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Farming Statistics – provisional arable crop areas at 1 June 2014 England

This release contains the first results from the 2014 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 2014 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 18 September 2014. 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 provisional June arable crop areas show large changes between 2013 and 2014. Last year terrible weather conditions left many farmers unable to plant winter sown crops. Failed crops due to pests and water-logged fields also contributed to the changes seen between crop categories in 2013. This resulted in some farmers planting spring sown crops instead of winter crops and others leaving more arable land out of production. As a result of improved weather conditions this year, farmers have been able to once again plant crops on land previously left out of production. The ratios between winter and spring sown crops have also returned to more typical levels seen prior to 2013. The key results are given below.

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

- The area of wheat in England increased by 19% from 1.5 million hectares in 2013 to 1.8 million hectares in 2014.
- The area of winter sown barley increased by 42% in 2014 to 366 thousand hectares. This is the largest area of winter barley since 2003.
- The area of spring sown barley decreased by 40% between 2013 and 2014 and stands at 343 thousand hectares.
- The area of oats in England is 106 thousand hectares in 2014.

Oilseed rape ([page 5](#))

- Oilseed rape decreased by 6% in 2014 to 634 thousand hectares. This was largely due to an 86% decrease in the spring sown area to 13 thousand hectares.
- Winter oilseed rape increased by 6% in 2014 to 621 thousand hectares and accounts for 98% of the total oilseed area.

Enquiries on this publication to: Jennie Blackburn, Farming Statistics, Department for Environment, Food and Rural Affairs, Room 201, Foss House, Kings Pool, 1-2 Peasholme Green, York YO1 7PX
Tel: 01904 455332. Email: farming-statistics@defra.gsi.gov.uk.

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

- Uncropped arable land decreased by 39% between 2013 and 2014, returning to a more typical area of 146 thousand hectares.

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 2014. 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

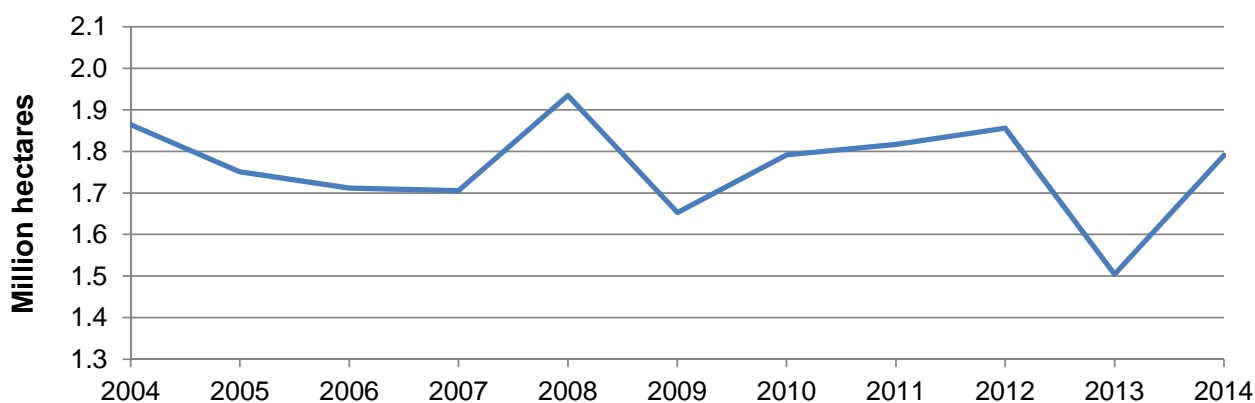
Cereals

Wheat

The 2014 provisional wheat area estimate for England is 1.8 million hectares. This is an increase of 19% from 1.5 million hectares in June 2013 (see figure 1 for the last ten years of data).

The difficult weather conditions saw many farmers either leaving land out of production last year or planting spring sown crops instead of winter sown crops when possible. This year has seen a return to areas more consistent with previous years, before the large changes seen in 2013.

