



# Agriculture in the United Kingdom

# 2015

Department for Environment, Food and Rural Affairs

Department of Agriculture, Environment and Rural Affairs (Northern Ireland)

Welsh Assembly, The Department for Rural Affairs and Heritage

The Scottish Government, Rural and Environment Research and Analysis Directorate



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Produced by:

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# Preface

## Legal Basis

1. Agriculture in the United Kingdom (AUK) 2015 fulfils the requirement under the Agriculture Act 1993 that Ministers publish an annual report on such matters relating to price support for agricultural produce as they consider relevant. The Government will draw on this information when considering the policy issues, including proposals by the European Commission in respect to the Common Agricultural Policy (CAP) and the provision of agricultural support.

## Changes

2. Some of the figures now given for past years may differ from those published in proceeding issues. This is because of the use of later information, changes in scope and nature of available data and improvements in statistical methods. Where modifications to the data are made a 'Revisions' section will be added to the chapter to explain the changes.

## Content of document

3. The latest available data are used throughout this document. Most of the data are on calendar year basis and for 2015. Some data for 2015 are provisional and may be revised as more data becomes available.
4. The following points apply throughout:
  - All figures relate to the United Kingdom unless otherwise stated
  - Unless stated otherwise, Defra is the source for all data presented in tables and charts
  - In the tables
    - means 'nil' or 'negligible' (less than half the last digit shown)
    - .. means 'not available' or 'not applicable'.
  - The figures for imports and exports include those from intervention stocks and the figures for exports include re-exports. Imports are based on country of consignment. Exports are based on country of reported final destination. The source of overseas trade statistics is HM Revenue and Customs.
  - Where statistics are shown for the European Union (EU) as a whole they represent the present Member States in all the years regardless of when they became members.
  - Values are expressed as either current or as a real term value.
    - Current (or nominal) value is the value expressed in historical monetary terms
    - Real term value is the current value adjusted to take account of inflation.

# Chapter 1 Key Events

## Income and productivity

1. Total Income from Farming is estimated to have fallen between 2014 and 2015 by 29% (£1,526 million) in real terms, to £3,769 million. The 2015 value was driven by lower commodity prices and reduced direct payments resulting from the less favourable euro/sterling exchange rate.
2. Gross Value Added (GVA) fell by £1,393 million, to £8,495 million, in real terms a 14% decrease.
3. Total factor productivity is estimated to have fallen by 0.4% between 2014 and 2015. This follows high levels of production in 2014 including record yields for cereals. Compared to 2010 productivity has increased by 5.3%.

## Common Agricultural Policy

4. 2014 was the last year under the Single Payments Scheme (SPS) before the Basic Payment Scheme (BPS) came into force in 2015. Most payments for 2015 will come under the BPS, including greening payments and the young farmer payments.
5. Under the Rural Development Programme a number of new schemes became available during 2015.
6. Scotland is the only administration in the United Kingdom to operate coupled support schemes. In 2015 two new schemes were introduced, the Scottish Suckler Beef Support Scheme (Mainland and Islands) and the Scottish Upland Sheep Support Scheme.
7. The EU milk quota scheme ended on 31 March 2015.

## Weather<sup>1</sup>

8. The summer was cool and wet, but early autumn provided fine, sunny weather. However from late autumn a succession of Atlantic storms brought exceptional rainfall to the north and west, causing widespread severe flooding to many towns and cities.
9. The UK mean temperature was 9.2°C, 0.4°C above the 1981 to 2010 long term average. For most months, temperatures were fairly near average, although somewhat below from May to September. November was very mild and December exceptionally so; easily the mildest December on record.
10. The UK rainfall total was 1272 mm, 110% of the 1981 to 2010 average and seventh-wettest in the UK series. December was the wettest calendar month in the series for the UK.
11. 2015 was a sunny year for most areas, especially the north-east. January to April and September were all sunny months, whereas November was duller in the UK series.

## Animal health

12. In 2015, Defra continued to implement the 25-year strategy to eradicate bovine tuberculosis (TB) in England. This included strengthening cattle measures, promoting biosecurity on farm and when trading, and effective licensed badger control in three areas where TB is widespread. While some regions of England have the highest incidence of TB in the EU, more than half the country is on track to be officially free of the disease by 2019.
13. There were two cases of notifiable avian influenza (AI) in 2015:
  - Low pathogenic AI (H7N7) in Hampshire in February; and

<sup>1</sup> Source: The Met Office <http://www.metoffice.gov.uk/climate/uk/summaries/2015/annual>

- Highly pathogenic AI (H7N7) in Lancashire in July.

Both cases were contained to single sites. Restrictions were lifted three weeks and one month, respectively, after preliminary cleansing and disinfection of the affected premises had been completed.

## Summary

In 2015:

- The Utilised Agricultural Area (UAA) decreased by 0.5% to 17.1 million hectares, covering 70% of land in the UK. Within the total croppable area of 6.1 million hectares, the total crop area decreased by 0.9% (43 thousand hectares), with a 33.5% (54 thousand hectares) increase in uncropped arable land and a 16.4% (229 thousand hectares) decrease in temporary grass.
- The area of oilseed crops planted decreased by 3.0% to 670 thousand hectares and was 115 thousand hectares less than the peak in 2012.
- The cereal crops area decreased by 2.5% to 3.1 million hectares.
- The dairy herd increased by 3.0% to 1.9 million.
- Total pig numbers slightly decreased by 1.6% from 4.8 million to 4.7 million.
- Sheep and lamb numbers fell by 1.2% to 33.3 million, largely due to a 2.4% decrease (0.4 million) in the number of lambs under one year old.
- The total labour force on commercial holdings has not changed at 476 thousand although there are some variations in the structure.

## Introduction

1. The tables in this chapter show the size and structure of the agricultural industry in the United Kingdom. They provide information on land use and livestock numbers, on the distribution of these between holdings, on the labour force and the age of farm holders.
2. Data in this chapter are sourced primarily from the June Surveys of Agriculture carried out in the four UK countries each year. The exceptions to this are the holder age data (sourced from the EU Farm Structure Survey) and most of the land use data in Scotland (sourced from Single Application Form (SAF) subsidy data). Also, cattle data are sourced from the Cattle Tracing System (CTS) in England, Wales and Scotland and from the equivalent Animal and Public Health Administration (APHIS) system in Northern Ireland.
3. From 2009 onwards, England data relate to “commercial” holdings only. The term “commercial” covers all holdings in England which have more than 5 hectares of agricultural land, 1 hectare of orchards, 0.5 hectares of vegetables or 0.1 hectares of protected crops, or more than 10 cattle, 50 pigs, 20 sheep, 20 goats, or 1,000 poultry. These thresholds are specified in the EU Farm Structure Survey Regulation EC 1166/2008.

4. For more information on the June Survey and for more detailed results please see:

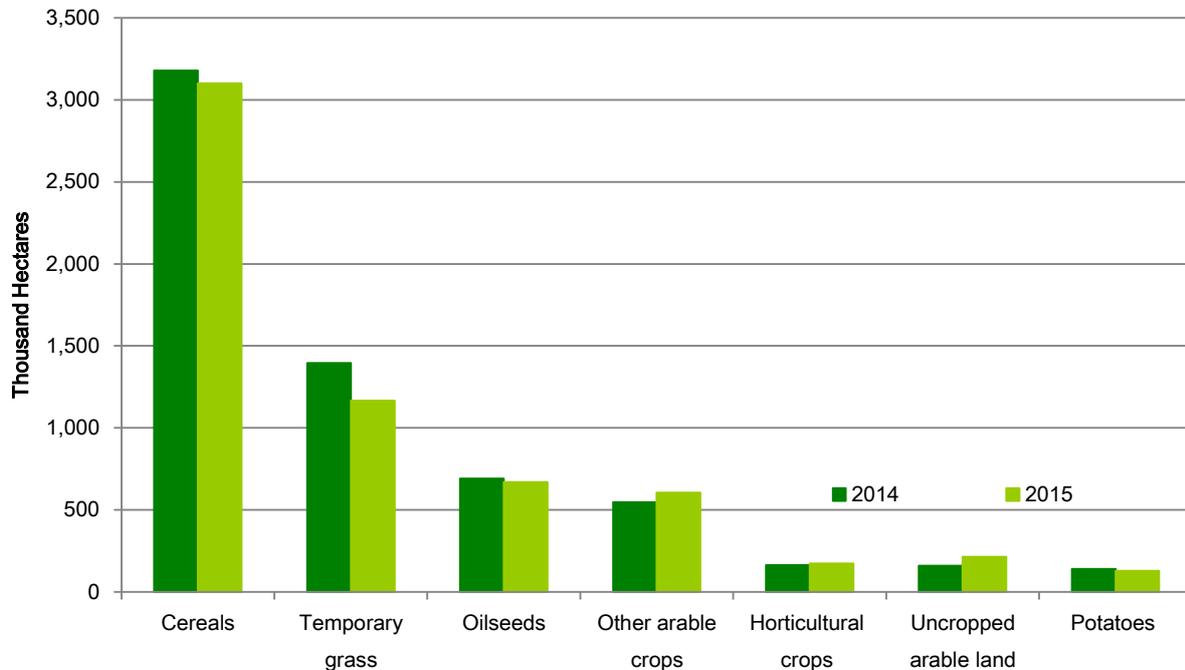
England: <https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/series/structure-of-the-agricultural-industry>

Scotland: <http://www.gov.scot/Topics/Statistics/Browse/Agriculture-Fisheries/PubFinalResultsJuneCensus>

Wales: <http://gov.wales/statistics-and-research/?topic=Environment+and+countryside&lang=en>

Northern Ireland: <https://www.daera-ni.gov.uk/topics/statistics>

Chart 2.1 Total croppable area on agricultural holdings June 2015



### Land use, crop areas and livestock numbers (chart 2.1, tables 2.1, 2.2)

5. At June 2015 the Utilised Agricultural Area (UAA) was 17.1 million hectares, covering 70% of the total UK land area. UAA is made up of arable and horticultural crops, uncropped arable land, common rough grazing, temporary and permanent grassland and land used for outdoor pigs. It does not include woodland and other non-agricultural land.
6. On the whole the proportion of croppable land used for each purpose remained similar between 2014 and 2015 however some categories did see large value changes (Chart 2.1). Temporary grass decreased by 229 thousand hectares to 1.17 million hectares. Scotland largely contributed to this decrease with a 213 thousand hectare reduction due to changes in how temporary and permanent grass areas were defined.
7. 51% of croppable area was planted as cereal crops. Wheat and barley were the predominant cereal crops at 1.8 and 1.1 million hectares respectively. The area of barley has declined considerably over the years. However, in 2015 barley increased by 2.0%.
8. The area of oilseed rape decreased for a third year in 2015, by 3.3% to 652 thousand hectares, after reaching a record high in 2012 of 756 thousand hectares.
9. The total number of cattle and calves increased slightly between 2014 and 2015 by 81 thousand animals to just over 9.9 million. The dairy herd increased by 3.0%.
10. The UK population of sheep and lambs fell by 1.2% to 33.3 million animals, largely due to a 2.4% decrease in the number of lambs to 16.5 million. The female breeding flock remained almost unchanged at 16.0 million.

11. The total number of pigs in the UK decreased by 1.6%, from 4.8 million animals in 2014 to 4.7 million in 2015. The main reason for this was the 1.9% decrease in fattening pigs, largely due to the 3.6% fall in the England figures which account for 81% of the UK fatteners.
12. The total number of poultry in the UK decreased by 1.2% to almost 168 million birds in 2015 compared to almost 170 million in 2014. Breeding fowl saw an increase of 11.1%. However this was offset by a 3.0% decrease in table chickens to just over 107 million birds.

**Table 2.1 Agricultural land use (a)**

Enquiries: Louise Rawlings on +44 (0) 208 0268948

email: [farming-statistics@defra.gsi.gov.uk](mailto:farming-statistics@defra.gsi.gov.uk)

Thousand hectares	At June of each year				
	2011	2012	2013	2014	2015
<b>Utilised agricultural area (UAA) (b)</b>	17 172	17 190	17 259	17 240	17 147
UAA as a proportion of total UK area	70%	70%	71%	71%	70%
<b>Total agricultural area</b>	18 263	18 349	18 449	18 456	18 428
<b>Common rough grazing</b>	1 199	1 200	1 198	1 199	1 199
<b>Total area on agricultural holdings</b>	17 064	17 149	17 250	17 257	17 229
<b>Total croppable area</b>	6 106	6 258	6 310	6 278	6 059
<b>Total crops</b>	4 673	4 748	4 665	4 722	4 679
Arable crops	4 497	4 576	4 502	4 559	4 505
Cereals	3 075	3 142	3 028	3 179	3 100
Oilseeds (includes linseed and borage)	742	785	752	691	670
Potatoes	146	149	139	141	129
Other crops	534	500	582	548	606
Horticultural crops	175	172	163	164	174
<b>Uncropped arable land (c)</b>	156	153	255	160	214
<b>Temporary grass under 5 years old</b>	1 278	1 357	1 390	1 396	1 167
<b>Total permanent grassland</b>	9 858	9 725	9 742	9 755	9 880
Grass over 5 years old	5 877	5 799	5 802	5 824	6 078
Sole right rough grazing (d)	3 981	3 926	3 940	3 930	3 801
<b>Other land on agricultural holdings</b>	1 100	1 166	1 198	1 224	1 290
Woodland	786	827	865	897	961
Land used for outdoor pigs	9	7	9	8	9
All other non-agricultural land	305	332	324	318	320

Data source: UK Agriculture departments June Survey/Census of Agriculture/ AF land data Scotland. For more details please see the introduction section of this chapter.

(a) Figures for England relate to commercial holdings only.

(b) UAA includes all arable and horticultural crops, uncropped arable land, common rough grazing, temporary and permanent grassland and land used for outdoor pigs (it excludes woodland and other non-agricultural land).

(c) Includes all arable land not in production, including land managed in Good Agricultural and Environmental Condition (GAEC12), wild bird cover and game cover.

(d) Also includes mountains, hills, heathland or moorland.

Table 2.2 Crop areas and livestock numbers (a)

Enquiries: Louise Rawlings on +44 (0) 208 0268948

 email: [farming-statistics@defra.gsi.gov.uk](mailto:farming-statistics@defra.gsi.gov.uk)

	At June of each year				
	2011	2012	2013	2014	2015
<b>Crop areas</b> (thousand hectares)					
Total area of arable crops	4 497	4 576	4 502	4 559	4 505
of which:					
wheat	1 969	1 992	1 615	1 936	1 832
barley	970	1 002	1 213	1 080	1 101
oats	109	122	177	137	131
rye, mixed corn and triticale	27	26	24	26	35
oilseed rape	705	756	715	675	652
linseed	36	29	34	15	15
potatoes	146	149	139	141	129
sugar beet (not for stockfeeding)	113	120	117	116	90
peas for harvesting dry and field beans	155	120	147	139	213
maize	164	158	194	183	187
Total area of horticultural crops	175	172	163	164	174
of which:					
vegetables grown outdoors	129	123	116	116	123
orchard fruit (b)	24	24	23	23	26
soft fruit & wine grapes	10	9	10	9	10
outdoor plants and flowers	11	12	12	12	13
glasshouse crops	2	3	3	3	3
<b>Livestock numbers</b> (thousand head)					
Total cattle and calves	9 988	9 952	9 844	9 837	9 919
of which:					
cows in the dairy herd (c)	1 796	1 796	1 782	1 841	1 895
cows in the beef herd (d)	1 687	1 666	1 611	1 569	1 576
Total sheep and lambs	31 634	32 215	32 856	33 743	33 337
of which:					
breeding flock 1 year and over	14 868	15 229	15 561	16 026	16 024
lambs under one year old	15 990	16 229	16 381	16 936	16 528
Total pigs	4 441	4 481	4 885	4 815	4 739
of which:					
sows in pig and other sows for breeding	362	357	355	349	352
gilts in pig	70	69	66	57	56
Total poultry	162 551	160 061	162 609	169 684	167 579
of which:					
table fowl	102 461	102 558	104 576	110 374	107 056
laying flock (including pullets)	38 357	36 646	35 841	37 146	36 998
breeding flock	10 253	9 987	11 184	11 258	12 511
turkeys, ducks, geese and all other poultry	11 481	10 870	11 008	10 907	11 014

Source: June Surveys/Census of Agriculture/SAF land data Scotland. Also Cattle Tracing System/APHIS (for cattle data). For more details please see the introduction section of this chapter.

(a) Figures for England relate to commercial holdings only.

(b) Includes non-commercial orchards.

(c) Dairy cows are defined as female dairy cattle over 2 years old with offspring.

(d) Beef cows are defined as female beef cattle over 2 years old with offspring.

## Numbers and sizes of holdings and enterprises (tables 2.3 and 2.4)

13. The number of agricultural holdings was 222 thousand in 2010 and decreased by 4% to 214 thousand in 2015. Within the time period the total area on holdings increased by 1%, therefore average area of all holdings increased by 5% to 80 hectares in 2015. Similarly the average croppable area of holdings also increased 5% between 2010 and 2015.

**Table 2.3 Numbers of holdings by size group (a)**

Enquiries: Louise Rawlings on +44 (0) 208 0268948

email: [farming-statistics@defra.gsi.gov.uk](mailto:farming-statistics@defra.gsi.gov.uk)

	2010		2015	
	Number of holdings (thousand)	Hectares (thousand)	Number of holdings (thousand)	Hectares (thousand)
Total area on holdings				
under 20 hectares	104	704	98	702
20 to under 50 hectares	43	1 425	42	1 372
50 to under 100 hectares	34	2 405	33	2 375
100 hectares and over	41	12 520	42	12 779
<b>Total</b>	<b>222</b>	<b>17 054</b>	<b>214</b>	<b>17 229</b>
Average area (hectares)		77		80
Average area on holdings with >=20 hectares		138		142
Croppable area (b)				
0.1 to under 20 hectares	52	312	49	312
20 to under 50 hectares	20	646	19	628
50 to under 100 hectares	14	1 036	15	1 038
100 hectares and over	18	4 021	17	4 081
<b>Total</b>	<b>104</b>	<b>6 015</b>	<b>100</b>	<b>6 059</b>
Average croppable area (hectares)		58		61

Source: June Surveys/Census of Agriculture/SAF land data Scotland. For more details please see the introduction section of this chapter

(a) Figures for England relate to commercial holdings only.

(b) Croppable area is defined as land under crops, temporary grass under five years old and uncropped arable land.

**Table 2.4 Numbers of holdings by size group and country at June 2015**

Enquiries: Louise Rawlings on +44 (0) 208 0268948

email: [farming-statistics@defra.gsi.gov.uk](mailto:farming-statistics@defra.gsi.gov.uk)

	England (a)		Wales		Scotland		Northern Ireland	
	Number of holdings (thousand)	Hectares (thousand)						
Total area on holdings								
Under 20 hectares	36.7	318	18.8	113	32.4	165	10.1	107
20 to under 50 hectares	20.5	685	6.3	208	6.0	199	8.7	281
50 to under 100 hectares	19.0	1 372	4.9	351	5.0	359	4.2	293
100 hectares and over	26.2	6 616	4.9	992	8.8	4 854	1.9	318
<b>Total</b>	<b>102.5</b>	<b>8 992</b>	<b>34.8</b>	<b>1 663</b>	<b>52.3</b>	<b>5 576</b>	<b>24.9</b>	<b>998</b>
Average area (hectares)		88		48		107		40
Average area on holdings with >=20 hectares		132		97		273		60

Source: June Surveys/Census of Agriculture/SAF land data Scotland. For more details please see the introduction section of this chapter.

(a) Figures for England relate to commercial holdings only.

14. The agricultural workforce remained unchanged in 2015 at 476 thousand compared to 2014. Farmers, business partners, directors and spouses account for the majority (62%) of the total labour force.

**Table 2.5 Agricultural labour force on commercial holdings (a)**

Enquiries: Louise Rawlings on +44 (0) 208 0268948

[email: farming-statistics@defra.gsi.gov.uk](mailto:farming-statistics@defra.gsi.gov.uk)

Thousands	At June of each year				
	2011	2012	2013	2014	2015
<b>Total labour force (incl. farmers and spouses)</b>	476	481	464	476	476
<b>Farmers, business partners, directors and spouses</b>	299	298	290	294	294
Full time	140	141	138	140	142
Part time (b)	159	158	152	155	152
<b>Regular employees, salaried managers and casual workers</b>	177	183	173	181	183
<b>Regular employees (c)</b>	115	116	112	115	115
Full time	73	73	71	72	73
Part time (b)	42	44	41	43	43
Seasonal, casual or gang labour	62	67	61	66	67

Source: June Surveys/Census of Agriculture

(a) 2013 figures relate to commercial holdings only for all of the UK

(b) Part time is defined as less than 39 hours per week in England and Wales, less than 38 hours per week in Scotland and less than 30 hours per week in Northern Ireland.

(c) Not all UK countries collect separate estimates for salaried managers. These figures are included with regular employees.

### Age of holders (table 2.6)

15. Table 2.6 shows the proportion of holders by age group. Agriculture has an aging workforce. In the United Kingdom, around a third of all holders were over the typical retirement age of 65 years while the proportion of young people aged less than 35 years was around 3%.
16. The proportions of holders in the central age bands of 45-54 years and 55-64 years have remained broadly unchanged over the past decade. The proportion in the 35-44 years old band has decreased by 5 percentage points whilst the proportion in the oldest band, 65 years and over, has increased by 5 percentage points.
17. The average age of holders is defined using the median. This is the middle value when all holders' ages are ranked in order. In 2013 the median age for holders in the UK was 59 years old, unchanged from 2010.

Table 2.6 Proportion of holders in each age group (a)(b)

Enquiries: Louise Rawlings on +44 (0) 208 0268948

email: [farming-statistics@defra.gsi.gov.uk](mailto:farming-statistics@defra.gsi.gov.uk)

	2003	2005	2007	2010 (c)	2013 (c)
	% of holders				
Holdings' age					
Under 35 years	3	3	3	3	3
35 - 44 years	15	14	12	11	10
45 - 54 years	24	23	23	25	25
55 - 64 years	29	29	29	29	28
65 years and over	29	31	33	32	34
Median age (years)	58	58	59	59	59

Source: EU Farm Structure Survey

(a) The holder is defined as the person in whose name the holding is operated. The data in this table relate to all holders whether or not the holder is also the manager of the holding.

(b) Holdings run by an organisation (such as limited companies or institutions) do not have a holder and are therefore excluded from these figures.

(c) 2010 and 2013 figures relate to commercial holdings only for all of the UK.

# Chapter 3 Farming Income

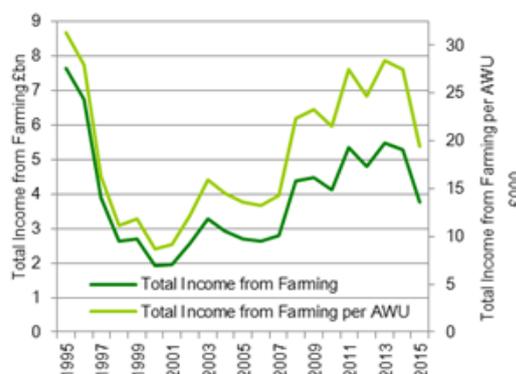
## Summary

- Total Income from Farming in 2015 is estimated to be 29% lower than 2014, a fall of £1,526 million to £3,769 million in real terms.
- Gross value added at basic price, which identifies agriculture’s contribution to the Gross Domestic Product (GDP), fell by £1,393 million to £8,495 million. In real terms, a 14% decrease.
- Incomes across all farm types in England, Wales and Northern Ireland are expected to have fallen or remained broadly similar in 2015/16. This is due to lower prices for key outputs such as milk, cereals, eggs and meat, offset to some extent by lower input costs, particularly for animal feed, fuel and fertiliser.

## Longer term trends in farming income (chart 3.1)

1. By making an adjustment for inflation, real term value allows a direct comparison with previous years.
2. In real terms Total Income from Farming in 2015 is estimated to be 29% lower than 2014, a fall of £1,526 million to £3,769 million.
3. Following poor weather in 2012 and 2013 growing conditions were more favourable in 2014 and maintained in 2015 encouraging good crop growth and record yields. However in 2015 whilst production levels were maintained, lower commodity prices due to increased global production and stocks resulted in a fall of 8.3% in the value of outputs.
4. The value of intermediate consumption, the goods and services used in the production process fell by 4.2%. Lower prices and to some degree a fall in volumes used, led to a 14% fall in gross value added at basic price to £8,495 million.
5. Compared to 2011, a comparable year which was not adversely affected by the weather, outputs in 2015 were £1,197 million lower. This was driven by significantly lower farm gate prices which failed to offset higher volumes of production.
6. The cost of intermediate consumption between the two years fell by £519 million with the increase in volumes used offset by lower prices. Gross value added at basic price was £678 million lower in 2015 compared to 2011.

Chart 3.1 Long term trends in real terms at 2015 prices



## Summary measures including total income from farming (table 3.1)

7. Table 3.1 shows summary measures from the aggregate agriculture accounts. More information on the agriculture account can be found in Chapter 4.
8. Net value added at factor cost is the value of outputs plus all subsidies minus intermediate consumption, consumption of fixed capital and taxes; Net value added at factor cost fell by 16.5% in real terms to £7.2 billion and is just below the value of 2010.

9. Total Income from Farming represents the income that is left to farmers when all costs are deducted. It differs from net value added at factor cost as it deducts interest, rent and labour costs. Total Income from Farming is estimated to have fallen by 29% to £3.8 billion.
10. Compensate employees which is the cost of paid labour has remained relatively stable over the last 10 years and currently stands at £2.5 billion.
11. Total Income from Farming per AWU of entrepreneurial labour follows a similar trend to Total Income from Farming, but owing to a decline in the number of farmers and other unpaid workers has performed better over time. In 2015 total Income from Farming per AWU of entrepreneurial labour is 29% lower than 2014.

**Table 3.1 Summary measures from the aggregate agriculture accounts**

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£ million (unless otherwise specified)

Year	Net value added at factor cost	Income from farming			
		Total Income from Farming	Compensation of employees	Income from agriculture of total labour input	Total Income from Farming per AWU of entrepreneurial labour (a)
<b>Current prices</b>		A	B	A + B	(£)
2005	4 928	2 193	1 944	4 136	10 950
2006	4 923	2 183	1 973	4 155	10 983
2007	5 205	2 403	2 004	4 407	12 185
2008	6 667	3 844	2 065	5 910	19 697
2009	6 821	4 016	2 165	6 181	20 871
2010	6 717	3 826	2 226	6 051	19 937
2011	8 155	5 043	2 341	7 385	25 947
2012	7 773	4 620	2 353	6 974	23 762
2013	8 617	5 367	2 403	7 770	27 860
2014	8 650	5 285	2 406	7 691	27 403
2015	7 239	3 769	2 479	6 247	19 471
<b>In real terms, 2015 prices</b>		A	B	A + B	(£)
2005	6 100	2 714	2 406	5 120	13 554
2006	5 917	2 624	2 371	4 995	13 202
2007	6 088	2 811	2 344	5 155	14 252
2008	7 576	4 369	2 347	6 716	22 385
2009	7 594	4 471	2 410	6 881	23 237
2010	7 254	4 131	2 404	6 535	21 529
2011	8 627	5 336	2 477	7 813	27 450
2012	8 092	4 810	2 450	7 260	24 736
2013	8 794	5 478	2 452	7 930	28 434
2014	8 666	5 295	2 410	7 705	27 456
2015	7 239	3 769	2 479	6 247	19 471

(a) An annual work unit (AWU) represents the equivalent of an average full-time person engaged in agriculture.

### Summary measures by country (table 3.2)

12. Table 3.2 shows main measures, at current price, for the agriculture industries in England, Wales, Scotland and Northern Ireland and for the United Kingdom as a whole. It also presents the contribution that agriculture makes to the economy and employment for each country.

Table 3.2 Summary measures by country at current price (a)(c)

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	2010	2011	2012	2013	2014	2015 (provisional)
<b>Gross output at basic prices £ million</b>						
United Kingdom	20 561	23 677	24 166	25 885	25 875	23 852
England	15 229	17 637	18 079	19 267	19 292	17 675
Wales	1 248	1 398	1 398	1 537	1 586	1 495
Scotland	2 561	2 916	2 931	3 121	3 072	2 937
Northern Ireland	1 522	1 725	1 759	1 960	1 926	1 745
<b>Intermediate consumption £ million</b>						
United Kingdom	13 669	15 006	15 526	16 503	16 005	15 356
England	9 751	10 798	11 062	11 824	11 465	11 047
Wales	1 071	1 107	1 159	1 207	1 200	1 110
Scotland	1 677	1 832	1 945	1 992	1 888	1 805
Northern Ireland	1 170	1 268	1 360	1 480	1 453	1 394
<b>Gross value added at basic prices £ million</b>						
United Kingdom	6 891	8 671	8 640	9 382	9 869	8 495
England	5 478	6 839	7 017	7 443	7 826	6 628
Wales	177	291	239	331	386	385
Scotland	884	1 084	986	1 128	1 184	1 132
Northern Ireland	352	457	398	480	473	351
<b>Total Income from Farming £ million</b>						
United Kingdom	3 826	5 043	4 620	5 367	5 285	3 769
England	2 774	3 671	3 574	3 989	3 996	2 739
Wales	108	220	147	214	201	175
Scotland	687	818	660	819	776	672
Northern Ireland	258	334	240	345	312	183
<b>Agriculture's share of total regional gross value added at basic prices (a) %</b>						
United Kingdom	0.49	0.60	0.58	0.61	0.61	..
England	0.46	0.56	0.56	0.56	0.57	..
Wales	0.37	0.59	0.47	0.62	0.71	..
Scotland	0.82	0.98	0.88	0.96	0.96	..
Northern Ireland	1.13	1.44	1.22	1.43	1.38	..
<b>Agriculture's share of total regional employment %</b>						
United Kingdom (b)	1.48	1.51	1.51	1.45	1.43	1.42
England (b)	1.10	1.14	1.13	1.09	1.07	1.07
Wales	4.26	4.28	4.30	3.87	4.20	4.07
Scotland	2.62	2.60	2.60	2.58	2.46	2.42
Northern Ireland	5.53	5.69	5.86	5.83	5.79	5.66

(a) Data on national and regional GVA for 2015 are not yet available.

(b) Estimates for England are based on employment on 'commercial holdings' only.

(c) Data may be subject to change, correct as at May 2016, next update due June 2016

### Comparison of income measures in EU member States (chart 3.2)

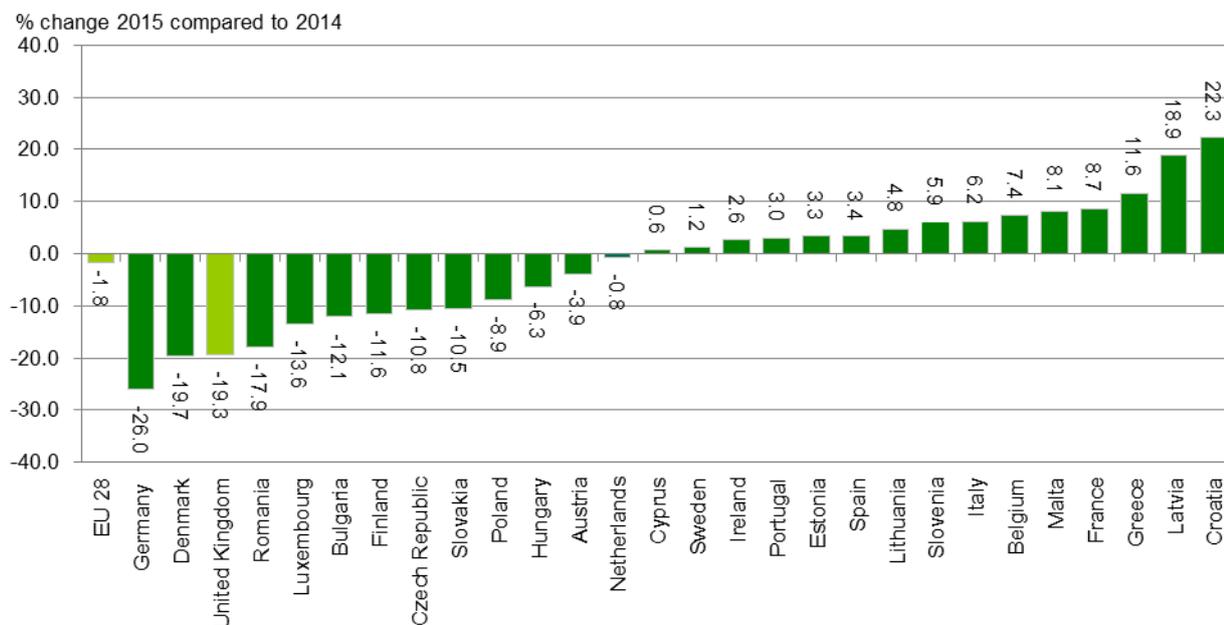
13. Eurostat, the statistical office of the European Union, produces measures of income from agricultural activity based on data provided by Member States. These include:

- Indicator A - Index of the real income of factors in agriculture per annual work unit, which corresponds to the real (i.e. deflated) net value added at factor cost of agriculture per total annual work unit.
- Indicator B - Indicator B: Index of real net agricultural entrepreneurial income, per unpaid annual work unit.

- Indicator C: Net entrepreneurial income of agriculture.

14. Eurostat's preferred measure of agricultural income is Indicator A. Chart 3.2 shows the forecast change between 2015 and 2014 for all Member States in the European Union (28 countries). The decrease of 1.8% in the European Union as a whole masks a great range of changes in Member States, from a fall of 26% for Germany to an increase of 22% in Croatia. The United Kingdom showed the third largest fall in incomes at 19%.

