



20 August 2020

Farming Statistics – provisional arable crop areas at 1 June 2020 England

This release contains first estimates of the English cereal and oilseed areas as at 1 June 2020 by region. Difficult weather conditions during winter 2019 followed by the spring drought have led to large changes in crop areas grown this year, with many farms switching to spring planted crops.

Cereals

- The English wheat area in 2020 is 1.27 million hectares. This is a 24% decrease compared with 2019 and the lowest area since the 1970's. This decrease was mainly driven by the wet weather during the winter planting.
- The barley area increased by 26% between 2019 and 2020 to 1.05 million hectares. This is the largest area of barley seen since 1990. Winter barley fell by 35% to 253 thousand hectares whilst spring barley increased by 79% to 795 thousand hectares. Industry early indications show slightly lower barley yields which could potentially dampen the effect of this large area on the resulting harvest size.
- The oats area in England increased by 19% to 170 thousand hectares in 2020. The oats area has been steadily rising for the past five years.

Oilseed rape

- Winter sown oilseed rape (96% of the total oilseed area) decreased by 32% to 331 thousand hectares. Early industry indications show yields of winter oilseed rape are currently below the 5 year average with weather fluctuations and pest damage affecting the crop. The combination of a small area and potentially lower yields could result in a small harvest this year.

Area estimates will be updated in the next release due to be published on the 24 September 2020. This will include estimates of other crop areas and cattle, sheep and pig populations. The first harvest estimates for wheat and barley are due to be published on 5 October 2020.

Defra would like to thank all the farmers who completed the June Survey of Agriculture questionnaire, especially during such a difficult year.

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What you need to know about this release

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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 [full assessment](#) by the UK Statistics Authority against the [Code of Practice for Statistics](#).

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

For general enquiries about National Statistics, contact the National Statistics Public Enquiry Service:

Tel: 0845 601 3034

Email: info@statistics.gov.uk.

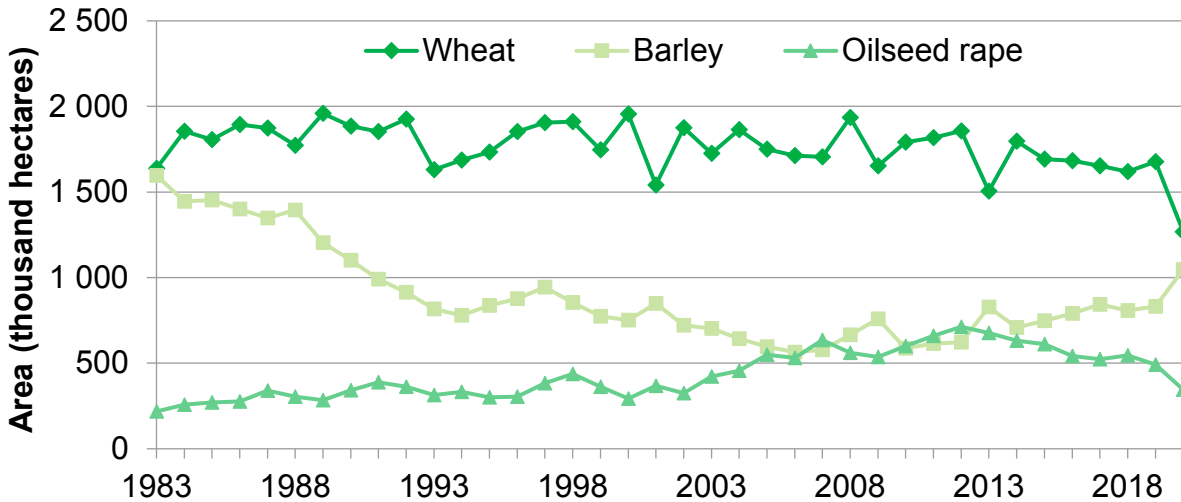
You can find National Statistics on the internet [on the Gov.uk website](#).

Section 1 – Detailed results

1.1 Cereals

Due to the weather conditions in the latter part of 2019 and then the spring droughts in 2020, there have been some noticeable changes in the areas of Cereal crops in England as shown in Figure 1 below.