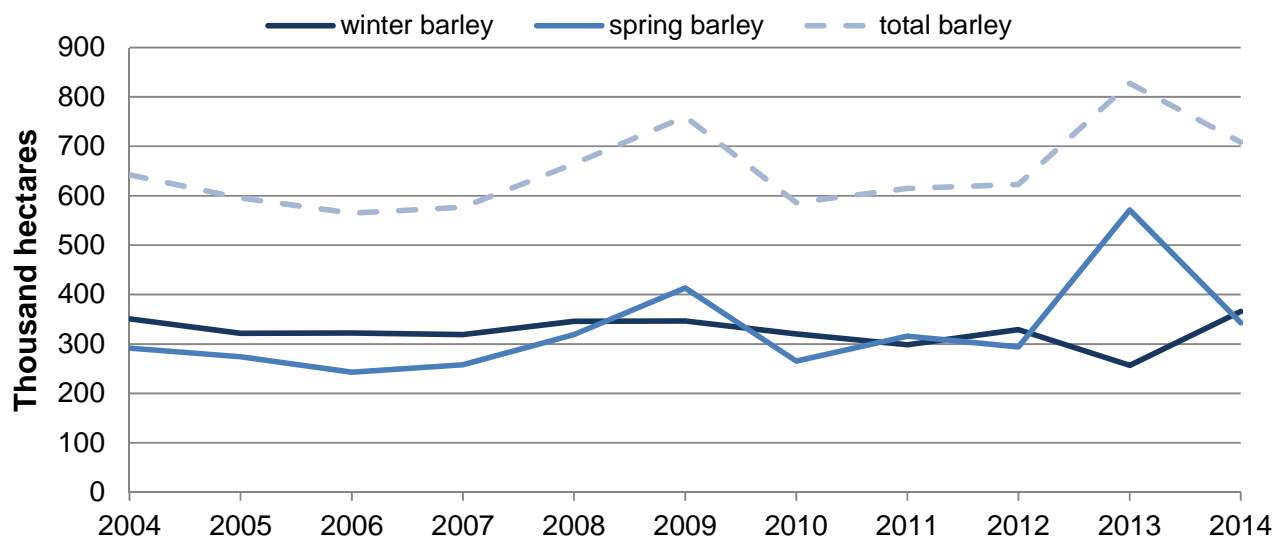
Figure 1: June wheat area: 2004 to 2014 ^(a)



(a) The figures from 2004 to 2008 are for all holdings. Figures for 2009 to 2014 are for commercial holdings only. For further information please see the methodology section on page 9.

The increase in wheat area has been seen across all of the English regions with the largest proportional change (22%) in the North West & Merseyside. This is closely followed by the North East, the West Midlands and the South West all increasing by 21% (Figure 2). Despite the large increases seen in 2014, the area of wheat grown in each region is still lower than in 2012.