Chart 3.2 Changes in incomes from agricultural activity across the EU: Indicator A (a)



(a) 2015 forecast data for Member States as of November 2015

Source: Eurostat

### Farm Business Incomes by farm type (tables 3.3, 3.4 and chart 3.3)

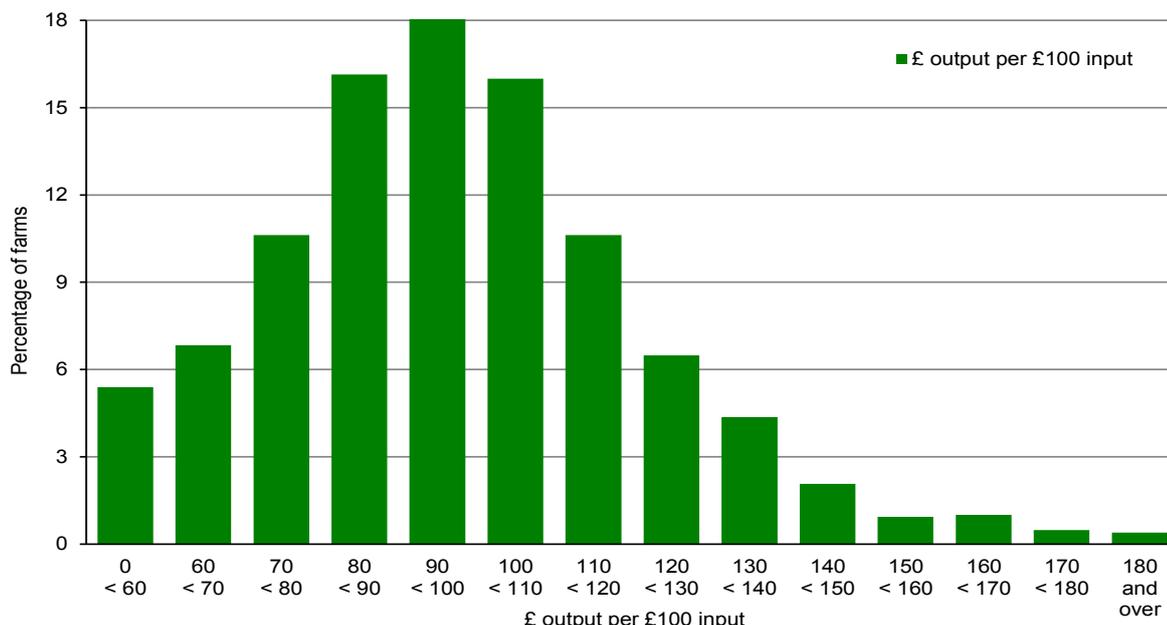
15. Farm Business Income, is presented in Tables 3.3 and 3.4. Chart 3.3 shows the distribution of performance for farms in the United Kingdom in 2014/15.
16. Estimates of Farm Business Income for 2015/16 (i.e. year ended February 2016 and harvest 2015) at current prices are shown in table 3.3 for England, Wales and Northern Ireland alongside outturn data for earlier years. These estimates include Single and Basic Payment Scheme receipts which are recorded as due for the appropriate accounting year, e.g. receipts of the 2015 Basic Payment Scheme are recorded in the 2015/16 accounting year. Note that forecasts of Farm Business Income for 2015/16 are not produced in Scotland.
17. Incomes across all farm types in England, Wales and Northern Ireland are expected to have fallen or remained broadly similar in 2015/16. This is due to lower prices for key outputs such as milk, cereals, eggs and meat, offset to some extent by lower input costs, particularly for animal feed, fuel and fertiliser.
18. On dairy farms, average incomes are expected to have fallen by around 40 to 45% in England and Wales and by almost 80% in Northern Ireland. These falls are primarily due to lower milk prices driven by plentiful global supplies and slowing demand. For the UK as a whole, milk prices were 21% lower for the year ending February 2016 whilst production was around 3% ahead of last year. Note that these estimates include payments under the EU Dairy Fund.
19. In England, average incomes on grazing livestock farms in both the Lowland and Less Favoured Areas (LFA) are expected to have increased in 2015/16. Total input costs are expected to have fallen for both these farm types, more than offsetting the lower output from livestock enterprises driven by lower prices. LFA farms are also expected to have benefited from increased payment rates for moorland and SDA land in the Basic Payment Scheme.
20. In Northern Ireland and Wales incomes on LFA grazing livestock farms are expected to have fallen due to lower cattle and sheep prices and Basic Payment Scheme receipts.

21. Average Farm Business Income is forecast to have fallen by almost 50% on specialist pig farms. Finished pig prices were more than 15% lower and the resulting fall in output is expected to have been only partially offset by rising productivity and higher throughput. Weaner, store and cull sow prices have also fallen. Forecasts for specialist poultry farms are subject to a considerable degree of uncertainty reflecting both the structure of this sector and the relatively small sample of these farms in the Farm Business Survey (FBS). Despite a fall in egg prices, increased throughput for both eggs and broilers is expected to have kept total farm output at a similar level to 2014/15. Lower input costs, particularly for feed and heating mean that incomes are expected to have increased on these farms to around £145,000.
22. Incomes on mixed farms in England are expected to remain broadly unchanged at £22,500. The changes reported above for the specialist farm types will all have influenced the incomes for these farm types. Total farm output is expected to have fallen largely due to the reduced output on cropping enterprises and a lower Basic Payment. Input costs are expected to have fallen to a similar extent meaning that average incomes remained at a similar level to 2014/15.
23. In England, Northern Ireland and Wales the average Basic Payment was around 8% lower in 2015 than the Single Payment was in 2014. This was primarily due to a change in the exchange rate (sterling strengthening against the euro).
24. Table 3.4 shows the variation in the level of Farm Business Income, Net Farm Income and Cash Income across farms in England, Wales, Scotland and Northern Ireland for 2014/15. Almost a fifth of farms in the UK failed to make a positive Farm Business Income although the proportion was lower (15%) in Northern Ireland. Around a half of farms in the UK and in each individual country fell into the lower income brackets (less than £20,000). At the top end of the scale 22% of farms in the UK had a Farm Business Income of more than £50,000.
25. A greater proportion of farms fall into the lower band income ranges for Net Farm Income. This is because Net Farm Income is a narrower measure of income; it is net of an imputed rent on owned land and an imputed cost for unpaid labour (apart from farmer and spouse). On this basis almost a third of farms in the UK failed to make a profit.
26. Chart 3.3 shows the differences in performance of farms in England for 2014/15. Performance is measured as £ of output per £100 of input. An imputed value for unpaid labour is added to the input costs. The chart illustrates the significant variation in performance with over a half of farms failing to recover their costs in that year.

Chart 3.3 Distribution of performance (a) across farms 2014/15; England only

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(a) Performance based on the ratio of farm business output to farm business costs which includes an adjustment for unpaid labour.

**Table 3.3 Farm business income by country and type of farm (a)**

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Average farm business income per farm (£ farm)	Accounting years ending on average in February					
	2010/11	2011/12	Standard Output (SO) Typology		2014/15	2015/16
			2012/13(b)	2013/14 (b)		Provisional
At current prices						
<b>England</b>						
Cereals	84 000	93 500	67 500	49 500	45 000	34 000
General cropping	110 000	100 500	89 000	67 500	52 000	43 000
Dairy	66 000	86 500	52 500	88 000	84 000	46 500
Grazing livestock (lowland)	21 500	32 000	16 000	15 000	18 500	20 000
Grazing livestock (LFA)	22 000	29 000	18 500	14 500	14 500	21 500
Specialist pigs	44 500	38 000	41 500	65 000	49 500	26 500
Specialist poultry	72 500	46 500	90 000	157 000	127 000	145 000
Mixed	50 500	74 000	37 500	29 500	21 500	22 500
<b>Wales</b>						
Dairy	57 500	68 000	45 000	77 000	70 000	42 000
Grazing livestock (lowland)	31 000	36 500	27 000	28 500	28 000	25 500
Grazing livestock (LFA)	30 000	34 500	21 500	19 000	23 500	22 500
<b>Scotland</b>						
Cereals	58 500	60 000	23 500	25 500	16 000	..
General cropping	72 500	50 500	55 000	35 500	27 000	..
Dairy	78 000	82 000	45 500	78 000	68 500	..
Grazing livestock (lowland)	42 000	33 500	18 000	24 000	25 500	..
Grazing livestock (LFA)	33 000	37 000	24 000	25 000	21 000	..
Mixed	54 000	49 000	34 500	30 000	11 500	..
<b>Northern Ireland</b>						
Dairy	51 500	58 000	28 000	61 500	45 500	10 000
Grazing livestock (LFA)	19 500	23 000	13 000	14 500	14 500	13 000
<b>United Kingdom (c)</b>						
Cereals	80 500	90 000	63 000	46 500	41 500	..
General cropping	99 500	86 500	81 500	59 000	48 000	..
Dairy	62 500	77 500	45 500	80 000	72 500	..
Grazing livestock (lowland)	22 000	31 000	16 500	16 000	19 000	..
Grazing livestock (LFA)	26 500	31 500	20 000	18 500	18 500	..
Specialist pigs	45 500	38 000	40 500	66 000	49 000	..
Specialist poultry	72 500	46 500	90 000	157 000	127 000	..
Mixed	50 500	65 500	36 500	30 000	20 000	..
<b>ALL TYPES (Including Horticulture)</b>	<b>50 500</b>	<b>57 000</b>	<b>38 000</b>	<b>38 500</b>	<b>34 500</b>	<b>..</b>
In real terms (at 2014/15 prices) (d)						
<b>United Kingdom</b>						
Cereals	87 000	95 000	65 500	47 500	41 500	..
General cropping	107 500	91 500	84 500	60 500	48 000	..
Dairy	67 500	82 000	47 500	81 500	72 500	..
Grazing livestock (lowland)	23 500	32 500	17 000	16 500	19 000	..
Grazing livestock (LFA)	29 000	33 500	20 500	19 000	18 500	..
Specialist pigs	49 000	40 000	42 500	67 500	49 000	..
Specialist poultry	78 500	49 000	93 500	160 000	127 000	..
Mixed	54 500	69 500	38 000	30 500	20 000	..
<b>ALL TYPES (Including Horticulture)</b>	<b>54 000</b>	<b>60 000</b>	<b>39 500</b>	<b>39 000</b>	<b>34 500</b>	<b>..</b>

(a) Figures rounded to nearest £500

(b) England, Wales and Northern Ireland results from 2013/14 onwards derived from 2010 standard output coefficients.

Scotland are derived from 2007 standard output coefficients for all years.

(c) UK totals include farm types that are present though not listed individually for some member countries.

(d) Uses GDP deflator

Table 3.4 All farm types: distribution of farm incomes by country 2014/15

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Percentage of farms

	England	Wales	Scotland	Northern Ireland	United Kingdom
<b>Farm Business Income</b>					
Less than zero	19	19	22	15	19
1 to less than £5,000	8	8	8	9	8
£5,000 to less than £10,001	9	11	8	10	9
£10,000 to less than £20,001	15	16	20	22	16
£20,000 to less than £30,001	11	12	11	16	12
£30,000 to less than £50,001	14	16	16	14	14
£50,000 and over	25	18	15	14	22
Average (£ thousand per farm)	40	29	23	25	35
<b>Net Farm Income</b>					
Less than zero	34	32	37	28	33
1 to less than £5,000	8	10	7	13	9
£5,000 to less than £10,001	8	10	9	7	8
£10,000 to less than £20,001	12	15	16	18	14
£20,000 to less than £30,001	9	9	9	10	9
£30,000 to less than £50,001	10	12	11	10	10
£50,000 and over	19	12	12	15	17
Average (£ thousand per farm)	26	17	14	20	23
<b>Cash Income</b>					
Less than zero	10	8	8	4	9
1 to less than £5,000	5	7	6	7	5
£5,000 to less than £10,001	7	7	8	4	7
£10,000 to less than £20,001	10	13	12	23	12
£20,000 to less than £30,001	12	16	15	16	13
£30,000 to less than £50,001	17	18	19	19	18
£50,000 and over	39	30	33	28	36
Average (£ thousand per farm)	66	44	43	42	58

27. Farm Business Income (FBI) is the preferred measure for comparisons of farm type and represents the return to all unpaid labour (farmers, spouses and others with an entrepreneurial interest in the farm business) and to all their capital invested in the farm business including land and farm buildings.

**Farm Business Income equals**

Total output from agriculture (includes crop and livestock valuation change) plus  
 Total output from agri-environment schemes plus  
 Total output from diversification plus  
 Single/Basic payment scheme less  
 Expenditure (costs, overheads, fuel, repairs, rent, depreciation, paid labour) plus  
 Profit/(loss) on sale of fixed assets.

28. Total Income from Farming (TIFF) represents business profits and remuneration for work done by owners and other unpaid workers. It is used to assess United Kingdom agriculture as a whole.

**Total Income from Farming equals**

Gross output at basic prices plus  
 Other subsidies less taxes less  
 Total intermediate consumption, rent, paid labour less  
 Total consumption of fixed capital (depreciation) less  
 Interest

## 29. Differences and similarities

### **Farm Business Income**

- the preferred measure for comparisons of farm type;
- covers the 12 month period March to February;
- does not subtract imputed rent for owner occupiers;
- complete range of on-farm activities including income from diversified activities where they are included in the farm accounts;
- treatment of stocks: the change in the book value of stocks between the start and end of the accounting year.

### **Total Income from Farming**

- the main aggregate measure of farm income used to assess United Kingdom agriculture as a whole.
- covers the calendar year;
- does not subtract imputed rent for owner occupiers;
- complete range of on-farm activities including income from diversified activities where they are included in the farm accounts;
- treatment of stocks: the physical changes in stocks valued at average calendar year prices.

## Revisions

30. Compared with the provisional 2014/15 results published in the 2014 edition of AUK, the outturns published for England were lower for cereals, general cropping, specialist pig, specialist poultry, LFA grazing livestock and mixed farms. On cereal, general cropping, LFA grazing livestock and specialist poultry farms, costs were higher than predicted whilst output was lower than expected on specialist pig farms. Note that the sample size is relatively small for specialist poultry farms and to a lesser extent for specialist pigs so the results are subject to considerable variability. On mixed farms both output and input costs were lower than expected whilst on dairy farms output was higher than expected meaning that incomes did not fall to the level forecast. Farm business output was also higher than predicted on lowland grazing livestock farms in England largely due to an increase in diversified income plus a higher output from the agricultural activities than forecast.
31. In Wales, incomes on dairy, lowland and LFA grazing livestock farms did not fall to the level expected as output was higher than predicted. This was also the case for dairy farm incomes in Northern Ireland. However on LFA grazing livestock farms in Northern Ireland it was the impact of lower costs, particularly for feed and fertiliser that meant incomes on these farms did not fall to the level expected.

# Chapter 4 Accounts

## Summary

- Total Income from Farming is estimated to have fallen between 2014 and 2015 by 29% (£1,526 million) in real terms, to £3,769 million. The 2015 value was driven by lower commodity prices and reduced direct payments resulting from the less favourable euro/sterling exchange rate.
- Gross value added at basic price, which identifies agriculture's contribution to the Gross Domestic Product (GDP), fell by £1,393 million to £8,495 million. In real terms, a 14% decrease.

## Introduction

1. This chapter shows production and income accounts for agriculture in the United Kingdom. Table 4.1 shows the value in real terms and table 4.2 shows the values in current price. Real term value is where previous year's data is adjusted to take account of inflation so the values are comparable. Current price values are based on prices in the year in question. Table 4.3 presents the year on year changes in outputs and inputs at current price. See table 4.4 for a list of definition of terms used in tables 4.1, 4.2 and 4.3.
2. These accounts conform to internationally agreed accounting principles required by both the United Kingdom's National Statistics and by Eurostat, the statistical office of the European Union.
3. Unless otherwise stated all comparisons are with the previous with previous years (2014).

## Real term value (table 4.1)

4. Real term value is where previous year's data is adjusted to take account of inflation so the values are comparable.
5. Following poor weather in 2012 and 2013 growing conditions were more favourable in 2014 and maintained in 2015 encouraging good crop growth and record yields. However in 2015 whilst production levels were maintained, lower commodity prices, due to increased global production and stocks, resulted in a fall of 8% in the value of outputs.
6. The cost of intermediate consumption fell by 4.2%, due to the lower prices and to some degree a fall in volumes used, leading to a 14% (£1,393 million) fall in gross value added at basic price to £8,495 million.
7. The pound further strengthened against the euro in 2015 and subsequently reduced the value of direct payments to farmers. It is estimated that the net value of Basic Payments (formerly Single Farm Payments) were 7.5% lower in 2015 than 2014. Direct payments are set in euros and converted to sterling each year using the exchange rate for the month of September set by the European Central Bank.
8. Labour, rent and interest rises further contributed to the overall fall in Total Income from Farming.
9. Compared to 2011, a comparable year which was not adversely affected by the weather, outputs in 2015 were £1,197 million lower. This was driven by significantly lower farm gate prices which failed to offset higher volumes of production. The cost of intermediate consumption between the two years fell by £519 million with the increase in volumes used offset by lower prices. Gross value added at basic price was £678 million lower in 2015 compared to 2011. However the reduction in exchange rate reduced the amount of direct payment received by farmers by £880 million and led to total income from farming being £1,567 million less than 2011.

Table 4.1 Production and income accounts in real terms (adjusted to take account of inflation)

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£ million (real terms)	2011	2012	2013	2014	2015 (provisional)
<b>Output at market prices (a)</b>					
1 Output of cereals	3 417	3 332	3 445	3 477	2 947
of which: wheat	2 456	2 250	2 116	2 470	2 033
barley	856	958	1 159	902	824
oats	100	119	163	99	86
2 Output of industrial crops	1 612	1 412	1 208	1 162	1 048
of which: oilseed rape	1 174	1 026	759	685	706
protein crops	109	102	126	123	137
sugar beet	266	236	275	316	173
other industrial crops	34	30	23	23	23
3 Output of forage plants	197	152	221	265	259
4 Output of vegetables and horticultural products	2 473	2 496	2 582	2 386	2 411
of which: fresh vegetables	1 294	1 307	1 367	1 218	1 263
plants and flowers	1 178	1 189	1 215	1 168	1 149
5 Output of potatoes (including seeds)	752	686	966	678	547
6 Output of fruit	639	597	614	623	690
7 Output of other crop products including seeds	502	670	593	649	573
<b>Total crop output (sum 1 - 7)</b>	<b>9 592</b>	<b>9 345</b>	<b>9 630</b>	<b>9 241</b>	<b>8 474</b>
8 Output of livestock	8 640	8 981	9 316	8 981	8 573
primarily for meat	7 302	7 540	7 897	7 482	7 367
of which: cattle	2 722	2 909	2 945	2 616	2 739
pigs	1 132	1 178	1 301	1 266	1 078
sheep	1 215	1 069	1 059	1 124	1 105
poultry	2 014	2 163	2 372	2 255	2 226
gross fixed capital formation	1 338	1 441	1 419	1 499	1 207
of which: cattle	667	891	936	927	686
pigs	9	9	6	5	4
sheep	437	330	278	332	284
poultry	225	211	199	234	233
9 Output of livestock products	4 642	4 670	5 177	5 380	4 433
of which: milk	3 954	3 921	4 359	4 603	3 663
eggs	592	689	733	681	681
<b>Total livestock output (8 + 9)</b>	<b>13 281</b>	<b>13 651</b>	<b>14 493</b>	<b>14 361</b>	<b>13 006</b>
10 Other agricultural activities	1 085	1 057	1 074	1 124	1 132
11 Inseparable non-agricultural activities	1 061	1 084	1 200	1 178	1 201
<b>12 Output (at market prices) (sum 1 to 11)</b>	<b>25 019</b>	<b>25 136</b>	<b>26 396</b>	<b>25 904</b>	<b>23 813</b>
13 Total subsidies (less taxes) on product (b)	29	21	21	21	38
<b>14 Gross output at basic prices (12 + 13)</b>	<b>25 048</b>	<b>25 157</b>	<b>26 418</b>	<b>25 925</b>	<b>23 852</b>

continued

Table 4.1 Production and income accounts in real terms (adjusted to take account of inflation)  
*continued*

£ million (real terms)

	2011	2012	2013	2014	2015 (provisional)
<b>Intermediate consumption</b>					
15 Seeds	805	772	885	770	707
16 Energy	1 460	1 488	1 480	1 399	1 182
of which: electricity and fuels for heating	390	402	394	374	363
motor and machinery fuels	1 070	1 086	1 087	1 026	819
17 Fertilisers	1 681	1 585	1 542	1 469	1 353
18 Plant protection products	817	873	873	945	907
19 Veterinary expenses	424	438	456	458	458
20 Animal feed	4 770	5 091	5 677	5 074	4 864
of which: compounds	2 774	2 994	3 357	3 005	2 845
straights	1 453	1 508	1 606	1 417	1 294
feed produced and used on farm or purchased from other farms	542	589	714	652	725
21 Total maintenance	1 528	1 501	1 531	1 547	1 475
of which: materials	952	940	957	963	890
buildings	575	561	575	584	585
22 Agricultural services	1 085	1 057	1 074	1 124	1 132
23 FISM	118	111	118	104	117
24 Other goods and services (c)	3 188	3 246	3 205	3 145	3 162
<b>25 Total intermediate consumption (sum 15 to 24)</b>	<b>15 875</b>	<b>16 163</b>	<b>16 843</b>	<b>16 036</b>	<b>15 356</b>
<b>26 Gross value added at market prices (12 - 25)</b>	<b>9 144</b>	<b>8 973</b>	<b>9 554</b>	<b>9 868</b>	<b>8 457</b>
<b>27 Gross value added at basic prices (14 - 25)</b>	<b>9 174</b>	<b>8 995</b>	<b>9 575</b>	<b>9 888</b>	<b>8 495</b>
28 Total consumption of Fixed Capital	4 101	4 172	4 068	4 084	3 963
of which: equipment	1 623	1 676	1 708	1 722	1 763
buildings	1 037	1 045	999	987	995
livestock	1 441	1 451	1 360	1 376	1 206
cattle	837	906	875	878	700
pigs	9	8	7	5	4
sheep	379	313	273	295	290
poultry	217	224	206	197	212
<b>29 Net value added at market prices (26 - 28)</b>	<b>5 043</b>	<b>4 801</b>	<b>5 486</b>	<b>5 783</b>	<b>4 494</b>
<b>30 Net value added at basic prices (27 - 28)</b>	<b>5 072</b>	<b>4 822</b>	<b>5 507</b>	<b>5 804</b>	<b>4 532</b>
31 Other taxes on production	- 128	- 126	- 120	- 96	- 96
32 Other subsidies on production (b)	3 683	3 395	3 407	2 958	2 803
<b>33 Net value added at factor cost (30 + 31 + 32)</b>	<b>8 627</b>	<b>8 092</b>	<b>8 794</b>	<b>8 666</b>	<b>7 239</b>
34 Compensation of employees	2 477	2 450	2 452	2 410	2 479
35 Rent	503	511	530	554	561
36 Interest (d)	312	321	334	407	431
<b>37 Total Income from Farming (33 - 34 - 35 - 36)</b>	<b>5 336</b>	<b>4 810</b>	<b>5 478</b>	<b>5 295</b>	<b>3 769</b>

(a) Output is net of VAT collected on the sale of non-edible products. Figures for output at market prices exclude subsidies on products.

(b) Subsidies (less taxes) on product: payments linked to the production of agricultural products. Other subsidies on production: payments not linked to production from which agricultural producers can benefit as a consequence of engaging in agricultural activities e.g. Basic Payment Scheme, Single Payment Scheme, agri-environment schemes.

(c) Includes livestock and crop costs, water costs, insurance premiums, bank charges, professional fees, rates, and other farming costs.

(d) Interest charges on loans for current farming purposes and buildings and works less interest on money held on short term deposit.

## Current price (tables 4.2 and 4.3)

10. Current price values are based on prices in the year in question.
11. In 2015 Total Income from Farming fell by £1,516 million to £3,769 million, a 29% decrease on 2014. The key contributors to the change were the decreases in: milk by £931 million, wheat by £432 million, pigs by £186 million, subsidies on production by £150 million, and sugar beet by £142 million. This was to a small extent offset by a fall in energy costs of £215 million and animal feed costs of £201 million.
12. Gross value added at basic price, which identifies agriculture's contribution to the Gross Domestic Product (GDP), fell by £1,374 million to £8,495 million, a 14% decrease.

## Outputs

13. Overall output of crops value fell by £749 million to £8,474 million, a fall of 8.1%, with most crops seeing falls with the exception of oilseed, protein crops and fruit and vegetables. 2015 was a good year for crop production. Good weather for the second year running led to record high cereal yields and along with ample global supplies pushed prices down and reduced overall values.
14. The value of wheat fell by £432 million to £2,033 million. Planted area was down but the highest recorded yield saw wheat production levels only slightly down on 2014. Again the quality of the wheat crop was generally good but plentiful global supplies resulted in domestic price 17% lower than in 2014.
15. The value of barley fell by £76 million to £824 million. This fall was entirely due to lower price, 13% down on 2014, as planted area was 2% higher and, as with wheat, yield was at a record high resulting in an overall 5.4% rise in volume.
16. The value of oilseed rape rose for the first time in three years. At £706 million, this 3.2% rise was entirely due to a rise in volume as good yields offset a reduction in crop area and led to a 3.4% increase in production.
17. The value of protein crops increased by £14 million to £137 million. The crop area of peas and beans more than doubled in 2015 as farmers planted to comply with Common Agriculture Policy greening rules which led to a 52% rise in volume. In contrast the price fell and some farmers experienced difficulties in marketing these crops.
18. In 2015 the value of sugar beet fell by £142 million to £173 million. Planted area fell for the fourth year running and led to a 33% fall in volume. Strong global supplies put pressure on price, down over a quarter on 2014.
19. In 2015 the value of potatoes fell by £131 million to £547 million. A reduction in planted area led to a 19% fall in volumes whilst price was virtually unchanged on 2014.
20. Overall the total value of output of livestock was 9.3% lower at £13,006 million. In 2015 all livestock values were lower than 2014 with the exception of cattle.
21. The value of milk decreased by £940 million to £3,663 million. In 2015 milk volume rose by 2.6% with monthly domestic production consistently higher than 2014. Good grazing due to the favourable weather conditions led to high milk yields. This contributed to an abundance of supply and subsequent fall in milk price. The average price of milk in 2015 (calendar year) was 24.5 pence per litre (ppl) compared to 31.5 ppl in 2014.
22. The value of livestock primarily for meat fell by £101 million with decreases seen in all sectors apart from cattle which rose by £128 million to £2,739 million. Despite fewer prime cattle slaughterings, higher cull cow numbers and heavier weights resulted in a 3.4% increase in volumes. Price for adult cattle were ahead of 2014 and contributed to the 1.5% increase in price.
23. The value of pig meat fell by £186 million to £1,078 million. This fall was entirely due to the lower price in 2015 compared to 2014 as volumes rose by 3.3%.
24. The value of sheep meat decreased by £17 million to £1,105 million with production virtually unchanged and price down on 2014.

25. The value of poultry meat fell by £25 million to £2,226 million, the second year a decline has been seen in spite of steady growth in the last ten years. Production levels rose by 2.0% whereas price fell by 3.0%.

### Intermediate consumption

26. The total cost of intermediate consumption fell by £649 million to £15,356 million. Reduced energy, animal feed and fertiliser costs were the main contributors to this fall.
27. The cost of energy fell by £215 million to £1,182 million driven by the fall in global oil prices which led to lower fuel costs, just over a fifth down on 2014. The good weather and efficiency savings kept volumes virtually unchanged on the year.
28. In 2015 the cost of animal feed fell by £201 million to £4,864 million, with both price and volume lower. Volumes fell by 9.0% as favourable weather conditions led to good grass growth and livestock been kept outside for longer reducing the need for animal feed. Feed prices fell by 10% as higher crop production pushed down grain prices.
29. The cost of fertiliser fell by to £114 million to £1,353 million. Reductions in planted areas and the switch in planted crops led to a 2.3% fall in volume and the lower oil price put downward pressure on price.

### Gross Value Added

30. Gross value added at basic price, which identifies agriculture's contribution to the Gross Domestic Product (GDP), fell by £1,374 million to £8,495 million, a 14% decrease.

### Net value at factor cost

31. Net Value Added at factor cost, which is Gross Value Added at basic prices adjusted for consumption of fixed capital, other taxes on production and other subsidies on production, is estimated to have decreased by £1,410 million (-16%) to £7.2 billion.

### Compensation of employees

32. There was an increase of £73 million to compensate employees in 2015. This was due to an increase in rates of pay and in the number of employees. The total value of compensation to employees in 2015 was £2,479 million

### Other subsidies on production

33. Direct payments fell by £150 million to £2,803 million. Overall this is a 5% decrease in payments and is mainly due to the reduction in euro/sterling exchange rate and is a significant contributor to the fall in the Total Income from Farming.

Table 4.2 Production and income accounts at current prices

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£ million (current prices)

	2011	2012	2013	2014	2015 (provisional)
<b>Output at market prices (a)</b>					
1 Output of cereals	3 230	3 201	3 375	3 470	2 947
of which: wheat	2 322	2 162	2 073	2 465	2 033
barley	809	920	1 136	900	824
oats	94	114	160	99	86
2 Output of industrial crops	1 524	1 356	1 183	1 160	1 048
of which: oilseed rape	1 110	986	744	684	706
protein crops	103	98	123	123	137
sugar beet	251	227	270	315	173
other industrial crops	32	29	23	23	23
3 Output of forage plants	186	146	217	265	259
4 Output of vegetables and horticultural products	2 337	2 398	2 530	2 382	2 411
of which: fresh vegetables	1 224	1 255	1 340	1 216	1 263
plants and flowers	1 114	1 142	1 191	1 166	1 149
5 Output of potatoes (including seeds)	711	659	947	677	547
6 Output of fruit	604	573	602	622	690
7 Output of other crop products including seeds	475	644	581	648	573
<b>Total crop output (sum 1 - 7)</b>	<b>9 067</b>	<b>8 977</b>	<b>9 435</b>	<b>9 223</b>	<b>8 474</b>
8 Output of livestock	8 167	8 628	9 128	8 964	8 573
primarily for meat	6 902	7 244	7 738	7 468	7 367
of which: cattle	2 573	2 794	2 886	2 611	2 739
pigs	1 070	1 132	1 274	1 264	1 078
sheep	1 149	1 027	1 037	1 122	1 105
poultry	1 904	2 078	2 324	2 250	2 226
gross fixed capital formation	1 265	1 384	1 390	1 496	1 207
of which: cattle	631	856	917	925	686
pigs	8	8	6	5	4
sheep	413	317	272	332	284
poultry	213	203	195	234	233
9 Output of livestock products	4 387	4 486	5 072	5 369	4 433
of which: milk	3 738	3 767	4 271	4 594	3 663
eggs	559	662	718	679	681
<b>Total livestock output (8 + 9)</b>	<b>12 554</b>	<b>13 113</b>	<b>14 200</b>	<b>14 333</b>	<b>13 006</b>
10 Other agricultural activities	1 026	1 015	1 052	1 122	1 132
11 Inseparable non-agricultural activities	1 003	1 041	1 176	1 176	1 201
<b>12 Output (at market prices) (sum 1 to 11)</b>	<b>23 649</b>	<b>24 146</b>	<b>25 864</b>	<b>25 854</b>	<b>23 813</b>
13 Total subsidies (less taxes) on product (b)	28	20	21	21	38
<b>14 Gross output at basic prices (12 + 13)</b>	<b>23 677</b>	<b>24 166</b>	<b>25 885</b>	<b>25 875</b>	<b>23 852</b>

continued

Table 4.2 Production and income accounts at current prices

£ million (current prices)

	2011	2012	2013	2014	2015 (provisional)
<b>Intermediate consumption</b>					
15 Seeds	761	742	867	769	707
16 Energy	1 380	1 429	1 450	1 397	1 182
of which: electricity and fuels for heating	369	386	386	373	363
motor and machinery fuels	1 012	1 043	1 065	1 024	819
17 Fertilisers	1 589	1 523	1 511	1 466	1 353
18 Plant protection products	772	839	856	943	907
19 Veterinary expenses	401	420	447	458	458
20 Animal feed	4 508	4 891	5 563	5 065	4 864
of which: compounds	2 622	2 876	3 290	2 999	2 845
straights	1 374	1 448	1 574	1 415	1 294
feed produced and used on farm or purchased from other farms	512	566	699	651	725
21 Total maintenance	1 444	1 442	1 500	1 544	1 475
of which: materials	900	903	937	961	890
buildings	544	539	563	583	585
22 Agricultural services	1 025	1 015	1 052	1 122	1 132
23 FISM	111	106	116	103	117
24 Other goods and services (c)	3 013	3 118	3 140	3 139	3 162
<b>25 Total intermediate consumption (sum 15 to 24)</b>	<b>15 006</b>	<b>15 526</b>	<b>16 503</b>	<b>16 005</b>	<b>15 356</b>
<b>26 Gross value added at market prices (12 - 25)</b>	<b>8 644</b>	<b>8 620</b>	<b>9 361</b>	<b>9 849</b>	<b>8 457</b>
<b>27 Gross value added at basic prices (14 - 25)</b>	<b>8 671</b>	<b>8 640</b>	<b>9 382</b>	<b>9 869</b>	<b>8 495</b>
28 Total consumption of Fixed Capital	3 877	4 008	3 986	4 077	3 963
of which: equipment	1 535	1 610	1 674	1 719	1 763
buildings	980	1 004	979	985	995
livestock	1 362	1 394	1 333	1 373	1 206
cattle	791	870	857	876	700
pigs	8	8	7	5	4
sheep	358	301	267	295	290
poultry	205	216	202	197	212
<b>29 Net value added at market prices (26 - 28)</b>	<b>4 767</b>	<b>4 612</b>	<b>5 376</b>	<b>5 772</b>	<b>4 494</b>
<b>30 Net value added at basic prices (27 - 28)</b>	<b>4 795</b>	<b>4 632</b>	<b>5 396</b>	<b>5 793</b>	<b>4 532</b>
31 Other taxes on production	- 121	- 121	- 118	- 96	- 96
32 Other subsidies on production (b)	3 482	3 262	3 338	2 953	2 803
<b>33 Net value added at factor cost (30 + 31 + 32)</b>	<b>8 155</b>	<b>7 773</b>	<b>8 617</b>	<b>8 650</b>	<b>7 239</b>
34 Compensation of employees	2 341	2 353	2 403	2 406	2 479
35 Rent	476	491	520	553	561
36 Interest (d)	295	308	327	406	431
<b>37 Total Income from Farming (33 - 34 - 35 - 36)</b>	<b>5 043</b>	<b>4 620</b>	<b>5 367</b>	<b>5 285</b>	<b>3 769</b>

(a) Output is net of VAT collected on the sale of non-edible products. Figures for output at market prices exclude subsidies on products.

(b) Subsidies (less taxes) on product: payments linked to the production of agricultural products. Other subsidies on production: payments not linked to production from which agricultural producers can benefit as a consequence of engaging in agricultural activities e.g. Basic Payment Scheme, Single Payment Scheme, agri-environment schemes.

(c) Includes livestock and crop costs, water costs, insurance premiums, bank charges, professional fees, rates, and other farming costs.

(d) Interest charges on loans for current farming purposes and buildings and works less interest on money held on short term deposit.

