



27 April 2017

## Ecological Focus Areas: features on farms in England 2015/16

This release provides an assessment of the total area of Ecological Focus Area (EFA) features on farms with arable land<sup>1</sup> in England, regardless of whether the feature has been used to meet greening requirements. The information was collected from a subset of farms within the 2015/16 Farm Business Survey which covered the 2015 harvest. The results shown here have been presented before (unweighted) and after (weighted) the application of the EFA feature weights<sup>2</sup>. Key results are given below:

### Areas of features that could be used to meet EFA requirements in England

The areas below are only for those farms with arable land. They include all features on arable land, including on farms that would have been exempt from the EFA requirement.

- Of the features that could be used to meet the EFA requirement in England in 2015, fallow land and nitrogen fixing crops offered the largest potential areas; accounting for around 6% and 4% respectively of the total arable area in England represented by this survey (with EFA weightings applied).
- The total area of catch crops and green cover, nitrogen fixing crops and fallow land increased by 45%, 29%, 19% respectively between 2014/15 and 2015/16 (unweighted).
- Rotational fallow, field margins and other fallow features accounted for over 65% of the total fallow land (257,600 hectares).

### Areas of features currently not applicable to farms in England

The areas below are only for those farms with arable land and include all such features on arable land including on farms that would have been exempt from the EFA requirement.

- Of those features not currently applicable to farms in England, ditches had the largest area at around 40,400 hectares (with weightings applied), accounting for around 1% of the arable area.
- Isolated trees had the smallest area at around 500 hectares (weighted).

### Features used to meet EFA requirement

Farmers were also asked which features they had used to meet their EFA requirements in 2015/16. The areas used to meet their EFA requirements were not collected.

- Just under half of all farm businesses (45%) used fallow land to meet their EFA requirement; 38% used hedges and 23% used nitrogen fixing crops.

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<sup>1</sup> For the Basic Payment Scheme, arable land is: Land cultivated for crop production, fallow land and temporary grassland. See the [definitions](#) section for a more detailed explanation.

<sup>2</sup> See appendix A for details of the conversion and weighting factors.

- Cropping farms (cereal and general cropping) were more likely to have used fallow land and nitrogen fixing crops to meet their EFA requirement.
- Dairy and grazing livestock farms were more likely to have used hedges to meet their EFA requirement.

## Background

In 2015 the Single Payment Scheme was replaced by a new system of direct payments comprised of the Basic Payment Scheme (BPS) and additional 'greening' payments. The new 'greening' rules specify the requirements that eligible farmers must meet in order to receive a greening payment worth 30% of the total direct payment. There are 3 greening rules<sup>3</sup>:

1. **Permanent grassland:** Under this rule, if the percentage of permanent grassland in England – relative to the area of agricultural land – falls by more than 5%, farmers who have ploughed permanent grassland may have to re-instate it.
2. **Crop diversification:** this has also been called the '2 or 3 crop rule'. If a farmer has 10 or more hectares of arable land, they will have to follow the crop diversification rules on the minimum number of crops they grow and the areas they cover – unless they qualify for an exemption.
3. **Ecological Focus Areas (EFAs):** if a farmer has more than 15 hectares of arable land, they will need 'Ecological Focus Areas' on their arable land – unless they qualify for an exemption. EFAs are areas and/or features drawn from the list of areas and features which the EU has decided are beneficial for the climate and the environment. Five of the EFA options have been selected as applicable in England. If a farm does need to apply the EFA requirement, the areas and features used must be equivalent to at least 5% of the total arable land the farmer declares on their BPS application.

Some farms, such as those certified as organic or farms with large amounts of eligible land which is fallow and/or in grass, are exempt from the greening requirements. Full details of the exemptions can be found in Appendix B.

An additional module was included within the 2015/16 Farm Business Survey (FBS) to collect information on the total area of EFA features on farms. This was done in order to allow an assessment of the impact of the greening requirements. In England the following features count towards a farm's EFA requirement:

- **Fallow land** - land which has no crop production or grazing on it, but is maintained in a state suitable for grazing or cultivation for the first six months of the year.
- **Hedges** - A 'hedge' is any hedgerow (a row of bushes) growing on or adjacent to (next to) arable land which forms part of a farm business.
- **Buffer strips** - A buffer strip is an area of land maintained in permanent vegetation that provides an intermediate protection zone between cropped or grazed land and areas of conservation value. To count as EFA, a buffer strip must be next to a watercourse or parallel with and on a slope leading to a watercourse.
- **Areas of catch crops or green cover** - Catch crops are those crops which are planted after the harvest and before the sowing of winter crops. Green cover is

<sup>3</sup> Please see the Basic Payment Scheme guidance document for more information on the greening rules <https://www.gov.uk/government/publications/basic-payment-scheme-guidance-for-2015>

present on the land throughout winter. Catch and cover crops are designed to protect the soil and use available nutrients between harvest and sowing.

- **Area of nitrogen fixing crops** - These are crops which are able to draw nitrogen from the air and store it in their roots e.g. legume plants such as peas and beans. When the plant dies, the fixed nitrogen is released and becomes available to other plants. This helps to fertilize the soil.

As well as collecting information about these features, the module also collected data on the full list of features identified by the EU Commission as being beneficial for the climate and the environment (Appendix A).

The data collected from this module will enable us to explore the impact of Greening on farm businesses and provide an evidence-based assessment to inform future policies.

