



Department  
for Environment  
Food & Rural Affairs



Rural Payments  
Agency

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## **Crop areas in England sourced from the Basic Payment Scheme compared to areas from the Defra June Survey of Agriculture, 2015-2019**

This release presents the crop areas claimed under the Basic Payment Scheme (BPS) in the years 2015-2019 compared to the previously published official crop areas from the Defra June Survey of Agriculture and Horticulture.

It is important to note that BPS crop areas are Experimental Statistics which have not met the quality criteria for National Statistics badging. A fuller description of the limitations of these statistics is provided throughout the release.

The full BPS data series for 2015-2019 including geographical breakdowns is available on the following webpage: <https://www.gov.uk/government/statistics/farming-statistics-crop-areas-in-england-sourced-from-basic-payment-scheme-data-compared-to-the-june-survey-of-agriculture-2015-2019>

### **Definitions**

**Area claimed under BPS:** These areas are sourced from BPS claim forms in England and use the total field area, rather than the area eligible for payments (total field area is more comparable to the June Survey areas). Crop codes for each field parcel have been matched to the relevant category.

**Official June Survey area:** These areas are sourced from the Defra June Survey of Agriculture and Horticulture, a survey sent to a representative sample of all farms in England (the source of National Statistics on crop areas).

**Definitions of individual categories can be found in Annex A on page 11.**

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## Background

This statistical release publishes the areas claimed under the Basic Payment Scheme in England and compares these to the previously published official June Survey areas.

There are genuine reasons why the crop areas from the two sources may not be identical:

- *Thresholds and Coverage*: The June Survey includes a greater number of smaller farms than BPS. Whereas some farm types, such as horticulture, poultry and pig farms are much less likely than other farm types to claim BPS.
- *Survey vs Administrative data*: There is an element of uncertainty associated with any sample survey. For wheat this is generally +/-2% of the published area (shown at the time of publication). Administrative data is a by-product of administrative processes and as such was not originally designed for statistical purposes.
- *Processes*: BPS claim forms are pre-populated with the previous year's figures whereas June Survey forms are not; this potentially means that some switching between similar crops is not captured in the BPS data. Data validation processes also differ since the two datasets are intended for two unique purposes.
- *Definitions*: BPS crop codes and June survey categories are not directly comparable, although care has been taken to ensure comparability where possible. Differences in definitions are discussed throughout this release and in Annex A.

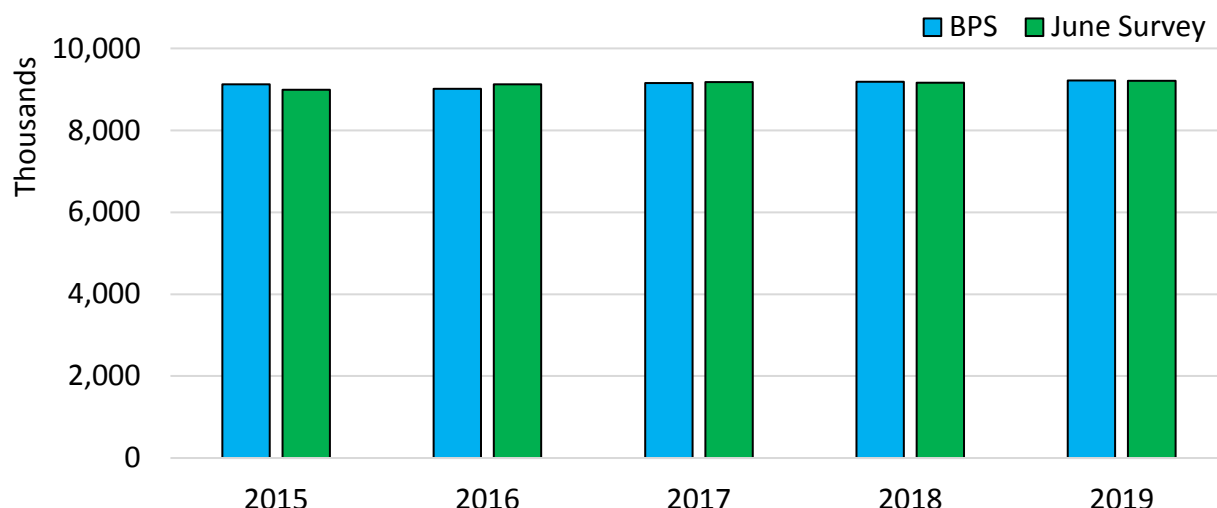
For further details on the strengths and limitations of the two data sources see the Metadata sections on pages 8 and 9.