Table 4.3 Changes in outputs and inputs at current price

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£ million

	Current price value		Changes %		
	2014	2015	value	volume	price
<b>Output at market prices (a)</b>					
1 Output of cereals	3 470	2 947	- 15	1	- 16
of which: wheat	2 465	2 033	- 18	- 1	- 17
barley	900	824	- 8	5	- 13
oats	99	86	- 14	- 2	- 12
2 Output of industrial crops	1 160	1 048	- 10	- 2	- 8
of which: oilseed rape	684	706	3	3	-
protein crops	123	137	11	52	- 27
sugar beet	315	173	- 45	- 33	- 18
other industrial crops	23	23	-	-	0
3 Output of forage plants	265	259	- 2	2	- 4
4 Output of vegetables and horticultural products	2 382	2 411	1	-	1
of which: fresh vegetables	1 216	1 263	4	-	4
plants and flowers	1 166	1 149	- 1	-	- 2
5 Output of potatoes (including seeds)	677	547	- 19	- 19	0
6 Output of fruit	622	690	11	3	7
7 Output of other crop products including seeds	648	573	- 12	-	- 11
<b>Total crop output (sum 1 - 7)</b>	<b>9 223</b>	<b>8 474</b>	<b>- 8</b>	<b>- 1</b>	<b>- 7</b>
8 Output of livestock	8 964	8 573	- 4	1	- 5
primarily for meat	7 468	7 367	- 1	2	- 4
of which: cattle	2 611	2 739	5	3	1
pigs	1 264	1 078	- 15	3	- 17
sheep	1 122	1 105	- 2	-	- 2
poultry	2 250	2 226	- 1	2	- 3
gross fixed capital formation	1 496	1 207	- 19	- 6	- 14
of which: cattle	925	686	- 26	- 3	- 24
pigs	5	4	- 28	7	- 33
sheep	332	284	- 15	- 20	- 33
poultry	234	233	-	2	7
9 Output of livestock products	5 369	4 433	- 17	2	- 2
of which: milk	4 594	3 663	- 20	3	- 22
eggs	679	681	-	3	- 3
<b>Total livestock output (8 + 9)</b>	<b>14 333</b>	<b>13 006</b>	<b>- 9</b>	<b>2</b>	<b>- 11</b>
10 Other agricultural activities	1 122	1 132	1	- 2	3
11 Inseparable non-agricultural activities	1 176	1 201	2	2	-
<b>12 Output (at market prices) (sum 1 to 11)</b>	<b>25 854</b>	<b>23 813</b>	<b>- 8</b>	<b>-</b>	<b>- 8</b>
13 Total subsidies (less taxes) on product (b)	21	38	87	..	..
<b>14 Gross output at basic prices (12 + 13)</b>	<b>25 875</b>	<b>23 852</b>	<b>- 8</b>	<b>-</b>	<b>- 8</b>

continued

Table 4.3 Changes in outputs and inputs at current price *continued*

£ million		Current price value		Changes %		
		2014	2015	value	volume	price
<b>Intermediate consumption</b>						
15	Seeds	769	707	- 8	- 2	- 6
16	Energy	1 397	1 182	- 15	1	- 16
	of which: electricity and fuels for heating	373	363	- 3	- 2	- 1
	motor and machinery fuels	1 024	819	- 20	2	- 21
17	Fertilisers	1 466	1 353	- 8	- 2	- 6
18	Plant protection products	943	907	- 4	- 4	-
19	Veterinary expenses	458	458	-	- 1	1
20	Animal feed	5 065	4 864	- 4	7	- 10
	of which: compounds	2 999	2 845	- 5	4	- 9
	straights	1 415	1 294	- 9	4	- 12
	feed produced and used on farm or purchased from other farms	651	725	11	24	- 11
21	Total maintenance	1 544	1 475	- 4	- 4	- 1
	of which: materials	961	890	- 7	- 7	-
	buildings	583	585	-	2	- 2
22	Agricultural services	1 122	1 132	1	- 2	3
23	FISM	103	117	13	..	..
24	Other goods and services (c)	3 139	3 162	1	2	- 1
<b>25</b>	<b>Total intermediate consumption (sum 15 to 24)</b>	<b>16 005</b>	<b>15 356</b>	<b>- 4</b>	<b>2</b>	<b>- 5</b>
		0				
<b>26</b>	<b>Gross value added at market prices (12 - 25)</b>	<b>9 849</b>	<b>8 457</b>	<b>- 14</b>	<b>- 1</b>	<b>- 13</b>
<b>27</b>	<b>Gross value added at basic prices (14 - 25)</b>	<b>9 869</b>	<b>8 495</b>	<b>- 14</b>	<b>- 1</b>	<b>- 13</b>
28	Total consumption of Fixed Capital	4 077	3 963	- 3	2	- 4
	of which: equipment	1 719	1 763	3	3	-
	buildings	985	995	1	- 1	2
	livestock	1 373	1 206	- 12	2	- 14
	cattle	876	700	- 20	3	- 23
	pigs	5	4	- 34	1	- 35
	sheep	295	290	- 1	- 8	7
	poultry	197	212	8	10	- 2
29	Net value added at market prices (26 - 28)	5 772	4 494	- 22	- 4	- 19
30	Net value added at basic prices (27 - 28)	5 793	4 532	- 22	- 4	- 19
31	Other taxes on production	- 96	- 96	-	..	..
32	Other subsidies on production (b)	2 953	2 803	- 5	..	..
33	Net value added at factor cost (30 + 31 + 32)	8 650	7 239	- 16	..	..
34	Compensation of employees	2 406	2 479	3	..	..
35	Rent	553	561	1	..	..
36	Interest (d)	406	431	6	..	..
<b>37</b>	<b>Total Income from Farming (33 - 34 - 35 - 36)</b>	<b>5 285</b>	<b>3 769</b>	<b>- 29</b>	<b>..</b>	<b>..</b>

- means 'nil' or 'negligible' (less than half the last digit shown).

.. means 'not available' or 'not applicable'.

(a) Output is net of VAT collected on the sale of non-edible products. Figures for output at market prices exclude subsidies on products.

(b) Subsidies (less taxes) on produc: payments linked to the production of agricultural products. Other subsidies on production: payments not linked to production from which agricultural producers can benefit as a consequence of engaging in agricultural activities e.g. Basic Payment Scheme, Single Payment Scheme, agri-environment schemes.

(c) Includes livestock and crop costs, water costs, insurance premiums, bank charges, professional fees, rates, and other farming costs.

(d) Interest charges on loans for current farming purposes and buildings and works less interest on money held on short term deposit.

## Capital (table 4.4)

34. The aggregate balance sheet for agriculture shown at table 4.4 values the total assets and liabilities for agriculture at the end of each calendar year and estimates the total net worth of the industry.
35. Net worth was estimated to be £271 billion in December 2014; the latest year for which data is available. This shows a £15 billion increase on 2013, which is largely due to the £16 billion increase in the estimate of land values due to the higher prices seen in 2014. Liabilities, particularly the long- and medium-term loans, show a £1 billion increase.

**Table 4.4 Aggregate balance sheet for the agricultural industry**

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	2010	2011	2012	2013	2014
<b>At current prices</b>					
<b>Assets</b>					
Fixed (a):					
Land (b)	163 497	178 284	189 638	216 347	232 046
Buildings, plant, machinery and vehicles	29 059	30 734	31 834	32 417	32 752
Breeding livestock	6 813	8 603	7 571	8 225	8 347
Total fixed	199 369	217 621	229 043	256 989	273 145
Trading livestock	3 305	4 030	4 024	4 172	4 126
Crops and stores	3 557	4 024	4 050	3 961	4 072
Debtors, cash deposits	6 107	6 286	6 887	6 291	6 589
Total current	12 968	14 340	14 960	14 424	14 787
	212 337	231 961	244 003	271 413	287 932
<b>Liabilities</b>					
Long and medium term:					
AMC and SASC (c)	1 469	1 621	1 762	1 761	1 965
Building Societies and Institutions	1 017	1 247	1 078	1 025	1 188
Bank loans	4 324	5 127	5 293	5 535	6 163
Family Loans	537	454	544	577	638
Other	18	20	21	25	63
Total long and medium term	7 365	8 469	8 698	8 923	10 016
Short term:					
Leasing	80	81	82	82	82
Hire purchase	1 039	1 271	1 203	1 159	1 261
Trade Credit	1 912	2 323	2 221	2 255	2 311
Bank overdrafts	2 846	2 566	2 953	2 880	2 850
Other	106	72	68	57	119
Total short term	5 983	6 312	6 527	6 432	6 625
Total Liabilities	13 349	14 781	15 224	15 355	16 641
<b>Net worth</b>	<b>198 988</b>	<b>217 180</b>	<b>228 779</b>	<b>256 057</b>	<b>271 291</b>

### In real terms (as deflated by the GDP deflator):

Indices 2011 = 100

GDP deflator	98	100	102	104	105
Total assets	94	100	103	113	119
Total liabilities	92	100	101	100	108
Net worth	94	100	104	114	120

(a) The valuations of land and breeding livestock are at average market prices; cost, net of consumption of fixed capital; those of buildings, plant, machinery and vehicles are replacement

(b) Includes values for arable land and pasture in Great Britain & Northern Ireland based on land area from June Surveys.

(c) Agricultural Mortgage Company (AMC) and Scottish Agricultural Securities Corporation (SASC).

## Revisions

36. These estimates will be subject to revision as more data becomes available.
37. There are minor revisions to livestock output data which are a result of changes implemented following a review of methodology in the calculation of minor items.
38. There are revisions to rent and some intermediate consumption items following changes implemented by the Scottish Government. There are also minor revisions to data as a result of the publication of incomes by Northern Ireland and Wales.

## Definition of terms used in tables 4.1, 4.2 and 4.3

Terms	Tables item reference number	Definition
Agricultural industry		All agricultural activities taking place within businesses that carry out agricultural activities. These businesses include all farms and specialist agricultural contractors.
Capital formation in livestock	8	Production of animals that will be used as the means of production, e.g. breeding animals.
Other agricultural activities	10	Agricultural activities that do not result in sales of final product, e.g. quota leasing, contract work.
Inseparable non-agricultural activities	11	Non-agricultural activities which are included within the business level accounts and are inseparable, e.g. some cases of bed and breakfast and recreation facilities.
Output at market prices	12	Output excluding subsidies. The output of the agricultural industry includes some non-agricultural activities and transactions within the industry.
Basic prices		Market price plus directly paid subsidies that are linked to production of specific product.
Subsidies (less taxes) on product	13	Subsidies and taxes linked to the production of an agricultural product. All subsidies are recorded on an 'as due' basis.
FISIM	23	Financial Intermediation Services Indirectly Measured (FISIM) is an estimate of the value of services provided by financial intermediaries, such as banks, for which no explicit charges are made, and which are paid for as part of the margin between rate applied to savers and borrowers.
Intermediate consumption	25	Consumption of goods and services, e.g. feed, seeds, fertiliser, pesticides.
Gross value added	26	Gross output less intermediate consumption.
Consumption of fixed capital	28	The value (at current prices) of capital assets used in the production process, e.g. buildings, plant, machinery, vehicles and livestock.
Net value added	30	Gross value added at basic prices less consumption of fixed capital.
Other subsidies on production	32	Subsidies and taxes not linked to production of a specific product, e.g. Basic Payment Scheme, Single Payment Scheme, agri-environment payments, animal disease compensation.
Net value added at factor cost	33	Net value added at basic prices plus other subsidies (less taxes) on production.
Compensation of employees	34	The full costs of employees to the business including national insurance contributions.
Total Income from Farming	37	Income to those with an entrepreneurial interest in the agricultural industry, e.g. farmers, partners, spouses and most other family workers.

# Chapter 5 Productivity

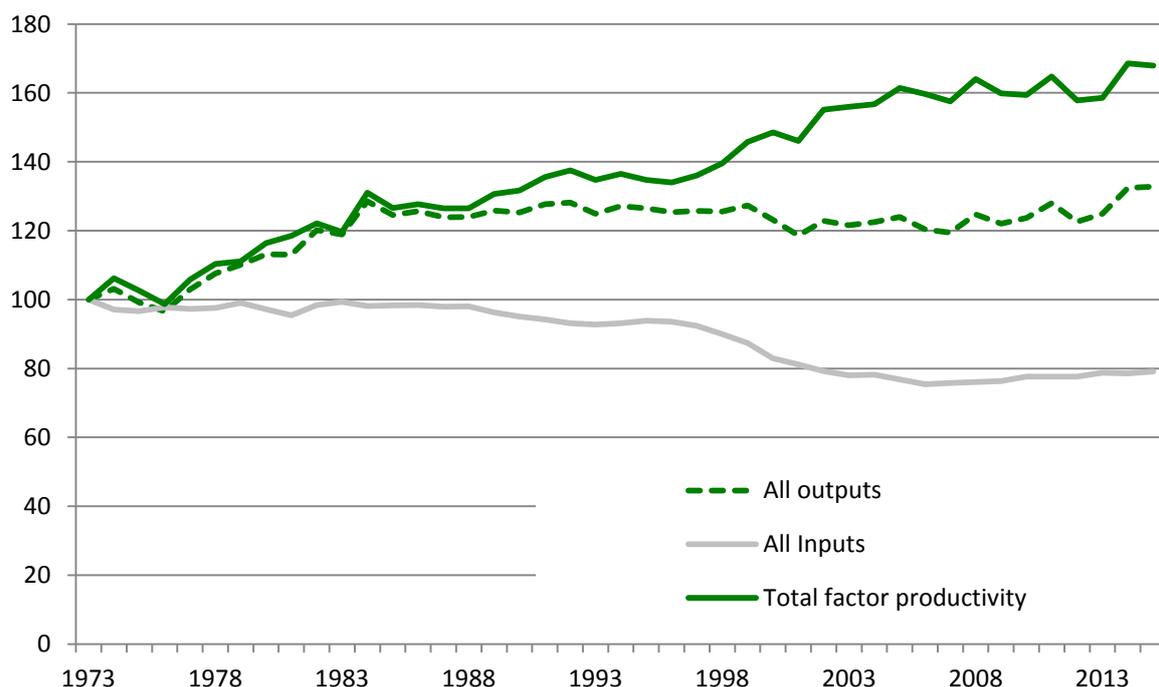
## Summary

- Total factor productivity of the agriculture industry in the United Kingdom is estimated to have fallen by 0.4% between 2014 and 2015. This follows high levels of production in 2014 including record yields for cereals
- The volume of all outputs rose by 0.3% compared to 2014 which is the highest level ever recorded for the UK
- The volume of all inputs increased slightly (0.7%) and this more than offset the smaller increase in outputs.
- Since 1973 total factor productivity has increased by 68% driven by a 33% increase in the volume of outputs and a 21% decrease in the volume of inputs.

## Introduction (chart 5.1)

1. Productivity is a measure of how well inputs are converted into outputs giving an indication of the efficiency and competitiveness of the agriculture industry. While external factors such as weather conditions or disease outbreaks may have short term impact on productivity, it is developments in productivity over a longer period that constitute one of the main drivers of agricultural income.
2. The headline measure, total factor productivity, shows the change in the volume of output leaving the industry per unit of all inputs entering the industry, including fixed capital and labour. The partial factor productivity indicators show the volume of output leaving the industry per unit of one particular type of input, in this case intermediate consumption, consumption of fixed capital, labour and land.

Chart 5.1 Total factor productivity (1973=100)



## Total factor productivity

3. Total factor productivity of the agriculture industry in the United Kingdom is estimated to have fallen by 0.4% between 2014 and 2015. This follows high levels of production in 2014 including record yields for cereals. Compared to 2010 productivity is up by 5.3%.
4. The volume of all outputs rose by 0.3% compared to 2014 which is the highest level ever recorded for the UK. This was driven by a fall of 3.2% in the volume of all crops offset by a 2.4% increase in the volume of livestock outputs.
5. The volume of all inputs increased slightly (0.7%) and this more than offset the smaller increase in outputs.
6. Since 1973 total factor productivity has increased by 68% driven by a 33% increase in the volume of outputs and a 21% decrease in the volume of inputs.

## Details of volume changes of outputs and inputs (table 5.1)

### 7. All Outputs

- Total outputs increased by 0.3% compared to 2014, driven by a slight fall (3.2%) in the volume of all crops
- This was offset by a 2.4% increase in the volume of livestock outputs

### 8. Crops

- Total volume of all crops for 2015 fell slightly (-3.2%) compared to 2014
- Cereal volumes fell by 4.5% compared to 2014
- Falls in wheat and rye were partially offset by a 2.1% increase for barley
- Oilseed rape saw an increase in the volume of outputs, up 3.4% compared to 2014

### 9. Livestock

- Compared to 2014 there was a 2.5% increase in the volume of all livestock outputs
- Milk was the key contributor to the increase in livestock outputs with a 2.6% increase in the volume compared to 2014. This represents the largest volume of production in thirty years.
- Total volume of meat production increased 2.4% compared to 2014, driven by an increase of about 3.3% for cattle and pigs and an increase of 2.0% for poultry.
- Sheep and other animals remained level

### 10. Inputs

- Compared to 2014 there was a 0.7% increase in the volume of all inputs.
- Animal feed is the largest input and there was a 4.1% increase in the volume used in 2015, driven by similar increase for both compounds (+4.2%) and straights (+3.9%)
- The volume of plant protection products used in 2015 decreased by 3.5%. This reflects reduced disease pressures compared to 2014

Table 5.1 Total factor productivity volume indices

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	2010	2011	2012	2013	2010=100	
					2014	2015
					(provisional)	
1 Output of cereals	100.0	105.0	92.6	92.6	118.9	113.5
wheat	100.0	104.2	88.2	75.9	109.9	102.5
rye	100.0	100.0	68.2	90.9	90.9	77.3
barley	100.0	110.7	111.3	154.3	152.9	156.2
oats and summer cereal mixtures	100.0	92.1	93.3	150.6	114.0	116.6
other cereals	100.0	99.5	93.3	106.0	105.3	89.6
2 Output of industrial crops	100.0	118.3	105.8	98.6	111.6	109.5
oil seeds	100.0	122.9	112.9	95.2	108.3	111.3
oilseed rape	100.0	123.7	114.6	95.4	110.3	114.0
other oil seeds	100.0	98.9	58.0	86.4	54.7	40.1
protein crops	100.0	76.0	55.5	68.9	81.8	124.5
sugar beet	100.0	130.3	111.7	129.2	142.6	95.3
other industrial crops	100.0	101.1	101.1	101.1	101.1	101.1
3 Output of forage plants	100.0	107.1	109.0	121.3	121.3	121.3
4 Output of vegetables and horticultural products	100.0	97.7	95.0	97.8	100.1	100.3
fresh vegetables	100.0	98.1	93.4	97.9	102.7	103.0
plants and flowers	100.0	97.2	96.7	97.7	97.3	97.4
5 Output of potatoes	100.0	116.4	90.7	112.8	109.7	88.3
6 Output of fruit	100.0	101.3	93.0	100.1	106.8	110.4
7 Output of other crop products	100.0	114.4	126.9	119.1	132.6	132.5
<b>Total crop output (sum 1 - 7)</b>	100.0	105.5	95.7	98.0	110.4	106.8
8 Output of livestock (meat)	100.0	102.8	102.8	103.0	102.8	105.2
cattle	100.0	102.8	101.9	97.9	96.2	99.4
pigs	100.0	106.4	108.6	111.9	115.8	119.6
sheep	100.0	105.9	101.2	103.3	108.3	108.6
poultry	100.0	99.5	102.2	105.5	102.6	104.6
other animals	100.0	100.0	100.0	100.0	100.0	100.0
9 Output of livestock products	100.0	101.3	98.9	100.2	107.3	109.9
milk	100.0	101.5	99.8	100.5	108.5	111.4
eggs	100.0	99.6	96.5	99.5	100.0	103.4
raw wool	100.0	105.3	110.4	97.4	99.8	101.9
other animal products	100.0	98.7	57.5	84.2	106.8	88.9
<b>Total livestock output (8 + 9)</b>	100.0	102.2	101.3	101.9	104.7	107.2
10 Inseparable non-agricultural activities	100.0	101.5	103.1	115.4	113.7	116.1
<b>11 All outputs</b>	100.0	103.4	99.2	101.0	107.1	107.4

continued

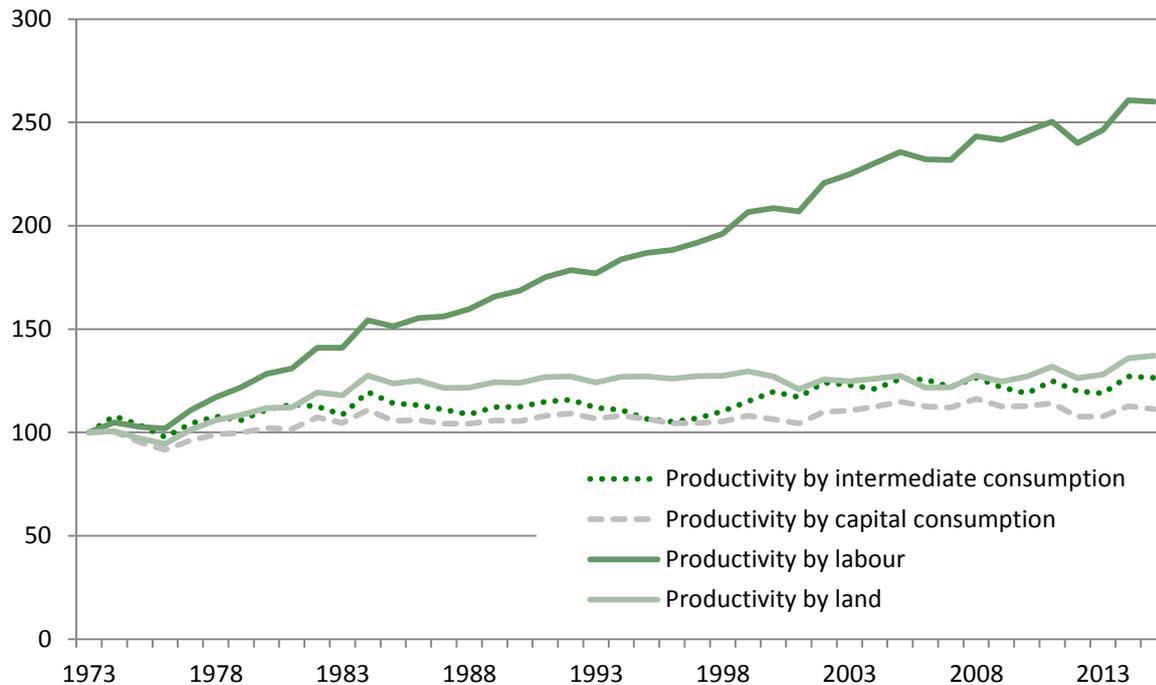
Table 5.1 Total factor productivity volume indices (*continued*)

	2010=100					
	2010	2011	2012	2013	2014	2015
	(provisional)					
12 Seeds	100.0	97.6	101.6	107.0	106.8	104.9
13 Energy	100.0	96.3	96.3	97.0	97.2	98.0
electricity and fuels for heating	100.0	94.5	93.8	87.4	80.5	79.2
motor and machinery fuels	100.0	96.9	97.2	100.9	104.2	106.0
14 Fertilisers	100.0	103.2	97.9	99.2	100.8	98.5
15 Plant protection products	100.0	108.1	117.9	124.9	130.8	126.2
16 Veterinary expenses	100.0	97.2	100.3	104.1	105.7	105.0
17 Animal feed	100.0	93.0	94.7	99.1	101.3	105.5
compounds	100.0	97.7	103.0	109.3	109.9	114.5
straights	100.0	85.3	81.3	82.5	87.4	90.9
18 Total maintenance	100.0	99.8	99.3	100.5	101.9	98.0
materials	100.0	101.4	100.2	102.2	103.0	95.4
buildings	100.0	97.2	97.8	97.6	100.0	102.1
19 FISIM	100.0	100.0	100.0	100.0	100.0	100.0
20 Other goods and services	100.0	102.7	97.6	98.5	87.5	89.8
<b>21 Intermediate consumption</b>	100.0	98.5	98.3	101.1	100.2	101.1
<b>22 Consumption fixed capital (excluding livestock)</b>	100.0	102.2	103.9	105.7	107.1	108.8
equipment	100.0	103.9	107.2	110.8	113.7	117.1
buildings	100.0	99.5	98.8	98.0	97.2	96.4
<b>23 All Labour</b>	100.0	101.6	101.6	100.8	101.0	101.6
Compensation of employees	100.0	102.4	102.4	101.7	101.7	102.7
Entrepreneurial workers (farm and specialist contractor)	100.0	101.2	101.2	100.3	100.6	100.9
<b>24 Land</b>	100.0	99.6	99.7	100.1	100.0	99.5
<b>25 All Inputs and Entrepreneurial Labour</b>	100.0	100.1	100.1	101.4	101.2	101.9
<b>Total factor productivity (11 divided by 25)</b>	100.0	103.4	99.0	99.5	105.8	105.3
<b>Partial factor productivity indicators</b>						
Productivity by intermediate consumption (11 divided by 21)	100.0	105.0	100.9	99.9	106.8	106.3
Productivity by capital consumption (11 divided by 22)	100.0	101.3	95.5	95.5	100.0	98.7
Productivity by labour (11 divided by 23)	100.0	101.8	97.6	100.2	106.0	105.7
Productivity by land (11 divided by 24)	100.0	103.8	99.4	100.8	107.0	107.9

Partial productivity indicators (chart 5.2)

- Partial productivity shows the impact key inputs have on productivity. It measures total outputs against a part of the inputs. The figures below clearly show that labour is the key input in driving productivity gains. Productivity by labour shows a steady increase over the whole period. Labour volumes are now approximately half of what they were in 1973. However over the last few years growth in labour productivity is due to increased output rather than a reduction in labour number.

Chart 5.2 Partial productivity indicators (1973=100)



Revisions

- Revisions are generally made owing to the availability of more up-to-date data or as a result of methodology reviews.
- The main change in recent years has been the introduction of land in the productivity indicator, introduced for the 2014 estimates. The volume of land is based on the utilised agricultural area. The price associated for land is the rental value. Owned land is given a notional rent value. Due to the value associated to land it has become a key component of the productivity indicator. The overall impact of land on the indicator was a slight reduction in productivity gains.

# Chapter 6

# Prices

## Summary

In 2015:

- The strengthening pound against the euro and US dollar saw prices fall for both inputs and outputs. The average producer price of agricultural products fell by 8.4% while the average price of agricultural inputs fell by 4.8%.
- The average price of crop products fell by 5.8%. The large UK harvest and high global supplies saw cereal prices fall by 15%.
- The average price of livestock and livestock products fell by 10%, with pig prices falling by 17% and milk prices falling by 22%.
- The average price of animal feeding stuffs which is influenced by the cereal price fell by 10%.

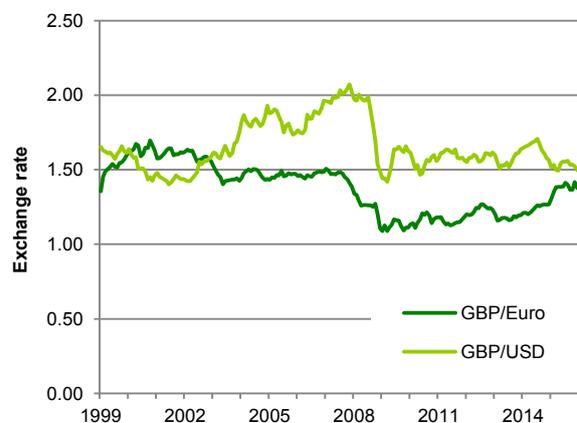
## Data Sources

1. The Agricultural Price Index (API) measures the monthly price changes in agricultural outputs and inputs for the UK. The output series reflects the price farmers receive for their products, also referred to as farm gate price. Information is collected for all major crops (for example wheat and potatoes) and on livestock and livestock products (for example sheep, milk and eggs).
2. The input series reflects the price farmers pay for goods and services. This is split into two groups: goods and services currently consumed; and goods and services contributing to investment. Goods and services currently consumed refer to items that are used up in the production process, for example fertiliser, or seed. Goods and services contributing to investment relate to items that are required but not consumed in the production process, such as tractors or buildings.

## Price Indices during 2015

3. The annual index for outputs has fallen 8.4% compared to 2014. The annual index for inputs fell by 4.8% compared to 2014.
4. The strength of the pound against the euro and also the US dollar has an impact on the price index as the global market impacts on UK prices, see chart 6.1. In 2015 the pound strengthened against the euro and the US dollar which saw the prices fall in 2015.
5. The annual crop product index was 5.8% lower than in 2014 due to the decreased prices for cereals, oilseed rape and forage crops.
6. Chart 6.2 shows that the price of cereals was low at the start of the year as supplies were good and fell away further due to another large harvest in the UK and around the world.

Chart 6.1 Exchange rate of sterling against the euro and US dollar



Source: European Central Bank

7. Chart 6.3 shows a similar monthly trend for animal feeding stuff prices in 2015 as that seen in 2014. The price at the start of the year was 11% lower than 2014 levels and never recovered. This was due to the low price of cereals throughout 2015 exacerbated by the large worldwide harvest.

Chart 6.2 Comparison monthly cereal price index 2014 and 2015

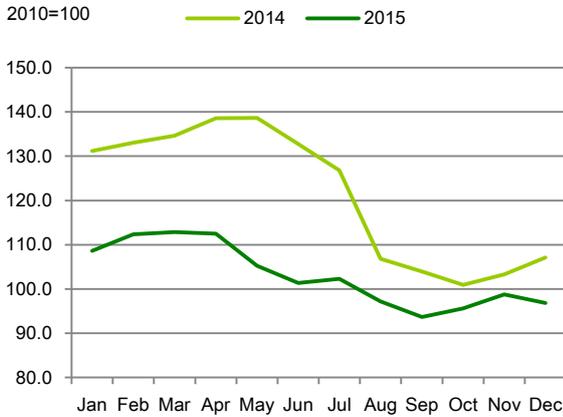
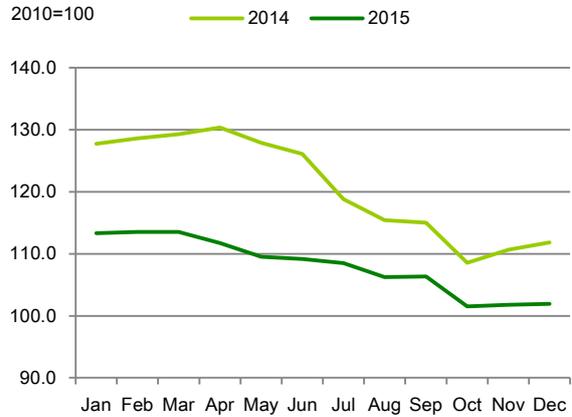


Chart 6.3 Comparison monthly animal feeding stuffs price index 2014 and 2015



8. Chart 6.4 shows the annual potato price index was 2.0% higher than in 2014. Prices were low in the first half of 2015 when supplies were up. Supplies and prices fluctuated in the second half of the year as lifting of the crop was delayed in September due to the wet weather and supplies remained low due to the planted area being at a record low.

Chart 6.4 Comparison of monthly potato price index 2014 and 2015

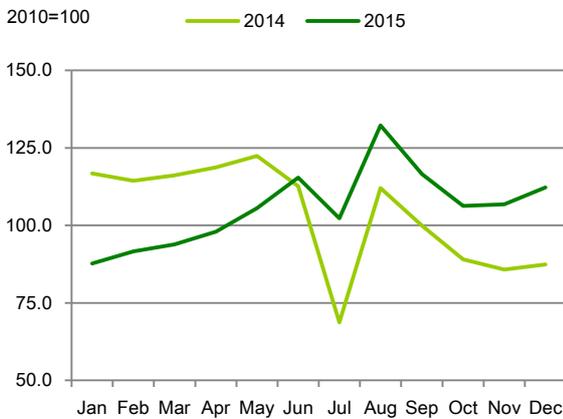
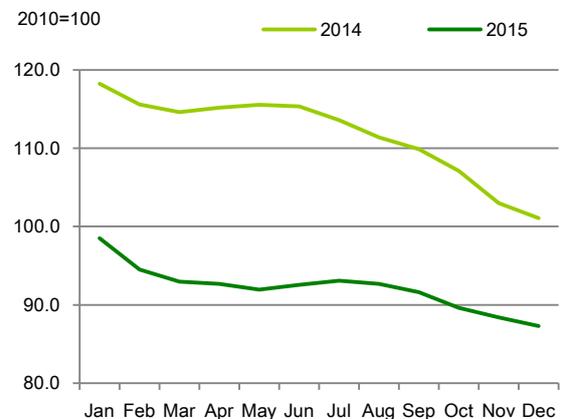


Chart 6.5 Comparison of monthly pig price index 2014 and 2015



9. Chart 6.5 shows the continued decline in the pig price in 2015. Continued high supplies, reduced demand and pressure on prices in the EU have all contributed to the decline in prices.

**Table 6.1 Price indices for outputs and inputs**

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2010=100

	2010	2011	2012	2013	2014	2015
<b>All Outputs</b>	100.0	113.5	118.7	125.6	114.1	104.6
<b>Crop products</b>	100.0	118.9	124.1	128.6	107.8	101.5
Cereals	100.0	144.8	149.7	153.1	120.6	102.8
Wheat	100.0	141.7	144.3	151.9	121.3	101.3
Barley	100.0	150.3	160.9	154.4	119.2	106.4
Oats	100.0	177.8	190.1	173.7	112.6	108.3
Potatoes	100.0	107.1	121.9	156.1	103.7	105.7
Industrial Crops	100.0	132.0	130.0	121.5	101.8	98.8
Oilseed Rape	100.0	143.3	139.1	127.0	99.7	95.1
Sugar Beet	100.0	99.9	104.3	105.7	108.9	110.7
Forage plants	100.0	112.6	106.2	114.8	107.3	94.4
Fresh Vegetables	100.0	92.7	108.6	110.2	96.1	97.4
Fresh Fruit	100.0	98.7	103.7	104.8	97.6	101.2
Flowers and plants	100.0	107.3	109.3	110.9	108.3	109.2
Other crop products	100.0	93.3	98.7	98.7	98.7	98.7
<b>Animals and animal products</b>	100.0	109.6	114.7	123.5	118.7	106.8
Animals (for slaughter & export)	100.0	109.6	114.7	120.6	113.4	109.6
Cattle and calves	100.0	116.4	129.3	137.7	123.2	126.0
Pigs	100.0	102.1	106.3	116.7	111.7	92.2
Sheep and lambs	100.0	112.3	105.1	102.0	106.1	98.5
All Poultry	100.0	103.0	105.1	111.1	106.0	104.5
Animal products	100.0	109.4	114.8	128.1	126.9	102.4
Milk	100.0	111.0	113.8	128.2	127.7	99.2
Eggs	100.0	99.9	124.0	130.8	122.2	118.6
<b>All Inputs</b>	100.0	112.2	114.0	116.9	112.1	106.7
<b>All goods and services currently consumed in agriculture</b>	100.0	113.9	116.4	119.6	112.8	106.1
Seeds	100.0	105.8	98.5	110.2	98.1	92.1
Energy and lubricants	100.0	118.1	122.3	123.3	119.0	101.2
Fertilisers and soil improvers	100.0	130.4	125.2	113.1	106.5	101.5
Plant protection products	100.0	100.7	102.0	97.7	102.6	102.5
Veterinary services	100.0	102.0	103.5	106.1	107.0	107.7
Animal feedingstuffs	100.0	120.7	128.5	139.4	120.7	108.1
Straight feedingstuffs	100.0	122.9	135.7	147.6	120.1	103.6
Compound feedingstuffs	100.0	119.2	123.7	134.0	121.1	111.1
Maintenance of Materials	100.0	104.9	106.5	108.3	110.3	110.8
Maintenance of Buildings	100.0	107.4	109.8	110.1	110.9	109.0
Other goods and services	100.0	106.0	107.2	109.6	110.2	109.6
<b>Goods and services contributing to investment</b>	100.0	103.6	101.7	102.9	108.7	110.0
Materials	100.0	103.0	99.1	100.4	108.5	110.5
Buildings	100.0	105.8	107.4	107.7	108.4	107.2
Other (Engineering and soil improvement operations)	100.0	102.5	104.5	107.2	110.7	113.4

## Data Revisions

Revisions were made to 2014 data for sugar beet and other goods and services, and 2013 data for poultry, and 2011 data for flowers and plants.

## Farmers' share of food items

10. In 2015 the farmgate share of the retail price of a basket of items covering staples of agricultural production was 40%, unchanged from 2014. The absolute level of the farmgate share is sensitive to which retail products are chosen for the basket; some have a greater amount of added value beyond the farmgate and it would therefore be expected that the share accounted for by the farmer would be lower.
11. Table 6.2 shows the items in the basket and how the farmers' share has changed for each. Items are weighted according to their value to farmers in the United Kingdom. Milk, for example, has a weight of 361 units, which means it accounts for 36% of the basket.
12. Meat and dairy products are influenced by the underlying feed costs required in production – crops are likewise affected by weather conditions. International trade and changes to currency exchange rates also have an impact and the farmgate share will reflect the relative influences of these factors in any given year.