The data used for this analysis have been collected from a subset of 884 farms within the 2015/16 FBS. In addition, the areas of these features in 2014/15 were also available for this same subset of farms<sup>4</sup>. The FBS covers those farms with at least 25 thousand euros of standard output<sup>5</sup>. **Completion of the EFA module was voluntary and restricted to farms with an arable area**. Some 79% of farms in the FBS population had an arable area<sup>6</sup>. Weights were derived for this sub sample in line with the method described in the survey methodology section (e.g. to preserve the population totals for robust farm types and farm size groups). For some farms, it was not possible to complete a full record, as the data were not readily known by the farmer or researcher. In these cases, we have imputed<sup>7</sup> values for missing items. For more information please see the [data analysis section](#).

This release provides an assessment of the total Ecological Focus Area (EFA) features on farms with an arable area in 2015/16 regardless of whether they were used to meet greening requirements. The results presented for 2014/15 will differ to those previously published, as they are derived from a slightly different sample of farms. The results are presented together with [confidence intervals](#).

The results presented in this notice can be found at:

<https://www.gov.uk/government/collections/farm-business-survey#other-analysis-from-the-farm-business-survey>

## Detailed Results

Subject to some exemptions (see Appendix B) all farmers claiming the Basic Payment with more than 15 hectares of arable land must have EFAs. A farm's total EFA must be equivalent to at least 5% of their total arable land area<sup>8</sup>. In 2015/16 the total arable area of the farms represented by this survey was 4.5 million hectares.

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<sup>4</sup> Data for 2014/15 was able to be updated if more accurate information was available at the time of collecting the 2015/16 data.

<sup>5</sup> Please see the Survey methodology section for more information on the FBS.

<sup>6</sup> The survey was restricted to just those farms with an arable area as it is only these farms that might need to comply with the EFA requirement. See the [survey methodology section](#) for more details.

<sup>7</sup> Imputation is a process whereby missing values in a data set are replaced with known acceptable values.

<sup>8</sup> For the Basic Payment Scheme, arable land is: Land cultivated for crop production, fallow land and temporary grassland. See the [definitions](#) section for a more detailed explanation.

Whilst the greening rules don't apply to land which is certified as organic (including land 'in conversion'), farmers can choose to count their organic land in their arable area when they do their greening calculations. For the purpose of this analysis we have included organic land within the arable area, as we do not know whether a farmer would choose to include their organic land or not.

Each EFA feature (fallow land, hedges, buffer strips, catch crops/green cover and nitrogen fixing crops) has a different weighting towards the total EFA area. These weightings apply in all Member States and can be found in Appendix A.

The results are only for those farms which had an arable area in 2015/16. Some 79% of farm businesses in the FBS had an arable area in 2015/16 (see [survey methods](#) for further information). Data was not collected for those farms which did not have an arable area.

## 1 Areas of Ecological Focus Area features

### Key findings:

The areas below are only for those farms with arable land. They include all features on arable land, including on farms that would have been exempt from the EFA requirement.

- Of the features that could be used to meet the EFA requirement in England in 2015, fallow land and nitrogen fixing crops offered the largest potential areas; accounting for around 6% and 4% respectively of the total arable area (with EFA weightings applied).
- The total area of catch crops and green cover, nitrogen fixing crops and fallow land increased by 45%, 29%, 19% respectively between 2014/15 and 2015/16 (unweighted).
- Rotational fallow, field margins and other fallow features accounted for over 65% of the total fallow land (257,600 hectares).
- Of those features not currently applicable to farms in England, ditches had the largest area at around 40,400 hectares (with weightings applied), accounting for around 1% of the arable area.
- Isolated trees had the smallest area at around 500 hectares (weighted).

In England, fallow land, hedges, buffer strips, catch crops/green cover and nitrogen fixing crops are currently the features which can count towards a farm's EFA requirement. The survey collected information on the total area of these features on farms with an arable area in 2015/16 (2015 harvest). In addition the areas of these features in 2014/15 were available for the same subset of farms. The survey also collected areas for some of the other features that Member States could include within the requirement. These have been separately presented. The results shown here have been presented before (Tables 1 and 3) and after the application of the EFA feature weights<sup>9</sup> (Tables 2 and 4).

### 1.1 Features applicable to farms in England

The features with the largest areas that were potentially available for use as EFAs in 2015/16 were fallow land and nitrogen fixing crops; these each accounted for around 6% and 5% respectively of the total arable area (unweighted) and for around 6% and 4% respectively of the total arable area once the weighting had been applied (Table 1 and 2).

<sup>9</sup> See appendix A for details of the conversion and weighting factors.

The total area of catch crops and green cover, nitrogen fixing crops and fallow land increased by 45%, 29%, 19% respectively between 2014/15 and 2015/16 (unweighted). The increase in the total area of these features may have been in response to the introduction of the EFA requirement in 2015.

**Table 1: Total area of EFA features (unweighted), England 2014/15 and 2015/16<sup>(a)(b)</sup>**

	Total area of features (thousand hectares)		Percentage of arable area (%)	
	2014/15	2015/16	2014/15	2015/16
Fallow land	216.9 (±45.3)	257.6 (±46.9)	5.0	5.7
Hedges	149.0 (±16.6)	145.7 (±15.0)	3.4	3.2
Buffer Strips	21.8 (±6.4)	22.9 (±6.3)	0.5	0.5
Catch crops/green cover	38.7 (±17.9)	55.9 (±18.4)	0.9	1.2
Nitrogen fixing crops	180.8 (±39.4)	232.5 (±35.9)	4.1	5.1

Source: Farm Business Survey.

(a) Based on responses from 884 farm businesses with an arable area in 2014/15 and 2015/16.

(b) 95% confidence intervals shown in brackets below estimate.