## Results

### Total area

The **total area on agricultural holdings** claimed under BPS in 2019 was 9.22 million hectares. This was similar to the official June Survey total area on agricultural holdings of 9.21 million hectares. This has been the case across all years since 2015 (Figure 1) with the difference ranging from -1.5% to 1.1%.

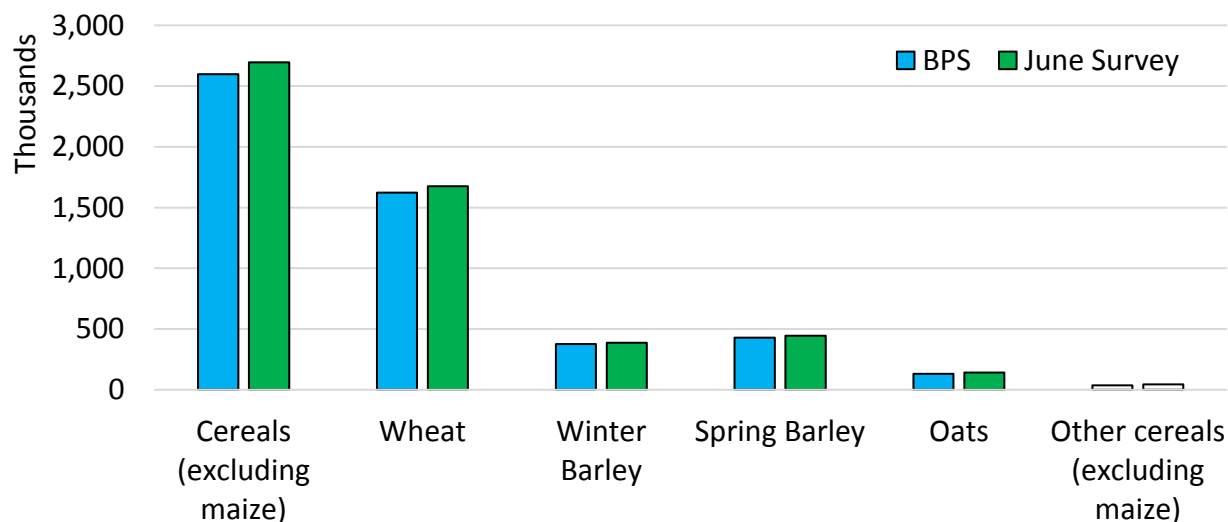
**Figure 1: Total area on agricultural holdings claimed under BPS compared to the June Survey area, 2015-2019**



### Cereals

The **cereal** area claimed under BPS in 2019 was 2.6 million hectares compared to the official June Survey cereals area of 2.7 million hectares, a difference of 97 thousand hectares (3.6%). Within cereals, the area of **wheat** claimed under BPS was 1.6 million hectares, 55 thousand hectares less than the official June Survey area and a similar pattern could be seen across all cereal crops (Figure 2). These differences are possibly due to difference in coverage and data processing differences such as pre-population of the BPS claim forms and validation priorities. For further details on the strengths and limitations of the two data sources see the Metadata sections on pages 8 and 9.