Table 6.2 Farmers' share of the value of a basket of food items <sup>(a)</sup>

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		Farmgate share in 1988 %	Farmgate share in 2000 %	Farmgate share in 2015 %	% change in share 1988/2015	Weight in 2015 basket
<b>Farmers' share of basket</b>		47	35	40	-15	
<b>Farm gate product</b>	<b>Retail product</b>					
apples	dessert apples per kg	55	40	34	-39	6
beef	untrimmed beef (b) per kg	67	44	50	-26	175
carrots	carrots per kg	30	38	35	14	8
cabbages	cabbage, hearts, per kg	38	39	38	0	5
chicken	oven ready roasting chicken, fresh or chilled per kg	47	37	40	-16	138
eggs	Free range eggs per dozen (c)	28	29	32	na	54
lamb	untrimmed lamb (b) per kg	65	43	52	-20	79
onions	onions per kg	25	19	37	48	8
pork	untrimmed pork (b) per kg	57	47	40	-29	99
potatoes	old loose white potatoes per kg	24	27	14	-39	5
tomatoes	tomatoes per kg	48	41	27	-43	9
wheat	white loaf sliced, 800g	16	10	9	-42	52
milk	whole milk (d)	38	28	38	2	361

(a) Farm gate prices from Defra, retail prices from the Office for National Statistics and the Agriculture & Horticulture Development Board (AHDB).

(b) Retail prices for beef, lamb and pork are untrimmed AHDB prices adjusted for drip loss.

(c) Farmgate share in 1988 is based on non-free range size 2 eggs; there was also a break in the series in 2012 due to changes in methodology, therefore the comparison with 2012 is indicative only.

(d) The average price of one pint of delivered milk and one pint of shop milk (the shop milk based on a two pint purchase).

# Chapter 7 Crops

## Summary

In 2015:

- Harvested production of wheat was 16.4 million tonnes, 1.0% lower than 2014 and the value of production was 18% lower at £2 billion.
- Oilseed rape production increased by 3.4% due to higher yields and the value of production was 3.2% higher at £706 million.
- Production of sugar beet fell by 33% to 6.2 million tonnes.
- The value of fruit production was up 11% to £681 million, with strawberries up £40 million and raspberries up £15 million contributing much of the increase.

## Cereals (tables 7.1 to 7.4)

1. Harvested production of wheat fell by 1.0% lower to 16.4 million tonnes. The value of production of wheat was £2 billion in 2015, 18% lower than in 2014. The value of production of barley decreased by 8.4% to £824 million. The value of production of oats decreased by 14% to £86 million.
2. The area of wheat decreased by 5.4% and oats decreased by 4.4% whereas the area of barley increased by 1.9%. Yields were above average across all cereals (and oilseeds) aided by good crop establishment, adequate moisture for most crops through the spring and summer and enough sunshine during grain fill. Harvest 2015 started later than average with only a small quantity of winter barley ready for harvest before mid-July. Good progress was made until mid-August through to early September, when showery weather affected the end of the harvest in the south and the beginning of the harvest in the north. Reasonable conditions through September allowed for the completion of the harvest in England and Wales by the end of September and Scotland by the first week in October. The overall quality of the crops was good, for wheat the specific weight was 78.6kg/hl, higher than both 2013 (77kg/hl) and 2014 (77.1kg/hl). The average nitrogen content of GB barley was 1.52%, marginally lower than last year and the lowest since records began in 1977.
3. Another large wheat harvest and a continuing move back to domestic milling wheat from flour millers meant imports were reduced by 10% compared to 2014 at just under 1.7 million tonnes. UK exports of 2 million tonnes was 74% higher than 2014 and the highest figure since 2011. Feed wheat usage increased as wheat regained its share of the feed ration at the expense of barley, oats and maize.
4. Cereal prices were below 2014 values, largely due to abundant global supplies (especially wheat). For the UK market human and industrial demand for wheat and barley was similar to last year, although demand from the distilling sector weakened in the second half of the year. Lower feed wheat prices also meant lower feed barley and feed oats prices.

## Straw

5. Cereal straw production was estimated 8.4 million tonnes. This is a decrease of 13% (9.61 million tonnes) although this represents a 9.2% increase on the 5 year average (7.69 million tonnes). Straw production was aided by good establishment conditions throughout the season and near perfect growing conditions. As a result both straw availability and quality were reasonable.

## Oilseed rape and linseed (tables 7.5 and 7.6)

6. The value of oilseed rape was £706 million, up 3.2% on 2014 with prices remaining static. The area planted was lower but the yield was good, resulting in an increase in production of 3.4%. Harvest of winter oilseed rape started later than in recent years but progressed well and was completed in line

with previous years. The average yield estimate for winter and spring oilseed rape was 3.9 tonnes per hectare with average oil content of 45%. Oilseed rape prices were at their lowest in mid-August (£238 per tonne ex farm) but recovered to £248 per tonne at the end of the harvest period. Global and therefore UK oilseed prices have been depressed by an excellent worldwide soya bean crop.

7. The planted area of linseed has declined by 65% since 2010; although the 2015 area of 1500 ha was similar to 2014, production was 27% lower at 29 thousand tonnes due to lower yields. The value to the calendar year account was £9 million, 42% lower than 2014.

### Sugar beet (table 7.7)

8. The farm gate value of sugar beet was £173 million, down £142m on 2014's record crop. Price fell to £28.09 per tonne, but the biggest factor was a decrease in volume of harvested production from 9.3 million tonnes in 2014 to 6.2 million tonnes. Yields were in line with the trend at 68.8 tonnes per hectare (down from a record 80 tonnes per hectare the previous year), but the 2015 sugar beet contract saw a decrease of 20% due to the need to reduce stocks following the previous year's high crop.

### Peas and Beans (table 7.8)

9. The area of pulses increased significantly in 2015 to fulfil greening requirements of the Common Agricultural Policy. Field peas increased by 40% to 25 thousand hectares. The increased area combined with an increased yield meant that production utilised for animal feed stood at 101 thousand tonnes, an increase of 44%. The value of production of field peas was similar to last year at £13 million, with higher production negated by lower prices. The 2015 harvest progressed well and yields were above average. Later harvested crops did suffer from some bleaching.
10. The area of field beans was 59% higher than last year at 170 thousand hectares. Yields were slightly above last year, which together with the increased area meant production was 65% higher than 2014 at 740 thousand tonnes. The value of production of field beans was 16% higher at £97 million, higher production offsetting lower prices.

### Fresh vegetables (table 7.9)

11. The value of vegetable production increased by 3.9% to £1.3 billion. This increase was driven mainly by carrots, up by £22 million, mushrooms up by £13 million and cabbages up by £7.7 million.
12. A dry start to the year led to slow growth and pest infestations which reduced gross yields, although the showery conditions later in the summer helped to increase yields for some crops to above average levels. Production as a percentage of total new supply to the United Kingdom for all fresh vegetables was 55%, little change on 2014.

### Plants and flowers (table 7.10)

13. The value of production in the ornamental sector was down 1.5% to £1.1 billion. In the retail sector, the early warm spring stimulated strong demand during the first half of the year. However, demand became more variable as the seasons progressed and mixed weather prevailed, resulting in the year's marketed production estimates being similar to 2014.
14. The cut flower industry benefitted from high demand, and good crop quality with low wastage, as in 2014. Overall the production areas of outdoor cut flowers have remained relatively stable with increased plantings of peony, hardy foliage offsetting a reduction in more traditional lines such as chrysanthemum, pinks and sweet william.
15. The value of flowers/bulbs saw an increase of 7.8% while the value of protected crops and hardy ornamental nursery stock (including Christmas trees) decreased by 2.2% and 1.7% respectively.

### Potatoes (table 7.11)

16. The value of potatoes reduced to £547 million, a drop of 19%. This was due to a reduced planting area which led to a fall in total production by 5.5% and saw end of year stocks fall by 11%. This was despite good growing conditions that saw yields increase.

17. The average price for maincrop/early potatoes was £142 per tonne, little change on 2014. However, due to the smaller harvest and reduction in stocks prices were 29% higher at the end of 2015 compared to 2014.

### Fresh Fruit (table 7.12)

18. The value of fruit production was up 11% to £681 million, with strawberries up £40 million and raspberries up £15 million contributing much of the increase. The volume of fruit production was up 34% to 575 thousand tonnes, with favourable growing conditions leading to good yields and a steady supply throughout a longer growing season.
19. The value of dessert apples increased by £2.1 million while the value of culinary apples was down by £2.7 million (6.3%), with the availability of unwanted dessert apples impacting on their price and demand for processing and juicing at harvest time. The value of pears was up 3.5% to £13 million.
20. Production as a percentage of total new supply for use in the United Kingdom increased from 11% in 2014 to 14% in 2015.

### Revisions

21. There have been revisions to the data for wheat, barley and oats back to 2013 due to changes in stocks data and methodology.
22. Revisions to import and export figures for vegetables and fruit have been revised from 2009 onwards to provide a more complete coverage of the vegetables and fruit categories.
23. The value of fruit production has been revised since publication of the Agricultural Accounts in April 2016. The value shown in Table 7.12 reflects this updated information.
24. There have been small revisions to the linseed data in 2013 due to an update of the area planted. The previously estimated trade data for 2014 has now been updated with actual data.
25. There have been revisions to the method of estimating potatoes. Sales for human consumption are now based on data on actual sales of potatoes rather than a residual of estimates of production, stockfeed and waste.

Table 7.1 Total cereals

Enquiries: Allan Howsam on +44 (0)20 802 66123

 email: [allan.howsam@defra.gsi.gov.uk](mailto:allan.howsam@defra.gsi.gov.uk)

Thousand tonnes (unless specified otherwise)	Calendar year				
	2011	2012	2013	2014	2015
	(provisional)				
<b>Production</b>					
Area (thousand hectares)	3 076	3 142	3 029	3 179	3 064
Volume of harvested production	21 484	19 515	20 083	24 468	24 613
<b>Value of production (£ million) (a)</b>	<b>3 230</b>	<b>3 201</b>	<b>3 375</b>	<b>3 470</b>	<b>2 943</b>
<b>Supply and use</b>					
Production	21 484	19 515	20 083	24 468	24 613
Imports from: the EU	1 313	2 479	4 076	2 728	2 844
the rest of the world	687	825	1 217	1 440	1 032
Exports to: the EU	2 908	1 827	1 046	1 797	2 812
the rest of the world	238	317	420	676	1 023
Total new supply	20 338	20 675	23 910	26 163	24 655
Change in farm and other stocks	36	- 798	1 473	3 216	2 330
Total domestic uses	20 302	21 473	22 438	22 947	22 324
<b>Production as % of total new supply for use in the UK</b>	<b>106</b>	<b>94</b>	<b>84</b>	<b>94</b>	<b>100</b>

(a) Includes arable area payments, but excludes set-aside payments and farm saved seed. Taxes, where applicable, are deducted.

Table 7.2 Wheat

Enquiries: Allan Howsam on +44 (0)20 802 66123

 email: [allan.howsam@defra.gsi.gov.uk](mailto:allan.howsam@defra.gsi.gov.uk)

Thousand tonnes (unless specified otherwise)	Calendar year				
	2011	2012	2013	2014	2015
	(provisional)				
<b>Production</b>					
Area (thousand hectares)	1 969	1 992	1 615	1 936	1 832
Yield (tonnes per hectare)	7.7	6.7	7.4	8.6	9.0
Volume of harvested production	15 257	13 261	11 921	16 606	16 444
<b>Value of production (£ million) (a)</b>	<b>2 322</b>	<b>2 162</b>	<b>2 073</b>	<b>2 465</b>	<b>2 033</b>
of which: sales	2 218	2 230	1 937	1 900	1 757
on farm use	72	139	188	166	244
change in stocks	32	- 207	- 51	399	32
<b>Prices (£ per tonne)</b>					
Milling wheat	175	173	193	159	138
Feed wheat	150	163	174	146	121
<b>Supply and use</b>					
Production	15 257	13 261	11 921	16 606	16 444
Imports from: the EU	493	1 358	2 490	1 369	1 201
the rest of the world	409	427	475	455	451
Exports to: the EU	2 125	1 282	413	804	1 519
the rest of the world	162	221	35	339	483
Total new supply	13 872	13 543	14 438	17 287	16 095
Change in farm and other stocks	359	- 849	296	3 105	1 780
<b>Total domestic uses</b>	<b>13 513</b>	<b>14 392</b>	<b>14 142</b>	<b>14 182</b>	<b>14,314</b>
of which: flour milling	6 123	6 306	6 506	6 725	6,528
animal feed	6 268	6 807	6 719	6 610	7,076
seed	299	304	293	293	284
other uses and waste	823	975	624	554	426
<b>Production as % of total new supply for use in the UK</b>	<b>110</b>	<b>98</b>	<b>83</b>	<b>96</b>	<b>102</b>
% of home grown wheat in milling grist	89	84	69	82	85

(a) Excludes farm saved seed

**Table 7.3 Barley**

Enquiries: Allan Howsam on +44 (0)20 802 66123

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Thousand tonnes (unless specified otherwise)	Calendar year				
	2011	2012	2013	2014	2015
	(provisional)				
<b>Production</b>					
Area (thousand hectares)	970	1 002	1 213	1 080	1 101
Yield (tonnes per hectare)	5.7	5.5	5.8	6.4	6.7
Volume of harvested production	5 494	5 522	7 092	6 911	7 370
<b>Value of production (£ million) (a)</b>	809	920	1 136	900	824
of which : sales	563	637	691	687	597
on farm use	264	282	290	222	220
change in stocks	- 18	1	155	- 9	7
<b>Prices (£ per tonne)</b>					
Malting barley	162	185	177	146	127
Feed barley	146	161	149	121	107
<b>Supply and use</b>					
Production	5 494	5 522	7 092	6 911	7 370
Imports from: the EU	129	162	193	100	180
the rest of the world	-	-	2	-	5
Exports to: the EU	724	494	478	796	1 080
the rest of the world	76	96	385	335	535
Total new supply	4 823	5 094	6 424	5 880	5 940
Change in farm and other stocks	- 289	38	1 011	187	580
<b>Total domestic uses</b>	5 112	5 055	5 405	5 685	5 350
of which : brewing/distilling	1 788	1 837	1 868	1 925	1 830
animal feed	3 135	2 997	3 336	3 455	3 304
seed	150	182	162	177	177
other uses and waste	39	40	47	135	49
<b>Production as % of total new supply for use in the UK</b>	114	108	110	118	124

(a) Excludes farm saved seed

Table 7.4 Oats

Enquiries: Allan Howsam on +44 (0)20 802 66123

 email: [allan.howsam@defra.gsi.gov.uk](mailto:allan.howsam@defra.gsi.gov.uk)

Thousand tonnes (unless specified otherwise)	Calendar year				
	2011	2012	2013	2014	2015 (provisional)
<b>Production</b>					
Area (thousand hectares)	109	122	177	137	131
Yield (tonnes per hectare)	5.6	5.1	5.5	6.0	6.1
Volume of harvested production	613	627	964	820	799
<b>Value of production (£ million) (a)</b>	94	114	160	99	86
of which : sales	76	78	87	81	69
on farm use	26	31	35	28	22
change in stocks	- 8	5	38	- 9	- 6
<b>Prices (£ per tonne)</b>					
Milling oats	150	180	174	128	112
Feed oats	159	188	151	111	99
<b>Supply and use</b>					
Production	613	627	964	820	799
Imports from: the EU	34	64	66	34	48
the rest of the world	-	-	-	-	-
Exports to: the EU	23	11	17	66	82
the rest of the world	-	-	-	1	4
Total new supply	624	680	1 013	787	761
Change in farm and other stocks	- 33	13	165	- 77	- 30
<b>Total domestic uses</b>	657	667	848	864	791
of which : milling	472	474	507	499	513
animal feed	167	166	316	342	256
seed	15	25	19	18	18
other uses and waste	3	3	5	4	4
<b>Production as % of total new supply for use in the UK</b>	98	92	95	104	105

(a) Excludes farm saved seed

Table 7.5 Oilseed rape

Enquiries: Lisa Brown on +44 (0)20 802 66340

 email: [lisa.brown@defra.gsi.gov.uk](mailto:lisa.brown@defra.gsi.gov.uk)

Thousand tonnes (unless specified otherwise)	Calendar year				
	2011	2012	2013	2014	2015 (provisional)
<b>Production</b>					
Area (thousand hectares)	705	756	715	675	652
Yield (tonnes per hectare)	3.9	3.4	3.0	3.6	3.9
Volume of harvested production	2 758	2 557	2 128	2 460	2 542
<b>Value of production (£ million)</b>	1 110	986	741	684	706
of which : sales	1 025	1 017	801	647	697
change in stocks	85	- 31	- 60	37	9
<b>Prices (average weighted by volume of sales (£ per tonne))</b>	402	386	348	278	278
<b>Supply and use</b>					
Production	2 758	2 557	2 128	2 460	2 542
Imports from: the EU	64	18	148	77	87
the rest of the world	-	-	29	10	-
Exports to: the EU	659	1 057	437	333	283
the rest of the world	-	-	2	38	24
Total new supply	2 164	1 518	1 867	2 176	2 322
<b>Production as % of total new supply for use in the UK</b>	127	168	114	113	109

Table 7.6 Linseed

Enquiries: Lisa Brown on +44 (0)20 802 66340

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Thousand tonnes (unless specified otherwise)	Calendar year				
	2011	2012	2013	2014	2015 (provisional)
<b>Production</b>					
Area (thousand hectares)	36	28	34	15	15
Yield (tonnes per hectare)	2.0	1.5	1.8	2.7	1.9
Volume of harvested production	71	42	62	39	29
<b>Value of production (£ million)</b>	27	16	24	15	9
of which : sales	27	17	23	16	9
change in stocks	-	- 1	1	- 1	-
<b>Supply and use</b>					
Production	71	42	62	39	29
Imports from: the EU	8	12	11	13	10
the rest of the world	2	2	2	1	2
Exports to : the EU	49	52	37	16	12
the rest of the world	-	-	-	-	-
Total new supply	31	4	38	38	28
<b>Production as % of total new supply for use in the UK</b>	226	1145	163	104	104

Table 7.7 Sugar

Enquiries: Lisa Brown on +44 (0)20 802 66340

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Thousand tonnes (unless specified otherwise)	Calendar year				
	2011	2012	2013	2014	2015 (provisional)
<b>Sugar Beet</b>					
Area (thousand hectares)	113	120	117	116	90
Yield (tonnes per hectare)	75	61	72	80	69
Volume of harvested production	8 504	7 291	8 432	9 310	6 218
<b>Value of production (£ million)</b>	251	227	270	315	173
Sugar content (%)	18.4	17.0	17.5	17.2	17.3
<b>Prices (average market price (£ per adjusted tonne)) (a)</b>	29.6	31.2	32.0	33.9	27.8
<b>All Sugar (refined basis)</b>					
Production (b)	1315	1144	1324	1446	978
Imports from: the EU	396	406	423	476	537
the rest of the world	832	648	691	699	546
Exports to : the EU	154	163	135	232	250
the rest of the world	154	93	98	94	75
Total new supply	2 235	1 943	2 204	2 296	1 736
<b>Production as % of total new supply for use in the UK</b>	59	59	60	63	56

(a) Average price for all sugar, including transport allowance and bonus

(b) Sugar coming out of the factory in the early part of the new year is regarded as being part of production in the previous calendar year.

Table 7.8 Peas and beans

Enquiries: Allan Howsam on +44 (0)20 802 66123

email: [allan.howsam@defra.gsi.gov.uk](mailto:allan.howsam@defra.gsi.gov.uk)

Thousand tonnes (unless specified otherwise)	2011	2012	2013	Calendar year	
				2014	2015 (provisional)
<b>Peas for harvesting dry (a)</b>					
Area (thousand hectares)	12	11	13	18	25
Yield (tonnes per hectare)	4.1	2.4	3.7	4.0	4.1
Volume of harvested production	49	26	48	70	101
<b>Value of production (£ million)</b>	<b>8</b>	<b>6</b>	<b>10</b>	<b>13</b>	<b>13</b>
<b>Field beans</b>					
Area (thousand hectares)	125	96	118	107	170
Yield (tonnes per hectare)	3.4	3.3	3.2	4.2	4.4
Volume of harvested production	419	317	378	448	740
<b>Value of production (£ million)</b>	<b>72</b>	<b>74</b>	<b>90</b>	<b>84</b>	<b>97</b>

(a) The figures presented here cover only that part of the crop which is assumed to be used for stockfeed including for pets and specialist bird food. It also includes an estimate for those varieties originally grown for human consumption but did not meet the required grade. The percentage utilised for animal feed is variable with typical estimates ranging from 30-60%. The remainder is included in UK fresh vegetables, Table 7.9.

Table 7.9 Fresh vegetables

Enquiries: Lisa Brown on +44 (0)20 802 66340

email: [lisa.brown@defra.gsi.gov.uk](mailto:lisa.brown@defra.gsi.gov.uk)

Thousand tonnes (unless specified otherwise)		Calendar year				
		2011	2012	2013	2014	2015
		(provisional)				
<b>Production</b>						
Area (thousand hectares):		135	128	131	132	139
of which:	grown in the open (a) (b)	134	127	130	132	138
	protected (c)	1	1	1	1	1
<b>Value of production (£ million): (e)</b>		1 234	1 260	1 349	1 229	1 277
of which:	grown in the open	925	949	1 025	857	884
	protected	309	311	324	373	393
Selected crops:	cabbages	85	57	71	65	72
	carrots	113	128	137	102	124
	cauliflowers	45	53	47	42	43
	calabrese	56	86	56	30	31
	lettuces	143	157	156	145	143
	mushrooms	119	114	118	142	154
	onions	85	60	97	104	106
	tomatoes	95	97	105	118	120
<b>Prices (farm gate price (£ per tonne))</b>						
Selected crops:	cauliflowers	444	529	455	452	473
	tomatoes	1 052	1 165	1 165	1 196	1 226
<b>Supply and use (d)</b>						
Total production		2 636	2 512	2 657	2 758	2 780
<b>Imports from:</b>	the EU	1 739	1 824	1 977	1 940	2 032
	the rest of the world	431	390	410	408	389
<b>Exports to:</b>	the EU	130	102	97	116	133
	the rest of the world	23	16	20	51	41
Total new supply		4 653	4 615	4 926	4 940	5 027
<b>Production as % of total new supply for use in the UK</b>		57	55	54	56	55

(a) Includes peas harvested dry for human consumption.

(b) Areas relate to field areas multiplied by the number of crops in the year and hence differ from those shown in table 2.2.

(c) Excludes area of mushrooms from 1992.

(d) Trade figures relate to fresh produce where distinguishable.

(e) Includes peas harvested, dry

Table 7.10 Plants and flowers

Enquiries: Lisa Brown on +44 (0)20 802 66340

 email: [lisa.brown@defra.gsi.gov.uk](mailto:lisa.brown@defra.gsi.gov.uk)

Thousand tonnes (unless specified otherwise)	Calendar year				
	2011	2012	2013	2014	2015 (provisional)
<b>Production</b>					
Area (thousand hectares) (a):	12	13	12	12	13
<b>Value of production (£ million)</b>	1 114	1 142	1 191	1 166	1 149
of which: flowers and bulbs in the open (b)	39	38	45	42	45
hardy plants and flowers nursery stock	756	791	809	796	783
protected crops	319	313	336	328	321
<b>Trade (£ million)</b>					
Imports					
Bulbs	95	90	85	82	71
Cut flowers	628	653	663	692	666
Foliage	35	38	36	37	42
Indoor plants	112	107	127	136	127
Outdoor plants	59	55	58	66	60
Trees	68	63	62	55	57
Other	42	47	46	44	41
<b>Total Imports (exc. Channel Islands)</b>	1 039	1 053	1 079	1 111	1 064
Exports					
Bulbs	13	11	9	7	5
Cut flowers	22	14	26	24	23
Foliage	1	1	1	1	1
Indoor plants	6	5	4	5	6
Outdoor plants	4	4	5	4	3
Trees	3	3	4	4	4
Other	10	10	12	12	12
<b>Total Exports</b>	59	47	61	56	53

(a) Areas relate to field areas multiplied by the number of crops in the year and hence differ from those shown in table 2.2.

(b) Including forced flower bulbs.

Table 7.11 Potatoes

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Thousand tonnes (unless specified otherwise)	Calendar year				
	2011	2012	2013	2014	2015 (provisional)
<b>Production</b>					
Area sown (thousand hectares)	146	149	139	141	129
Area (thousand hectares)	133	126	127	125	115
Yield (tonnes per hectare)	47	37	45	47	49
Volume of harvested production	6 310	4 658	5 902	5 911	5 588
of which : early/maincrop	5 712	4 155	5 165	5 355	5 074
seed	599	503	738	556	514
Sales	4 521	4 295	3 925	4 136	3 915
of which : early/maincrop	4 098	3 940	3 403	3 790	3 578
seed	423	355	522	346	337
End of year stocks	2 746	2 214	2 606	2 934	2 617
Change in stocks	111	- 532	392	328	- 317
<b>Value of production (£ million)</b>	711	659	947	677	547
of which : early/maincrop	600	646	737	542	509
seed	95	100	131	90	83
change in stocks	16	- 86	78	45	- 45
<b>Prices (average price paid to registered producers (£ per tonne))</b>					
early/maincrop potatoes	146	164	217	143	142
seed	225	281	250	260	245
<b>Supply and use</b>					
Total production	6 310	4 658	5 902	5 911	5 588
<b>Imports</b>	1 966	2 162	2 702	2 163	2 218
<b>Exports</b>	559	483	481	472	528
<b>Net Trade</b>	1 407	1 679	2 221	1 692	1 691
of which : early/maincrop	- 23	266	417	72	54
seed	- 94	- 92	- 79	- 94	- 93
processed (raw equivalent)	1 525	1 504	1 884	1 713	1 730
Total new supply	7 718	6 337	8 124	7 603	7 279
<b>Production as % of total new supply for use in the UK</b>	82	74	73	78	77

Table 7.12 Fresh fruit

Enquiries: Lisa Brown on +44 (0)20 802 66340

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Thousand tonnes (unless otherwise specified)		Calendar year				
		2011	2012	2013	2014	2015 (provisional)
<b>Production</b>						
Area (thousand hectares):		29	29	29	28	29
	of which: orchard fruit (a)	19	19	19	19	19
	soft fruit (b)	10	10	10	9	9
End year stocks (c)		64	58	80	71	71
<b>Value of production (£ million) (d):</b>		604	576	602	613	681
	of which: orchard fruit	153	154	184	164	168
	soft fruit	399	364	353	392	456
	of which: sales	606	580	584	619	681
	change in stocks (c)	- 1	- 4	18	- 6	-
Selected crops:	dessert apples	68	70	73	75	77
	culinary apples	44	46	47	43	40
	pears	16	15	13	12	13
	raspberries	111	97	95	109	124
	strawberries	245	223	214	244	284
<b>Prices (farm gate price (£ per tonne))</b>						
Selected crops:	dessert apples	533	604	554	507	480
	culinary apples	390	530	550	441	443
	pears	483	580	593	482	488
	raspberries	7 161	6 198	6 501	6 119	7 235
	strawberries	2 407	2 356	2 283	2 338	2 609
<b>Supply and use</b>						
Total production		423	366	387	430	575
Imports from:	the EU	1 282	1 331	1 370	1 451	1 493
	the rest of the world	2 079	2 090	2 191	2 159	2 208
Exports to:	the EU	148	108	141	101	128
	the rest of the world	2	2	2	2	2
Total new supply		3 635	3 677	3 804	3 938	4 147
Change in stocks		- 2	- 5	22	- 9	1
Total domestic uses		3 637	3 682	3 782	3 947	4 146
<b>Production as % of total new supply for use in the UK</b>		12	10	10	11	14

(a) Includes field area of commercial orchards only, and may therefore differ from the area in table 2.2, which also includes non-commercial orchards.

(b) Excludes area of wine grapes and may therefore differ from the area in table 2.2.

(c) Stocks relate to apples and pears.

(d) Includes glasshouse fruit. The value of fruit production has been revised since publication of the Agricultural Accounts in April 2016. The value shown here reflects this updated information.

## Summary

In 2015:

- The value of beef and veal rose by 4.9% to £2.74 billion driven by higher prices.
- Pig meat value fell by 15% to £1.08 billion as prices fell by 17%.
- The value of mutton and lamb fell by 1.5% to £1.10 billion where a fall in prices was offset by an increase in production.
- Poultry meat value fell by 1.1% to £2.23 billion with increased production and falling prices offsetting each other.
- The value of milk and milk products fell by 20% to £3.66 billion as milk prices fell by 22%.
- The value of eggs rose by 0.3% to £681 million with increased production offset by a fall in price.

### Cattle and calves: beef and veal (table 8.1)

1. The effects of reduced calf registrations in 2012 and 2013 led to a reduction in prime cattle slaughtering of 1.9% in 2015. The number of adult cattle slaughtered increased 3.4%, in part due to the challenges in the dairy sector as some producers reduce their breeding stock levels. Home fed production increased 0.4% to 875 thousand tonnes as improved fodder quality and quantity combined with lower feed prices resulted in heavier carcass weights. The value of production increased by 4.9% to £2.74 billion.

### Pigs and pig meat (table 8.2)

2. Home fed pig meat production rose by 4.5% to 859 thousand tonnes, driven by a 3.7% increase in slaughtering and continued improvements in breeding herd productivity. Pig prices however have fallen 17% since 2014 leading to a fall of 15% in the value of production to £1.08 billion. Lower animal feed costs have partly offset the fall in pig prices but consumer demand has not increased in response to lower prices.

### Sheep and lambs: mutton and lamb (table 8.3)

3. Home fed mutton and lamb production increased by 0.4% to 307 thousand tonnes. A 2.2% increase in clean sheep slaughtering with increased carcass weights was offset by an 11% decrease in ewe slaughtering. Prices fell by 9.4% resulting in a decrease of 1.5% in the value of production to £1.10 billion.

### Poultry and poultry meat (table 8.4)

4. Total production of poultry increased by 2.8% to 1.69 million tonnes, with table chickens accounting for 84% of the total. Turkey meat production increased 2.9% to 177 thousand tonnes, regaining some of the reduction seen in 2014. There has been some downward movement on prices across the sector; table chickens have fallen by 5.4%, leading to an overall reduction in the value of the poultry meat sector of 1.1% to £2.23 billion.

### Milk (table 8.5)

5. Milk production increased by 2.7%. A 2.1% increase to the dairy herd along with a further small increase in yields resulted in the highest production levels since the 1980s. The average milk price across 2015 (calendar year) was 24.5 pence per litre (ppl), a fall of 22% on the 2014 average of 31.5 ppl. Between January and December 2015, the average monthly milk price fell 9.8%, finishing the year at 23.78 ppl.
6. The fall in the farmgate price has resulted in a 20% reduction, £940 million, in the value of production to £3.66 billion.

### Hen eggs (table 8.6)

7. The value of egg production increased slightly by 0.3% to £681 million. An increase of 3.2% in the volume of production for human consumption (not including eggs for hatching) was offset by a 2.8% reduction in the average price.
8. Free range egg production regained a little more of the market share it had previously lost to enriched cage production. It now accounts for 44% of throughput; up from 43% in 2014 while organic and barn production continue at relatively low levels, around 2% each.

### Revisions

9. Figures in these tables for 2015 are provisional and may be subject to revision.
10. Revisions have been made to previous data due to on-going revisions caused by estimated survey data being replaced with actual data when it is received; survey respondents supplying amended figures for previous survey periods; changes to data supplied by Scotland and Northern Ireland and amended administrative data; updates to trade data supplied by HMRC; and methodological changes. The scale of revision is not significant.

**Table 8.1 Cattle and calves; beef and veal**

Enquiries: Ben Drummond on +44 (0) 2080 266157

email: [ben.drummond@defra.gsi.gov.uk](mailto:ben.drummond@defra.gsi.gov.uk)

Thousand tonnes (unless otherwise stated)					
	2011	2012	2013	2014	2015
				(provisional)	
<b>Population</b>					
Total cattle and calves (thousand head at June)	9 988	9 952	9 844	9 837	9 919
of which: dairy cows	1 796	1 796	1 782	1 841	1 895
beef cows	1 687	1 666	1 611	1 569	1 576
<b>Production (a)</b>					
Total home-fed marketings (thousand head)	2 824	2 652	2 594	2 678	2 645
of which: steers, heifers and young bulls	2 090	1 930	1 892	1 934	1 900
calves	92	80	93	142	122
cows and adult bulls	642	641	609	603	623
Average dressed carcass weight (kg):					
steers, heifers and young bulls	345	347	342	349	354
calves	43	45	43	47	54
cows and adult bulls	316	311	307	316	313
Production (dressed carcass weight):					
home-fed production	931	877	840	871	875
Value of production (£ million)	2 595	2 814	2 906	2 632	2 772
of which: value of home-fed production (a)	2 653	2 763	2 841	2 691	2 748
subsidies (b)	22	20	21	21	33
change in work-in-progress (c)	- 74	38	59	- 62	13
less imported livestock	6	8	14	19	22
plus breeding animals exported	..	..	..	..	..
Value of production at market prices (£ million) (d)	2 573	2 794	2 886	2 611	2 739
<b>Prices</b>					
Finished cattle (pence per kg deadweight): All prime cattle (g)	306.4	341.4	386.3	348.6	346.4
<b>Supply and use (thousand tonnes, dressed carcass weight) (e)</b>					
Home-fed production (a)	931	877	840	871	875
Imports from (h):					
the EU (f)	259	275	268	290	309
the rest of the world	42	30	41	36	32
Exports to (h):					
the EU	164	135	121	127	120
the rest of the world	6	7	5	9	9
Total new supply	1 062	1 040	1 023	1 061	1 087
Home-fed production as % of total new supply for use in the UK	88%	84%	82%	82%	80%

(a) Measures of home-fed marketings, dressed carcass weights, production and value include animals raised and slaughtered in the UK, excluding any animals removed from the food chain.

(b) Comprising Scottish Beef Calf Scheme.

(c) A valuation of the change in work-in-progress of animals to be slaughtered.

(d) Excluding subsidies and taxes.

(e) Does not include meat offals or trade in preserved or manufactured meat products. Boneless meat has been converted to bone-in weights.

(f) Includes meat from imports of live finished animals.

(g) Data revised back to 1980 due to changed methodology. See datasets for further information.

(h) Data revised back to 2008 due to changed methodology. See datasets for further information.

Table 8.2 Pigs and pig meat

Enquiries: Ben Drummond on +44 (0) 2080 266157

 email: [ben.drummond@defra.gsi.gov.uk](mailto:ben.drummond@defra.gsi.gov.uk)

Thousand tonnes (unless otherwise specified)

	2011	2012	2013	2014	2015 (provisional)
<b>Population</b>					
Total pigs (thousand head at June)	4 441	4 481	4 885	4 815	4 739
of which: sows in pig and other sows for breeding	362	357	355	349	352
gilts in pig	70	69	66	57	56
<b>Production (a)</b>					
Total home-fed marketings (thousand head)	(e)	9 702	9 743	9 953	10 349
of which: clean pigs	9 204	9 426	9 479	9 698	10 090
sows and boars	(e)	276	265	255	259
Average dressed carcass weight (kg):					
clean pigs	78	78	79	81	81
sows and boars	151	150	147	146	146
Production (dressed carcass weight):					
home-fed production (a)	757	776	787	822	859
Value of production (£ million)	1 070	1 132	1 274	1 264	1 078
of which: value of home-fed production	1 067	1 134	1 265	1 256	1 082
change in work in progress (b)	- 2	- 4	8	6	- 4
less imported livestock	..	..	..	..	..
plus breeding animals exported	6	2	2	1	-
<b>Prices (pence per kg deadweight)</b>					
Clean pigs	144.8	150.2	165.3	159.0	131.7
<b>Supply and use of pigmeat (carcass weight equivalent) (c)</b>					
Home-fed production (a)	757	776	787	822	859
Imports from (f):					
the EU (d)	778	731	724	733	739
the rest of the world	5	3	2	1	1
Exports to (f):					
the EU	153	139	154	156	160
the rest of the world	39	43	54	55	57
Total new supply	1 347	1 327	1 305	1 345	1 382
Home-fed production as % of total new supply for use in the UK	56%	58%	60%	61%	62%

(a) Measures of home-fed marketings, dressed carcass weights, production and value include animals raised and slaughtered in the UK, excluding any animals removed from the food chain.

