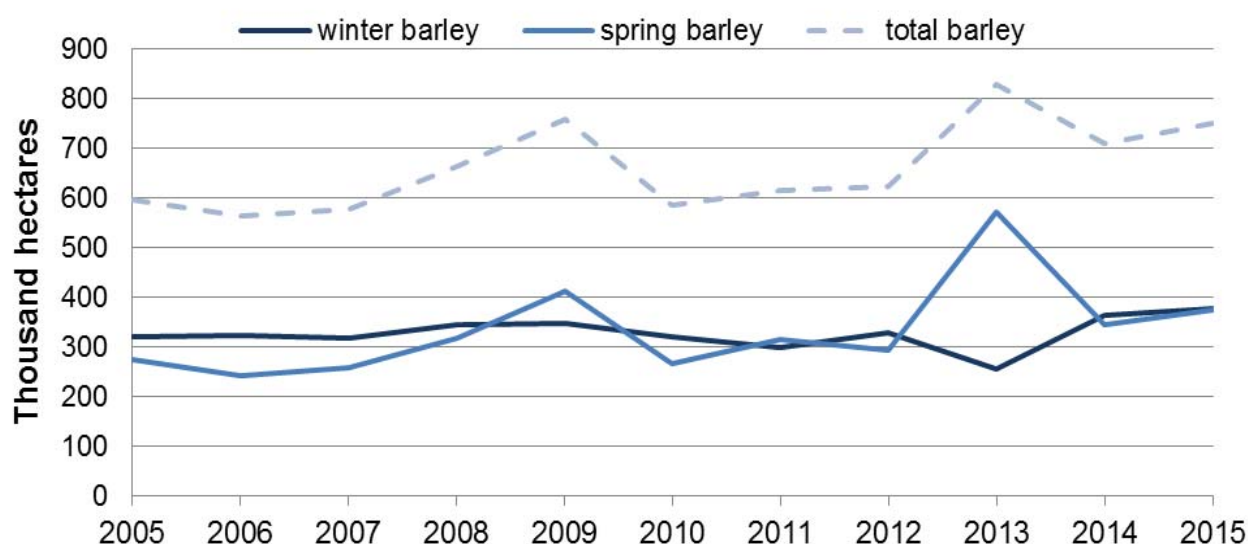


Barley

In contrast to the 5.8% decrease in wheat, the total barley area increased by 6.0% from 709 thousand hectares in 2014 to 752 thousand hectares in 2015. Winter and spring sown barley both increased in 2015 and the ratio between the two crops remains at a 50/50 split (Figure 3). Winter sown barley increased by 3.9% to 377 thousand hectares and spring sown barley increased by 8.3% to 374 thousand hectares.

The increased area of barley may be due to both winter and spring sown barley being used for black-grass management. The increase in area of winter barley may also be due to the rise of high yielding feed varieties and the earlier harvest time allowing good opportunity to drill winter oilseed.

Figure 3: June barley areas: 2005 to 2015 ^(a)



(a) The figures from 2005 to 2008 are for all holdings. Figures for 2009 to 2015 are for commercial holdings only. For further information please see the methodology section on page 9.

Oats

The area of oats in England decreased from 105 thousand hectares in 2014 to 98 thousand hectares in 2015. This is a decrease of 6.5%