**Figure 2: Cereal areas claimed under BPS compared to the June Survey areas, 2019**

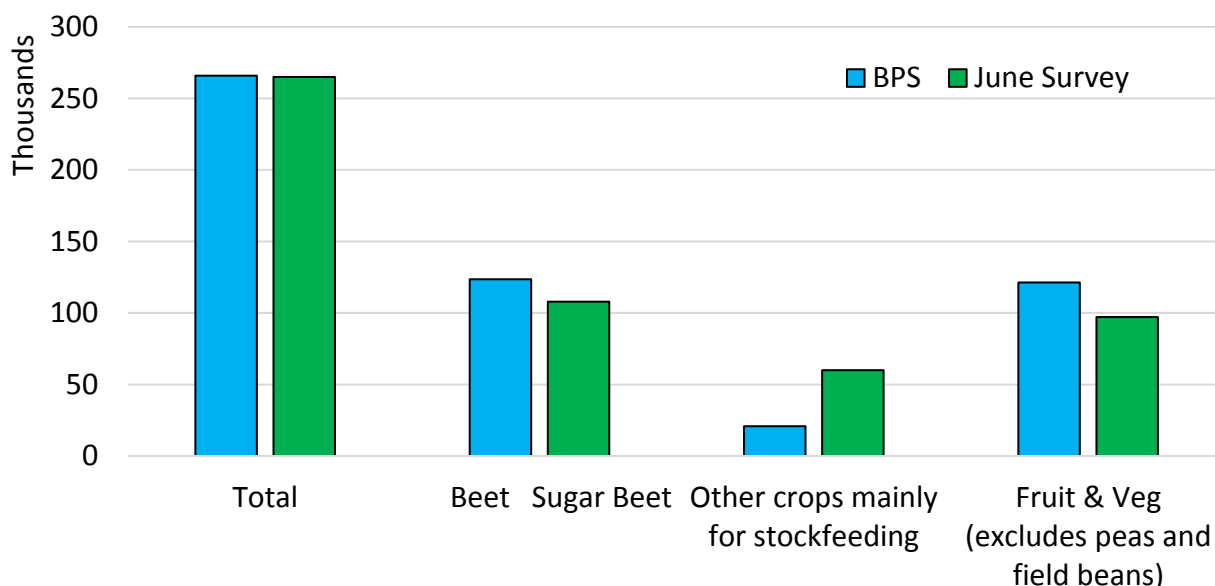


## Crops for stockfeeding and crops for human consumption

The BPS crop codes do not distinguish between crops for stockfeed and crops for human consumption whereas the June Survey categories do. The **combined area of beet crops, other crops mainly for stockfeeding and fruit and vegetables** claimed under BPS in 2019 and the equivalent official June Survey area were 266 thousand hectares and 265 thousand hectares respectively. However, there are differences within these three categories (Figure 3) as described below:

- **Beet crops** – BPS includes all beet crops regardless of use as stockfeed or not; the June Survey includes only sugar beet not used for stockfeeding.
- **Other crops mainly for stockfeeding** – BPS excludes all beet crops, fruit and vegetables; the June Survey includes any beet crops, fruit and vegetables used for stockfeeding.
- **Fruit and vegetables** – BPS includes all fruit and vegetables regardless of use as stockfeed or not; the June Survey excludes fruit and vegetables used for stockfeeding.

**Figure 3: Crops for stockfeeding and crops for human consumption claimed under BPS compared to the June Survey areas, 2019**



### Arable crops not for stockfeeding

The area of **arable crops not for stockfeeding** claimed under BPS in 2019 was 766 thousand hectares which was 16 thousand hectares (2.2%) more than the official June Survey area. The majority of this difference is due to **beet** crops where the area claimed under BPS was 124 thousand hectares compared to the official June Survey **sugar beet** area of 108 thousand hectares (see section above on “Crops for stockfeeding and crops for human consumption”). Other differences within arable crops not for stockfeeding are likely due to the strengths and limitations of the two data sources, see the Metadata sections on pages 8 and 9.

### Crops mainly for stockfeeding

The area of **crops mainly for stockfeeding (including all peas and field beans)** claimed under BPS in 2019 was 434 thousand hectares, compared to the official June Survey area of 476 thousand hectares, a difference of 42 thousand hectares (8.8%). For the purposes of comparison we have included all peas and field beans (regardless of use as stockfeed or not) within this category for both data sources. This difference is caused by **other crops**

**mainly for stockfeeding** where the area claimed under BPS is 39 thousand hectares less than the official June survey area of 60 thousand hectares (see section above on “Crops for stockfeeding and crops for human consumption”). Other differences within crops mainly for stockfeeding are likely due to the strengths and limitations of the two data sources, see the Metadata sections on pages 8 and 9.