(b) A valuation of the change in work in progress of animals to be slaughtered.

(c) Does not include meat offals or trade in preserved or manufactured meat products. Boneless meat has been converted to bone-in weights.

(d) Includes meat from imports of live finished animals.

(e) data are confidential

(f) Data revised back to 2008 due to changed methodology. See datasets for further information.

**Table 8.3 Sheep and lambs; mutton and lamb**

Enquiries: Ben Drummond on +44 (0) 2080 266157

email: [ben.drummond@defra.gsi.gov.uk](mailto:ben.drummond@defra.gsi.gov.uk)

Thousand tonnes (unless otherwise specified)

	2011	2012	2013	2014	2015 (provisional)
<b>Population</b>					
Total sheep and lambs (thousand head at June)	31 634	32 215	32 856	33 743	33 337
of which: breeding flock 1 year and over	14 868	15 229	15 561	16 026	16 024
lambs under one year old	15 990	16 229	16 381	16 936	16 528
<b>Production (a)</b>					
Total home-fed marketings (thousand head)	15 007	14 221	15 024	15 061	15 087
of which: clean sheep and lambs	12 956	12 347	12 906	13 222	13 463
ewes and rams	2 051	1 874	2 118	1 838	1 624
Average dressed carcase weight (kg):					
clean sheep and lambs	19	19	19	19	20
ewes and rams	26	26	26	27	27
Production (dressed carcase weight):					
home-fed production (a)	301	286	300	306	307
Value of production (£ million)	1 149	1 027	1 037	1 122	1 111
of which: value of home-fed production	1 139	1 018	1 049	1 114	1 106
subsidies(b)	..	..	..	..	6
change in work in progress (c)	9	9	- 12	8	- 1
less imported livestock	-	-	-	-	-
plus breeding animals exported	..	..	..	..	..
Value of production at market prices (£ million) (d)	1 149	1 027	1 037	1 122	1 105
<b>Prices</b>					
Finished sheep (pence per kg dressed carcase weight) (e):					
Great Britain	432.9	411.3	415.1	420.6	381.1
<b>Supply and use (dressed carcase weight) (f)</b>					
Home-fed production (a)	301	286	300	306	307
Imports from (h):					
the EU (g)	16	15	16	15	12
the rest of the world	93	91	104	97	102
Exports to (h):					
the EU	107	95	101	100	86
the rest of the world	5	13	19	16	4
Total new supply	299	283	301	302	332
Home-fed production as % of total new supply for use in the UK	101%	101%	100%	101%	93%

(a) Measures of home-fed marketings, dressed carcase weights, production and value include animals raised and slaughtered in the UK, excluding any animals removed from the food chain.

(b) Scottish Upland Sheep Support Scheme

(c) A valuation of the change in work in progress of animals to be slaughtered.

(d) Excluding subsidies and taxes.

(e) Unweighted average of weekly prices at representative markets.

(f) Does not include meat offals or trade in preserved or manufactured meat products. Boneless meat has been converted to bone-in weights.

(g) Includes meat from imports of live finished animals.

(h) Data revised back to 2008 due to changed methodology. See datasets for further information.

Table 8.4 Poultry and poultry meat

Enquiries: Ben Drummond on +44 (0) 2080 266157

 email: [ben.drummond@defra.gsi.gov.uk](mailto:ben.drummond@defra.gsi.gov.uk)

Thousand tonnes (unless otherwise specified)					
	2011	2012	2013	2014	2015 (provisional)
<b>Population</b>					
Number (thousand head at June):	162 551	160 061	162 609	169 684	167 579
of which: table chickens	102 461	102 558	104 576	110 374	107 056
laying and breeding fowl	48 610	46 633	47 024	48 404	49 509
turkeys, ducks, geese and all other poultry	11 481	10 870	11 008	10 907	11 014
<b>Production</b>					
Slaughterings (millions):	931	952	976	972	1 006
of which: fowls	899	919	945	942	975
turkeys	17	18	18	15	16
ducks & geese	15	15	14	15	14
Production (carcase weight) (a):	1 560	1 609	1 663	1 648	1 694
of which: chickens and other table fowls	1 297	1 322	1 388	1 383	1 421
boiling fowls (culled hens)	56	58	55	58	65
turkeys	171	196	187	172	177
ducks & geese	35	34	32	34	31
Value of production (£ million):	1 904	2 078	2 324	2 250	2 226
of which: table chickens	1 444	1 564	1 777	1 741	1 693
change in work in progress in fowls (b)	- 5	- 4	11	3	6
turkeys, ducks, geese	367	417	421	393	394
exports of live poultry	99	103	87	77	93
hatching eggs for export	33	40	71	82	85
less live poultry imported	18	15	9	20	20
less hatching eggs imported	17	26	33	25	25
<b>Prices (average producer prices (pence per kg carcase weight)):</b>					
Chickens and other table fowls	110.9	117.9	127.7	125.5	118.7
Boiling fowls (culled hens)	9.7	9.2	9.0	9.7	9.6
Turkeys	156.7	161.9	170.9	165.3	166.5
Ducks	263.3	274.0	290.3	300.6	295.7
Geese	616.6	616.1	616.8	641.3	641.3
<b>Supply and use (carcase weight) (a)</b>					
Production (a)	1 560	1 609	1 663	1 648	1 694
Imports from:					
the EU	483	454	452	479	511
the rest of the world	32	26	30	30	29
Exports to:					
the EU	205	203	223	245	233
the rest of the world	86	80	91	94	59
Total new supply	1 785	1 807	1 832	1 818	1 942
Production as % of total new supply for use in the UK	87%	89%	91%	91%	87%

(a) Excludes offal.

(b) A valuation of the change in work-in-progress of fowls to be slaughtered.

**Table 8.5 Milk**

Enquiries: Ben Drummond on +44 (0) 2080 266157

email: [ben.drummond@defra.gsi.gov.uk](mailto:ben.drummond@defra.gsi.gov.uk)

Million litres (unless otherwise specified)					
	2011	2012	2013	2014	2015
					(provisional)
<b>Population and yield</b>					
Dairy herd (annual average, thousand head) (a)	1 807	1 798	1 794	1 851	1 889
Average yield per dairy cow (litres per annum)	7 563	7 477	7 542	7 897	7 944
<b>Production</b>					
Milk from the dairy herd (b)	13 665	13 443	13 533	14 617	15 008
Milk from the beef herd (b)	7	7	7	7	7
less on farm waste and milk fed to stock	115	111	114	120	124
Volume for human consumption	13 557	13 339	13 426	14 504	14 891
Value of production (£ million)	3 738	3 767	4 271	4 594	3 663
of which: raw milk leaving farm (c)	3 674	3 712	4 215	4 540	3 616
raw milk processed on farm (d)	64	55	56	54	46
<b>Prices (average price received by milk producers, net of delivery charges (pence per litre)) (e)</b>					
Farmgate price of milk excluding bonus payments	27.3	28.0	31.6	31.5	..
Farmgate price of milk including bonus payments	27.4	28.1	31.7	31.5	24.5
<b>Supply and use</b>					
Production	13 672	13 450	13 540	14 623	15 015
Imports	102	157	187	221	221
Exports	481	497	501	553	553
Total new supply	13 292	13 110	13 226	14 292	14 684
of which:					
for liquid consumption	6 892	6 785	6 856	6 931	6 786
for manufacture	6 260	6 015	6 223	7 101	7 508
of which: butter	267	293	293	289	302
cheese	3 710	3 673	3 513	3 878	4 110
cream	243	252	305	302	318
condensed milk (f)	300	289	290	265	249
milk powder	1 130	893	1 138	1 638	1 634
other	610	614	685	728	896
dairy wastage and stock change	3	178	10	118	241
other uses (g)	138	133	137	143	148
Production as a % of new supply	103%	103%	102%	102%	102%

(a) Average size of the dairy herd across the whole year, rather than the size at a particular time of year. Dairy herd is defined as dairy cows over two years of age with offspring.

(b) Excludes suckled milk.

(c) Value of raw milk sold to other businesses (dairies) for processing.

(d) Value of milk and milk products processed on farm and sold direct to the consumer.

(e) No deduction is made for superlevy.

(f) Includes condensed milk used in the production of chocolate crumb and in the production of machine skimmed milk.

(g) Includes farmhouse consumption, milk fed to stock and on farm waste. Excludes suckled milk.

Table 8.6 Hen eggs

Enquiries: Ben Drummond on +44 (0) 2080 266157

email: [ben.drummond@defra.gsi.gov.uk](mailto:ben.drummond@defra.gsi.gov.uk)

Million dozen (unless otherwise specified)	Calendar years				
	2011	2012	2013	2014	2015 (provisional)
<b>Population</b>					
Number of laying fowl (thousands)	38 357	36 646	35 841	37 146	36 998
<b>Production</b>					
Volume of production of eggs	937	918	960	971	997
of which: eggs for human consumption	821	797	829	839	866
eggs for hatching	103	105	107	108	111
other (a)	13	16	23	23	20
Value of production of eggs for human consumption (£ million) (b)	559	662	718	679	681
<b>Prices (pence per dozen)</b>					
Weighted average of eggs graded in the UK (c)	68.1	83.1	86.6	80.9	78.6
<b>Supply and use</b>					
UK production of eggs for human consumption	821	797	829	839	866
of which: eggs sold in shell	664	654	695	695	729
eggs processed	158	143	134	144	137
Imports from (d): the EU	126	162	152	157	166
the rest of the world	1	1	1	1	1
Exports to (d): the EU	10	19	23	11	9
the rest of the world	1	-	-	-	-
Total new supply	937	941	959	986	1 024
Production as % of total new supply for use in the UK	88%	85%	86%	85%	85%

(a) Includes hatching eggs for export and waste

(b) Eggs for hatching and hatching egg exports are not valued as they are included in the final value for poultry in table 8.4

(c) Represents the price paid by packers to producers in the United Kingdom and takes accounts of all egg systems - intensive, free range, barn and organic. Methodology changes: data up to and including 2011 excludes bonus payments, thereafter bonus payments are included.

(d) Includes shell egg equivalent of whole (dried, frozen and liquid) egg, egg yolk and albumen.

## Summary

In 2015:

- The total cost of intermediate consumption (inputs) fell by £649 million to £15,356 million. Reduced energy, animal feed and fertiliser costs were the main contributors to this fall.
- The cost of animal feed, the largest item of expenditure recorded in the production and income account, fell by 4.0% to £4.9 billion.
- Oil prices, which influence the cost of some inputs such as fuels, electricity and fertilisers, averaged \$52 per barrel compared to \$99 per barrel in 2014.
- The value of the energy used by the agriculture industry is estimated to be just under £1.2 billion, a decrease of 18%.

## Introduction

1. Unless otherwise stated all comparisons are with the previous year (2014).
2. The total cost of intermediate consumption fell by £649 million to £15,356 million. Reduced energy, animal feed and fertiliser costs were the main contributors to this fall of 4.1%, largely as a result of the lower prices and to some degree a fall in volumes used.

## Animal Feed (table 9.1)

3. The cost of animal feed is the largest item of expenditure recorded in the production and income account. It also tends to fluctuate more than other input costs and is the key driver of annual variations in total intermediate consumption. Usage has remained broadly level since 1993 and so the value of animal feed used within the agricultural industry has closely followed trends in commodity prices, shaped by exchange rates and world prices.
4. The total value of all animal feed decreased by 4.0% to £4.9 billion, mainly due to the fall in feed prices. The total volume of all 'purchased' animal feed increased by 6.6% to 32 million tonnes. Total compound feed production increased by 4% with a significant increase for pig and poultry compound feed. These increases were due to higher slaughter weights in the case of pigs and, for poultry, a significant switch to retail compound feed from integrated poultry units. Besides compound feed usage, there was an increase of 3.5% in purchased straight concentrates and a 13% increase in inter/intra farm sales

Table 9.1 Animal Feed (a)

Enquiries: Allan Howsam on +44 (0)20 802 66123

 email: [allan.howsam@defra.gsi.gov.uk](mailto:allan.howsam@defra.gsi.gov.uk)

Thousand tonnes (unless specified otherwise)	Calendar years				
	2010	2011	2012	2013	2014 (provisional)
<b>Compounds (b)</b>					
cattle	4 680	4 584	4 895	5 240	5 050
calves	213	218	248	253	250
pigs	1 580	1 621	1 829	1 807	1 889
poultry (c)	3 828	3 759	3 861	4 019	4 109
sheep	859	765	836	966	766
<b>Total compounds plus imports less exports</b>	<b>11 060</b>	<b>10 795</b>	<b>11 377</b>	<b>12 119</b>	<b>12 051</b>
Straight concentrates (d)	7 935	6 920	6 725	6 782	6 997
Non-concentrates (e)	525	525	525	525	525
Inter/intra farm transfer	8 145	7 444	6 560	8 965	10 336
<b>Total all purchased animal feed</b>	<b>27 666</b>	<b>25 684</b>	<b>25 187</b>	<b>28 390</b>	<b>29 909</b>
<b>Value of purchased animal feed (£ million) (f)</b>	<b>4 087</b>	<b>4 508</b>	<b>4 891</b>	<b>5 567</b>	<b>5 012</b>

(a) Including direct inter-farm and intra-farm transfer and Maize for stockfeed

(b) UK produced compounds, excludes imports and exports

(c) Includes poultry feed produced by 'retail' compounders but excludes production from integrated poultry units which are included within the straight concentrates data

(d) These are cereals, cereal offals, proteins and other high energy feeds.

(e) Low energy bulk feeds expressed as concentrate equivalent. Brewers and distillers grains, hay, milk by-products and other low-energy bulk feeds expressed in terms of equivalent tonnage of high energy feeds.

(f) See table 4.1 for a breakdown of this total.

## Oil prices (chart 9.1)

5. Some inputs, such as fuels, electricity and fertilisers are closely linked to the oil price.

6. Chart 9.1 shows the trend in Europe Brent crude oil prices since 1985. Oil prices peaked in July 2008 at just over \$130 per barrel but fell sharply by the end of 2008 as the global crisis hit. Between 2010 to mid-2014 oil prices were high but relatively stable due to a weak global economy and tension in the Middle East. On average prices traded between \$100 and \$115 per barrel. From July 2014, as strong global production exceeded demand, prices fell rapidly and had reached around \$60 per barrel by December 2014.

7. In 2015 prices continued to fall and ended the year at just under \$40 per barrel, over \$70 per barrel lower than the highest price seen in 2014 and the lowest price for almost 10 years. As an annual average 2015 prices were almost 50% lower than 2014 and helped reduce the cost of those inputs linked to oil prices.

Chart 9.1 Europe Brent Spot Price FOB



Source: US Energy Information Administration

## Energy and fertiliser (charts 9.2 and 9.3)

8. The total value of energy used within the agricultural industry is estimated to be just under £1.2 billion, a fall of around 18%. Energy costs, particularly motor and machinery fuels are heavily influenced by oil prices and this reduction mirrors the fall in the global oil price.

9. Chart 9.2 shows that while the value of energy follows a similar pattern to that of the crude oil price volumes have remained relatively stable in recent years.

10. The price of oil directly affects the price of energy but also affects the cost of other inputs such as fertiliser, which has an energy intensive manufacturing process. The price of natural gas, used to synthesise atmospheric nitrogen, is a significant driver of the cost and is linked to the oil price.

11. Chart 9.3 shows that although fertiliser usage has significantly decreased since the mid-90s, the value of fertiliser used has increased, driven by price. The value of fertiliser decreased to below £1.4 billion, its lowest level since 2010 and a fall of 7.7% on 2014. The decrease in value was largely price-driven with very similar levels of use to 2014.

Chart 9.2 Energy index for value and volume

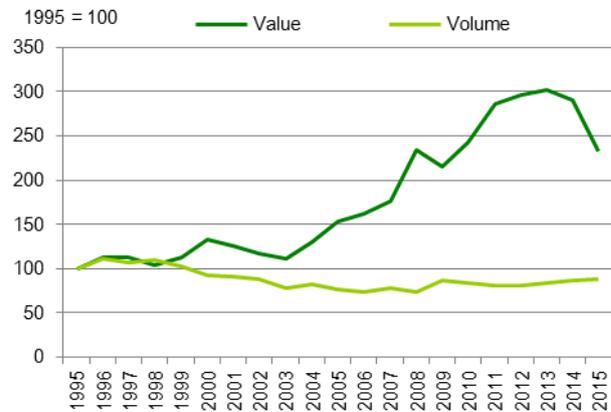
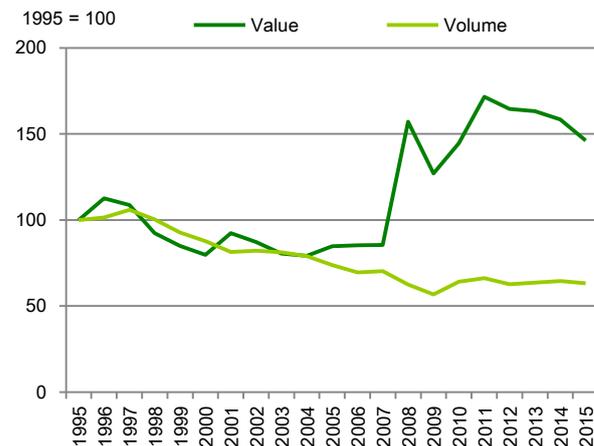


Chart 9.3 Fertiliser



## Other input costs

12. The value of seed fell by 8.1% to £707 million a result of both reduced seed usage and lower price.

13. The value of pesticides fell by 3.8% to £907 million driven by a 3.5% fall in usage. There was less need for treatments due to the smaller crops areas for sugar beet, potatoes and oil seed rape and the favourable weather resulted in moderate disease pressure and typical weed problems.

14. The value of veterinary expenses was unchanged with a small fall in product use and services offset by a small increase in price. In 2015 there were no major disease outbreaks and reliance on veterinary input remains relatively constant year on year.

15. There was little change in the value of agricultural services at £1,132 million. Other goods and services which is the second largest cost behind animal feed rose slightly to £3.2 billion. Other goods and services incorporate costs not included elsewhere such as: rates; telecoms; water rates; insurance; bank charges; etc.

# Chapter 10 Public Payments

## Summary

In 2015:

- Total direct payments to farmers are expected to have decreased by 4.4% to £2.8 billion.
- The Basic Payment Scheme contributed £2.2 billion, a fall of 6.9%.
- Payments linked to agri-environment schemes are expected to be 2.7% lower at £488 million.
- Payments under the Less Favoured Area Support Scheme (LFASS) are expected to be 2.3% lower at £91 million.

## Introduction

1. The 2014-2020 Common Agriculture Policy was introduced in 2015.
2. The Basic Payment Scheme (BPS) replaced the Single Farm Payment Scheme (SPS).
3. Under the Rural Development Programme a number of new schemes became available during 2015.
4. Scotland is the only administration in the United Kingdom to operate coupled support schemes. In 2015 two new schemes were introduced, the Scottish Suckler Beef Support Scheme (Mainland and Islands) and the Scottish Upland Sheep Support Scheme.
5. Values shown for a particular year refer to schemes operating in that year.
6. Unless otherwise stated comparisons are based on 2015 compared to 2014.

## Payments

7. Payments made to UK farmers under the BPS (formerly Single Farm Payments) are set in euros and converted to sterling using the exchange rate set by the European Central Bank in September. In 2015 the rate was €1 = £0.73129, as shown in table 10.1.
8. In 2015 further strengthening of sterling against the euro resulted in lower overall BPS payments to farmers, down 6.9% to £2.2 billion.

Table 10.1 Single payment scheme and exchange rate

Enquiries: Helen Mason on +44 (0)20 802 66256

email: [farmaccounts@defra.gsi.gov.uk](mailto:farmaccounts@defra.gsi.gov.uk)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
								(a)	(a)	provisional (b)
Basic/Single Farm Payment Scheme (£ million)n (a)(b)	2 475	2 313	2 592	2 980	2 798	2 805	2 600	2 691	2 336	2 176
Exchange rate (€/£) (c)	0.68	0.70	0.79	0.91	0.86	0.87	0.80	0.84	0.78	0.73
Financial discipline (%)	..	..	..	..	..	..	..	2.45	1.30	..

(a) Includes Financial Discipline reimbursements where applicable.

(b) In 2015 Basic Payment Scheme (BPS) replaced the Single Farm Payment Scheme (SPS)

(c) From 2015 Exchange rate set by the European Central Bank (ECB) for month of September. Up to and including 2014 exchange rate set by the ECB on the last day of September

9. Chart 10.1 details the value of overall direct payments to farmers and shows the breakdown between coupled and decoupled payments.

Chart 10.1 Direct Payments made to farmers

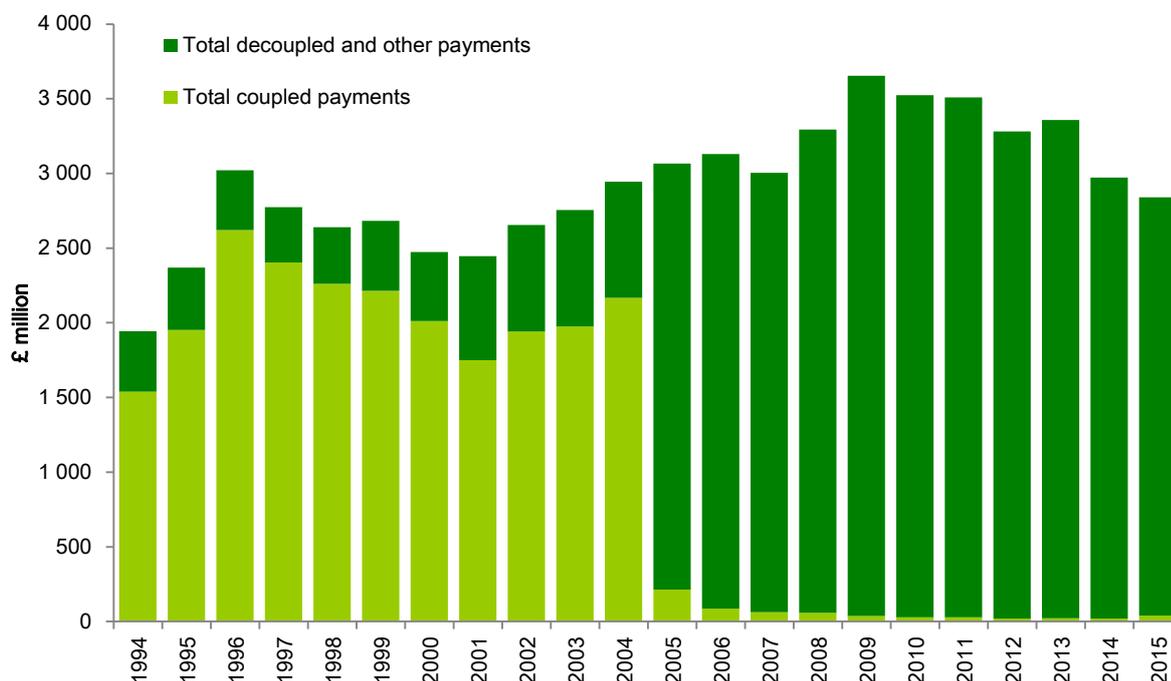


Table 10.2 Direct payments to farmers

Enquiries: Helen Mason on +44 (0)20 802 66256

email: farmaccounts@defra.gsi.gov.uk

£ million

	2011	2012	2013	2014	2015
					(provisional)
<b>Coupled payments (linked to production)</b>					
Crop subsidies					
Other crop subsidies (a)	5	..	..	..	..
Livestock subsidies					
Scottish Beef Calf scheme	22	20	21	21	..
Scottish Upland Sheep support scheme	..	..	..	..	6
Scottish Suckler Beef support scheme	..	..	..	..	33
<b>Total coupled payments</b>	<b>28</b>	<b>20</b>	<b>21</b>	<b>21</b>	<b>38</b>
<b>Decoupled and other payments (not linked to production)</b>					
Basic/Single Payments Scheme (b)	2 805	2 600	2 691	2 336	2 176
Agri-environment schemes (c)	534	520	525	502	488
Less Favoured Areas support schemes	123	121	92	89	91
Animal disease compensation (d)	18	20	20	20	21
Other (e)	1	-	10	5	26
<b>Total decoupled and other payments</b>	<b>3 481</b>	<b>3 261</b>	<b>3 338</b>	<b>2 953</b>	<b>2 803</b>
<b>Total direct payments less levies</b>	<b>3 509</b>	<b>3 282</b>	<b>3 359</b>	<b>2 973</b>	<b>2 841</b>
Capital transfers and other payments not included in the production and income account	39	32	33	32	30

(a) CAP hops and herbage seeds support; hemp and flax aid; protein crop premium; area aid for nuts; energy crops aid.

(b) Basic Payment introduced in 2015, prior to this Single Payment Scheme operated.

(c) For information on schemes included please see table 10.3

(d) Compensation paid for livestock compulsorily slaughtered under disease control measures. Compensation paid for work-in-progress livestock are recorded here while compensation paid for capital livestock are recorded as capital transfers.

(e) Includes one off payments

10. In 2015 the Scottish Beef Scheme ended and was replaced by the Scottish Suckler Beef Support mainland and islands schemes. The new Scottish Upland Sheep Support scheme also operated and as a result, in 2015, coupled payments increased from £21 million to £38 million.
11. Payments under the agri-environment schemes fell by £14 million to £488 million whilst Less Favoured Area Support Scheme payments were virtually unchanged.
12. In 2015, UK dairy farmers received a one-off support payment linked to milk production to help with their cash-flow problems caused by volatile prices. This direct aid package payment totalled £26 million.
13. Overall total direct payments to farmers fell by £132 million to £2,841 million.

**Table 10.3 Direct payment to farmers by country 2015**

Enquiries: Helen Mason on +44 (0)20 802 66256

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£ million

	England	Wales	Scotland	Northern Ireland	United Kingdom
<b>Livestock subsidies</b>					
Scottish Upland Sheep support scheme	..	..	6	..	6
Scottish Suckler Beef support scheme	..	..	33	..	33
<b>Total coupled payments</b>	..	..	38	..	38
<b>Decoupled payments (not linked to production)</b>					
Basic/Single Payment Scheme	1 402	190	348	236	2 176
Less Favoured Areas support schemes (a)	-	-	66	25	91
<b>Agri-environment schemes</b>					
Environmental Stewardship Scheme	394	-	-	-	394
Rural Priorities / Land Manager Options	..	..	33	..	33
Glastir	..	37	..	..	37
Countryside Management Scheme	..	..	..	16	16
Organic Farming Scheme	-	1	-	-	1
Environmentally Sensitive Areas Schemes	-	-	-	5	5
Sites and Areas of Special Scientific Interest	-	2	-	-	2
Other (b)	16	3	2	5	26
<b>Animal disease compensation</b>	12	3	1	5	21
<b>Total decoupled payments</b>	1 824	236	450	293	2 803
<b>Total direct payments</b>	1 824	236	488	293	2 841

(a) Less Favoured Area Compensatory Allowance (LFACA) in Northern Ireland, Less Favoured Areas Support Scheme (LFASS) in Scotland

(b) Includes one off payments

### Direct Payments made through key measures of the Rural Development Programmes

14. There are four rural development programmes in the United Kingdom, covering England, Wales, Scotland and Northern Ireland.
15. Table 10.4 shows details of payments made through two key measures of these programmes: Less Favoured Areas and Agri-Environment. Due to changes in the management and implementation of the Rural Development Programme in 2015, care should be taken when making comparisons.
16. The Environmental Stewardship Scheme is currently the main agri-environment scheme for England funded by the Rural Development Program for England (RDPE). Although it closed to new applicants in 2014 existing agreements will continue to be managed until they reach their agreed end date. It is expected payments under this scheme will total £394 million in 2015. This scheme will be replaced by the new Countryside Stewardship (CS) Scheme.

17. The Scottish Rural Development Programme (SRDP) is the main source of funding for land management in Scotland. In 2015 the Rural Priority and Land Manager option scheme payments totalled £33 million.
18. The principal Welsh agri-environment scheme is Glastir funded by the Welsh Government Rural Communities Rural Development Programme and payments totalled £37 million in 2015.
19. Under the new Rural Development Programme for Northern Ireland Countryside Management Scheme and Environmentally Sensitive Area Scheme payments totalled £21 million.

**Table 10.4 Direct Payments made through key measures of the Rural Development Programmes**

Enquiries: Helen Mason on +44 (0)20 802 66256

email: farmaccounts@defra.gsi.gov.uk

£ Million

		2011	2012	2013	2014	2015
						(provisional)
<b>Less Favoured Areas and Areas with Environmental Restrictions measure</b>						
England:	Uplands Transitional Payment	8	6	3	1	..
Wales:	Tir Mynydd (a)	25	24	..	..	..
Scotland:	Less Favoured Areas Support Scheme	66	65	66	66	66
Northern Ireland:	Less Favoured Areas Compensatory Allowance	24	25	25	25	25
<b>Agri. Environment and Animal Welfare measure</b>						
England:	Organic Farming Scheme	..	..	..	..	..
	Countryside Stewardship Scheme (b)	53	37	21	7	..
	Environmentally Sensitive Areas Scheme (b)	39	31	19	7	..
	Environmental Stewardship Scheme (c)	321	342	373	377	394
Wales:	Organic Farming Scheme	4	4	4	4	1
	Tir Cymen	..	..	..	..	..
	Tir Gofal	27	24	27	18	..
	Environmentally Sensitive Areas Scheme	-	-	-	-	..
	Tir Cynnal	7	7	7	-	..
	Glastir (d)	..	7	7	26	37
Scotland:	Organic Aid Scheme	2	-	-	-	..
	Countryside Premium Scheme	-	-	-	-	..
	Rural Stewardship Scheme	4	1	-	-	..
	Environmentally Sensitive Areas Scheme	1	-	-	-	..
	Land Management Contract Scheme	7	-	-	-	..
	Land Managers Options	4	6	7	5	5
	Rural Priorities (e)	32	33	33	35	28
Northern Ireland:	Organic Farming Scheme	-	-	-	-	..
	Countryside Management Scheme (f)	20	19	19	17	16
	Environmentally Sensitive Areas Scheme (g)	8	6	5	5	5

(a) Tir Mynydd has closed to be replaced by Glastir. No longer able to identify less favoured areas and environmental restriction measure payments.

(b) Remaining agreements expired during 2014 with the majority renewed into Environmental Stewardship from May 2014.

(c) Environmental Stewardship Scheme closed to new applicants in December 2014

(d) Introduced in 2012; existing scheme agreements will gradually moved across to this scheme.

(e) Scheme ended in December 2013, existing agreements continued to be honoured.

(f) Includes agreements which commenced under NIRDP 2000-2006 and 2007-2013; agreements continue to be honoured.

(g) Commenced under 2000-2006 NIRDP; existing agreements continue to be honoured.

## Take-up of Agri-Environment Schemes

20. Agri-environment schemes provide an incentive to farmers to adopt land management and farm practices that are beneficial to the environment. The take-up of agri-environment schemes is shown by area of land under each type of agreement currently in existence in the United Kingdom (Table 10.5) and by the number of agreements (Table 10.6). Due to the differing requirements of schemes, care should be taken when making comparisons.

Table 10.5 Agri-environment schemes – area under schemes

Enquiries: Elizabeth Finch on +44 (0) 20802 66226

 email: [elizabeth.finch@defra.gsi.gov.uk](mailto:elizabeth.finch@defra.gsi.gov.uk)

thousand hectares	31 December				
	2011	2012	2013	2014	2015
<b>England</b>					
Organic Farming Scheme	-	-	-	-	-
Countryside Stewardship Scheme (a)	172	100	36	-	-
Environmentally Sensitive Areas Scheme (a)	341	269	92	-	-
Environmental Stewardship Scheme					
Entry Level Scheme (b)	5 607	6 094	6 514	6 389	5 132
Higher Level Scheme (c)	882	1 047	1 276	1 348	1 344
<b>Wales</b>					
Organic Farming/Organic Farming Conversion Scheme (d)	130	132	51	97	-
Tir Cymen/Tir Gofal (e)	378	372	358	12	-
Environmentally Sensitive Areas Scheme	7	-	-	-	-
Tir Cynnal (e)	245	253	297	-	-
Glastir (f)					
Glastir Entry (g)	..	155*	203	508	546
Glastir Advanced (on Entry)	..		29	184	251
Glastir Commons	..	23	34	111	117
Glastir Organic	..	..	..	..	64
<b>Scotland</b>					
Organic Aid Scheme (h)	34	4	2	-	-
Countryside Premium Scheme/Rural Stewardship Scheme (h)	36	-	-	-	-
Environmentally Sensitive Areas Scheme (h)	49	9	1	-	-
Land Management Contracts (h)	-	-	-	-	-
Land Managers Options	328	405	387	338	136
Rural Priorities (i)	834	1 122	1 158	1 212	980
<b>Northern Ireland</b>					
Organic Farming Scheme (j)	3	2	1	-	-
Countryside Management Scheme (k)	333	350	295	280	221
Environmentally Sensitive Areas Scheme (l)	107	103	91	84	84

(a) Remaining agreements expired during 2014 with the majority renewed into Environmental Stewardship from May 2014.

(b) Includes Entry Level Pilot Scheme, OELS, Uplands ELS (from 2010) and HLS linked to ELS. Scheme ended in December 2014.

(c) Includes Freestanding HLS and HLS linked to ELS. Scheme ended in December 2014.

(d) Organic Farming Scheme replaced by Organic Farming Conversion Scheme.

(e) Now closed; majority of agreements ended on 31 December 2013.

(f) Introduced in 2012; all existing scheme agreements will gradually move across to this scheme.

(g) Includes Glastir Advanced (on Entry).

(h) Land has gradually moved into Rural Payments and Land Managers Options.

(i) Scheme ended in December 2013.

(j) Commenced under 2007-2013 NIRDP and agreements continue to be honoured.

(k) Includes agreements which commenced under NIRDP 2000-2006 and 2007-2013; agreements continue to be honoured.

(l) Commenced under 2000-2006 NIRDP; existing agreements continue to be honoured.

\*Glastir figures presented as a total figure rather than separated by scheme.