**Table 2: Total area of EFA features (weighted), England 2014/15 and 2015/16<sup>(a)(b)</sup>**

	Total area of features (thousand hectares)		Percentage of arable area (%)	
	2014/15	2015/16	2014/15	2015/16
Fallow land	216.9 (±45.3)	257.6 (±46.9)	5.0	5.7
Hedges	235.5 (±27.2)	230.3 (±24.8)	5.4	5.1
Buffer Strips	32.6 (±9.6)	34.3 (±9.5)	0.7	0.8
Catch crops/ green cover	11.6 (±5.4)	16.8 (±5.5)	0.3	0.4
Nitrogen fixing crops	126.5 (±27.6)	162.7 (±25.1)	2.9	3.6

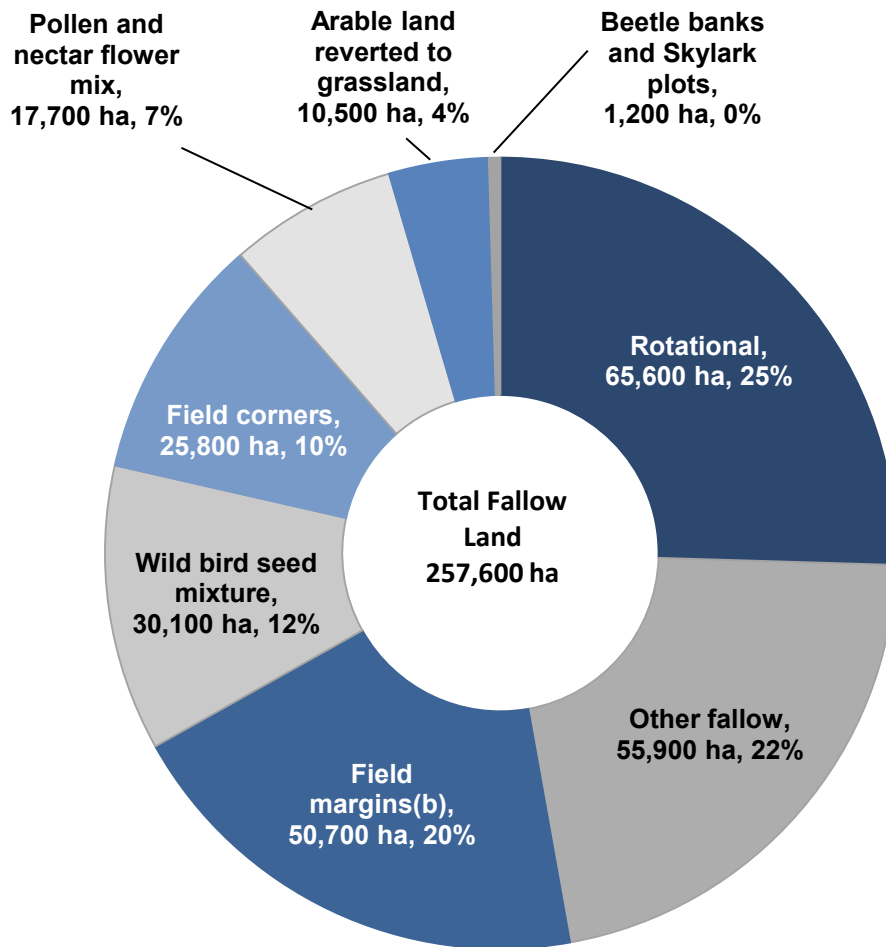
Source: Farm Business Survey.

(a) Based on responses from 884 farm businesses with an arable area in 2014/15 and 2015/16.

(b) 95% confidence intervals shown in brackets below estimate.

The module collected a breakdown of fallow land into managed fallow areas e.g. skylark plots and field corners (Figure 1). Over 65% of the total fallow land in 2015/16 (257,600 hectares) was made up of rotational fallow (65,600 hectares), other fallow features (55,900 hectares) and field margins features (50,700 hectares). Beetle banks and skylark plots accounted for less than 1% of the total fallow land (1,200 hectares).

**Figure 1: Total areas of fallow land features, England 2015/16<sup>(a)</sup>**



Source: Farm Business Survey.

(a) Based on responses from 884 farm businesses with an arable area in 2014/15 and 2015/16.

(b) Field margins do not include those that are part of cross compliance requirements

## 1.2 Features currently not applicable to farms in England

The areas of these other features were small and very similar between the two years. Ditches had the largest area at around 20,200 hectares, unweighted, and 40,400 hectares, weighted (Table 3 and 4). This accounted for around 0.5% and 0.9% of the arable area respectively. Isolated trees had the smallest area at around 300 hectares, unweighted, and 500 hectares, weighted.

**Table 3: Total area of other features (unweighted), England 2014/15 and 2015/16<sup>(a)(b)(c)</sup>**

	Total area of features (thousand hectares)		Percentage of arable area (%)	
	2014/15	2015/16	2014/15	2015/16
Isolated trees	0.3 (±0.1)	0.3 (±0.1)	0.01	0.01
Trees in a line	2.3 (±1.2)	2.4 (±1.2)	0.05	0.05
Groups of trees/Field copses	2.3 (±2.0)	2.5 (±2.0)	0.05	0.06
Ponds	2.4 (±0.9)	2.1 (±0.7)	0.06	0.05
Ditches	21.5 (±3.8)	20.2 (±2.8)	0.49	0.45
Stone walls	0.6 (±0.3)	0.6 (±0.3)	0.01	0.01
Strips along forest edges	1.1 (±0.5)	1.0 (±0.5)	0.02	0.02
Afforested areas	11.1 (±5.6)	12.7 (±5.9)	0.25	0.28

Source: Farm Business Survey.