### Horticultural crops

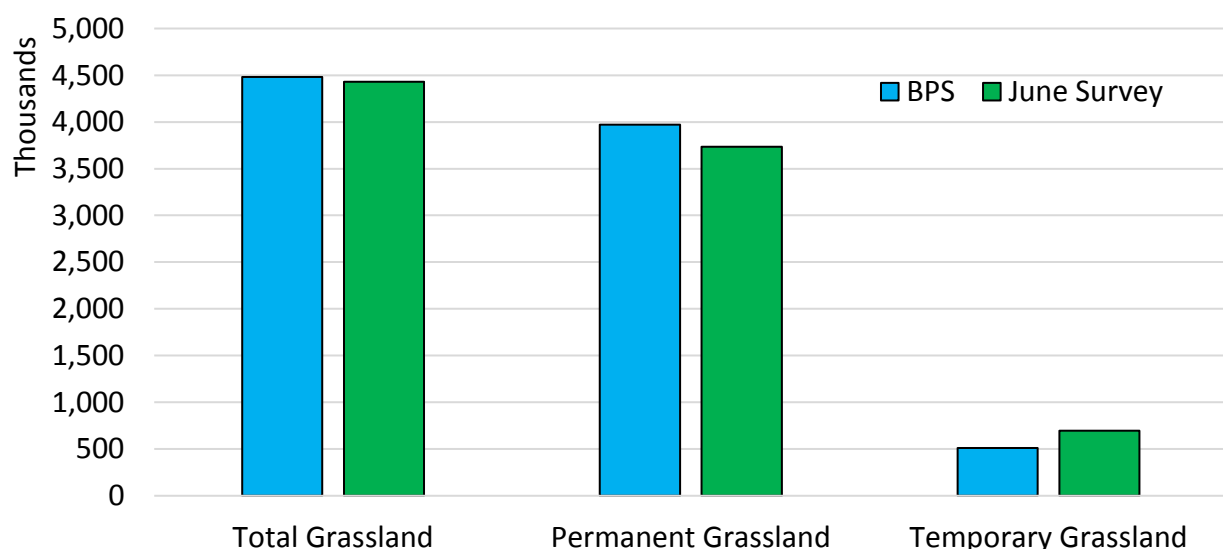
The area of **horticultural crops (excluding all peas and field beans)** claimed under BPS in 2019 was 130 thousand hectares which was 23 thousand hectares (21.5%) more than the official June survey area of 107 thousand hectares. For the purposes of comparison we have excluded all peas and field beans within this category for both data sources. This difference is caused by **fruit and vegetables** where the area claimed under BPS is 24 thousand hectares more than the official June survey area of 97 thousand hectares (see section above on “Crops for stockfeeding and crops for human consumption”).

### Fallow land and grassland

The area of **fallow land** claimed under BPS in 2019 was lower than the official June Survey areas by 32 thousand hectares. The definition of fallow differs slightly between the two dataset, see Annex A.

The area of **temporary grassland** claimed under BPS in 2019 was lower than the official June Survey areas by 186 thousand hectares respectively. However, the area of **permanent grassland** claimed under BPS in 2019 was 234 thousand hectares higher than the official June Survey area (Figure 4). The BPS data collection is concerned with total eligible areas for payment purposes and not the differences between types of grassland. The June Survey collects data on grassland areas split by when grass was last sown and checks are carried out to ensure grassland has been recorded under the correct category for the purposes of calculating national areas. For further details on the strengths and limitations of the two data sources see the Metadata sections on pages 8 and 9.

**Figure 4: Fallow land, permanent grassland and temporary grassland claimed under BPS compared to the June Survey areas, 2019**



## Other land

The area of **woodland** claimed under BPS in 2019 was 467 thousand hectares which was 88 thousand hectares (23.1%) more than the official June Survey area of 379 thousand hectares. The BPS area will include any woodland within land parcels, no matter how small. Whereas it is possible that the June Survey is not capturing all of these small woodland areas separately. Some very small areas may be recorded under the main use of the field.

The area of **non-agricultural land** claimed under BPS in 2019 was 182 thousand hectares which was similar to the official June Survey area of 176 thousand hectares. For further details on the strengths and limitations of the two data sources see the Metadata sections on pages 8 and 9.

**Table 1: Land areas claimed under BPS compared to the June Survey, 2019**

Land area	Source	2019 area (thousand hectares)	% change from 18-19	% difference from June to BPS
Total area on agricultural holdings	BPS	9,216	0.4%	0.1%
	June Survey	9,206	0.5%	
Total crops	BPS	3,928	0.6%	-2.5%
	June Survey	4,028	0.9%	
Fallow <sup>a</sup>	BPS	159	-22.3%	-16.7%
	June Survey	191	-15.3%	
Permanent Grassland <sup>a</sup>	BPS	3,970	-0.2%	6.3%
	June Survey	3,736	-0.4%	
Temporary Grassland <sup>a</sup>	BPS	510	8.5%	-26.7%
	June Survey	696	6.0%	
Other land	BPS	649	3.5%	16.9%
	June Survey	555	3.9%	
Woodland <sup>b</sup>	BPS	467	2.5%	23.1%
	June Survey	379	2.0%	
Non-agricultural land	BPS	182	6.4%	3.5%
	June Survey	176	8.2%	