Figure 2: Regional wheat areas: 2011 to 2014

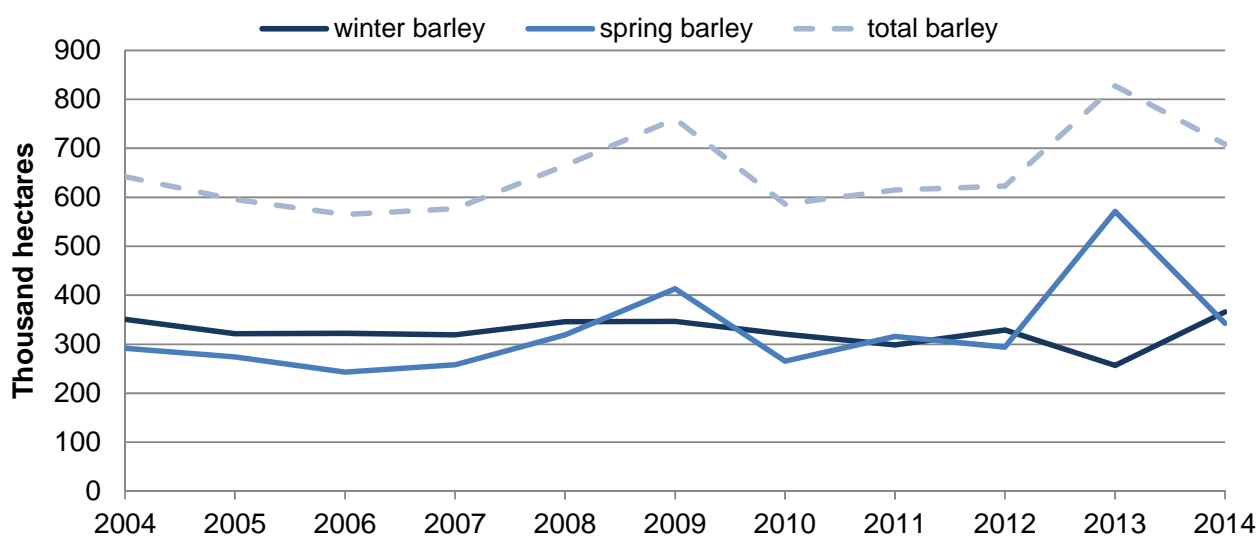


Barley

The total barley area also saw a large change in 2014, decreasing by 14% from 828 thousand hectares in 2013 to 708 thousand hectares. The overall fall in the total barley area was due to a 40% decrease in the spring sown area which more than offset the 42% increase in the winter sown area.

Following the sharp changes seen in 2013 due to weather the ratio between winter and spring sown barley has returned to an almost 50/50 split. This is consistent with recent years prior to 2013 (see figure 3).

Figure 3: June barley areas: 2004 to 2014 ^(a)



(a) The figures from 2004 to 2008 are for all holdings. Figures for 2009 to 2014 are for commercial holdings only. For further information please see the methodology section on page 9.

Oats

The area of oats was another crop seeing a return to more typical levels in 2014 and now stands at 106 thousand hectares. However, despite decreasing by 23% between 2013 and 2014, the area of oats still remains higher now than it was in 2012.

Cereal production

The 2014 harvest has continued at pace in recent weeks following the warm dry weather. Around three quarters of the winter oilseed 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 16 October 2014 and will be available at:

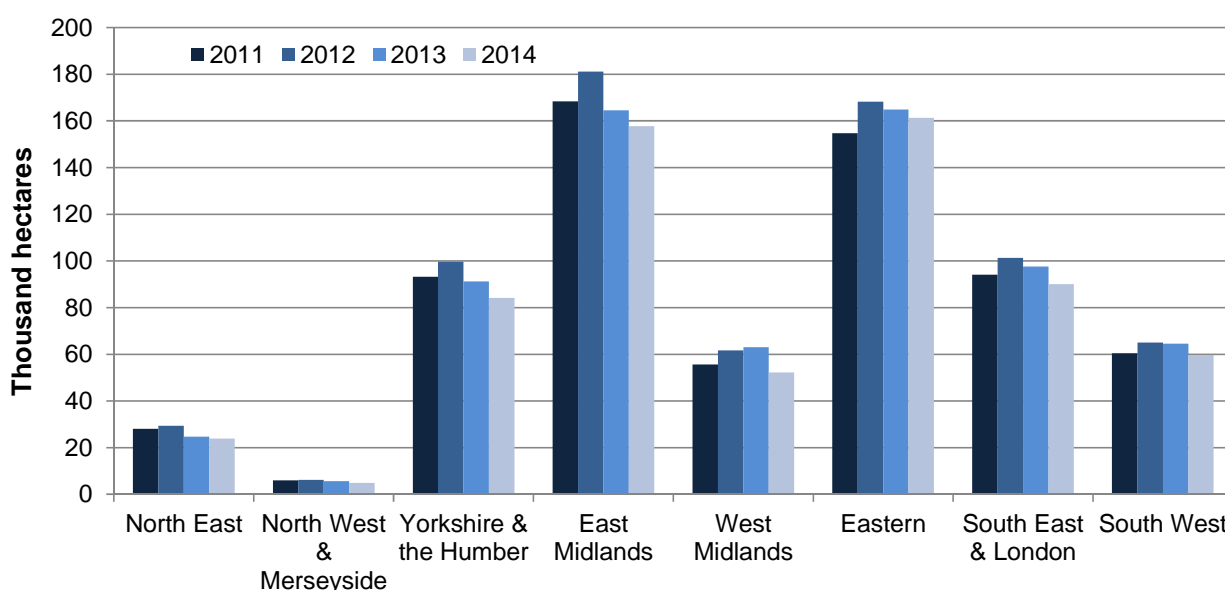
<https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/series/structure-of-the-agricultural-industry>.