Figure 1 – Area of wheat, barley and oilseed rape: 1983 to 2020

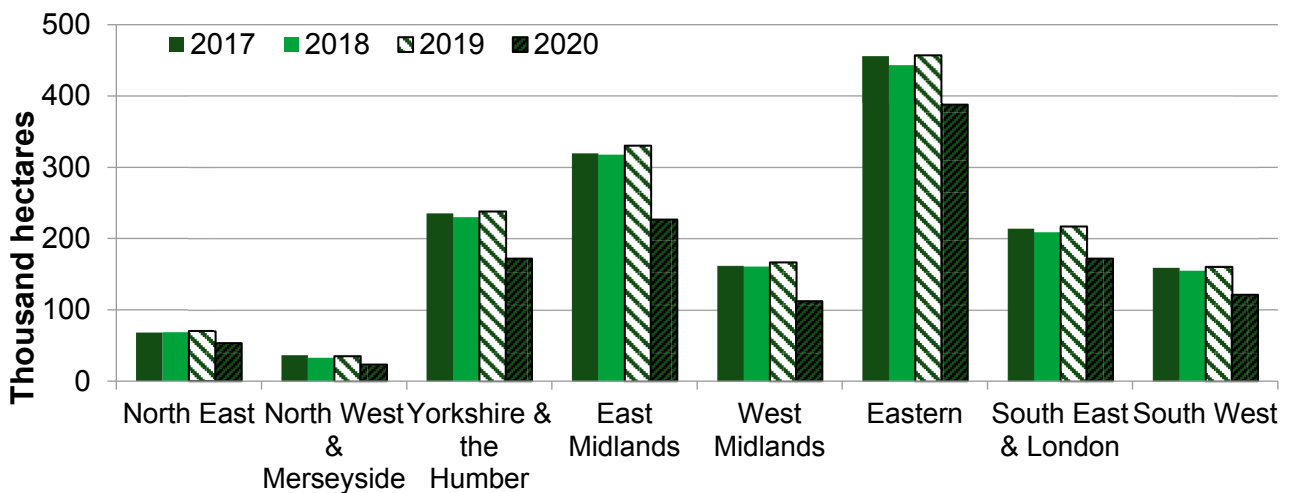


1.2 Wheat

The 2020 provisional wheat area estimate for England is 1.27 million hectares, a decrease of 24% compared to 2019 and the smallest area of wheat recorded since the 1970's. This decrease was mainly driven by the wet weather during planting in 2019 (see Figure 1).

All of the English regions saw a decrease in wheat area, the largest proportional decrease was in the North West and Merseyside region which saw a fall of 36% (see Figure 2). The Eastern region and the East Midlands together grow almost half of the wheat in the country, accounting for 31% and 18% of the total area respectively.

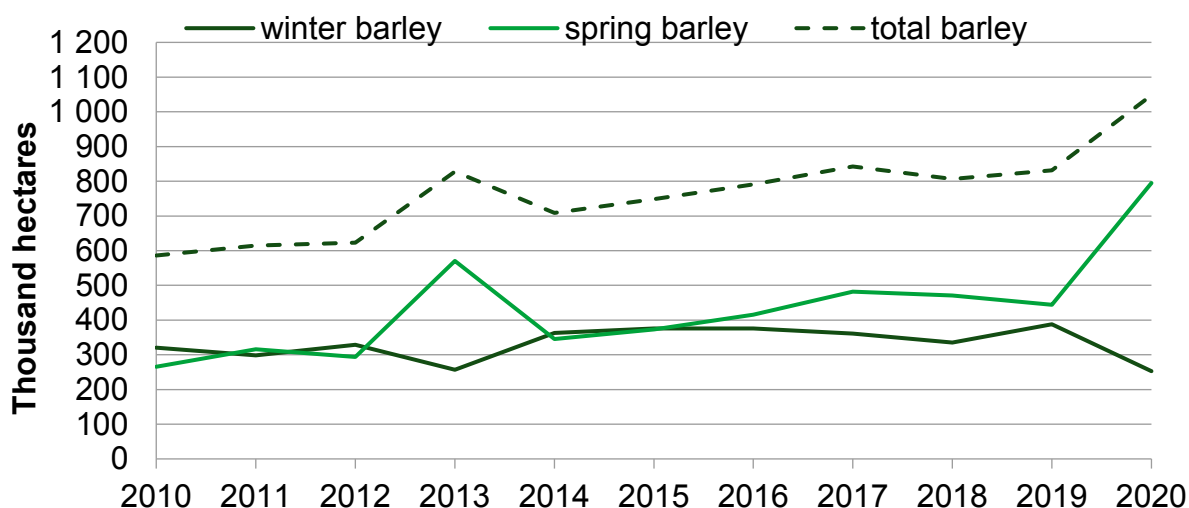
Figure 2 - Regional wheat areas: 2017 to 2020



1.3 Barley

The total area of barley increased by 26%, from 832 thousand hectares in 2019 to 1.05 million hectares in 2020. This is the largest area of barley seen since 1990, which is the last time it was over 1 million hectares. Winter barley fell by 35% to 253 thousand hectares, whilst spring barley increased by 79% to 795 thousand hectares. With the extremely wet weather in autumn and winter of 2019 many farmers made the switch to spring sown crops. This resulted in spring sown barley accounting for 76% of the total barley area compared with 53% in 2019. (See Figure 3).