<sup>a</sup> Fallow, Permanent Grassland and Temporary Grassland (June Survey and BPS) are not directly comparable. Fallow is defined slightly differently in the two data sources. The June Survey collects data on grassland areas split by when grass was last sown and checks are carried out to ensure grassland has been recorded under the correct category.

<sup>b</sup> Woodland (June Survey and BPS) is not directly comparable. The BPS figure includes any woodland within land parcels no matter how small. Whereas it is possible that the June Survey is not capturing all of these small woodland areas separately. Some very small areas may be recorded under the main use of the field.

**Table 2: Crop areas claimed under BPS compared to the June Survey, 2019**

<b>Crop</b>	<b>Source</b>	<b>2019 area (thousand hectares)</b>	<b>% change from 18-19</b>	<b>% difference from June to BPS</b>
Total crops	BPS	3,928	0.6%	-2.5%
	June Survey	4,028	0.9%	
Cereals (excluding maize)	BPS	2,597	3.8%	-3.6%
	June Survey	2,695	3.7%	
Wheat	BPS	1,622	3.9%	-3.3%
	June Survey	1,677	3.6%	
Winter Barley	BPS	378	16.3%	-2.6%
	June Survey	388	15.6%	
Spring Barley	BPS	429	-7.5%	-3.4%
	June Survey	444	-5.8%	
Oats	BPS	133	8.8%	-7.2%
	June Survey	143	8.0%	
Other cereals (excluding maize)	BPS	36	19.9%	-15.7%
	June Survey	43	6.7%	
Arable crops not for stockfeeding	BPS	766	-9.7%	2.2%
	June Survey	749	-7.7%	
Potatoes	BPS	102	-1.9%	-6.8%
	June Survey	109	3.4%	
Beet <sup>a</sup>	BPS	124	-6.6%	14.6%
Sugar Beet <sup>a</sup>	June Survey	108	-5.6%	
Oilseed Rape	BPS	487	-13.0%	-1.1%
	June Survey	492	-9.7%	
Other arable crops not for stockfeeding	BPS	54	2.2%	32.9%
	June Survey	40	-13.6%	
Crops mainly for stockfeeding (includes peas and field beans not for stockfeeding)	BPS	434	2.5%	-8.8%
	June Survey	476	0.9%	
Field beans (includes field beans not for stockfeeding)	BPS	134	-7.1%	-0.4%
	June Survey	135	-11.4%	
Peas (includes peas not for stockfeeding)	BPS	61	4.9%	-13.6%
	June Survey	70	6.4%	
Maize	BPS	218	9.9%	3.4%
	June Survey	211	2.4%	
Other crops mainly for stockfeeding <sup>b</sup>	BPS	21	-7.6%	-65.2%
	June Survey	60	26.4%	
Horticultural crops (excludes peas and field beans)	BPS	130	0.7%	21.5%
	June Survey	107	-2.3%	
Fruit & Vegetables (excludes peas and field beans) <sup>c</sup>	BPS	121	-0.6%	24.9%
	June Survey	97	-2.3%	
Flowers	BPS	9	22.1%	-11.3%
	June Survey	10	-2.7%	

<sup>a</sup> Sugar beet (June Survey) and Beet (BPS) are not directly comparable. The June Survey includes only sugar beet which is not used for stockfeeding whereas BPS includes any beet crop for stockfeeding or not.

<sup>b</sup> Other crops mainly for stockfeeding (June Survey and BPS) are not directly comparable. The June Survey includes any veg grown for stockfeeding whereas BPS excludes this.

<sup>c</sup> Fruit & Vegetables (June Survey and BPS) are not directly comparable. The June Survey excludes any veg grown for stockfeeding whereas BPS includes this.



## Metadata: Basic Payment Scheme (BPS)

This dataset comprises field areas of crops claimed under the Basic Payment Scheme each year. Crop codes provided on the BPS forms have been grouped and matched to the June Survey categories as closely as possible. Farms must have at least 5ha of eligible land to claim under BPS.