Oilseed rape

The total area of oilseed rape fell for the second year running, decreasing by 6% from 676 thousand hectares in 2013 to 634 thousand hectares in 2014. The spring sown area of oilseed decreased by 86%, however this was a return to a more typical area of 13 thousand hectares following the large increase seen in 2013. Conversely the area of winter sown oilseed increased between 2013 and 2014, rising by 6% to 621 thousand hectares.

The changes in total oilseed area vary across regions. All regions saw a decrease in area with the largest proportional decrease (17%) in the West Midlands, followed by the North West & Merseyside seeing the next largest decrease (13%). The smallest proportional changes were in the Eastern region and the North East, decreasing by 2% and 3% respectively.

Figure 4: Regional oilseed rape areas: 2011 to 2014

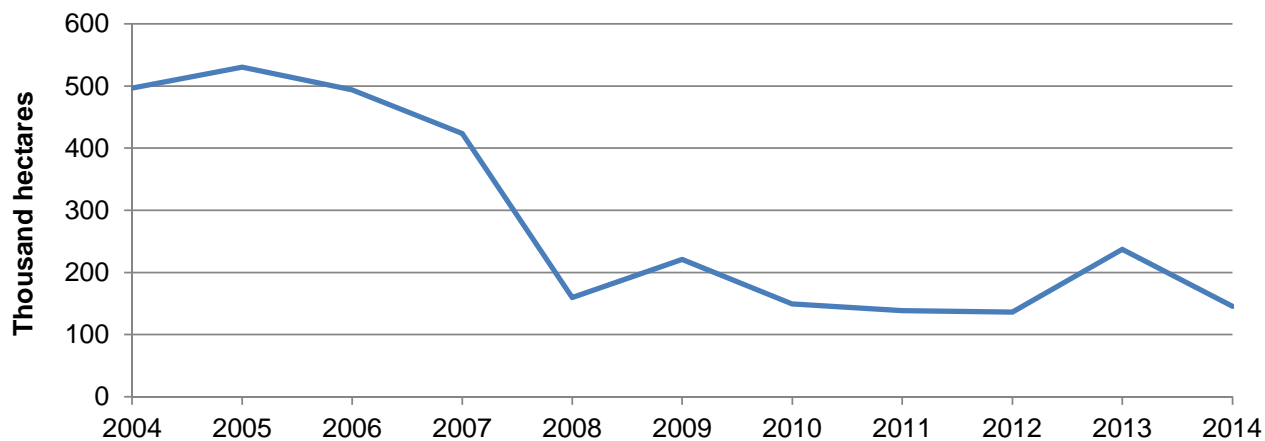


The area of winter oilseed rape has historically accounted for the majority of the total oilseed area. This was still the case in 2013; however the shift seen from winter to spring sown crops due to the weather resulted in the spring area accounting for a larger proportion of the total (14%). In 2014, the ratio between winter and spring sown oilseed returned to similar proportions seen prior to 2013, with winter sown oilseed once again accounting for 98% of the total oilseed area.

Uncropped arable land

The provisional estimate of uncropped arable land in England is 146 thousand hectares at 1 June 2014. This is a decrease of 39% due to many farmers once again being able to plant crops on land they were forced to leave out of production in 2013 as a result of the terrible weather. The decrease in area is a return to more typical levels of uncropped arable land seen in recent years (Figure 5).