Note: See below table 4 for footnotes

**Table 4: Total area of other features (weighted), England 2014/15 and 2015/16<sup>(a)(b)(c)</sup>**

	Total area of features (thousand hectares)		Percentage of arable area (%)	
	2014/15	2015/16	2014/15	2015/16
Isolated trees	0.5 (±0.1)	0.5 (±0.1)	0.01	0.01
Trees in a line	4.5 (±2.4)	4.7 (±2.4)	0.10	0.10
Groups of trees/Field copses	3.5 (±3.0)	3.8 (±3.0)	0.08	0.08
Ponds	3.6 (±1.4)	3.1 (±1.1)	0.08	0.07
Ditches	43.0 (±7.5)	40.4 (±5.6)	0.98	0.90
Stone walls	0.6 (±0.3)	0.6 (±0.3)	0.01	0.01
Strips along forest edges	1.6 (±0.8)	1.5 (±0.7)	0.04	0.03
Afforested areas	11.1 (±5.6)	12.7 (±5.9)	0.25	0.28

Source: Farm Business Survey.

(a) Based on responses from 884 farm businesses with an arable area in 2014/15 and 2015/16.

(b) 95% confidence intervals shown in brackets below estimate.

(c) Areas for short rotation coppice have not been presented due to insufficient observations.

## 2 Features used to meet EFA requirement

### Key findings:

Farmers were also asked which features they had used to meet their EFA requirements in 2015/16. The areas used to meet their EFA requirements were not collected.

- Just under half of all farm businesses (45%) used fallow land to meet their EFA requirement; 38% were using their hedges and 23% were using nitrogen fixing crops.
- Cropping farms (cereal and general cropping) were more likely to be using their fallow land and nitrogen fixing crops to meet their EFA requirement.
- Dairy and grazing livestock farms were more likely to use their hedges to meet their EFA requirement.

Farmers were also asked which features they had used (all of the area or some of the area) to meet their EFA requirement in 2015/16. The areas used to meet their EFA requirements were not collected. Just under half of all farm businesses (45%) used fallow land to meet their EFA requirement (Table 5); 38% used hedges and 23% used nitrogen fixing crops.

**Table 5: Features used to meet EFA requirement, England 2015/16<sup>(a)(b)</sup>**

	Percentage of farm businesses (%)	95% Confidence Interval (%)
Fallow land	45	±4
Hedges	38	±4
Buffer strips	10	±2
Catch crops/green cover	4	±2
Nitrogen fixing crops	23	±3
No features used <sup>(c)</sup>	24	±3

Source: Farm Business Survey.

(a) Based on responses from 884 farm businesses with an arable area in 2014/15 and 2015/16.

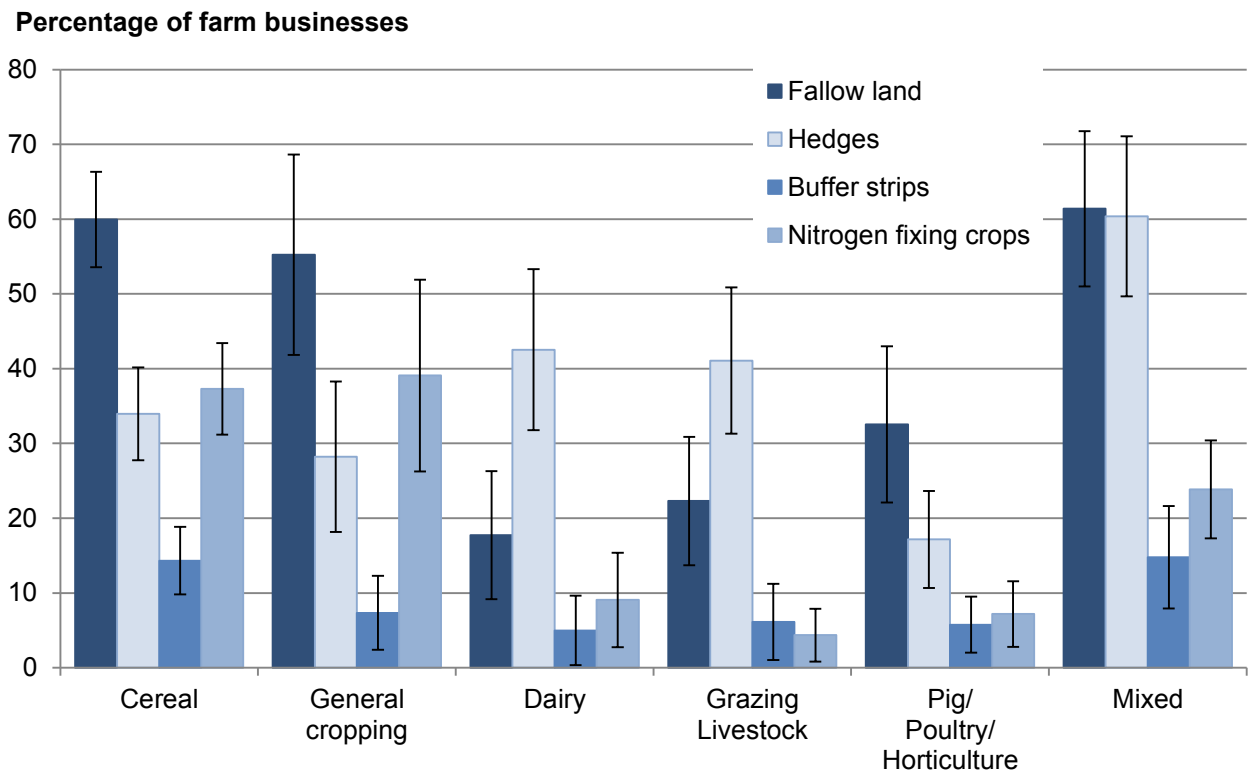
(b) Farm businesses can use more than one feature to meet their EFA requirement.