### Strengths of the data

The total land area should be accurate as farmers can be penalised if they over/under declare their land area or provide incorrect cropping details. Once their claim has been submitted, it undergoes a series of validation checks in the Rural Payment system. These checks include checking the size of the land parcels, the ownership of each parcel and the land cover. A proportion (approximately 5%) of claims are selected randomly for inspection to ensure they are claiming the correct land and crops. It includes data from individual land parcels with accompanying grid references which accurately identifies the land location and means that it is very robust at low geographic levels.

### Limitations of the data

The data is only available from 2015 so the time series is short. The BPS data is validated for the purpose of making correct payments to farmers and as such is concerned with total eligible areas and not individual crop areas. This means that any discrepancies between similar crops e.g. wheat and barley are unlikely to be picked up in the validation. BPS claim forms are pre-populated with the previous year's figures, reducing the need for farmers to re-calculate their areas year on year. At date of publication, 99% of 2019 claims had been processed so totals may change slightly once the process is complete.

The BPS data only includes data from farms that make a claim, the statistics are therefore dependent on the number claiming in any year and could underestimate as claimant numbers reduce. The table below illustrates a steady decrease in claimant numbers. However, changes in claimant numbers could be a result of structural change, rather than under-coverage.

**Table 3: Number of claimants and field areas claimed for under BPS, 2015-2019**

	Number of claimants	Total area (ha)	Crops (ha)	Grassland (ha)	Other (ha)	Crops %
<b>2015</b>	87,575	9,124,246	3,858,155	4,482,578	783,513	42%
<b>2016</b>	86,062	9,015,911	3,846,504	4,405,059	764,347	43%
<b>2017</b>	85,371	9,155,892	3,926,753	4,453,381	775,758	43%
<b>2018</b>	84,335	9,182,007	3,902,807	4,447,594	831,605	43%
<b>2019</b>	84,281	9,215,930	3,927,679	4,480,207	808,044	43%



## Metadata: June Survey of Agriculture and Horticulture

This is an annual survey of between 25,000 and 55,000 holdings in England (population approximately 105,000 holdings) with a typical response rate of 70%. The survey collects detailed data on crop areas, livestock numbers and the farm labour force. Farms must have at least 5 ha of agricultural land, 1 ha of orchards, 0.5 ha of vegetables or 0.1 ha of protected crops, or more than 10 cows, 50 pigs, 20 sheep, 20 goats or 1,000 poultry to be included in the June Survey population. The full survey Methodology can be found at:

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/182206/defra-stats-foodfarm-landuselivestock-june-junemethodology-20120126.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/182206/defra-stats-foodfarm-landuselivestock-june-junemethodology-20120126.pdf)

### Strengths of the data

The June Survey of Agriculture has a long running time series providing a long term view of changes to the agriculture industry. It is unaffected by changes in administrative data reporting or subsidy systems and it collects information on all aspects of the farm activity. The response rate is high, around 70%, and is closely monitored to ensure that it is not concentrated in particular types of farm in order to minimise the possibility of bias.

The data are subject to rigorous validation checks which identify inconsistencies within the data or large year-on-year changes. Any records still “in error” by the results production stage are excluded from the analysis. This survey uses the technique known as ratio raising to give England level estimates, in which the trend between the sample response data and previous year’s data is calculated for each group of holdings (based on size). The calculated ratio is then applied to the previous year’s population data. The June survey is the source of National Statistics on crop areas in England, this means these statistics have been badged as meeting high professional standards and they undergo regular quality assurance reviews to ensure that they meet customer needs.

### Limitations of the data

As with all sample surveys, the estimates that are derived are subject to sampling error and we provide confidence intervals as a measure of uncertainty that may apply to the estimated totals within the June Survey Statistics Release. The farm location is based on a central grid point so all of the land and livestock is attributed to this one location. This makes precise geographical estimates less reliable than other systems.