**Table 10.6 Agri-environment schemes – number of agreements**

Enquiries: Elizabeth Finch on +44 (0) 20802 66226

email: [elizabeth.finch@defra.gsi.gov.uk](mailto:elizabeth.finch@defra.gsi.gov.uk)

Rounded to nearest hundred agreements	31 December				
	2011	2012	2013	2014	2015
<b>England</b>					
Organic Farming Scheme	-	-	-	-	-
Countryside Stewardship Scheme (a)	6 500	3 700	1 300	-	-
Environmentally Sensitive Areas Scheme (a)	5 700	3 600	1 400	-	-
Environmental Stewardship Scheme:					
Entry Level Scheme (b)	41 600	44 700	48 200	47 400	36 100
Higher Level Scheme (c)	8 500	10 900	13 300	14 100	14 200
<b>Wales</b>					
Organic Farming/Organic Farming Conversion Scheme (d)	1 000	1 000	600	1 000	-
Tir Cymen/Tir Gofal (e)	3 000	3 000	2 800	100	-
Environmentally Sensitive Areas Scheme	-	-	-	-	-
Tir Cynnal (e)	3 900	3 800	3 700	-	-
Glastir (f)					
Glastir Entry (g)	..	1700*	1 900	4 200	4 600
Glastir Advanced (on Entry)	..		300	1 000	1 400
Glastir Commons (h)	..	100	100	200	200
Glastir Organic	..	..	..	..	500
<b>Scotland</b>					
Organic Aid Scheme (i)	200	-	-	-	-
Countryside Premium Scheme/Rural Stewardship Scheme (i)	500	-	-	-	-
Environmentally Sensitive Areas Scheme (i)	200	-	-	-	-
Land Management Contracts (i)	-	-	-	-	-
Land Managers Options	4 600	4 900	5 000	4 600	2 300
Rural Priorities (j)	4 500	5 800	5 900	6 400	5 000
<b>Northern Ireland</b>					
Organic Farming Scheme (k)	-	-	-	-	-
Countryside Management Scheme (l)	9 000	9 300	7 500	7 100	6 200
Environmentally Sensitive Areas Scheme (m)	3 000	2 900	2 500	2 300	1 600

(a) Remaining agreements expired during 2014 with the majority renewed into Environmental Stewardship from May 2014.

(b) Includes Entry Level Pilot Scheme, OELS, Uplands ELS (from 2010) and HLS linked to ELS. Scheme ended in December 2014.

(c) Includes Freestanding HLS and HLS linked to ELS. Scheme ended in December 2014.

(d) Organic Farming Scheme replaced by Organic Farming Conversion Scheme.

(e) Now closed; majority of agreements ended on 31 December 2013.

(f) Introduced in 2012; all existing scheme agreements will gradually move across to this scheme.

(g) Includes Glastir Advanced (on Entry).

(h) Includes Glastir Advanced (on Commons).

(i) Land has gradually moved into Rural Payments and Land Managers Options.

(j) Scheme ended in December 2013.

(k) Commenced under 2007-2013 NIRDP and agreements continue to be honoured.

(l) Includes agreements which commenced under NIRDP 2000-2006 and 2007-2013; agreements continue to be honoured.

(m) Commenced under 2000-2006 NIRDP; existing agreements continue to be honoured.

\*Glastir figures presented as a total figure rather than separated by scheme.

## All Common Agricultural Policy payments by funding stream

21. Table 10.7 shows all agricultural market support under the Common Agricultural Policy. This is different to the other tables in chapter 10, which show expenditure feeding into the agricultural account only, i.e. only those payments received by units as a consequence of engaging in agricultural activity. The market price support element of this table can be paid to non-agricultural units. In addition, readers should note the difference in timings as the data is for European Union agricultural financial years (see table footnote) and they are in euros.

Table 10.7 All Common Agricultural Policy (CAP) payments by funding stream

Enquiries: Michael Redfern +44 (0) 118 968 7284

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Euros million	EU financial years (a)					
	2010	2011	2012	2013	2014	2015
<b>UK CAP payments</b>						
<b>Pillar 1</b>	3,424	3,309	3,348	3,326	3,234	3,150
of which: Direct Aids	3,325	3,304	3,290	3,285	3,195	3,112
Market price support (b)	99	5	58	41	39	38
<b>Pillar 2 (c)</b>	913	1,018	1,085	1,091	1,065	959
of which: EAFRD (d)	512	653	742	752	798	709
Co-financing	401	365	343	339	267	250
<b>Total UK CAP payments</b>	<b>4,337</b>	<b>4,327</b>	<b>4,433</b>	<b>4,417</b>	<b>4,299</b>	<b>4,109</b>
<b>England CAP payments</b>						
<b>Pillar 1</b>	2,199	2,099	2,146	2,126	2,048	2,026
of which: Direct Aids	2,100	2,094	2,088	2,085	2,009	1,988
Market price support (b)	99	5	58	41	39	38
<b>Pillar 2 (c)</b>	562	597	631	666	666	507
of which: EAFRD (d)	348	448	470	532	563	460
Co-financing	214	149	161	134	103	47
<b>Total England CAP payments</b>	<b>2,761</b>	<b>2,696</b>	<b>2,777</b>	<b>2,792</b>	<b>2,714</b>	<b>2,533</b>
<b>Wales CAP payments</b>						
<b>Pillar 1</b> Direct Aids	316	312	309	309	301	269
<b>Pillar 2 (c)</b>	97	105	117	97	112	98
of which: EAFRD (d)	38	45	54	48	54	49
Co-financing	59	60	63	49	58	49
<b>Total Wales CAP payments</b>	<b>413</b>	<b>417</b>	<b>426</b>	<b>406</b>	<b>413</b>	<b>367</b>
<b>Scotland CAP payments</b>						
<b>Pillar 1</b> Direct Aids	589	583	584	583	566	534
<b>Pillar 2 (c)</b>	190	243	256	236	191	265
of which: EAFRD (d)	92	123	167	113	119	150
Co-financing	98	120	89	123	72	115
<b>Total Scotland CAP payments</b>	<b>779</b>	<b>826</b>	<b>840</b>	<b>819</b>	<b>757</b>	<b>799</b>
<b>Northern Ireland CAP payments</b>						
<b>Pillar 1</b> Direct Aids	320	315	309	308	319	321
<b>Pillar 2 (c)</b>	64	73	81	92	96	89
of which: EAFRD (d)	34	37	51	59	62	50
Co-financing	30	36	30	33	34	39
<b>Total Northern Ireland CAP payments</b>	<b>384</b>	<b>388</b>	<b>390</b>	<b>400</b>	<b>415</b>	<b>410</b>

(a) Information based on EU financial year 16th October – 15th October. Figures exclude financial corrections/penalties.

(b) Market price support covers interventions in agricultural markets, e.g. public intervention and private storage aid.

Payments are made by RPA in England on behalf of the UK.

(c) Pillar 2 funds rural development, e.g. for agri-environment schemes, competitiveness of agriculture and economic diversification and quality of life in rural areas.

(d) EAFRD is the European Agricultural Fund for Rural Development. Member states are required to co-finance these receipts with a contribution from their exchequer. Figures are based on in-year quarterly returns, rather than the annual account (in order to provide the split between EAFRD and co-financing)

# Chapter 11 Environment

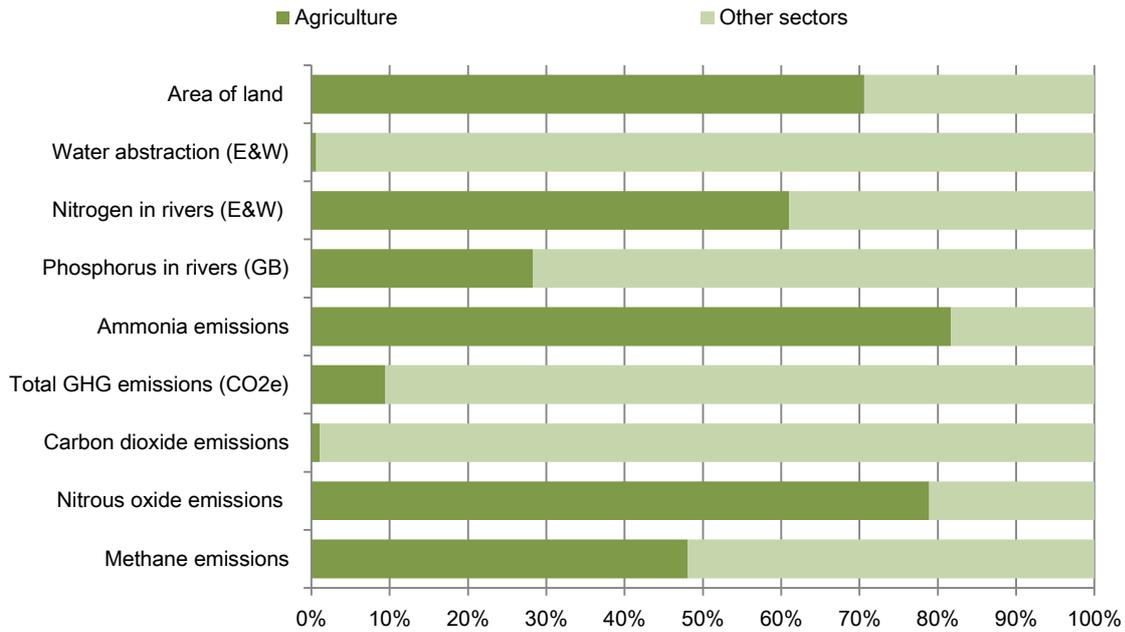
## Summary

- Accounting for approximately 70% of land use in the United Kingdom, agriculture and the associated land use and management are key drivers of both the positive and negative environmental impacts from the sector.
- Between 2000 and 2015 application rates of nitrogen and phosphorus fertilisers to grassland have shown an overall decline.
- Between 2000 and 2014 the estimated soil nutrient balances for nitrogen and phosphorus have fallen by 19% and 42%, respectively. This represents a reduction in the surpluses of nutrients that can potentially be lost to the environment.
- Between 2000 and 2014 estimated agricultural emissions:
  - Of nitrous oxide have fallen by 9%
  - Of methane have fallen by 11%
  - Of ammonia emissions have fallen by 11%
- In 2014 the population of UK farmland birds was less than half of its 1970 level.

## Introduction

1. Whilst agriculture contributes less than 1% to the United Kingdom's economy (Table 3.2), it provides around three-quarters of the indigenous food we eat (Table 14.1) and at around 70% is the predominant form of land use (Chart 11.1). As well as being vital for food production, agriculture helps to shape the landscape, providing important recreational, spiritual and other cultural benefits. This can be viewed in terms of delivering vital ecosystems services, with food production being a "provisioning" service whilst other environmental and societal benefits are delivered by, for example, "cultural" and "regulating" services.
2. Agricultural production and the associated land use and management are key drivers of the environmental impacts from the sector. A key challenge is to "de-couple" production from environmental impact so that production can be increased whilst reducing the overall environmental footprint. This is sometimes referred to as "sustainable intensification".
3. Farm practices and the use of inputs (particularly fertilisers and pesticides) directly influence the environmental pressures from farming including the quality, composition and availability of habitats and impact on air, water and soils.
4. In recent years, the key drivers of change in terms of environmental pressures from agriculture are declines in the number of livestock, specifically ruminants, and reductions in fertiliser applications, particularly on grassland. Reforms to the Common Agricultural Policy, and in particular the decoupling of subsidy payments from production, have been instrumental to these drivers of change. As a result of these reforms agriculture has become more responsive to market conditions which may influence both positive and negative environmental impacts.
5. This chapter provides an overview of the change in inputs (fertiliser, pesticide and water usage) and environmental management over time and the monitoring of environmental impacts to which agriculture contributes. In some cases 2014 figures are the latest available.

Chart 11.1 Agriculture’s environmental footprint

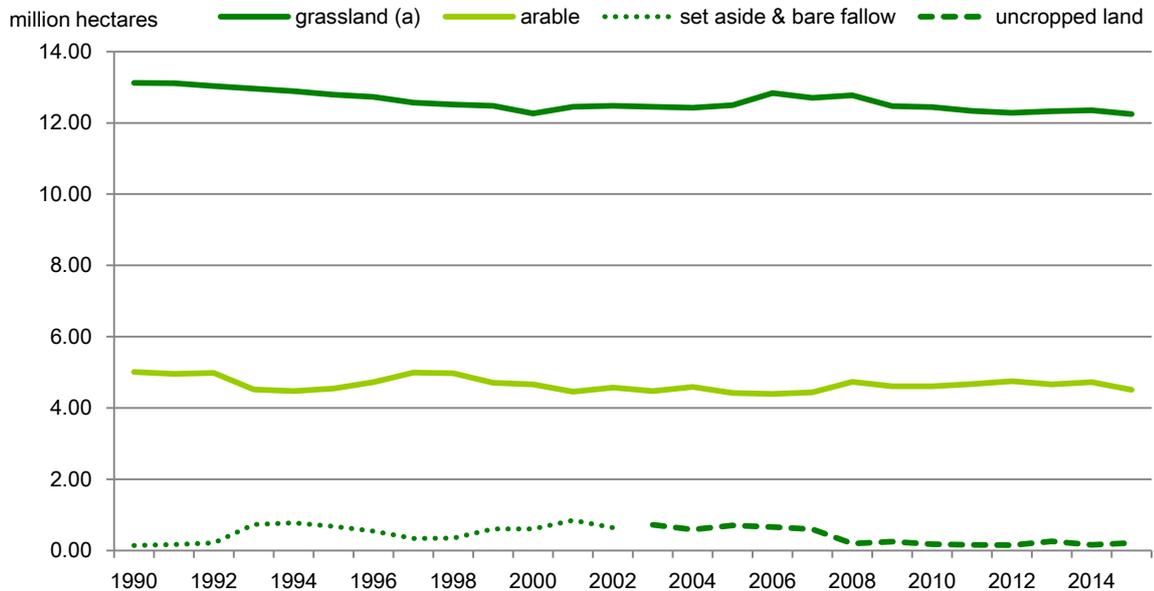


Source: Collated by Defra

Land use

6. Between 1990 and 2015 agricultural land use has remained relatively stable (Chart 11.2) with little change in the proportion of land used for grassland (72%) and crops (27%). The area of uncropped fell sharply in 2008 due to the abolition of set-aside and high cereal prices. Since then the area has fluctuated around that level, influenced by factors such as commodity prices and weather conditions.

Chart 11.2 Agricultural land use



(a) Grassland includes temporary and permanent grasslands, sole rights rough grazing and common rough grazing areas

Source: Defra

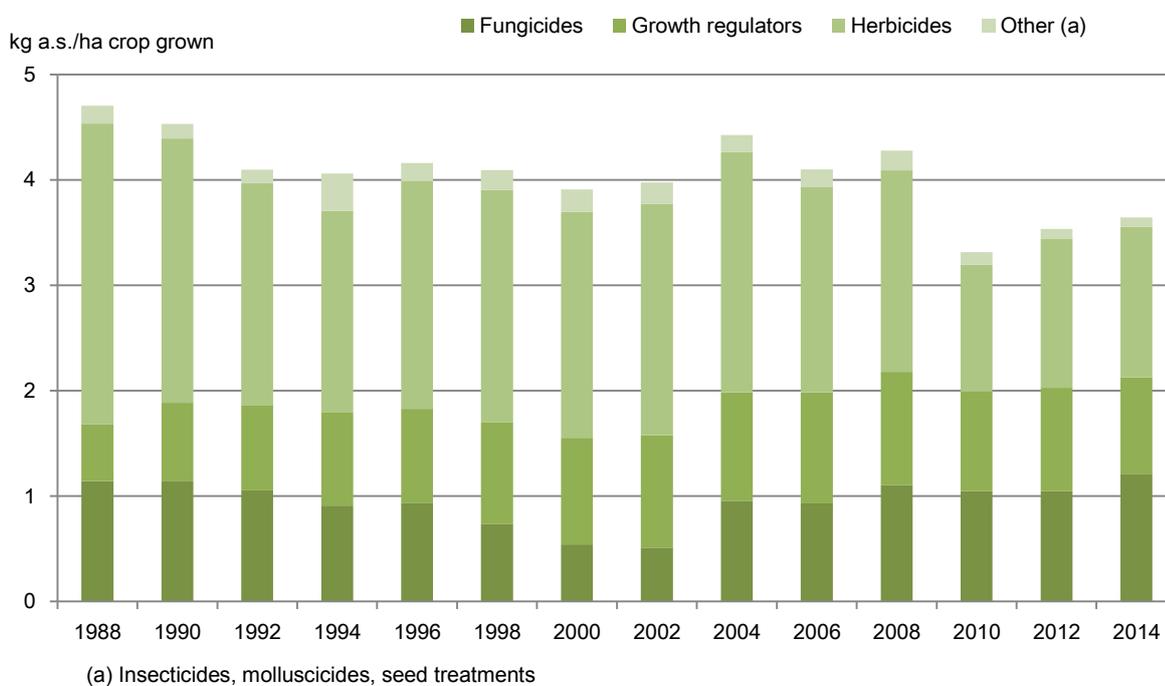
## Agri-environment schemes

7. Agri-environment schemes provide an incentive to farmers to adopt land management and farm practices that are beneficial to the environment. Farmers within the schemes receive payments designed to compensate them for the typical cost of these practices. There are a range of schemes in operation across the United Kingdom with each Administration implementing their own schemes.
8. The number of agreements and areas of land within individual schemes operating within the United Kingdom are detailed in Chapter 10. In 2015 farms within agri-environment schemes accounted for around 43% of the Utilised Agricultural Area, equivalent to 7.4 million hectares. This has risen from around 2.4 million hectares in 2000.

## Pesticide usage

9. Plant protection products are used to manage pests and diseases in crops and to regulate growth. They play a major role in maintaining high crop yields and therefore greater production from agricultural land. However, they can have detrimental impacts on the environment, particularly on terrestrial and aquatic biodiversity.
10. The need for pesticide usage varies from year to year depending on growing conditions particularly the weather which influences disease, weed and pest pressures. In addition, longer term variations are due to changes in the range and activity of active substances, the economics of pest control and resistance issues. In the United Kingdom the treated area of arable crops (number of hectares multiplied by number of applications) has remained relatively stable since 2008, whilst the total weight of pesticide applied has shown an overall decline highlighting the complexities. Further information on pesticide usage on arable crops in the UK can be found at: <https://secure.fera.defra.gov.uk/pusstats/surveys/documents/arable2014v2.pdf>
11. In 2014, cereals accounted for more than 70% of the treated area of arable crops and 70% of the weight of pesticides applied to arable crops. The majority of cereals (more than 80%) are grown in England. Chart 11.3 shows the different types of pesticides used on cereal crops in England and how these have fluctuated over time.

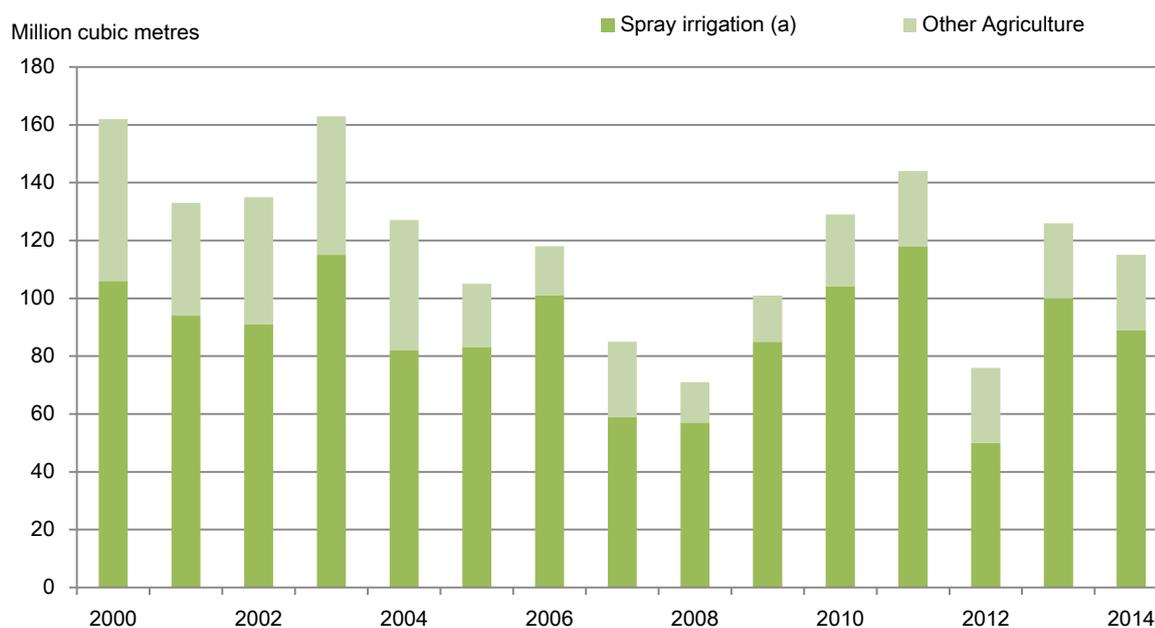
Chart 11.3 Pesticide use on cereals, England



## Water use

12. Water may be abstracted from surface waters and groundwater for irrigation purposes, particularly in areas where there is low rainfall, and for certain crops in order to achieve good crop quality and high yields. Whilst water from agriculture may have positive impacts by helping to recharge aquifers it may also contribute to soil erosion and flooding. Over-abstraction may also damage sensitive aquatic habitats. In England and Wales agriculture accounts for less than 1% of recorded water abstractions by volume; the majority was used in the south and east of England.
13. Levels of water abstraction are highly variable from year to year being greatly influenced by annual rainfall, particularly during the growing season. In 2014 the recorded agricultural abstraction rate in England and Wales was 115 million cubic metres per year, 9% lower than 2013.

Chart 11.4 Water abstraction, England and Wales



(a) Includes small amounts of non-agricultural irrigation

Data source: Environment Agency

Further information on water abstraction can be found at:

<https://www.gov.uk/government/statistics/water-abstraction-estimates>

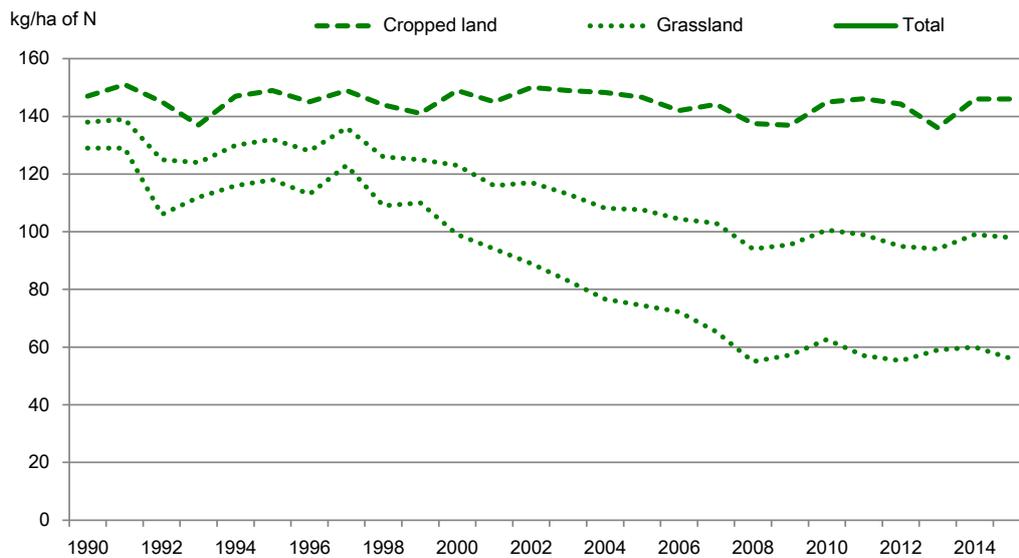
## Fertiliser use

14. Nitrogen and phosphorus are two of the key nutrients required for crop growth. A deficit of these nutrients impacts on crop yields and therefore on levels of production. The main sources of these nutrients are mineral fertilisers and organic fertilisers (e.g. manures and slurries from livestock). Losses of these nutrients to the environment from soils and manures can impact on water quality (nitrogen and phosphorus levels in water bodies), air quality (ammonia emissions) and contribute to climate change (nitrous oxide emissions).
15. Most agricultural soils do not contain enough naturally occurring plant available nitrogen to meet the needs of a crop throughout the growing season so supplementary nitrogen applications are needed each year. Nitrogen usually has a large immediate effect on crop growth, yield and quality. Correct rate and timing of applications is important to ensure crop growth requirements are met.
16. Annual levels of use of nitrogen and phosphate are influenced by fertiliser prices, crop prices, crop type and weather related issues during the growing season, for example the drop in nutrient application rates in 2009 was related to high fertiliser prices.
17. For Great Britain between 1990 and 2015 the overall mineral nitrogen application rate on cropped land has largely been in the range of 145-150 kg/ha. 2013 saw a fall to 136 kg/ha due to more spring cropping as a result of adverse weather during autumn 2012. However, in 2014 the nitrogen application rate increased to 146 kg/ha, seeing a return to more typical levels. This level was

maintained in 2015 which saw similar growing conditions and typical application rates. For grassland, nutrient application rates have always been lower than for cropped land. Between 1990 and 2015 there has been a downward trend in the overall mineral nitrogen application rate on grassland and in 2015 this was 56 kg/ha (Chart 11.5). A reduction in total cattle numbers is thought to have contributed to this, possibly in conjunction with some improvement in manure use efficiency.

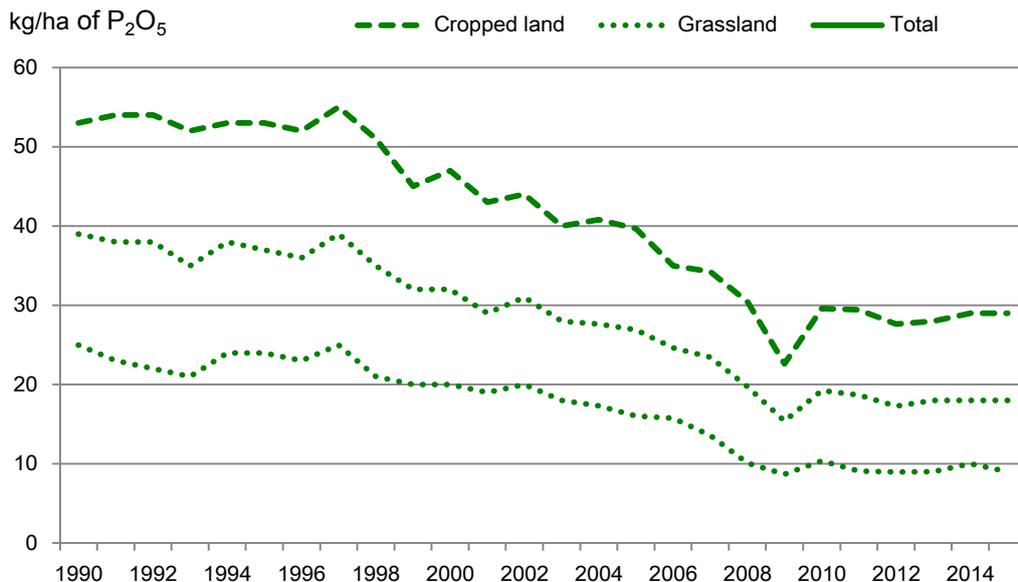
18. Phosphate is applied in fertilisers and manures, particularly to replace the quantities removed in harvested crops. Most British soils are able to hold large quantities of phosphate in forms that are available for crop uptake over several years. Therefore managing the supply of phosphate is based on maintaining appropriate levels in the soil with the timing of applications less critical.
19. Overall mineral phosphate application rates have declined between 1990 and 2015 to now stand at 18 kg/ha in 2015 (Chart 11.6). This decline has levelled off in recent years.

Chart 11.5 Nitrogen (N) use (kg/ha) on all crops and grass, Great Britain



Source: BSFP

Chart 11.6 Phosphate (P<sub>2</sub>O<sub>5</sub>) use (kg/ha) on all crops and grass, Great Britain



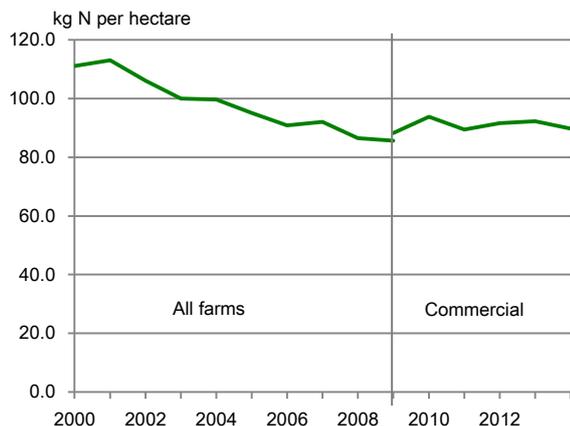
Source: BSFP

Further information is available in the annual report of the British Survey of Fertiliser Practice and the accompanying Statistical Notice which can be found at: <https://www.gov.uk/government/collections/fertiliser-usage>

## Soil nutrient balances

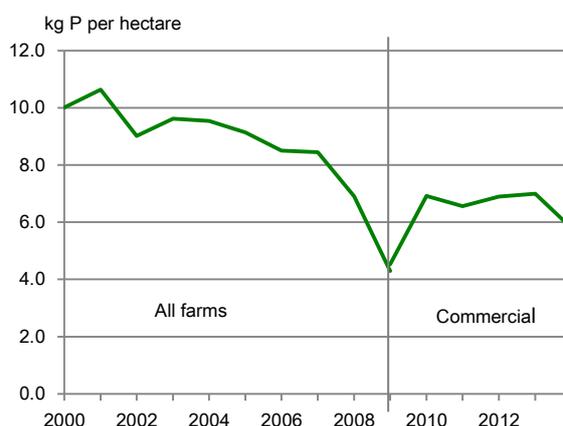
20. Soil nutrient balances provide an indication of the overall environmental pressure from nitrogen and phosphorus in agricultural soils. They measure the difference between nutrients applied to soils (largely as fertilisers and manures) and those removed from soils by the growth of crops, including grass for fodder, and grazing. An increase in the balance per hectare indicates a greater environmental risk whereas a decrease in the balance per hectare broadly indicates a reduced environmental risk from nutrient losses and their associated emissions. There is a theoretical risk that nutrient deficits lead to poor soil fertility and subsequent loss of yields.

Chart 11.7 Nitrogen (N) soil nutrient balance



Source: Defra

Chart 11.8 Phosphorus (P) soil nutrient balance



Source: Defra

21. Provisional estimates for 2014 show that the nitrogen balance for the UK was a surplus of 90 kg/ha of managed agricultural land (Chart 11.7). This is a decrease of 3 kg/ha (-3%) compared to 2013, and a reduction of 21 kg/ha (-19%) compared to 2000, continuing the long-term downward trend.
22. The reduction between 2013 and 2014 has been mainly driven by an increase in offtake (via harvested crops and crop residues) which more than offset an increase in inputs (mainly from inorganic manufactured fertilisers) over the same period.
23. The main drivers for overall reductions in the surplus of nitrogen since 2000 have been decreases in the application of mineral fertilisers and manure production (due to lower livestock numbers), although this has been partially offset by a reduction in the nitrogen offtake (particularly forage) over the same period.
24. The UK phosphorus balance was estimated to be a surplus of 6 kg/ha of managed agricultural land in 2014 (Chart 11.8). This is a decrease of 1 kg/ha (-17%) compared to 2013 and a reduction of 4 kg/ha (-42%) compared to 2000.
25. As with nitrogen, the reduction between 2013 and 2014 has been mainly driven by an increase in offtake while inputs increased by a much smaller margin in comparison. In the longer term the trend is downward, again with similar drivers to nitrogen.

Further information concerning soil nutrient balances can be found at:

<https://www.gov.uk/government/statistics/uk-and-england-soil-nutrient-balances-2014>

## Water quality

26. Agriculture contributes to the pollution of water bodies through fertilisers and manure (nutrients), pesticides, sediments and faecal bacteria. Rainfall may wash a proportion of fertiliser off fields into local water bodies or cause soluble nutrients to filter into groundwater. Pesticides can be washed into water bodies by rainwater or may enter them directly if spraying close to water and can also enter groundwater via soil infiltration. Erosion washes topsoil into water bodies. In additions, soils can carry large amounts of phosphates and agri-chemicals that bond to clay particles.

27. High nutrient concentrations, particularly phosphorus, can cause nutrient enrichment (eutrophication) resulting in poor water quality from excessive growth of macrophytes and algae and low dissolved oxygen levels at night. Excessive levels of nutrients must be removed from water bodies used for drinking water to meet legal limits, with water companies incurring significant costs. It is estimated that agriculture accounts for around 61% of the total nitrogen in river water in England and Wales<sup>2</sup> and around 28% of the total phosphorus load in river water in Great Britain<sup>3</sup> although this estimate may also include phosphorus from septic tanks<sup>4</sup>.
28. Due to the implementation of the Water Framework Directive (WFD) a revised approach to monitoring water quality across the UK was introduced in 2009. The WFD assesses water quality using three categories (ecological quality, chemical quality and hydrological quality). Each category is assigned a grade and these are combined to provide an overall classification. The combined score is based on 'one out, all out', e.g. if one category is ranked as 'poor' the water body will be classified as 'poor'.
29. There was a small decrease in the overall number of water bodies awarded high or good surface water status between 2010 and 2015. In 2015, 35% of surface water bodies assessed under WFD in the UK were in high or good status. This reflects very little change from 36% of surface water bodies assessed in 2010. Diffuse water pollution from agriculture and rural land use is directly attributed to 28% of failures to meet the WFD standards in England<sup>5</sup>.

Further information on the status of water bodies in the United Kingdom can be found at:  
<http://jncc.defra.gov.uk/page-4250>

## Greenhouse gas emissions

30. Agriculture accounts for approximately 10% of total greenhouse gas emissions in the UK. The three greenhouse gasses emitted by agriculture are nitrous oxide, methane and carbon dioxide.
31. Agriculture is the major source of both nitrous oxide and methane emissions in the UK accounting for approximately three quarters of total nitrous oxide emissions and half of all methane emissions in 2014. In contrast agriculture only accounted for about 1% of total carbon dioxide emissions in the UK.
32. Nearly 90% of agricultural nitrous oxide emissions come from soils, particularly as a result of nitrogen fertiliser application, manure (both applied and excreted on pasture) and leaching/run-off. Between 1990 and 2014, nitrous oxide emissions from agriculture are estimated to have fallen by 15% (Chart 11.9). This is consistent with trends in fertiliser usage over the same period.
33. Almost 87% of methane emissions from agriculture arise from enteric fermentation (digestive processes) in ruminating animals with manure management practices accounting for the remaining 13%. Between 1990 and 2014 methane emissions from agriculture are estimated to have fallen by 16% mainly as a result of decreasing livestock numbers, particularly cattle (Chart 11.10).

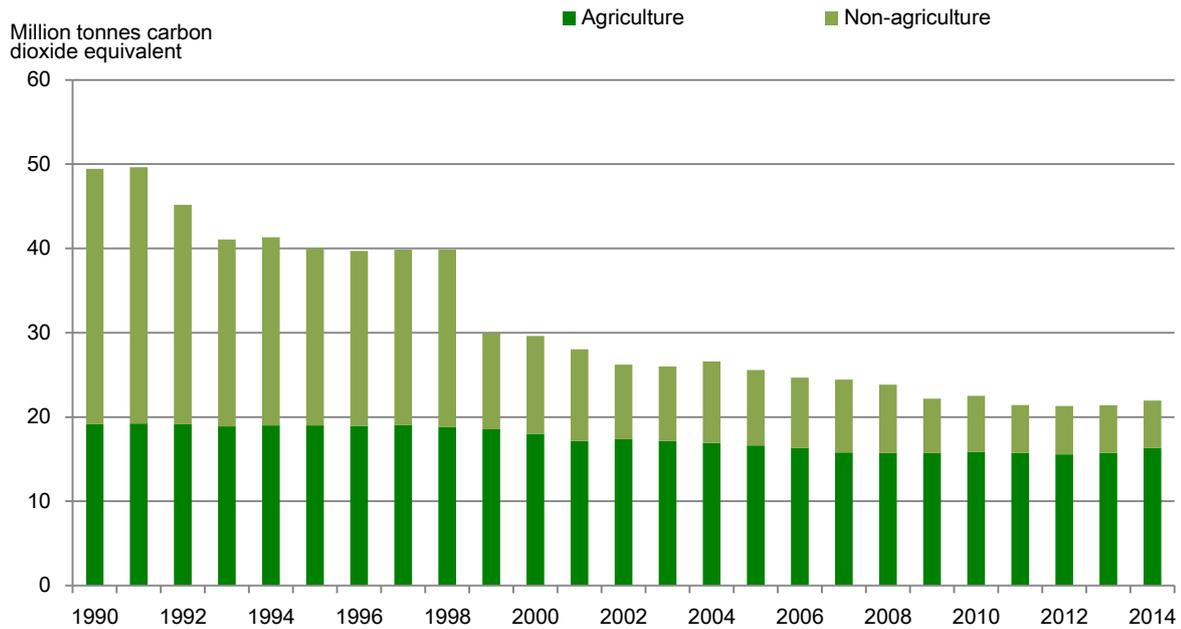
<sup>2</sup> Hunt, D.T.E., *et al*, 2004, Updating an estimate of the sources of nitrogen to waters in England and Wales. Defra project WT03016.