(c) This includes those farms which are exempt from the EFA requirement.

Cropping farms (cereal and general cropping) were more likely to have used fallow land and nitrogen fixing crops to meet their EFA requirement. Dairy and grazing livestock farms were more likely to have used hedges to meet their EFA requirement.



**Figure 2: Features used to meet EFA requirement by farm type, England 2015/16<sup>(a)(b)</sup>**



Source: Farm Business Survey.

(a) Based on responses from 884 farm businesses with an arable area in 2014/15 and 2015/16.

(b) Farm businesses can use more than one feature to meet their EFA requirement.

## Survey details

### Survey content and methodology

The FBS is an annual survey providing information on the financial position and physical and economic performance of farm businesses in England. The sample of around 1,800 farm businesses covers all regions of England and all types of farming with the data being collected by face to face interview with the farmer. Results are weighted to represent the whole population of farm businesses that have at least 25,000 Euros of standard output<sup>10</sup> as recorded in the annual June Survey of Agriculture and Horticulture. In 2015, this accounted for approximately 56,500 farm businesses.

For further information about the Farm Business Survey please see:

<https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/series/farm-business-survey>

Within the 2015/16 Farm Business Survey (FBS) an additional module was included to collect information on the total area of EFA features on farms, The information collected covered:

- Total area of features on farm in 2014/15 (brought forward from previous module). Data for 2014/15 was updated if more accurate information was available at the time of collecting the 2015/16 data.
- Total area of features on farm in 2015/16.
- Whether the feature had been used to meet the farms EFA requirement in 2015/16. The areas used to meet their EFA requirements were not collected.

Completion of the EFA module was voluntary and restricted to those farms with an arable area. Table 6 shows that around 21% of the FBS population did not have an arable area in 2015/16. This group is largely made up of livestock farms and represents around 12,000 farms in the population.

**Table 6: Percentage of farm businesses in the FBS population with and without an arable area by farm type**

	No arable area	Had an arable area
Cereals	0%	100%
General cropping	0%	100%
Dairy	19%	81%
Grazing livestock (Lowland)	34%	66%
Grazing livestock (LFA)	64%	36%
Pigs	37%	63%
Poultry	56%	44%
Mixed	6%	94%
Horticulture	21%	79%
<b>All farms</b>	<b>21%</b>	<b>79%</b>

Source: Farm Business Survey, England 2015/16

<sup>10</sup> For a definition of standard output please see the UK classification document here <https://www.gov.uk/farm-business-survey-technical-notes-and-guidance>

Data was collected from a sample of 884 farms. The farms that responded to the EFA module had slightly different characteristics to those farms in the main FBS which were eligible. There were greater proportions of cereal farms, farms in East England and smaller farms responding to the EFA module compared to eligible farms in the main FBS. There were smaller proportions of grazing livestock (LFA) farms, farms in the West Midlands and very large farms responding to the module compared to those eligible in the main FBS. Full details of the characteristic of responding farms can be found at Appendix C.

## Data analysis

The results from the FBS relate to farms which have a standard output of at least 25,000 Euros. Initial weights are applied to the FBS records based on the inverse sampling fraction for each design stratum (farm type by farm size). These weights are then adjusted (calibration weighting<sup>11</sup>) so that they can produce unbiased estimators of a number of different target variables.

The data used for this analysis is only for those farms which completed the EFA module in 2015/16 FBS. Completion of the EFA module was voluntary and restricted to those farms which had an arable area. A sample of 884 farms was achieved in 2015/16. In addition to the areas of features for 2015/16 the areas for 2014/15 were also available for this subset<sup>12</sup>. In order to take account of non-response, the results have been reweighted using a method that preserves marginal totals for populations according to farm type and farm size<sup>4</sup> groups. These population totals have been restricted to reflect just those farms in the population which were eligible for the module (those that have an arable area); the farms in the EFA module represent around 44,500 farms in the population.

Tables 7a and 7b shows the data completion codes for all features collected within the module. For some farms, it was not possible to complete a full record, as the data were not readily known by the farmer or researcher these have a code of 'Feature on the arable area of the farm but area/length/quantity not available' in tables 7a and 7b. For some features there was no missing data, or very small amounts less than 1%, but 16% of the records had missing data for ditches (Table 7b). For these cases we have imputed values for the missing items. Imputation is a process whereby missing values in a data set are replaced with known acceptable values.

Imputation was undertaken using a nearest neighbour approach. Those farms which required imputation were separated from the farms with complete data for the feature being imputed (base farms). A nearest neighbour was identified by calculating the minimum distance between each potential proxy farm (base farms) and the farms to be imputed based on farm type, farm size, region, arable area, utilised arable area (UAA) and the total fallow land recorded in the core FBS (where appropriate). For each recipient farm the maximum absolute difference between the recipient farm and the potential proxies are found. The proxy farm with the lowest maximum absolute difference was selected. Where several potential proxies with the same lowest maximum absolute difference were identified, one was selected at random. The value for the feature being imputed was transferred from the proxy farm to the farm to be imputed.

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<sup>11</sup> Further information on calibration weighting can be found here:

<https://www.gov.uk/farm-business-survey-technical-notes-and-guidance>

<sup>12</sup> Data for 2014/15 was able to be updated if more accurate information was available at the time of collecting the 2015/16 data.