Figure 5: Uncropped arable land area: 2004 to 2014 ^(a)
(Includes bare fallow, uncropped set-aside (2004 to 2007) and arable land not in production)



(a) The figures from 2004 to 2008 are for all holdings. Figures for 2009 to 2014 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 2012	June 2013	June 2014	% change 2014/2013	2014 95% confidence interval ('000 ha)	2014 Indicator
Wheat	1 856	1 505	1 791	19	+/- 24	✓✓✓
Barley	623	828	708	-14	+/- 20	✓✓✓
Winter barley	329	257	366	42	+/- 8	✓✓✓
Spring barley	294	571	343	-40	+/- 18	✓✓✓
Oats	92	138	106	-23	+/- 8	✓✓
Oilseed rape	713	676	634	-6	+/- 27	✓✓✓
Winter oilseed rape	702	584	621	6	+/- 16	✓✓✓
Spring oilseed rape	11	92	13	-86	+/- 21	☒
Uncropped arable land	136	237	146	-39	+/- 13	✓✓

(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 2012 ^(b)	June 2013	December 2013 ^(b)	June 2014	HGCA 2014 planting estimate ^(c)
Wheat	1 382	1 505	1 815	1 791	1 828
Barley	-	828	-	708	742
Winter barley	273	257	369	366	365
Spring barley	-	571	-	343	378
Oats	54	138	89	106	114
Oilseed rape	-	676	703	634	672
Winter oilseed rape	685	584	-	621	-
Spring oilseed rape	-	92	-	13	-
Uncropped arable land	-	237	-	146	-

(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 2014 AHDB/HGCA planting survey and can be found here:

<http://www.hgca.com/media/458255/planting-variety-survey-2014-commentary-tables.pdf>

Table 3: June 2014 provisional crop areas and uncropped arable land estimates by English region ^(a)

Region	Wheat			Winter barley		
	2013	2014	% change	2013	2014	% change
North East	55	66	21%	21	29	39%
North West & Merseyside	29	35	22%	11	16	52%
Yorkshire & the Humber	208	250	20%	55	78	42%
East Midlands	307	359	17%	32	46	43%
West Midlands	140	170	21%	23	34	50%
Eastern	428	503	18%	63	86	38%
South East (incl. London)	197	237	20%	20	30	46%
South West	142	172	21%	32	46	42%
England	1 505	1 791	19%	257	366	42%

Region	Spring barley			Oats		
	2013	2014	% change	2013	2014	% change
North East	29	16	-45%	11	9	-24%
North West & Merseyside	43	26	-38%	7	5	-24%
Yorkshire & the Humber	78	44	-44%	12	9	-25%
East Midlands	63	39	-38%	15	12	-20%
West Midlands	45	26	-42%	25	19	-24%
Eastern	104	63	-39%	13	10	-24%
South East (incl. London)	83	51	-39%	28	22	-23%
South West	127	77	-39%	28	22	-23%
England	571	343	-40%	138	106	-23%

Region	Oilseed rape			Uncropped arable land		
	2013	2014	% change	2013	2014	% change
North East	25	24	-3%	13	7	-44%
North West & Merseyside	6	5	-13%	6	4	-29%
Yorkshire & the Humber	91	84	-8%	31	18	-42%
East Midlands	165	158	-4%	47	28	-41%
West Midlands	63	52	-17%	21	13	-40%
Eastern	165	161	-2%	53	35	-34%
South East (incl. London)	98	90	-8%	39	24	-38%
South West	65	60	-8%	27	17	-39%
England	676	634	-6%	237	146	-39%

(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 30 thousand 'commercial' holdings were asked to complete the survey in 2014. 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 2014 sample design

Stratum	Description	Sampling rate (%)	Population size
1	SLR < 0.5	13	45 383
2	SLR >= 0.5 and < 1	18	14 945
3	SLR >= 1 and < 2	30	15 903
4	SLR >= 2 and < 3	45	8 853
5	SLR >= 3 and < 5	65	7 972
6	SLR >= 5	78	7 724
10	SLR unknown	35	4 232
All		28	105 012

The results in this statistical release are based on responses from almost 17 thousand commercial holdings, representing a response rate of 56%.

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 2014 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

- 18 September 2014: Farming Statistics final crop areas and cattle, sheep and pig populations at 1 June 2014 – England.
- 30 October 2014: Farming Statistics final land use, livestock populations and agricultural workforce at 1 June 2014 – England.

UK Publications

- 16 October 2014: Farming Statistics provisional crop areas, yields and livestock populations at 1 June 2014 – United Kingdom.
- 18 December 2014: Farming Statistics final crop areas, yields, livestock populations and agricultural workforce at 1 June 2014 – 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.