Figure 3 - June barley areas: 2010 to 2020



1.4 Oats

The area of oats in England increased from 143 thousand hectares in 2019 to 170 thousand hectares in 2020. This is an increase of 19%, the fifth consecutive rise in the area of oats.

1.5 Cereal production

An estimated 56% of GB winter barley and 49% of winter oilseed rape had been harvested by 28 July 2020. Early indications show yields of winter barley are below the 5 year average. Winter oilseed rape yields are also currently below the 5 year average with weather fluctuations and pest damage affecting the crop.

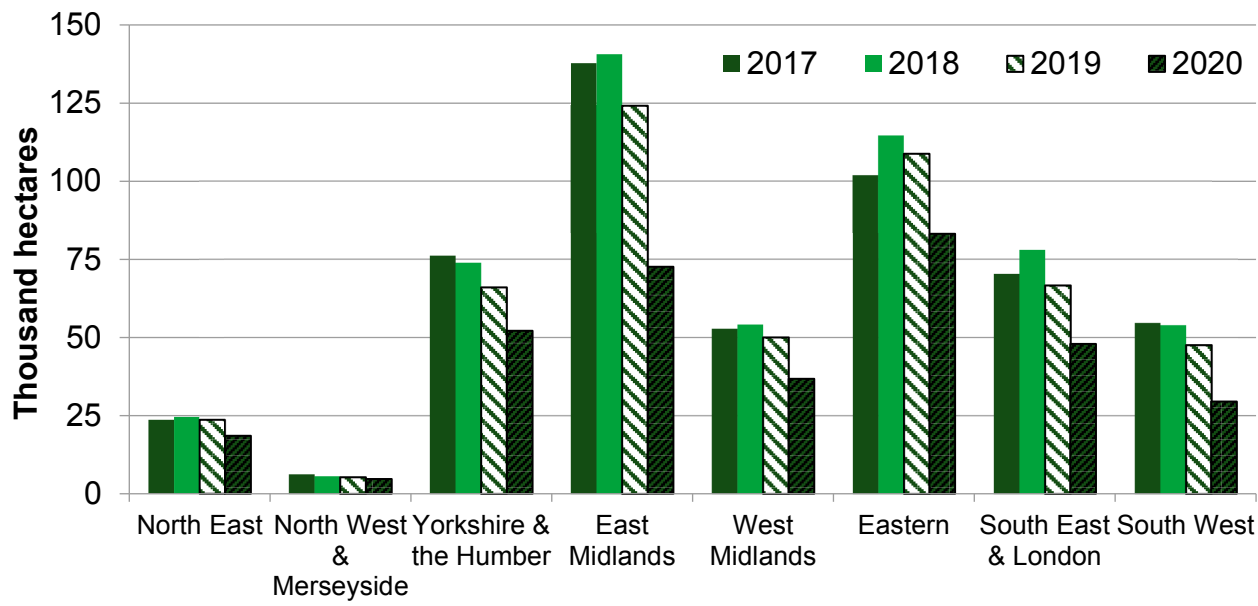
The first official Defra harvest estimates for wheat and barley are due to be published on 5 October 2020, with results for the remaining cereal and oilseed rape crops included in the full UK provisional results which are due to be published on 8 October 2020. Both publications will be available on our [publications page](#).

1.6 Oilseed rape

As with the cereal crops, oilseed rape was affected by the wet weather at the end of 2019, resulting in the total area of oilseed rape falling by 30% from 492 thousand hectares in 2019 to 345 thousand hectares in 2020. This was due to a 32% decrease in the winter sown area which stands at 331 thousand hectares in 2020 and accounts for 96% of the total oilseed area.

The spring sown area of oilseed increased between 2019 and 2020, more than treble the area in 2019. However, at just over 14 thousand hectares this accounts for only 4% of the total oilseed rape area.

Figure 4 - Regional oilseed rape areas: 2017 to 2020



The changes in total oilseed area vary across regions (Figure 4) with all regions seeing a decrease in area. The largest proportional decreases were in the East Midlands region (42%) and the South West (38%).

The largest proportion of the oilseed rape area is grown in the Eastern Region and East Midlands. Between them, these regions account for almost half (45%) of the total oilseed area in England.