**Table 7a: Data completion codes for all features for 2014/15 data**

	Feature on arable area of farm, data complete (i.e. no estimation)	Feature on the arable area of the farm but area/length/quantity estimated	Feature on the arable area of the farm but area/length/quantity not available	Feature not on the arable area of the farm
Rotational fallow	10%	4%	0%	86%
Field corners	18%	8%	1%	72%
Wild bird seed mixture	17%	6%	1%	76%
Pollen and nectar flower mix	11%	4%	1%	85%
Beetle banks	3%	1%	0%	96%
Skylark plots	3%	1%	0%	96%
Arable land reverted to grassland	3%	1%	0%	96%
Field margins	15%	17%	4%	64%
Other fallow	12%	5%	0%	83%
Hedges (both sides)	22%	51%	14%	13%
Hedges (one side)	21%	46%	14%	18%
Isolated trees	24%	12%	7%	57%
Trees in a line	3%	9%	6%	81%
Groups of trees/Field copses	4%	6%	4%	87%
Ponds	6%	16%	5%	73%
Ditches	14%	32%	17%	38%
Stone walls	3%	6%	2%	88%
Buffer strips	10%	10%	5%	75%
Strips along forest edges	3%	2%	2%	94%
Afforested areas	2%	2%	0%	96%
Catch crops or green cover	5%	1%	1%	93%
Nitrogen fixing crops	19%	2%	0%	79%

Source: Farm Business Survey

### Accuracy and reliability of the results

We show 95% confidence intervals against the results. These show the range of values that may apply to the figures. They mean that we are 95% confident that this range contains the true value. They are calculated as the standard errors (se) multiplied by 1.96 to give the 95% confidence interval (95% CI). The standard errors only give an indication of the sampling error. They do not reflect any other sources of survey errors, such as non-response bias. For the Farm Business Survey, the confidence limits shown are appropriate for comparing groups within the same year only; they should not be used for comparing with previous years since they do not allow for the fact that many of the same farms will have contributed to the Farm Business Survey in both years.

We have also shown error bars on the figures in this notice. These error bars represent the 95% confidence intervals (as defined above).

**Table 7b: Data completion codes for all features for 2015/16 data**

	Feature on arable area of farm, data complete (i.e. no estimation)	Feature on the arable area of the farm but area/length/ quantity estimated	Feature on the arable area of the farm but area/length/ quantity not available	Feature not on the arable area of the farm
Rotational fallow	17%	3%	0%	80%
Field corners	18%	9%	1%	72%
Wild bird seed mixture	17%	6%	1%	76%
Pollen and nectar flower mix	11%	4%	1%	84%
Beetle banks	3%	1%	0%	96%
Skylark plots	3%	1%	0%	96%
Arable land reverted to grassland	3%	0%	0%	96%
Field margins	15%	17%	4%	64%
Other fallow	13%	6%	0%	81%
Hedges (both sides)	26%	47%	14%	13%
Hedges (one side)	24%	44%	14%	18%
Isolated trees	24%	12%	6%	58%
Trees in a line	4%	9%	6%	81%
Groups of trees/Field copses	4%	6%	4%	86%
Ponds	7%	15%	5%	73%
Ditches	14%	31%	16%	39%
Stone walls	4%	6%	2%	88%
Buffer strips	11%	9%	5%	75%
Strips along forest edges	2%	2%	2%	95%
Afforested areas	2%	2%	1%	95%
Catch crops or green cover	7%	1%	1%	91%
Nitrogen fixing crops	27%	1%	1%	70%

Source: Farm Business Survey

### Availability of results

This release contains headline results for each section. The full breakdown of results can be found at: <https://www.gov.uk/government/collections/farm-business-survey#documents>

Defra statistical notices can be viewed on the Food and Farming Statistics pages on the Defra website at <https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/statistics>. This site also shows details of future publications, with pre-announced dates.

### Data Uses

Data from the main FBS are provided to the EU as part of the Farm Accountancy Data Network (FADN). The data have been used to help inform policy decisions (e.g. Reform of Pillar 1 and Pillar 2 of the Common Agricultural Policy and future policy following exit from the EU) and to help monitor and evaluate current policies relating to agriculture in England (and the EU). It is also widely used by the industry for benchmarking and informs wider research into the economic performance of the agricultural industry.

## User engagement

As part of our ongoing commitment to compliance with the Code of Practice for Official Statistics <http://www.statisticsauthority.gov.uk/assessment/code-of-practice/index.html>, we wish to strengthen our engagement with users of these statistics and better understand the use made of them and the types of decisions that they inform. Consequently, we invite users to make themselves known, to advise us of the use they do, or might, make of these statistics, and what their wishes are in terms of engagement. Feedback on this notice and enquiries about these statistics are also welcome.

## Definitions

### Farm Type

Where reference is made to the *type of farm* in this document, this refers to the 'robust type', which is a standardised farm classification system.

### Farm Sizes

Farm sizes are based on the estimated labour requirements for the business, rather than its land area. The farm size bands used within the detailed results tables which accompany this publication are shown in the table below. Standard Labour Requirement (SLR) is defined as the theoretical number of workers required each year to run a business, based on its livestock and livestock activities.

<b>Farm size</b>	<b>Definition</b>
Spare & Part time	Less than 1 SLR
Small	1 to less than 2 SLR
Medium	2 to less than 3 SLR
Large	3 to less than 5 SLR
Very Large	5 or more SLR

### Utilised Agricultural Area (UAA)

Utilised Agricultural Area (UAA) is the crop area, including fodder, set-aside land, temporary and permanent grass and rough grazing in sole occupation (but not shared rough grazing) i.e. the agricultural area of the farm. It includes bare land and forage let out for less than one year.

### Arable Land

For the Basic Payment Scheme, arable land is: Land cultivated for crop production, fallow land and temporary grassland (land that has been in grass for less than 5 years).