## Further information

The full BPS data series for 2015-2019 including geographical breakdowns is available on the following webpage: <https://www.gov.uk/government/statistics/farming-statistics-crop-areas-in-england-sourced-from-basic-payment-scheme-data-compared-to-the-june-survey-of-agriculture-2015-2019>

Basic Payment Scheme:

<https://www.gov.uk/government/collections/basic-payment-scheme>

June Survey:

<https://www.gov.uk/government/collections/structure-of-the-agricultural-industry>

## Feedback

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

## Annex A: Category definitions

Category	June	BPS
<b>Crop area (ha)</b>	Areas of crops in the ground on 1 June. Includes areas of headlands and ditches.	The field area that is claimed for under BPS. The land must be at the farmer's disposal with crops established, or intend to be established, on 15th May of the scheme year.
<b>Wheat</b>	Includes spring and winter wheat as well as buckwheat and spelt wheat.	Includes spring and winter wheat as well as buckwheat and spelt wheat.
<b>Winter Barley</b>	Winter barley only.	Winter barley only.
<b>Spring Barley</b>	Spring barley only.	Spring barley only.
<b>Oats</b>	Includes spring and winter oats.	Includes spring and winter oats.
<b>Other cereals (excluding maize)</b>	Includes rye, triticale and mixed grain. Excludes maize.	Includes rye and triticale. Excludes maize.
<b>Potatoes</b>	Includes earlies, main and seed.	Includes earlies, main and seed. Specifically excludes sweet potato.
<b>Beet</b>	Sugar beet only. Excludes beet for stockfeeding.	Covers a large selection of beet crops including sugar beet and beet for stock feeding.
<b>Oilseed Rape</b>	Includes spring and winter oilseed rape.	Includes spring and winter oilseed rape.
<b>Other arable crops not for stockfeeding</b>	Includes linseed, borage, other arable crops, short rotation coppice, miscanthus and crops for aromatic/medicinal use.	Includes linseed, borage, short rotation coppice and crop codes for mixed crops and mixed arable crops.
<b>Field beans (includes field beans not for stockfeeding)</b>	Includes field beans only.	Includes field beans, broad beans and vetch.
<b>Peas (includes peas not for stockfeeding)</b>	Peas for harvesting dry (for fodder) plus edible peas. The survey area also includes a small area of edible beans (<3,000 ha).	Includes feed peas, mange tout, marrow fat peas, snap peas, snow peas and vining peas.
<b>Maize</b>	Includes maize for grain, for anaerobic digestion and for fodder.	Includes corn, maize and sweetcorn.
<b>Other crops mainly for stockfeeding</b>	Includes root crops and other crops for stockfeeding as well as leguminous forage crops.	Includes soya, lucerne, lupin and mixed crops predominantly for fodder. Excludes any root crops or vegetables for stockfeeding.
<b>Fruit &amp; Veg (excludes peas and field beans)</b>	Survey areas include all soft and top fruit, and all vegetables (peas and beans have been excluded to assist comparability between the two data sources).	The list of categories included in the BPS data can be found in the accompanying dataset.
<b>Flowers</b>	Survey areas include bulbs, flowers, nursery stock and Christmas trees.	The BPS data includes flowers only. The full list of categories included can be found in the accompanying dataset.

Category	June	BPS
<b>Fallow</b>	Survey areas include uncropped arable land and all arable land not in production, including wild bird cover and game cover.	BPS areas include land lying fallow, catch and cover crops as well as hedges and buffer strips.
<b>Permanent Grassland</b>	Survey areas include grassland sown 5 or more years and areas of Sole rights rough grazing (lower quality grazing land including heathland, moors, hills and scrub). It excludes common grazing land.	BPS areas include land which is used to grow grasses or other herbaceous forage for 5 or more consecutive years (self seeded or sown). It includes areas of bracken, salt marshes, reed beds and light scrub (including gorse bushes and briar) if the land is managed so that they are suitable for grazing and grasses and other herbaceous forage remain predominant. Area also includes areas of heather - where these are kept in a state suitable for grazing. It excludes areas of dense scrub which prevent grazing.
<b>Temporary Grassland</b>	Survey areas include all temporary grass or grass sown within the past 5 years. It does not include land used for livestock production.	BPS areas include land that has been in grass or other herbaceous forage for fewer than 5 consecutive years (self-seeded or sown). It also includes land used for livestock production, if it's been used in this way for fewer than 5 years. This includes land used for outdoor pigs.
<b>Woodland</b>	Includes woodland but unlikely to capture very small woodland areas within other crops.	Includes all woodland areas, including very small areas with land parcels.
<b>Non-agricultural land</b>	Includes tracks, ponds, yards etc.	Includes any non-agricultural land, including very small areas such as outcrops etc.