1.7 Results tables

Table 1: Area of arable crops

Item	June 2018 (‘000 ha)	June 2019 (‘000 ha)	June 2020 (‘000 ha)	% change 2020/ 2019	2020 95% confidence interval (‘000 ha)	2020 Indicator
Wheat	1,619	1,677	1,268	-24	+/-15	✓✓✓
Barley	807	832	1,048	26	+/-15	✓✓✓
Winter barley	336	388	253	-35	+/-5	✓✓✓
Spring barley	471	444	795	79	+/-14	✓✓✓
Oats	132	143	170	19	+/-6	✓✓✓
Oilseed rape	545	492	345	-30	+/-10	✓✓✓
Winter oilseed rape	537	488	331	-32	+/-8	✓✓✓
Spring oilseed rape	8	4	14	234	+/-7	☒

Table 2: Defra Survey estimates compared with industry estimates of arable crop areas

Item	AHDB 2020 planting survey ^(a) (‘000 ha)	Defra June 2020 (‘000 ha)
Wheat	1,245	1,268
Barley	1,027	1,048
Winter barley	245	253
Spring barley	782	795
Oats	179	170
Oilseed rape	355	345
Winter oilseed rape	-	331
Spring oilseed rape	-	14

(a) These estimates are from the AHDB planting survey and can be found in the [published dataset](#)

Table 3: June 2020 provisional crop areas estimates by English region

Region	Wheat 2019	Wheat 2020	Wheat % change	Winter barley 2019	Winter barley 2020	Winter barley % change
North East	71	53	-25	29	20	-31
North West & Merseyside	36	23	-36	17	9	-43
Yorkshire & the Humber	238	172	-28	72	45	-38
East Midlands	330	227	-31	52	24	-54
West Midlands	167	112	-33	35	20	-42
Eastern	457	388	-15	96	73	-24
South East (incl. London)	217	172	-21	38	27	-30
South West	161	121	-25	48	34	-30
England	1,677	1,268	-24	388	253	-35
Region	Spring barley 2019	Spring barley 2020	Spring barley % change	Oats 2019	Oats 2020	Oats % change
North East	11	27	146	11	13	11
North West & Merseyside	20	34	69	6	7	16
Yorkshire & the Humber	51	116	129	12	15	34
East Midlands	74	168	127	17	28	59
West Midlands	25	61	146	21	26	21
Eastern	103	160	55	23	26	12
South East (incl. London)	79	110	39	26	28	8
South West	82	120	47	26	27	5
England	444	795	79	143	170	19
Region	Oilseed rape 2019	Oilseed rape 2020	Oilseed rape % change			
North East	24	19	-22			
North West & Merseyside	5	5	-12			
Yorkshire & the Humber	66	52	-21			
East Midlands	124	73	-42			
West Midlands	50	37	-26			
Eastern	109	83	-24			
South East (incl. London)	67	48	-28			
South West	47	29	-38			
England	492	345	-30			

Section 2 – About these statistics

2.1 Survey methodology

Full details of the survey methodology are available on the [web site](#). 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. This year the survey was run entirely online to enable us to adapt to the limitations caused by the coronavirus outbreak.

It was not possible to run the planned Census in 2020 due to coronavirus limitations. To reduce the burden on farmers at a difficult and uncertain time the Census was postponed and a smaller scale June survey was run instead. Approximately 22 thousand 'commercial' holdings were asked to complete the survey in 2020 and the survey was classed as voluntary.

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 2020 sample design

Stratum	Description	Sampling rate (%)	Population size
1	SLR < 0.5	8%	48,815
2	SLR >= 0.5 and < 1	8%	16,698
3	SLR >= 1 and < 2	21%	13,992
4	SLR >= 2 and < 3	45%	7,775
5	SLR >= 3 and < 5	59%	7,327
6	SLR >= 5	67%	7,733
10	SLR unknown	23%	5,666
All	All farms	21%	108,006

The results in this statistical release are based on responses from around 7,400 commercial holdings, representing a response rate of 33%. In addition to this, around

62,000 BPS responses have been used to help produce the best estimates possible. Although these areas are not yet finalised they provide an overview of activity on the holding and reduce the need for estimation.

2.2 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.

2.3 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 2020 figures, ranging from 3 ticks (good) to 1 cross (poor). The ranges relate to the relative standard errors (RSE) as follows:

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

2.4 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 10.
- All percentage changes are based on unrounded figures.
- Totals may not necessarily agree with the sum of their components due to rounding.

2.5 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 on our [web page](#).

2.6 Other survey results and publications

Results from all the Defra farming surveys can be viewed on the [Defra website](#). 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

- 24 September 2020: Farming Statistics final crop areas and cattle, sheep and pig populations at 1 June 2020 – England.
- 22 October 2020: Farming Statistics final land use, livestock populations and agricultural workforce at 1 June 2019 – England.

UK Publications

- 5 October 2020: Farming Statistics first estimates of 2020 wheat and barley production – United Kingdom.
- 8 October 2020: Farming Statistics provisional crop areas, yields and livestock populations at 1 June 2020 – United Kingdom.
- 17 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 on our [web page](#). This includes various time series of crop areas and livestock numbers dating back as early as 1866 and detailed geographical breakdowns of the results.

2.7 Feedback

We welcome feedback and any thoughts to improve the publication further. Please send any feedback to: farming-statistics@defra.gov.uk. 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?

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