Land cultivated for crop production includes land used for combinable crops, crops grown for fibre, root crops, crops grown for animal feed such as forage maize and forage rape, field vegetables, cut flowers or bulbs and soft fruit (other than permanent crops). It also includes crops grown in greenhouses, or under cover, on soil or grass.

Arable land **excludes** permanent crops that occupy the land for 5 years or more (other than permanent grassland) and provide repeated harvests; this includes short rotation coppice, nursery crops and multi-annual crops. Raspberries, gooseberries, rhubarb, lavender, mint and miscanthus are examples of permanent crops.

### **Fallow land**

Land which has no crop production or grazing on it, but is maintained in a state suitable for grazing or cultivation during the period 1 January to 30 June.

### **Hedges**

A 'hedge' is any hedgerow (a row of bushes) growing on or adjacent to (next to) arable land which forms part of a farm businesses.

### **Buffer strips**

A buffer strip is an area of land maintained in permanent vegetation that provides an intermediate protection zone between cropped or grazed land and areas of conservation value. To count as EFA, a buffer strip must be next to a watercourse or parallel with and on a slope leading to a watercourse.

### **Areas of catch crops or green cover**

Catch crops are those crops which are planted after the harvest and before the sowing of winter crops. Green cover is present on the land throughout winter. Catch and cover crops are designed to protect the soil and use available nutrients between harvest and sowing.

### **Area of nitrogen fixing crops**

These are crops which are able to draw nitrogen from the air and store it in their roots e.g. legume plants such as peas and beans. When the plant dies, the fixed nitrogen is released and becomes available to other plants. This helps to fertilize the soil.

### **Rotational fallow land**

Land that is left fallow as part of the normal crop rotation.

### **Field corners**

The provision of unmanaged areas on arable land (including temporary grassland) to increase the wildlife interest of the farm. Field corners create wildlife habitats, buffer features and minimise run-off and erosion.

### **Wild bird seed mixture**

These are mixtures of small-seed bearing crops or pollen and nectar rich plants sown at the edges of fields in strips or blocks, in early spring or late summer. These are an unharvestable mix of at least two crops that support wildlife and pollinators. They should be an area with a balanced combination of small-seed bearing crops. For example, Barley, Triticale, Kale, Quinoa, Linseed, Millet, Mustard, Fodder radish, Sunflower. This will benefit over-wintering birds.

### **Pollen and nectar flower mixture**

These are mixtures of small-seed bearing crops or pollen and nectar rich plants sown at the edges of fields in strips or blocks, in early spring or late summer. These are an unharvestable mix of at least two crops that support wildlife and pollinators They should be an area with a mixture of nectar-rich plants. For example, Red clover, Alsike clover, Bird's foot trefoil, Sainfoin, Musk mallow, Common knapweed. This will benefit nectar feeding insects like butterflies and bumble bees.

### **Beetle Banks**

Beetle banks are tussocky grass ridges, generally about 2 m wide, that run from one side of a field to the other whilst still allowing the field to be farmed. They provide habitat for ground nesting birds, small mammals and insects (including those which feed on crop

pests). Once created the earth ridge is sown with a mixture of perennial grasses, including some tussock forming varieties such as cocksfoot or timothy. Pesticides, fertilisers or manure are not applied and only spot applications of herbicide are permitted for the control of injurious or invasive weeds.

### **Skylark Plots**

Skylark plots are unsown areas within winter wheat crops between 3 and 12 metres in length and width. After drilling, there is no requirement to manage the plots differently from the remainder of the field (i.e. they can be over-sprayed, receive fertiliser applications, etc) but there must be no mechanical weeding of the plots between 1 April and harvest.

### **Arable land reverted to grass**

These are areas of former arable land which have reverted to grassland. They provide habitats and foraging areas for insects and other wildlife, and can be used to protect archaeology. They are grassy areas with a minimum width of 6 metres that are maintained by light grazing or at least an annual cut which should occur no earlier than 31 July.

### **Field margins**

Field margins shall have a width between 1 and 20 metres on which there shall be no agricultural production. These are grassy strips ideally established by natural regeneration which do not receive any fertiliser or manure. Invasive or injurious weeds may be treated by spot or weed wipe applications of herbicide. The strips may be cut occasionally to control woody growth.

Field margins that were part of cross compliance requirements for the Single Payment Scheme/Basic Payment Scheme were not recorded as part of the module.

### **Other features which count as fallow land, such as permanent fallow, lapwing plots**

Other features which count as fallow land were recorded in this group and would include lapwing plots (fallow land which provides nesting sites for lapwings on arable land) and permanent fallow land.

### **Isolated trees**

Trees are of historic and landscape significance in both arable and grassland situations, and also provide habitat for many invertebrates and birds. Isolated trees must have a crown diameter (The **crown of a tree** consists of the mass of foliage and branches growing outward from the trunk of the tree) of minimum 4 metres.

### **Trees in a line**

Trees in line must have a crown diameter of a minimum 4 metres. The space between the crowns of trees must not exceed 5 metres.

### **Group of trees/Field copses**

Trees in group are where trees are connected by overlapping crown cover. Field copses are areas overgrown with woody plants, not used for agricultural production. The maximum size for both is 0.3 hectares (3000m<sup>2</sup>). More than one group of trees/field copses can be recorded so the total area can exceed 0.3 hectares.

### **Ponds**

Ponds should have a minimum size of 0.01 hectares (100m<sup>2</sup>) and a maximum size of 0.1 hectares (1000m<sup>2</sup>). A strip with riparian vegetation alongside the water with a width of up



to 10 metres should be included in the size of the pond. Anything larger than 0.1 hectares is classed as a lake. Reservoirs made of concrete or plastic are not eligible.