<sup>3</sup> White, P.J. and Hammond, J.P., 2006, Updating the estimate of the sources of phosphorus in UK waters. Defra project WT0701CSF.

<sup>4</sup> May, L., *et al*, 2011, The impact of phosphorus inputs from small discharges on designated freshwater sites. Report to Natural England and Broads Authority, SWR/CONTRACTS/08-09/112.

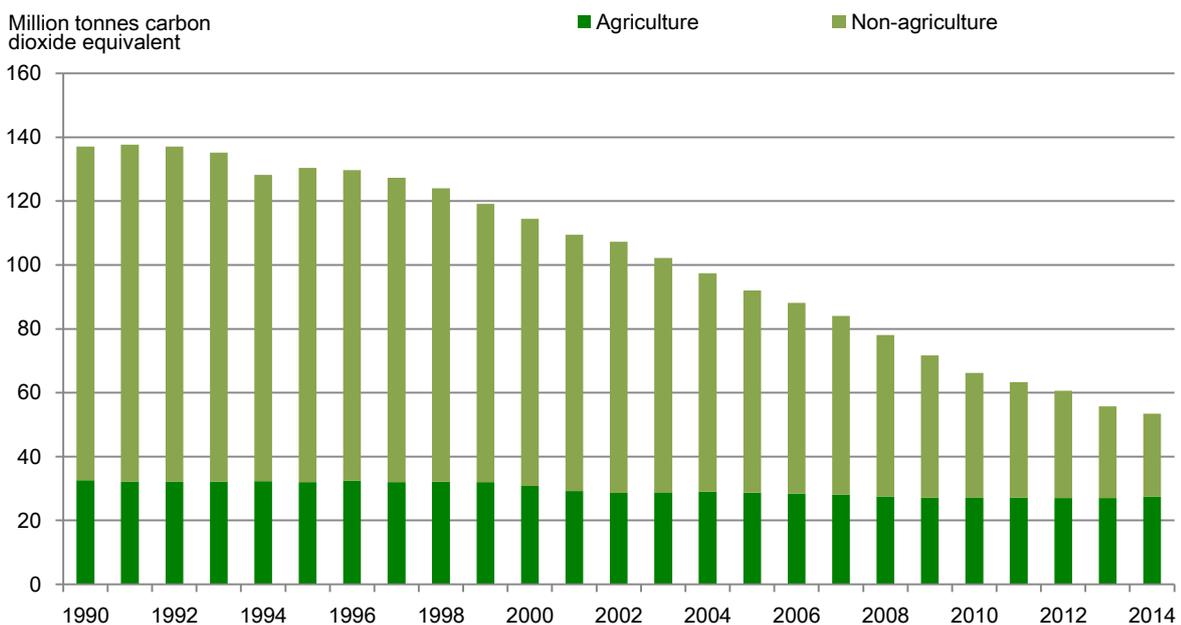
<sup>5</sup> POSTnote 478 October 2014 Diffuse Pollution of Water by Agriculture,

Chart 11.9 Nitrous oxide emissions from agriculture



Source: DECC

Chart 11.10 Methane emissions from agriculture



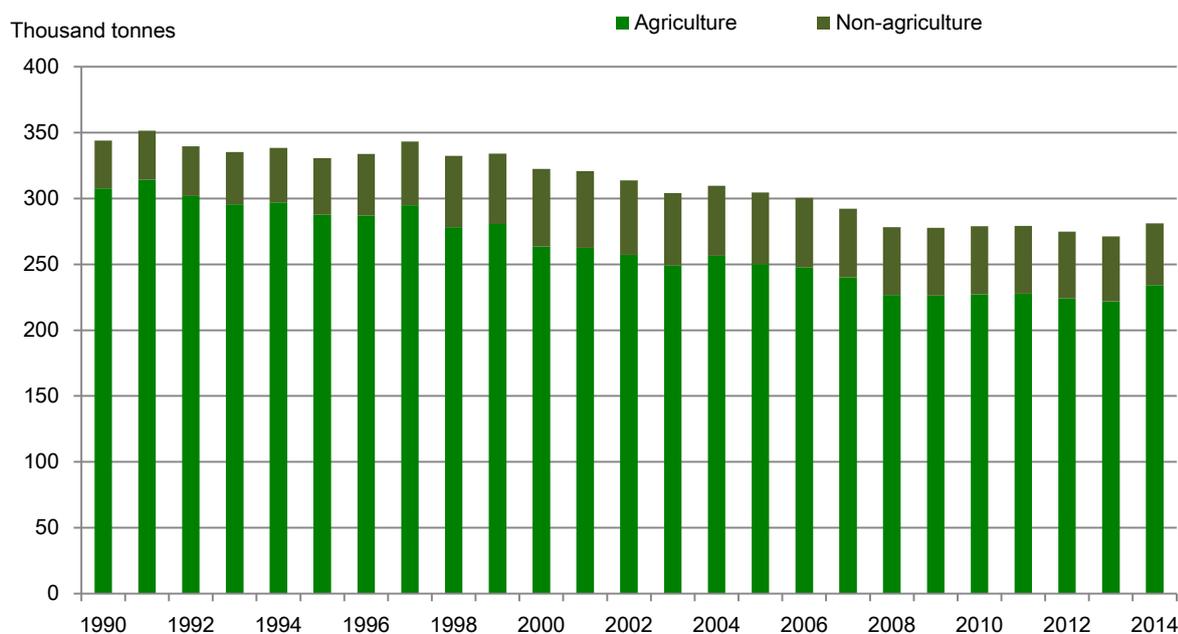
Source: DECC

Further information on greenhouse gas emissions from agriculture can be found at: <https://www.gov.uk/government/statistical-data-sets/agri-environment-indicators>.

## Air quality

34. Ammonia emissions impact on air quality and subsequently human and animal health. In addition, deposition of ammonia can damage sensitive habitats due to eutrophication and the acidification of soils. In 2014 agriculture accounted for almost 83% of the UK's ammonia emissions.
35. The primary source of ammonia emissions in the UK is agricultural livestock and in particular cattle. Between 1990 and 2014 ammonia emissions from agriculture are estimated to have fallen by 28% due to reductions in cattle numbers and more efficient fertiliser use (Chart 11.9).

Chart 11.11 Ammonia emissions from agriculture



Source: DECC

Further information on total ammonia emissions can be found at:

[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/388195/Emissions\\_of\\_air\\_pollutants\\_statistical\\_release\\_2014.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/388195/Emissions_of_air_pollutants_statistical_release_2014.pdf).

## Soils

36. The success of agriculture in the UK depends upon healthy soils; they are arguably a farmer's most valuable asset. Soil degradation costs England and Wales an estimated £0.9bn - £1.4bn per year<sup>6</sup>. In the face of a changing climate and increase in food demand, it is important to mitigate the risks to long-term productive capacity and encourage farmers to manage their soils in a sustainable way. While rates of soil erosion in England are not excessively high, it is estimated to affect around 17 per cent of land in England and Wales with impacts in the form of loss of productive capacity and nutrients, but also off site costs to the environment. Around 3.9 million hectares of our soils are at risk of soil compaction which could lead to a total yield penalty of around £163 million per year.<sup>7</sup> The total yield penalty attributable to compaction in England and Wales was estimated in 2011 to be around £163 million per year<sup>8</sup>.
37. Actions to improve soil organic matter can be mutually beneficial for soil and production. For example, early establishment of crops in the autumn reduces soil erosion risk during the late autumn and winter months<sup>9</sup> which can also increase winter cereal yields<sup>10</sup>.

<sup>6</sup> SP1606 Total costs of soil degradation project 2011 Defra.

<sup>7</sup> SP1606 Total costs of soil degradation project 2011 Defra.

<sup>8</sup> SP1606

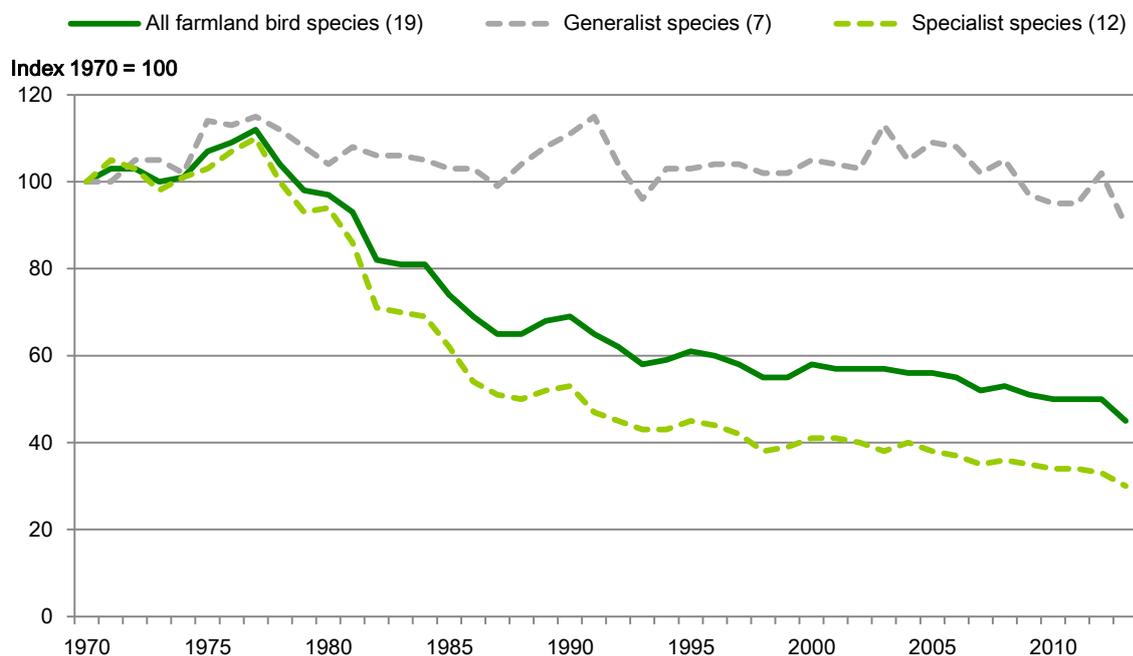
<sup>9</sup> (Chambers et al. 2000; Evans 1990)

<sup>10</sup> Green et al. (1985) found a 0.35% reduction in wheat yield and a 0.43% reduction in barley yield for every day of sowing later than mid-September.

## Biodiversity

38. Bird populations are considered to be a good indicator of the general state of wildlife as they have a wide habitat distribution, they are near the top of the food chain and there are long-term datasets available. Agriculture provides valuable resources in terms of winter food, spring forage and nesting habitats for farmland bird populations. The largest declines in farmland bird populations occurred between the late 1970s and early 1990s due to the impact of rapid changes in farmland management. Whilst agri-environment schemes offer specific measures designed to help stabilise and recover farmland bird populations, the situation is complex with other pressures such as weather effects and disease pressures adversely impacting on some species.
39. The farmland bird index comprises 19 species of bird. The long-term decline of farmland birds in the UK has been mainly driven by the decline of the 12 species known as the 'specialists' that are restricted to, or highly dependent on, farmland habitats (Chart 11.12). Between 1970 and 2014, populations of farmland specialists declined by about 70% whereas farmland generalists have declined by about 10%. In 2014 the farmland bird index is less than half (46%) of its 1970 level.

Chart 11.12 Farmland Bird Index



Source: BTO/RSPB

Further information on the farmland bird index can be found at:  
<https://www.gov.uk/government/statistics/wild-bird-populations-in-the-uk>.

# Chapter 12 Organic Farming

## Summary

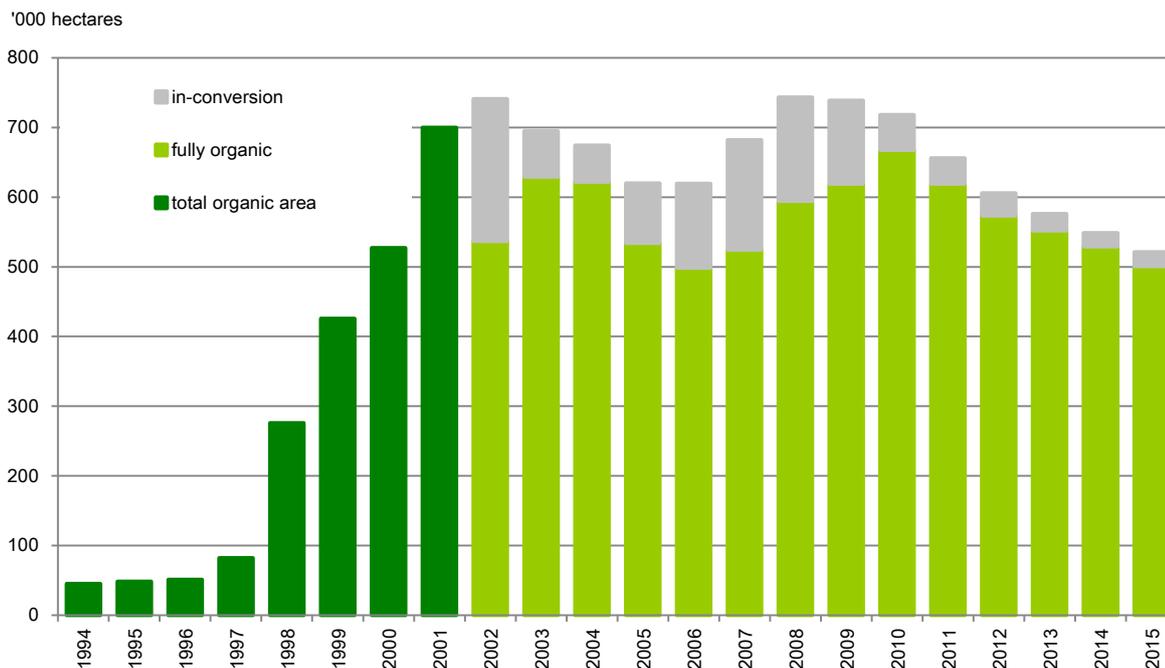
In 2015:

- The United Kingdom had a total area of 521 thousand hectares of land farmed organically, down from 549 thousand hectares in 2014.
- The area in-conversion expressed as a percentage of the total organic area rose slightly, the first rise since 2007.
- England has the majority of organically managed land in the UK with 58% of the total area, followed by Scotland with 24%, Wales with 16% and Northern Ireland with 2.0%. Within England nearly half of all organic land falls within the South West region with 48% of the area for England, followed by the South East (including London) with 15%.
- The number of organic producers and processors rose slightly, with the number of producers continuing to decline, whilst the number of processors rose for the second year running and now stands at 2,454, the highest number since 2008.
- Despite an 8.8% fall in numbers, sheep remained the most popular livestock species with around 874 thousand animals.

## Introduction

1. Organic farming is a method of farming that requires farmers to operate to a system based on ecological principles and which imposes strict limitations on the inputs that can be used in order to minimise damage to the environment and wildlife. Emphasis is placed on natural methods of production and pest control.
2. All foods sold as organic must originate from growers, processors and importers who are registered with an approved certification body and subject to regular inspection. During these inspections, the crop areas and numbers of livestock present on the organic holding are recorded. Due to the nature of the inspections, the data is collected at varying times through the year. The data presented in this chapter therefore do not give an exact snapshot of organic farming at any specific time of year and should be considered when interpreting the results.

Chart 12.1 Area of land in-conversion and fully organic



Area of land farmed organically (table 12.1)

- In 2015, the United Kingdom had a total area of 521 thousand hectares of land farmed organically (i.e. the fully converted area and area under conversion), down from 549 thousand hectares in 2014. Since 2008 when the area of land farmed organically peaked, the organically farmed area has declined by 30%.
- The organically farmed area represents 3.0% of the total farmed area on agricultural holdings in the United Kingdom. Organic production comes from fully converted land. Before an area can be considered as fully organic, it must undergo a conversion process. The area in-conversion showed a small increase in 2015, the first rise since 2007.

Land use and livestock numbers (tables 12.2, 12.5)

- Permanent pasture accounts for the biggest share of the organic area (67%) followed by temporary pasture (18%) and cereals (7.6%). The three main crop types grown organically are cereals, vegetables including potatoes and other arable crops. All have shown a decline since the late 2000s, mirroring the fall in the land area farmed organically since 2008. Poultry continues to be the most popular livestock type farmed organically in the United Kingdom, rising by 6.7% in 2015 to just over 2.5 million birds. In the red meat sector despite a fall of 8.8%, sheep remained the most popular species with around 874 thousand animals in 2015. Cattle numbers also declined in 2015 to 293 thousand animals compared to 304 thousand in 2014 whilst the number of pigs increased by 5.8% to 30 thousand animals.

Processors (tables 12.3, 12.4)

- There were 6,056 certified organic processors (including agricultural producers who are also processors) in the United Kingdom in 2015, a slight increase compared to 2014. The majority (76%) of them were in England. The number of crop producers and livestock producers both saw a drop in 2015, falling by 3.5% and 2.9% respectively.

**Table 12.1 Organic and in-conversion land by region**

Enquiries: Sarah Thompson on +44 (0)20 802 66462

email: [sarah.thompson@defra.gsi.gov.uk](mailto:sarah.thompson@defra.gsi.gov.uk)

Thousand hectares

	2011	2012	2013	2014	2015
<b>Land, in-conversion</b>					
North East	2.9	2.7	1.0	0.8	0.3
North West	1.4	1.1	0.9	0.6	0.3
Yorkshire & Humberside	0.7	0.6	0.5	0.6	0.5
East Midlands	0.5	0.6	0.7	0.9	0.7
West Midlands	1.8	1.4	0.8	1.2	1.0
Eastern	1.0	0.7	0.7	0.5	1.0
South East (inc. London)	3.7	3.1	3.0	1.9	0.7
South West	13.5	8.9	6.3	6.1	5.5
<b>England</b>	<b>25.4</b>	<b>19.2</b>	<b>14.0</b>	<b>12.5</b>	<b>10.0</b>
Wales	2.4	1.5	1.9	4.1	9.4
Scotland	5.1	8.0	8.4	3.0	1.0
Northern Ireland	4.0	3.6	0.1	0.2	0.3
<b>United Kingdom</b>	<b>36.9</b>	<b>32.2</b>	<b>24.4</b>	<b>19.7</b>	<b>20.6</b>
<b>Land, fully organic</b>					
North East	28.1	27.3	26.9	26.3	27.6
North West	16.4	15.5	14.0	13.6	13.8
Yorkshire & Humberside	12.5	9.9	10.2	10.1	10.2
East Midlands	15.2	15.5	14.1	13.7	13.5
West Midlands	28.9	30.6	30.8	29.3	28.3
Eastern	15.8	14.1	14.1	13.8	13.7
South East (inc. London)	51.4	46.5	48.1	45.6	45.0
South West	157.2	145.5	144.2	143.1	141.6
<b>England</b>	<b>325.6</b>	<b>304.8</b>	<b>302.4</b>	<b>295.7</b>	<b>293.7</b>
Wales	120.4	118.4	100.0	91.6	73.5
Scotland	164.8	143.7	140.0	132.9	125.3
Northern Ireland	8.3	6.6	9.3	8.8	8.2
<b>United Kingdom</b>	<b>619.1</b>	<b>573.4</b>	<b>551.7</b>	<b>529.0</b>	<b>500.8</b>
<b>Total UK organic land (in-conversion &amp; fully organic)</b>	<b>656.0</b>	<b>605.7</b>	<b>576.0</b>	<b>548.6</b>	<b>521.4</b>

Source: Organic certification bodies collated by Defra statistics

Table 12.2 Organic and in-conversion land use; United Kingdom

Enquiries: Sarah Thompson on +44 (0)20 802 66462

 email: [sarah.thompson@defra.gsi.gov.uk](mailto:sarah.thompson@defra.gsi.gov.uk)

Thousand hectares

	2011	2012	2013	2014	2015
<b>Land, in-conversion</b>					
Cereals	1.2	1.5	1.4	1.0	1.0
Other crops	0.4	0.3	0.2	0.3	0.4
Fruit & nuts	0.2	0.1	0.1	0.1	0.0
Vegetables (including potatoes)	0.3	0.3	0.2	0.1	0.1
Herbs & ornamentals (b)	0.5	0.3	0.7	0.6	0.1
Temporary pasture	5.8	5.5	3.8	3.2	3.1
Permanent pasture (a)	24.4	22.0	16.6	13.5	15.1
Woodland (b)	1.7	1.0	0.6	0.6	0.4
Unutilised land	2.5	1.3	0.8	0.3	0.3
<b>Total</b>	<b>36.9</b>	<b>32.2</b>	<b>24.4</b>	<b>19.7</b>	<b>20.6</b>
<b>Land, fully organic</b>					
Cereals	51.3	46.4	42.4	41.2	38.6
Other crops	8.9	8.1	7.4	7.0	6.6
Fruit & nuts	2.0	2.0	2.0	2.0	1.9
Vegetables (including potatoes)	15.4	12.0	11.2	9.3	10.2
Herbs & ornamentals (b)	5.7	5.5	6.1	7.9	6.2
Temporary pasture	110.3	100.6	95.1	90.5	89.1
Permanent pasture (a)	410.5	383.6	371.1	356.1	332.0
Woodland (b)	6.6	6.4	6.9	6.4	6.6
Unutilised land	8.4	8.8	9.6	8.4	9.7
<b>Total</b>	<b>619.1</b>	<b>573.4</b>	<b>551.7</b>	<b>529.0</b>	<b>500.8</b>

Source: Organic certification bodies collated by Defra statistics

(a) Includes rough grazing.

(b) The areas for 2014 have been revised following a data correction. All other areas, including the totals, were unchanged.

Table 12.3 Organic producers and/or processors (a) – by region

Enquiries: Sarah Thompson on +44 (0)20 802 66462

 email: [sarah.thompson@defra.gsi.gov.uk](mailto:sarah.thompson@defra.gsi.gov.uk)

Number of businesses

	2011	2012	2013	2014	2015
North East	152	137	127	130	137
North West	301	273	253	246	277
Yorkshire & Humberside	278	262	240	238	257
East Midlands	383	366	351	346	329
West Midlands	476	442	426	424	438
Eastern	481	456	449	445	457
South East (inc. London)	975	950	957	1 020	1 083
South West	1 851	1 706	1 616	1 605	1 601
<b>England</b>	<b>4 897</b>	<b>4 592</b>	<b>4 419</b>	<b>4 454</b>	<b>4 579</b>
Wales	1 119	1 080	913	779	741
Scotland	679	611	551	576	539
Northern Ireland	234	204	189	193	197
<b>United Kingdom</b>	<b>6 929</b>	<b>6 487</b>	<b>6 072</b>	<b>6 002</b>	<b>6 056</b>

Source: Organic certification bodies collated by Defra statistics

(a) Processors can include abattoirs, bakers, storers and wholesalers. The recorded location depends on the address registered with the certifier bodies and so larger businesses may be recorded at their headquarters.

## Table 12.4 Numbers of crop/livestock organic producers and processors 2015 (a) – by region

Enquiries: Sarah Thompson on +44 (0)20 802 66462

email: [sarah.thompson@defra.gsi.gov.uk](mailto:sarah.thompson@defra.gsi.gov.uk)

Number of businesses				
	No. crop producers	No. crop producers and processors	No. livestock producers	No. livestock producers and processors
North East	93	2	79	2
North West	114	5	85	4
Yorkshire & Humberside	100	5	75	4
East Midlands	132	8	106	6
West Midlands	239	12	169	11
Eastern	141	12	65	9
South East (inc. London)	327	25	187	21
South West	1087	61	827	59
<b>England</b>	<b>2 233</b>	<b>130</b>	<b>1 593</b>	<b>116</b>
Wales	601	23	515	18
Scotland	323	6	222	6
Northern Ireland	114	0	107	0
<b>United Kingdom</b>	<b>3271</b>	<b>159</b>	<b>2437</b>	<b>140</b>

Source: Organic certification bodies collated by Defra statistics

(a) Mixed organic holdings will be recorded under both the crop and livestock headings above, so the above numbers cannot be added together to get total producers / processors by region as this will lead to double counting. For totals please see Table 12.3.

## Table 12.5 Estimates of organic and in-conversion livestock numbers (a); United Kingdom

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Thousand head					
	2011	2012	2013	2014	2015
Cattle	335	290	283	304	293
Sheep	1 162	1 152	999	959	874
Pigs	53	35	30	28	30
Poultry	2 838	2 458	2 488	2 399	2 560
Other livestock (b)	5	4	4	6	4

Source: Organic certification bodies collated by Defra statistics

(a) Certification bodies record production data at various times of the year, so figures should be treated with care as they will not represent an exact snapshot of organic livestock farming.

(b) "Other Livestock" includes goats, farmed deer, horses, camelids and any livestock not recorded elsewhere.

# Chapter 13 Overseas Trade

## Summary

In 2015:

- The value of food, feed and drink (FFD) exports was £18.0 billion, a 4.3% fall on 2014.
- The value of food, feed and drink imports decreased by 2.9% to £38.5 billion.
- The trade gap in food, feed and drink narrowed by 1.6% to £20.5 billion.
- Principal destinations for exports were the Irish Republic (17%), France (11%), USA (10%) and the Netherlands (7.1%).
- The most important countries of despatch for imports into the UK remained the Netherlands (12%), Irish Republic (10%), France (10%), Germany (9.2%) and Spain (6.8%).
- Whisky had the highest export value, totalling £3.9 billion. This was a fall of 2.9% on 2014's value in real terms, though it is still 3.7% higher than 2010's value of £3.8bn (at 2015 prices). Whisky imports were up 13% from 2014's total of £198 million.
- Fresh fruit and vegetables together remain the highest value categories for imports, totalling £5.2 billion, which is a 4.9% increase on 2014 at 2015 prices. Exports of fresh vegetables increased by 23% to £98 million from 2014's total of £80 million, and they have risen by 42% on the previous 10 year average (at 2015 prices). Exports of fresh fruit rose by 24%.
- Exports of unmilled wheat totalled £264 million, a rise of 60% on 2014's total of £165 million as domestic production continued to recover from 2012's challenging planting conditions. Imports of unmilled wheat decreased by 20% to £276 million, so the UK continues to be a net importer of wheat for the fourth year in succession.

## Introduction

1. The Overseas Trade Statistics presented in this chapter are based on data collected by HM Revenue and Customs and are compiled from returns made by importers and exporters. Before the completion of the Single Market in the European Union at the end of 1992, all overseas trade data for the United Kingdom was compiled from Customs declarations made by traders. Since the beginning of 1993, the collection of trade statistics has been divided into two categories: that transacted between the United Kingdom and countries outside the European Union (extra-EU trade) and that between the United Kingdom and its European Union partners (intra-EU trade). Extra-EU trade statistics are compiled, as before, from Customs declarations by importers, exporters and their agents, while intra-EU trade statistics are compiled using a system linked to traders' VAT returns, known as Intrastat.
2. The trade statistics shown here may not match those shown in the commodities tables (Chapters 7 and 8) where, for example, trade in meat includes the carcase weight equivalent of trade in live animals and trade in milk is of raw milk before processing, and not of processed and packaged milk and cream as shown here.

## Value of trade in food, feed and drink (chart 13.1, table 13.1)

- The value of exports of food, feed and drink was £18.0 billion in 2015. To compare 2015 exports with previous years it is necessary to adjust for the effects of inflation in the economy. The real terms value of exports was £0.97 billion or 5.1% lower in 2015 than 2014. The longer trend is of rising real terms value. Since 2005 the real terms value of exports has risen by £4.7 billion or 35%. This is a consequence of the combination of the relative strength of sterling, proactive responses to disease related issues, an upward trend in world commodity prices, overall, in the last decade, and the agile response of the UK's food industry to Russian sanctions introduced in 2014.
- The value of imports of food, feed and drink was £38.5 billion in 2015. To compare 2015 imports with previous years it is necessary to adjust for the effects of inflation in the economy. The real terms value of imports was £1.5 billion or 3.7% lower in 2015 than 2014. The longer trend is of rising real terms value. Since 2005 the real terms value of imports has risen by £7.0 billion or 22%.
- In real terms, the trade gap narrowed by 1.6% between 2014 and 2015, but has widened by 13% from £18.2 billion in 2005 to £20.5 billion in 2015.
- Of the 11 food, feed and drink (FFD) categories, the cereals, fruit & veg, animal feed and miscellaneous edible products and preparations categories have seen an increase in exports: the largest increase occurring in the cereals category which showed a rise of 8%. Exports of dairy & eggs showed the largest decrease of 19% at 2015 prices. Exports of fish & fish preparations fell by 16%, and exports of oils & fats fell by 15%.
- The picture for imports was similar, with only three categories, namely coffee & tea, miscellaneous edible products & preparations, and fruit & veg increasing by 7.5%, 7.2% and 3.7% respectively between 2014 and 2015. The two categories which saw the largest fall in imports were dairy & eggs, by 24% to £2.2 billion, and fish & fish preparations, which decreased by 14% in value from £2.7 billion in 2014 to £2.3 billion in 2015.

Chart 13.1 Value of trade in food, feed and drink at 2015 prices; United Kingdom

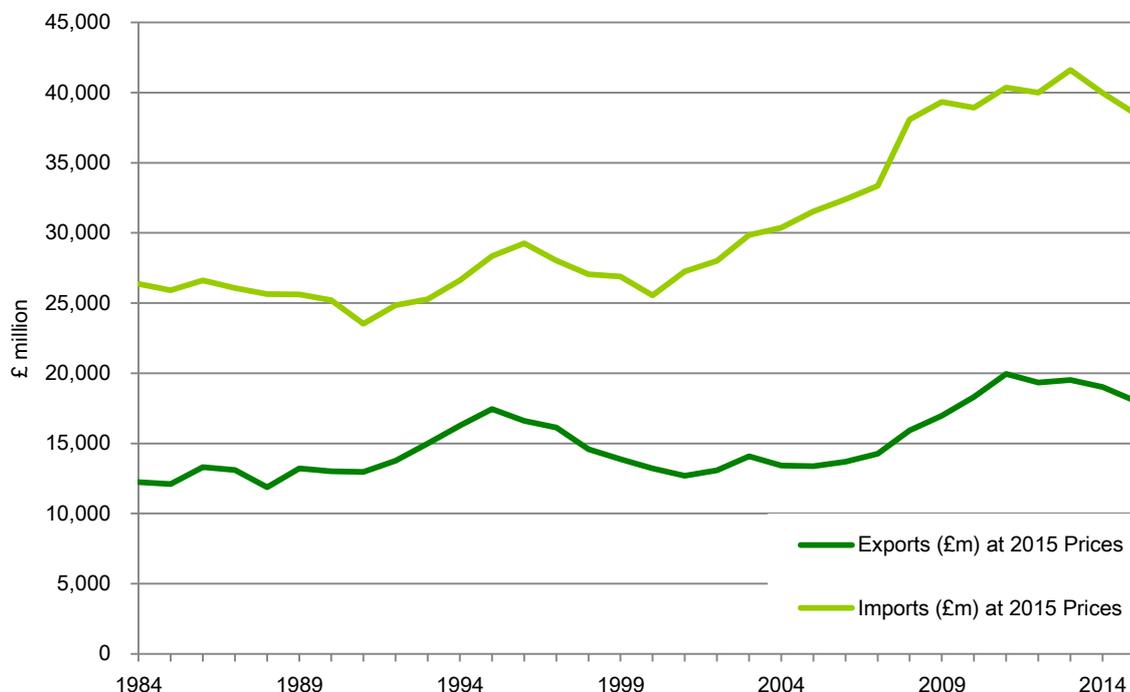


Table 13.1 Value of trade in food, feed and drink at 2015 prices; United Kingdom

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 email: [leigh.riley@defra.gsi.gov.uk](mailto:leigh.riley@defra.gsi.gov.uk)

£ million		Calendar year									
SITC Division		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Code	Type	(provisional)									
<b>Exports</b>											
01	Meat & Meat Preps	912	976	1 320	1 375	1 512	1 771	1 647	1 700	1 669	1 446
02	Dairy & Eggs	873	945	997	931	1 119	1 318	1 215	1 403	1 502	1 218
03	Fish & Fish Preps	1 135	1 149	1 147	1 298	1 453	1 549	1 400	1 492	1 564	1 314
04	Cereals & Cereal Preps	1 487	1 589	1 993	1 975	2 087	2 147	2 019	1 902	1 943	2 098
05	Fruit and Veg & Preps	701	701	784	844	874	933	885	974	909	966
06	Sugar & Sugar Preps	450	457	505	503	475	403	396	381	408	372
07	Coffee, tea, etc.	807	857	986	985	1 089	1 154	1 194	1 256	1 229	1 219
08	Animal feed	437	499	599	651	698	745	850	951	901	908
09	Misc. edible preps	933	912	1 015	1 109	1 180	1 245	1 263	1 427	1 606	1 632
11	Beverages	4 506	4 793	5 194	5 486	6 046	7 182	7 081	7 082	6 508	6 340
22 + S4	Oils/fats & Oilseeds	386	462	505	463	572	766	958	710	627	535
<b>Total</b>		<b>12 628</b>	<b>13 338</b>	<b>15 045</b>	<b>15 620</b>	<b>17 106</b>	<b>19 211</b>	<b>18 909</b>	<b>19 278</b>	<b>18 866</b>	<b>18 048</b>
<b>Imports</b>											
01	Meat & Meat Preps	4 717	4 777	5 332	5 538	5 485	6 063	5 887	5 999	6 002	5 856
02	Dairy & Eggs	2 238	2 190	2 616	2 614	2 668	2 731	2 786	3 005	2 884	2 182
03	Fish & Fish Preps	2 310	2 333	2 512	2 424	2 435	2 707	2 676	2 814	2 743	2 346
04	Cereals & Cereal Preps	1 872	2 250	2 803	2 747	2 545	2 693	3 101	3 642	3 264	3 174
05	Fruit and Veg & Preps	7 183	7 451	8 185	8 027	8 232	8 554	8 548	9 180	8 768	9 097
06	Sugar & Sugar Preps	1 165	1 137	1 324	1 339	1 262	1 349	1 332	1 448	1 328	1 157
07	Coffee, tea, etc.	1 775	1 880	2 222	2 578	2 702	2 962	2 826	2 772	2 897	3 115
08	Animal feed	1 220	1 255	1 625	1 725	1 844	1 792	1 855	2 129	2 040	1 910
09	Misc. edible preps	1 519	1 796	2 213	2 436	2 314	2 571	2 631	2 772	2 788	2 989
11	Beverages	4 578	4 696	4 973	4 952	5 081	5 255	5 369	5 356	5 226	5 124
22+S4	Oils/fats & Oilseeds	1 276	1 420	2 162	1 820	1 785	2 164	2 072	1 982	1 734	1 574
<b>Total</b>		<b>29 854</b>	<b>31 184</b>	<b>35 967</b>	<b>36 202</b>	<b>36 353</b>	<b>38 842</b>	<b>39 085</b>	<b>41 100</b>	<b>39 674</b>	<b>38 524</b>

source: HMRC

Defra's aggregate 'Food, Feed and Drink' is composed of the following divisions from the Standard International Trade Classification:

1. Meat: meat from cattle, sheep, pigs, goats, poultry, horses etc.; preparations including blood, juices, sausages, livers, offal.
  2. Dairy: includes milk (skimmed or otherwise), butter, buttermilk, cream, yoghurt, ice cream, whey, cheese and curd, all types of eggs both in and out of shell.
  3. Fish: All types of edible marine life excluding mammals, fresh, frozen, processed, prepared or preserved.
  4. Cereals: includes rice, wheat, barley, oats, maize, grain sorghum and preparations including sweet biscuits, waffles, gingerbread, and uncooked/unstuffed pasta.
  5. Fruit and vegetables: includes fresh, frozen or prepared fruit (except crystallised) and vegetables, nuts (except groundnuts), vegetable and fruit juices of all kinds except wine (see division 11), jams, marmalades, fruit or nut puree/paste etc.
  6. Sugar: includes both natural sugar and sugar confectionery (but not chocolate or cocoa), both natural and artificial honey, and liquorice.
  7. Coffee, tea, etc.: includes all types of tea, coffee (e.g. green, decaffeinated), extracts and substitutes thereof; cocoa and chocolate (of all kinds): all kinds of spices.
  8. Animal feed: includes hay, fodder, bran, sharps and other residues derived from cereals or leguminous plants, oil-cake and other solid residues, other residues, brewing dregs, all types of pet or animal food.
  9. Miscellaneous: includes margarine, shortening, homogenised products or preparations not elsewhere specified, sauces, vinegar, soups, yeasts, cooked/stuffed pasta, food preparations for infant use.
  11. Drink: includes alcoholic drinks of all kinds; also natural or artificial mineral and aerated waters sweetened or otherwise.
- 22+S4 Oils: includes groundnuts (peanuts), soya beans, sunflower seeds, rape seeds, palm nuts, linseed, poppy seeds etc., lard, pig fat, olive oil, rape oil, corn oil, linseed oil, beeswax etc.