Cereal production

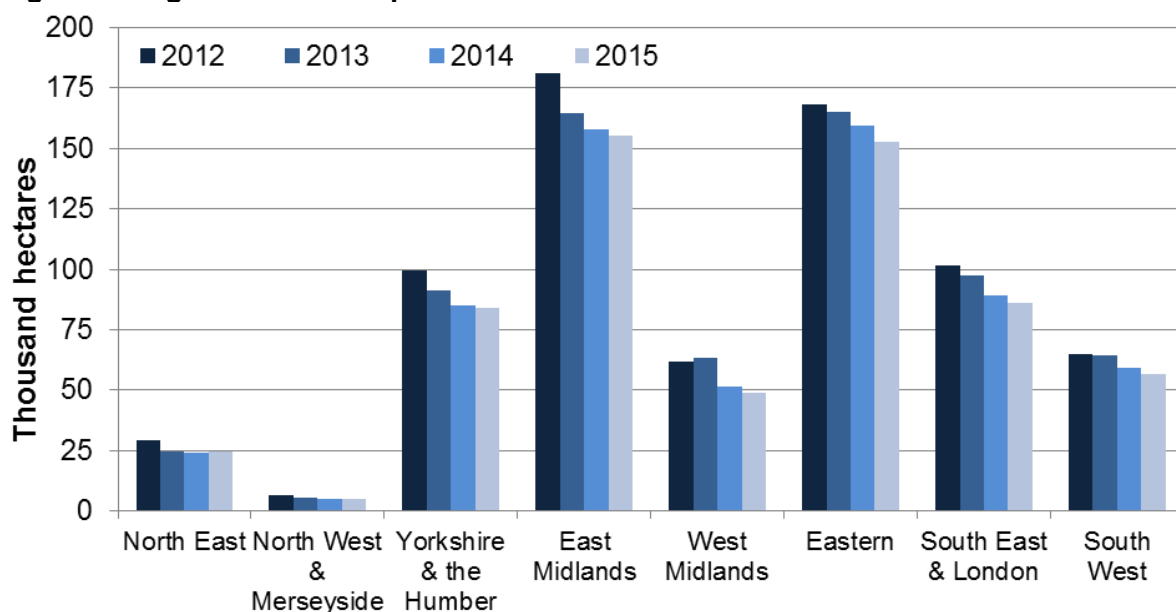
The 2015 harvest has continued following improved conditions. Around half of the winter barley harvest had been completed by the end of July and early indications show strong yields. However, there is a lot of variability in yields at present and this may change as the harvest is completed. The first official Defra harvest estimates will be published on 15 October 2015 and 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 third year running, decreasing by 2.9% from 632 thousand hectares in 2014 to 613 thousand hectares in 2015. The spring sown area of oilseed decreased by 49% to just 7 thousand hectares. This is the smallest area of spring oilseed planted for the last 20 years.

The area of winter sown oilseed saw a much smaller decrease of 1.9% between 2014 and 2015. However, at 606 thousand hectares, winter oilseed accounts for 99% of the total oilseed rape area.

Figure 4: Regional oilseed rape areas: 2012 to 2015



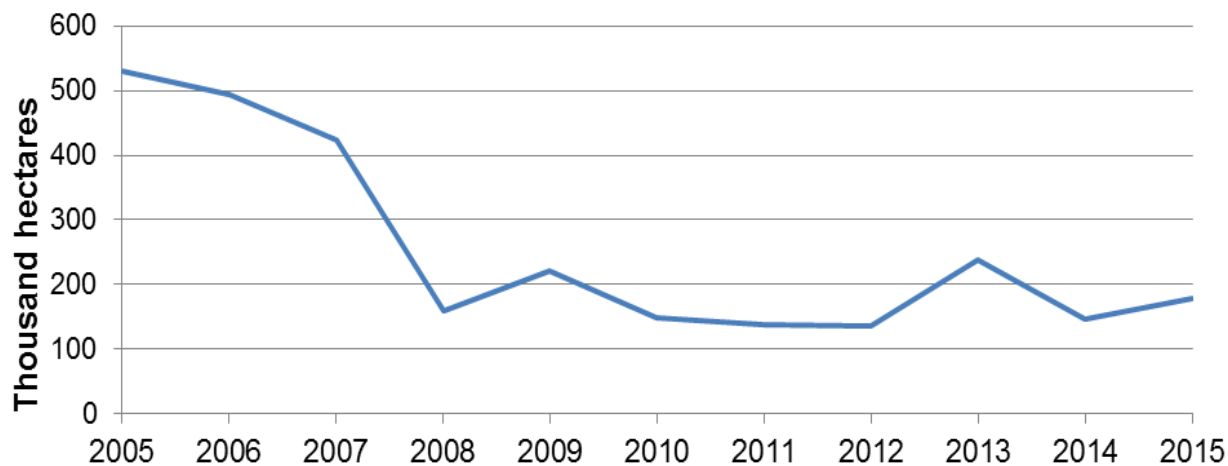
The changes in total oilseed area vary across regions (Figure 4). Almost all regions saw a decrease in area, with the exception of the North East which increased by 1.3% and the North West & Merseyside which remained almost unchanged.

The largest proportion of oilseed rape is produced in the East Midlands and the Eastern region. Between them these regions account for half 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 has decreased by 2.7% between 2014 and 2015. Therefore the area of land left out of production has increased in 2015. The provisional estimate of uncropped arable land in England is 179 thousand hectares at 1 June 2015, an increase of 22% (Figure 5).