### **Ditches**

A ditch is a small to moderate depression created to channel water. A ditch can be used for drainage, to drain water from low-lying areas, alongside fields, or to channel water from a more distant source for plant irrigation. Ditches up to a maximum width of 6 metres can be counted, including open watercourses for the purpose of irrigation or drainage. Channels with concrete walls are not eligible.

### **Traditional Stone Walls**

Stone walls of all types are important for stock management and as landscape and historic features. They are also potentially important habitats for lichens, mosses and ferns, invertebrates, reptiles, birds and small mammals. The walls do not have to be stock proof.

### **Strips along forest edges**

These are areas of land adjacent to a forest in order to create a buffering transition to the bordering forest. The minimum width of those strips is 1 metre and the maximum width is 10 metres.

### **Afforested areas**

This is the planting of trees for the purpose of creating woodland or forest. The area must have been afforested under a RDPE scheme (or a national scheme that meets all the conditions as the RDPE scheme).

This would include any land afforested since 2008 under the English Woodland Grant Scheme (<http://www.forestry.gov.uk/forestry/inf-d6dcegu>) and the Changing Landscape Scheme within the area of the National Forest (<http://www.nationalforest.org/woodlands/woodlandcreation/>).

Forest means land with a minimum area of 0.5 hectares and minimum width of 20 metres under stands of trees with, or with the potential to achieve, a height of 5 metres and crown cover of more than 20% of the ground. To achieve the 20% crown cover there will be a requirement to plant at least 300 trees per hectare.

### **Short Rotation Coppice**

Short rotation coppice (SRC) means areas planted with tree species of CN code 0602 90 41 that consist of woody, perennial crops, the rootstock or stools remaining in the ground after harvesting, with new shoots emerging in the following season. Short rotation coppice (SRC) is harvested on a cycle of only two to four years. The maximum harvest cycle (the period between harvests) is 20 years.

## Appendix A: Full list of features identified by the EU Commission<sup>(a)</sup>

Features	Conversion factor (m/tree to m <sup>2</sup> )	Weighting factor	Ecological focus area (if both factors are applied)
Land lying fallow (per 1m <sup>2</sup> )	n.a.	1	1 m <sup>2</sup>
Hedges (per 1m)	5	2	10 m <sup>2</sup>
Isolated tree (per tree)	20	1.5	30 m <sup>2</sup>
Trees in line (per 1m)	5	2	10 m <sup>2</sup>
Group of trees/Field copses (per 1m <sup>2</sup> )	n.a.	1.5	1.5 m <sup>2</sup>
Ponds (per 1m <sup>2</sup> )	n.a.	1.5	1.5 m <sup>2</sup>
Ditches (per 1m)	3	2	6 m <sup>2</sup>
Traditional stone walls (per 1m)	1	1	1 m <sup>2</sup>
Buffer strips (per 1m)	6	1.5	9 m <sup>2</sup>
Strips along forest edges (per 1m)	6	1.5	9 m <sup>2</sup>
Afforested areas (per 1m <sup>2</sup> )	n.a.	1	1 m <sup>2</sup>
Areas with catch crops or green cover (per 1m <sup>2</sup> )	n.a.	0.3	0.3m <sup>2</sup>
Areas with nitrogen fixing crops (per 1m <sup>2</sup> )	n.a.	0.7	0.7m <sup>2</sup>
Areas with short rotation coppice (per1m <sup>2</sup> )	n.a.	0.3	0.3 m <sup>2</sup>

(a) The list excludes terraces and hectares of agro-forestry as these features do not occur in England.

## Appendix B: Exemption Criteria for EFAs

Some farmers with more than 15 hectares of arable land may not need EFAs if any of the exemption criteria apply to them. The exemption criteria for EFAs are as follows:

- Exemption A - More than 75% of a farm's arable land is:
  - fallow land
  - temporary grassland
  - used for cultivation of leguminous crops
  - a combination of the above
 and the remaining arable land is 30 hectares or less.
- Exemption B -More than 75% of a farm's total eligible agricultural area is:
  - permanent grassland
  - temporary grassland
  - used for the cultivation of crops grown in water (such as Watercress)
  - a combination of the above
 and the remaining arable land is 30 hectares or less

## Appendix C: Characteristics of responders to the FBS (eligible farms) and the EFA module

	Farms in the FBS eligible for the EFA module <sup>(a)</sup>	EFA module subset
Cereals	25%	30%
General cropping	10%	10%
Dairy	14%	13%
Grazing livestock (Lowland)	14%	13%
Grazing livestock (LFA)	7%	5%
Pigs	3%	3%
Poultry	3%	2%
Mixed	13%	14%
Horticulture	11%	9%
<b>All farms</b>	<b>100%</b>	<b>100%</b>

	Farms in the FBS eligible for the EFA module <sup>(a)</sup>	EFA module subset
North East, Yorkshire & Humber	15%	18%
North West	10%	10%
East Midlands	12%	11%
West Midlands	11%	9%
East of England	18%	21%
South East	12%	13%
South West	22%	18%
<b>All farms</b>	<b>100%</b>	<b>100%</b>

	Farms in the FBS eligible for the EFA module <sup>(a)</sup>	EFA module subset
Spare & part-time	12%	16%
Small	22%	23%
Medium	18%	18%
Large	21%	20%
Very large	27%	23%
<b>All farms</b>	<b>100%</b>	<b>100%</b>

(a) Only those farms with an arable area were eligible for the EFA module, there were 1449 farms in the FBS that were eligible in 2015/16.

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