Figure 5: Uncropped arable land area: 2005 to 2015 ^(a)
(Includes bare fallow, uncropped set-aside (2005 to 2007) and arable land not in production)



(a) The figures from 2005 to 2008 are for all holdings. Figures for 2009 to 2015 are for 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 2013	June 2014	June 2015	% change 2015/2014	2015 95% confidence interval ('000 ha)	2015 Indicator
Wheat	1 505	1 797	1 692	-5.8	+/-33	✓✓✓
Barley	828	709	752	6.0	+/-20	✓✓✓
Winter barley	257	363	377	3.9	+/-14	✓✓✓
Spring barley	571	345	374	8.3	+/-15	✓✓✓
Oats	138	105	98	-6.5	+/-7	✓✓
Oilseed rape	676	632	613	-2.9	+/-19	✓✓✓
Winter oilseed rape	584	618	606	-1.9	+/-19	✓✓✓
Spring oilseed rape	92	13	7	-48.7	+/-3	☒
Uncropped arable land	237	146	179	22.1	+/-9	✓✓✓

(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	December 2013 ^(b)	June 2014	December 2014 ^(b)	June 2015	HGCA 2015 planting estimate ^(c)
Wheat	1 815	1 797	1 664	1 692	1 734
Barley	-	709	-	752	760
Winter barley	369	363	336	377	382
Spring barley	-	345	-	374	378
Oats	89	105	81	98	107
Oilseed rape	703	632	627	613	584
Winter oilseed rape	-	618	-	606	-
Spring oilseed rape	-	13	-	7	-
Uncropped arable land	-	146	-	179	-

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

(b) From 2011 the December figures are sourced from the AHDB planting survey instead of Defra's December Survey of Agriculture. Further information can be found at:

<http://www.hgca.com/content.output/100/100/Markets/Markets/Survey%20Results.msp>.

(c) These estimates are from the 2015 AHDB/HGCA planting survey and can be found here:

<http://cereals.ahdb.org.uk/media/683680/planting-and-variety-survey-2015-final-results.pdf>.

Table 3: June 2015 provisional crop areas and uncropped arable land estimates by English region ^(a)

Region	Wheat			Winter barley		
	2014	2015	% change	2014	2015	% change
North East	68	65	-4.9	29	30	2.3
North West & Merseyside	36	34	-3.8	16	17	6.8
Yorkshire & the Humber	250	238	-5.0	77	80	4.5
East Midlands	362	342	-5.4	46	48	3.8
West Midlands	172	158	-7.7	34	35	4.4
Eastern	500	471	-5.9	84	87	3.1
South East (incl. London)	237	223	-6.0	30	31	5.0
South West	172	161	-6.5	47	48	3.6
England	1 797	1 692	-5.8	363	377	3.9

Region	Spring barley			Oats		
	2014	2015	% change	2014	2015	% change
North East	15	15	2.3	9	8	-8.5
North West & Merseyside	27	28	4.2	5	5	-5.9
Yorkshire & the Humber	44	46	6.5	9	8	-7.6
East Midlands	41	45	11.7	12	10	-11.6
West Midlands	26	27	3.0	18	17	-5.4
Eastern	65	72	10.1	10	9	-4.2
South East (incl. London)	51	57	12.4	21	20	-6.8
South West	78	84	7.5	21	21	-4.4
England	345	374	8.3	105	98	-6.5

Region	Oilseed rape			Uncropped arable land		
	2014	2015	% change	2014	2015	% change
North East	24	24	1.3	7	9	20.2
North West & Merseyside	5	5	0.1	4	4	-9.9
Yorkshire & the Humber	85	84	-1.0	18	23	26.4
East Midlands	158	155	-1.7	27	34	23.8
West Midlands	52	49	-5.3	12	15	20.8
Eastern	159	153	-4.1	36	44	24.4
South East (incl. London)	89	86	-3.7	24	29	20.2
South West	59	57	-4.1	17	21	23.0
England	632	613	-2.9	146	179	22.1

(a) Results relate to commercial holdings only. For further information please see 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 2015. 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 2015 sample design

Stratum	Description	Sampling rate (%)	Population size
1	SLR < 0.5	11%	39 683
2	SLR >= 0.5 and < 1	16%	15 885
3	SLR >= 1 and < 2	26%	15 348
4	SLR >= 2 and < 3	38%	8 408
5	SLR >= 3 and < 5	55%	7 641
6	SLR >= 5	67%	7 648
10	SLR unknown	13%	9 862
All		24%	104 475

The results in this statistical release are based on responses from almost 14 thousand commercial holdings, representing a response rate of 55%.

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 2015 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 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

- 17 September 2015: Farming Statistics final crop areas and cattle, sheep and pig populations at 1 June 2015 – England.
- 29 October 2015: Farming Statistics final land use, livestock populations and agricultural workforce at 1 June 2015 – England.

UK Publications

- 15 October 2015: Farming Statistics provisional crop areas, yields and livestock populations at 1 June 2015 – United Kingdom.
- 17 December 2015: Farming Statistics final crop areas, yields, livestock populations and agricultural workforce at 1 June 2015 – 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.