Division 00, which covers all live animals, is excluded from the aggregate 'Food, Feed and Drink' because it includes non-food animals, particularly race horses. S4 stands for Section 4 in the SITC and covers animal and vegetable oils, fats and waxes.

## Trading partners (charts 13.2, 13.3)

8. Principal UK export destinations of food, feed and drink to the European Union in 2015 were the Irish Republic (£3.0 billion), France (£2.0 billion), Netherlands (£1.3 billion) and Germany (£1.1 billion). The principal European Union countries from which FFD items were imported into the United Kingdom in 2015 were the Netherlands (£4.7 billion), France (£3.9 billion), the Irish Republic (£3.9 billion) and Germany (£3.5 billion).
9. Principal non-EU destinations of UK food, feed and drink exports in 2015 were the USA (£1.9 billion), Hong Kong (£342 million) and the UAE (£325 million), while the main non-EU country from which food, feed and drink items were imported into the United Kingdom was the USA (£1.3 billion).

Chart 13.2 Exports of food, feed and drink by country of destination 2015; United Kingdom

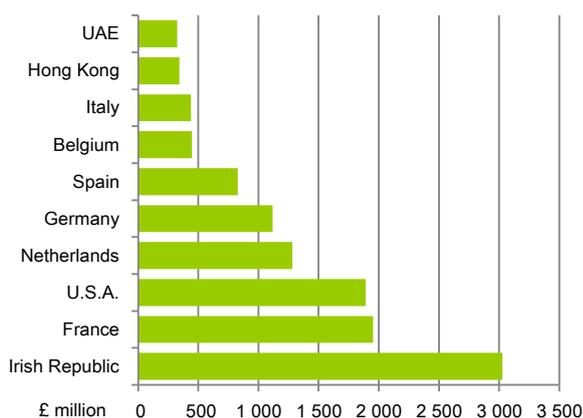
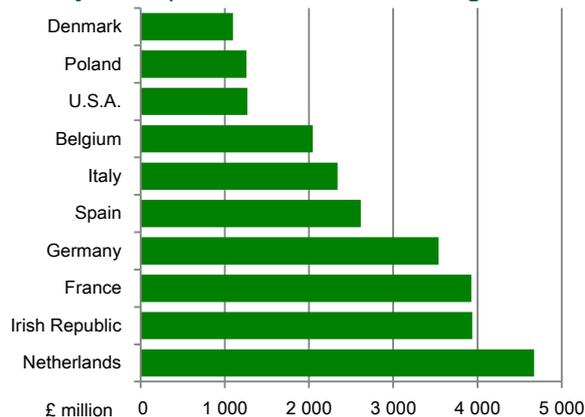


Chart 13.3 Imports of food, feed and drink by country of dispatch 2015; United Kingdom



## Exports and imports by degree of processing (charts 13.4, 13.5)

10. Trade in food, feed and drink covers a wide range of products from raw agricultural commodities through lightly processed foods such as meat, cheese and butter, powdered milk, flour and sugar to highly processed products such as confectionery, canned meats, jams, alcoholic drinks and ice cream. By grouping foods into unprocessed, lightly processed and highly processed additional insights in trading patterns can be found.
  - Exports of highly processed foods such as confectionery, canned meats, jams, alcoholic drinks and ice cream, increased by 50% in value between 2006 and 2015.
  - Exports of lightly processed food and drink, i.e. goods that retain their raw recognisable form, such as meat, cheese, butter and oils & fats rose by 27% in value between 2006 and 2015.
  - Exports of unprocessed commodities, such as fresh fruit & vegetables, nuts, unmilled cereal and eggs increased by 69% in value between 2006 and 2015.
  - Imports of highly processed foods increased by 44% in value between 2006 and 2015.
  - Imports of lightly processed food and drink increased by 19% in value between 2006 and 2015.
  - Imports of unprocessed commodities increased by 27% in value between 2006 and 2015.

Chart 13.4 Exports in food, feed and drink by degree of processing at 2015 prices; United Kingdom

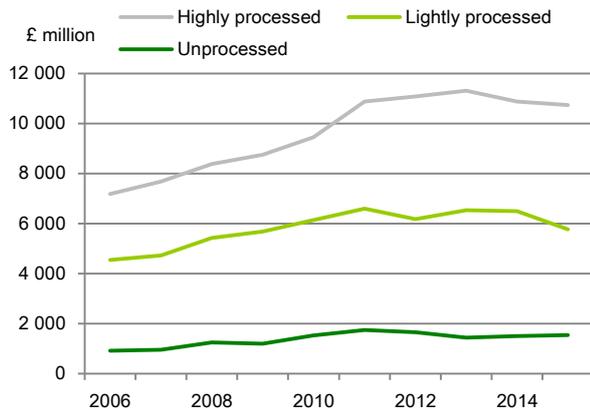
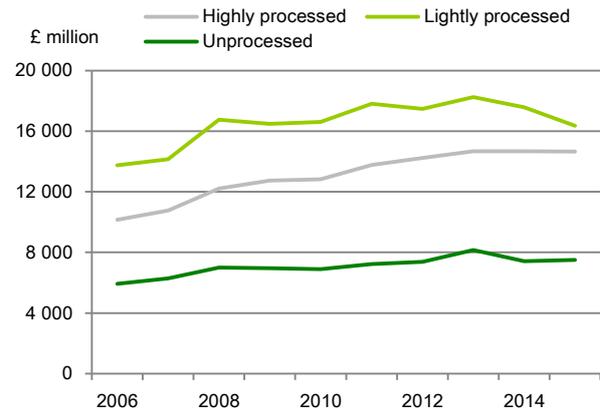


Chart 13.5 Imports in food, feed and drink by degree of processing at 2015 prices; United Kingdom



Value and volume of trade in key commodities (tables 13.2, 13.3)

11. The value of exports across a range of different commodities has broadly increased since 2006. However, in 2015, commodity prices for many sectors fell, due to a slowdown of global economic markets and the effect of exchange rates. The notable exceptions were unmilled wheat and fresh fruit. In 2015, exports of fresh fruit increased by 24% to £97 million, due to a return to more favourable weather conditions, following the poor harvest in 2014.
12. The value of exports of whisky, which represents the highest valued individual food, feed and drink item, fell by 2.9% to £3.9 billion, the fourth annual fall in a row. It is 30% higher than in 2006. The value of exports of unmilled wheat increased by 60% to £264 million in 2015. A recovery after very low exports in 2013 following the poor domestic harvest in 2012. Exports of fresh vegetables increased by 23% in value to £98 million in 2015. Exports of eggs and egg products in 2015 remained at similar levels to the previous year at £96 million.
13. The value of imports across a range of different commodities was broadly similar to 2014. Imports of unmilled wheat fell by 20% to £276 million as a result of good domestic supply. Imports of milk & cream also fell by 14% to £116 million as a result of strong domestic production.
14. The value of wine imports, which is the single highest valued commodity among the imports, fell by 3.1% to £3.0 billion from last year, although this was due to a fall in commodity prices, rather than a reduction in imports. The value of fresh fruit and vegetable imports together accounted for £5.2 billion in 2015 which was a slight increase on the previous year.
15. The overall volume of exports of food, feed and drink was broadly similar in 2015 compared to 2014. Over the longer term, the volume of exports is rising and in 2015 was 8% higher than in 2006. Since 2006 the volume of imports has increased by 15%, nearly twice as much as the rise in exports.

Table 13.2 Trade in key commodities in real terms at 2015 prices; United Kingdom

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£ million		Calendar year									
Commodity	Flow	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015 (provisional)
Whisky	Imports	137	115	122	134	136	137	136	167	198	223
	Exports	3 037	3 365	3 555	3 574	3 802	4 564	4 542	4 458	4 059	3 942
Wine	Imports	2 808	3 003	3 241	3 066	3 180	3 215	3 348	3 263	3 102	3 006
	Exports	206	244	269	361	462	575	462	456	460	447
Cheese	Imports	1 065	1 088	1 358	1 321	1 321	1 342	1 368	1 479	1 459	862
	Exports	277	282	320	315	368	428	424	452	470	386
Poultry meat	Imports	848	908	894	952	1 028	1 142	1 010	1 016	1 061	1 064
	Exports	193	234	247	257	282	325	298	349	306	238
Poultry meat products	Imports	522	558	685	699	742	844	835	866	890	913
	Exports	105	146	155	135	137	152	143	129	136	115
Beef and veal	Imports	751	717	842	800	832	908	902	973	984	1 032
	Exports	111	147	242	287	358	463	404	380	376	342
Wheat, unmilled	Imports	160	243	363	286	217	240	418	674	347	276
	Exports	229	270	459	339	491	436	281	88	165	264
Lamb and mutton	Imports	339	327	356	425	413	436	384	391	408	392
	Exports	280	214	298	352	346	396	367	391	381	302
Pork	Imports	820	784	765	708	709	766	718	755	701	612
	Exports	120	103	150	129	161	181	197	222	210	197
Breakfast cereals	Imports	124	135	166	202	186	195	195	188	195	228
	Exports	379	367	401	460	396	403	375	383	363	369
Milk and cream	Imports	55	62	90	84	111	126	122	145	135	116
	Exports	214	214	227	218	266	314	263	264	263	193
Bacon and ham	Imports	661	659	781	853	776	716	675	658	603	537
	Exports	31	35	82	57	48	63	38	40	38	38
Butter	Imports	402	267	265	267	309	339	313	325	269	263
	Exports	72	77	62	64	87	136	106	148	149	115
Eggs and egg products	Imports	110	125	150	171	150	138	197	184	175	185
	Exports	29	30	43	51	50	51	62	92	97	96
Fresh vegetables	Imports	1 849	1 925	1 976	1 911	2 043	1 980	1 942	2 128	2 022	2 088
	Exports	58	57	62	73	80	77	74	72	80	98
Fresh fruit	Imports	2 504	2 515	2 718	2 715	2 713	2 804	2 814	2 991	2 890	3 066
	Exports	130	94	97	106	109	106	84	111	78	97
Salmon (inc. smoked)	Imports	170	169	171	219	242	267	263	352	369	328
	Exports	237	227	239	323	422	512	460	586	619	488

Source: HMRC

Whisky	includes bourbon, scotch (malted and blended) and other whiskies.
Wine	includes grape must, vermouth and wine of fresh grapes (sparkling and still).
Cheese	includes grated or powdered, processed, blue-veined and fresh (e.g. curd).
Poultrymeat (inc. poultry offal)	includes carcase meat, cuts and offal (inc. liver).
Beef and veal	includes carcase meat and cuts, both bone-in and boneless.
Wheat, unmilled	includes durum, other wheat (inc. spelt) and meslin.
Lamb and mutton	includes carcase meat and cuts, both bone-in and boneless.
Pork	includes carcase meat and cuts, both bone-in and boneless.
Breakfast cereals	includes cereal grains worked or prepared for breakfast cereals
Milk and cream	includes milk (inc. skimmed milk) and cream, not concentrated or sweetened.
Fresh vegetables	excludes potatoes.
Salmon (inc. smoked)	includes fresh, chilled, frozen or smoked, but not canned

Table 13.3 Trade in key commodities by volume; United Kingdom

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Thousand tonnes (unless otherwise specified)		Calendar year									
Commodity	Flow	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015 (provisional)
Whisky (million litres pure alcohol)	Imports	17	14	16	16	16	16	15	23	29	23
	Exports	302	326	308	311	305	361	345	353	344	333
Wine (million litres)	Imports	1 260	1 309	1 289	1 295	1 365	1 371	1 326	1 318	1 425	1 443
	Exports	32	48	44	58	90	88	80	95	104	97
Cheese	Imports	378	403	422	419	436	414	444	468	469	281
	Exports	104	97	88	105	113	124	126	125	134	132
Poultry meat	Imports	382	383	335	340	381	412	394	398	423	451
	Exports	259	292	278	258	270	295	297	350	356	297
Poultry meat products	Imports	206	230	249	241	255	279	292	291	306	336
	Exports	31	46	46	38	38	46	46	42	49	44
Beef and veal	Imports	236	240	247	231	238	235	236	241	255	269
	Exports	41	59	81	83	110	144	120	105	112	100
Wheat, unmilled	Imports	1 028	1 238	1 248	1 390	1 111	902	1 785	2 965	1 824	1 653
	Exports	2 117	1 911	2 766	2 533	3 335	2 287	1 503	448	1 143	1 990
Lamb and mutton	Imports	114	114	112	116	101	88	86	98	93	93
	Exports	87	69	87	96	89	96	95	104	102	79
Pork	Imports	459	463	393	360	363	373	349	352	358	371
	Exports	95	99	118	104	131	144	154	181	182	186
Breakfast cereals	Imports	93	92	103	110	105	108	102	98	108	135
	Exports	175	165	160	171	158	161	150	146	147	156
Milk and cream	Imports	124	133	193	158	193	215	194	245	221	206
	Exports	621	513	532	539	561	648	617	574	654	665
Bacon and ham	Imports	264	277	293	323	313	280	258	250	256	251
	Exports	10	12	31	21	24	34	15	13	14	16
Butter	Imports	147	103	81	96	102	100	104	106	95	108
	Exports	36	32	24	27	27	36	38	45	51	50
Eggs and egg products	Imports	78	93	95	90	75	68	100	95	99	102
	Exports	13	12	14	23	24	17	18	28	21	17
Fresh vegetables	Imports	1 893	1 947	1 957	1 823	1 871	1 975	2 049	2 225	2 179	2 248
	Exports	83	88	80	78	95	89	85	80	119	156
Fresh fruit	Imports	3 470	3 510	3 326	3 175	3 229	3 347	3 408	3 544	3 590	3 682
	Exports	177	147	128	153	142	149	109	143	102	128
Salmon (inc. smoked)	Imports	44	48	47	53	50	57	63	69	74	68
	Exports	54	60	57	71	83	96	100	111	123	113
Food, feed and drink Index, 2005=100	Imports	104	105	107	103	104	107	110	114	115	116
	Exports	102	107	106	109	116	123	122	128	127	126

Source: HMRC

Whisky	includes bourbon, scotch (malted and blended) and other whiskies.
Wine	includes grape must, vermouth and wine of fresh grapes (sparkling and still).
Cheese	includes grated or powdered, processed, blue-veined and fresh (e.g. curd).
Poultrymeat (inc. poultry offal)	includes carcass meat, cuts and offal (inc. liver).
Beef and veal	includes carcass meat and cuts, both bone-in and boneless.
Wheat, unmilled	includes durum, other wheat (inc. spelt) and meslin.
Lamb and mutton	includes carcass meat and cuts, both bone-in and boneless.
Pork	includes carcass meat and cuts, both bone-in and boneless.
Breakfast cereals	includes cereal grains worked or prepared for breakfast cereals
Milk and cream	includes milk (inc. skimmed milk) and cream, not concentrated or sweetened.
Fresh vegetables	excludes potatoes.
Salmon (inc. smoked)	includes fresh, chilled, frozen or smoked, but not canned

## Volume of Trade with EU countries (charts 13.6 to 13.11)

16. This section describes the volume of trade in 3 key commodities between the United Kingdom and the other 27 Member States of the European Union. These commodities have been chosen because the vast majority of UK trade in them is with countries within the EU.

### Bacon and ham

17. Imports of bacon and ham from EU countries have been far in excess of exports for many years. Imports have remained relatively stable over the last 10 years. In 2015, imports stood at 251 thousand tonnes, down from 256 thousand tonnes in 2014. Denmark and the Netherlands provided 73% of all imported bacon and ham, with a further 19% coming from Germany. In 2015, exports increased by 16% to 16 thousand tonnes.

Chart 13.6 Trade with EU countries: bacon and ham

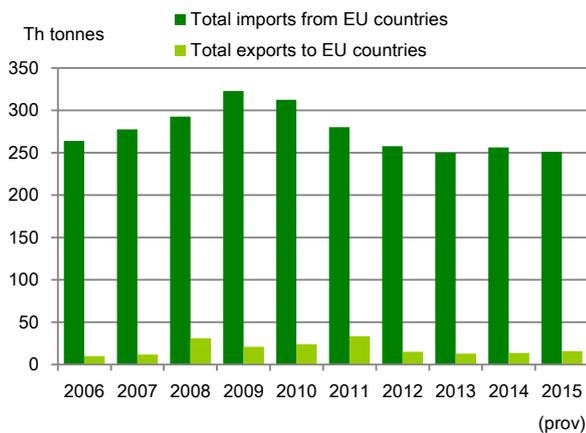
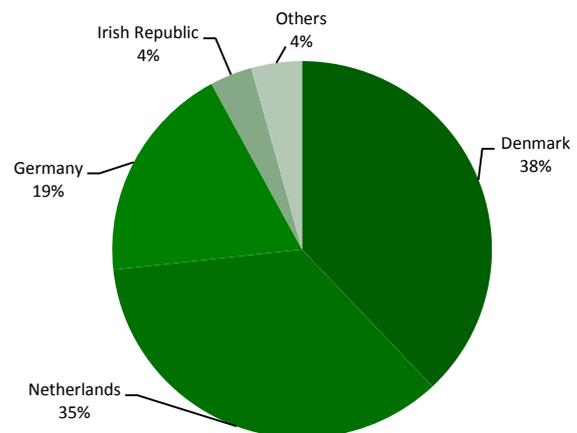


Chart 13.7 Trade with EU countries: imports of bacon and ham in 2015 (provisional)



### Pork

18. Since the ban on exports during the outbreak of foot and mouth disease in 2001, exports have been much lower than their pre-2001 levels. However, they have recovered in recent years, from 32 thousand tonnes in 2001 to 129 thousand tonnes in 2015. This is a 300% increase in volume, but it is still 22% lower than exports in 2000 (166 thousand tonnes). Imports showed a gradual increase until 2007 when they stood at 458 thousand tonnes. In recent years, imports of pork have stabilised at approximately 360 thousand tonnes a year. Denmark accounted for 25% of the imports of pork in 2015, with Germany accounting for 21% and a further 26% contributed by the Netherlands (16%) and Belgium-Luxembourg (10%).

Chart 13.8 Trade with EU countries; pork

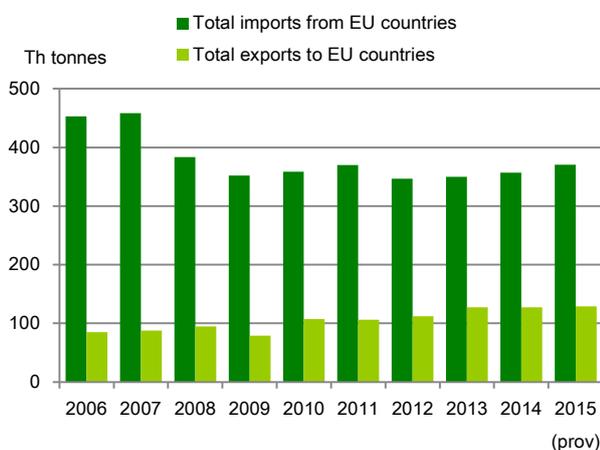
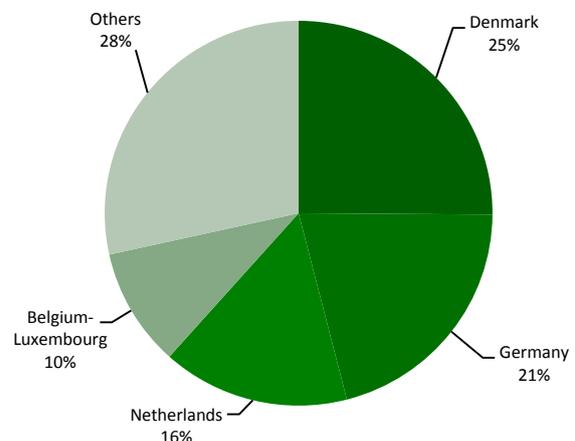


Chart 13.9 Trade with EU countries; imports of pork in 2015 (provisional)



Milk and cream

19. Overall, there was a gradual increase in exports of milk and cream between 2006 and 2015 by 24 thousand tonnes in volume to 645 thousand tonnes. Imports should be viewed in the context of overall supply, as imports of liquid milk only account for approximately 1% of the UK's domestic supply. The 2015 volume of exports exceeds imports by 439 thousand tonnes as the UK remains a solid net exporter of milk and cream. In 2015, 96 per cent of milk and cream exports went to the Irish Republic with a further 2% exported to Belgium, Luxembourg and France.

Chart 13.10 Trade with EU countries: milk and cream

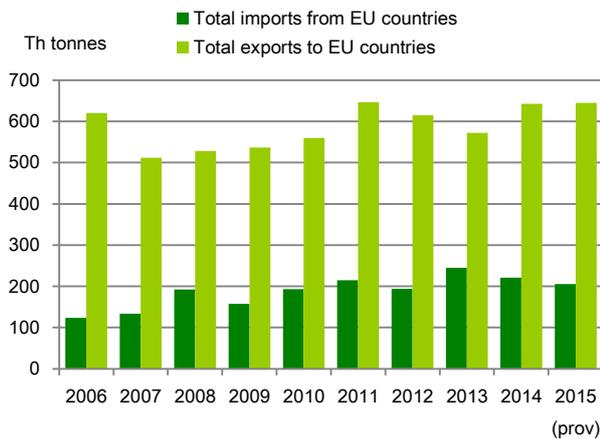
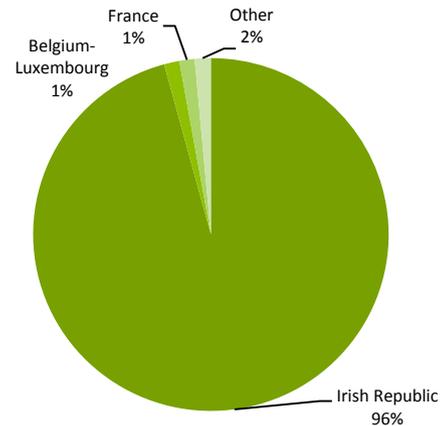


Chart 13.11 Trade with EU countries: exports of milk and cream in 2015 (provisional)



Trade with key trading partners (charts 13.12 to 13.25)

20. This section describes the volume of trade in several key commodities between the United Kingdom and all countries, both inside and outside the EU.

Lamb and mutton

21. The ban on exports during the outbreak of foot and mouth disease caused a major dip in exports to 30 thousand tonnes in 2001, followed by a relatively steady recovery to reach 104 thousand tonnes in 2013, before falling back to 79 thousand tonnes in 2015. Between 2011 and 2014, the UK was a net exporter of lamb and mutton. France was the destination for 54% of UK lamb and mutton exports in 2015, with 12% going to Germany and 9.2% going to the Irish Republic. In 2012, imports of lamb and mutton fell to their lowest level since 1991 (86 thousand tonnes), but increased by 7.7% in 2015 to 93 thousand tonnes.

Chart 13.12 World trade: lamb and mutton

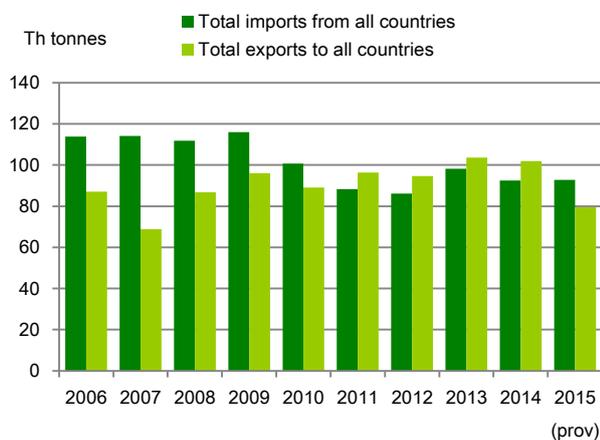
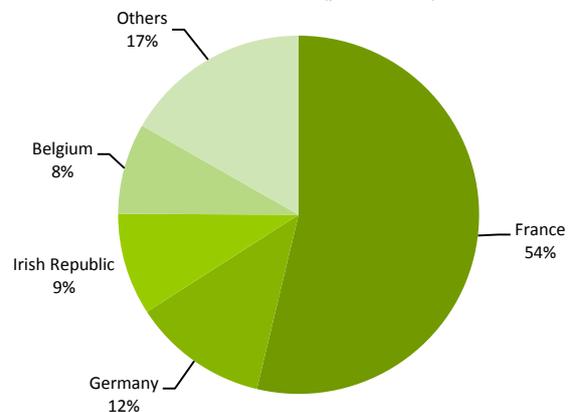


Chart 13.13 Trade with all countries: exports of lamb and mutton in 2015 (provisional)



## Beef and veal

22. Following the end of the BSE ban, exports have recovered steadily, reaching a high of 144 thousand tonnes in 2011. UK exports of beef and veal stood at 100 thousand tonnes in 2015. Despite this recovery, exports of beef and veal are still below the 1995 level of 274 thousand tonnes. Imports rose during the export ban, peaking in 2004 at 281 thousand tonnes before falling to 240 thousand tonnes in 2005. Since then, imports have remained stable between 230 and 250 thousand tonnes per year. They rose to 269 thousand tonnes in 2015, which is the highest volume of imports since 2004. The Irish Republic accounted for 68% of beef and veal imports in 2015 with the Netherlands, Germany and Poland combined accounting for a further 17%.

Chart 13.14 World trade: beef and veal

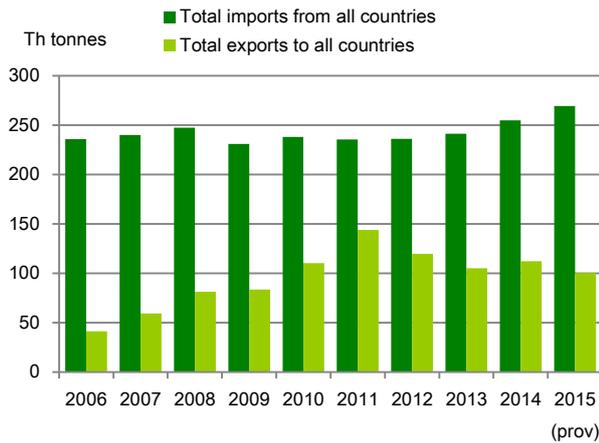
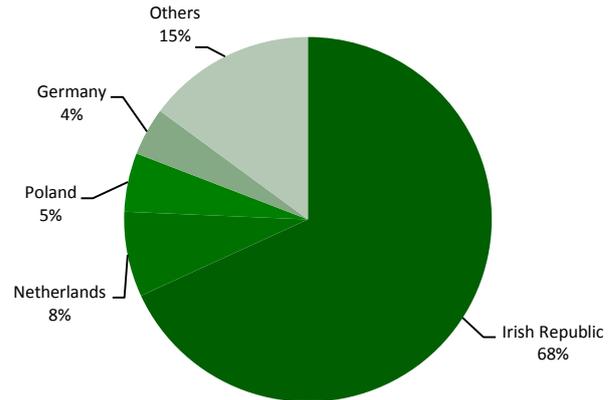


Chart 13.15 Trade with all countries: imports of beef and veal in 2015 (provisional)



## Poultry meat

23. The United Kingdom has run a long term trade deficit in poultry meat, though the trade gap by volume has narrowed between 2004, when it stood at 131 thousand tonnes, and 2013 when it had fallen to 48 thousand tonnes. Imports increased steadily from 1997, reaching a peak in 2005 of 406 thousand tonnes. Imports by volume have increased in recent years, and now stand at 451 thousand tonnes in 2015. Exports have risen steadily since 2009, when they stood at 258 thousand tonnes, although fell back slightly in 2015 to 297 thousand tonnes. 43% of imported poultrymeat came from the Netherlands in 2015 with Poland, Irish Republic and Germany together accounting for a further 31%.

Chart 13.16 World trade: poultry meat

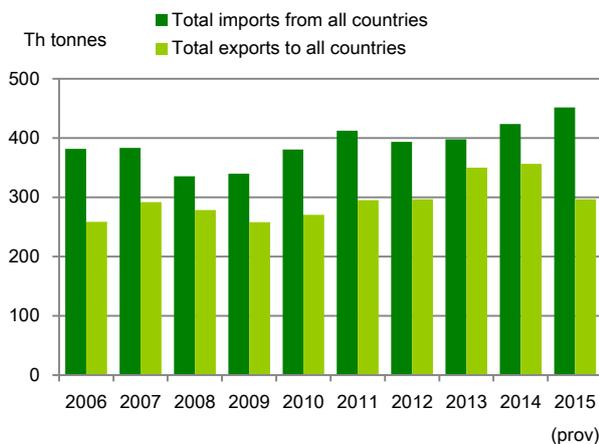
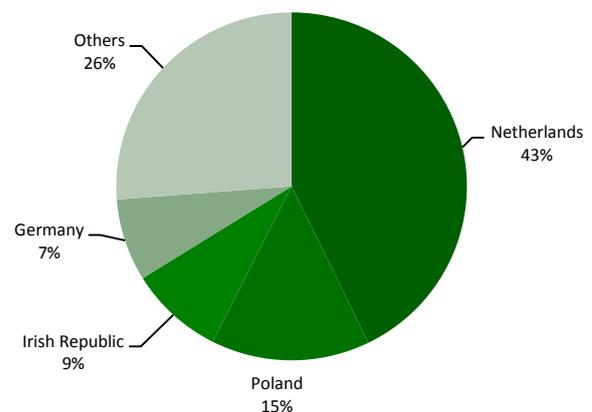


Chart 13.17 Trade with all countries: Imports of poultry meat in 2015 (provisional)



### Poultry meat Products

24. Poultry meat products include prepared, preserved, salted or cooked poultrymeat. In 2015, imports were 336 thousand tonnes, up from 306 thousand tonnes in 2014 (+10%). UK exports in 2015 were slightly lower than the previous year at 44 thousand tonnes (-9%). The year on year trade deficit remains very wide, up from 175 thousand tonnes in 2006 to 292 thousand tonnes in 2015. Thailand accounted for 38% of imports, with Brazil accounting for 13% of them, and the Netherlands and Irish Republic together accounting for 21% of imports in 2015.

Chart 13.18 World trade: poultry meat products

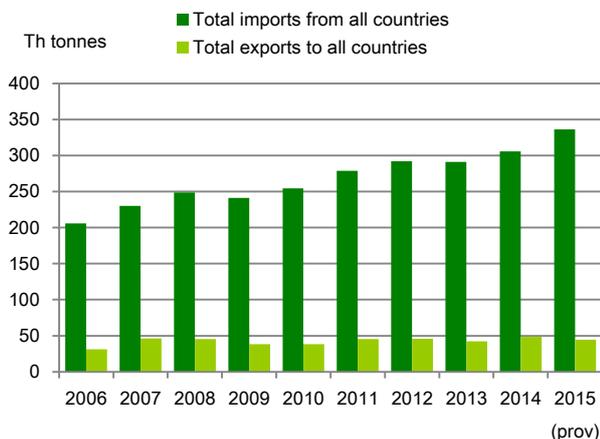
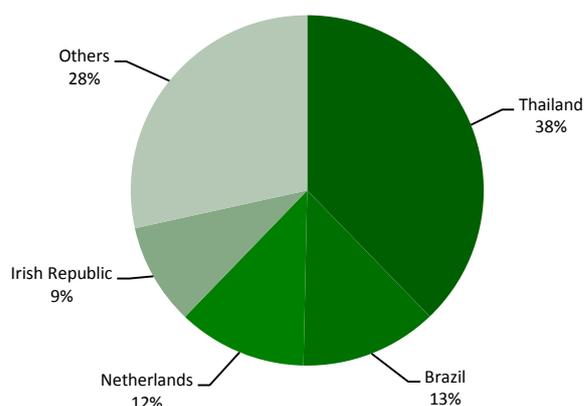


Chart 13.19 Trade with all countries: Imports of poultry meat products in 2015 (provisional)



### Unmilled wheat

25. Exports of unmilled wheat comfortably exceeded imports between 2004 and 2011. Challenging growing conditions in the 2011/12 cropping year again resulted in a fall in both domestic production and the quality of wheat. This shortage was exacerbated by another relatively small harvest in 2013, though the quality of the wheat was good. Demand for imports for milling and feed wheat increased since 2011, and imports reached a record level of around 3 million tonnes in 2013. Exports fell to 448 thousand tonnes in 2013, creating a record, negative trade gap of 2.5 million tonnes. This gap has narrowed to 681 thousand tonnes in 2014, following the improved harvest in 2013, when imports fell to around 1.8 million tonnes and exports rose to around 1.1 million tonnes. In 2015 imports fell to 1.7 million tonnes, and exports grew to 2.0 million tonnes, resulting in a return to a positive trade gap for the first time since 2011. The main markets for exports were Spain (33%), the Netherlands (17%) and Portugal (15%) by volume.

Chart 13.20 World trade: unmilled wheat

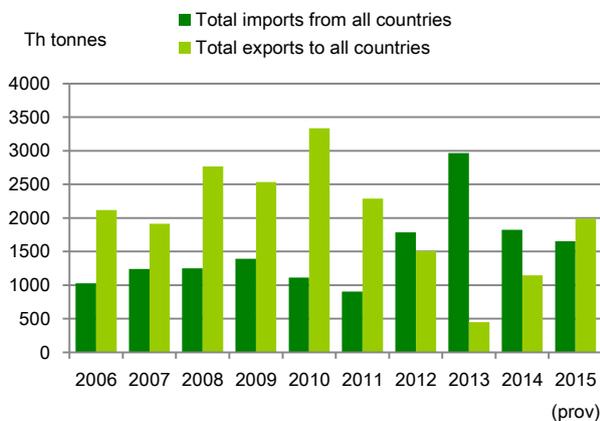
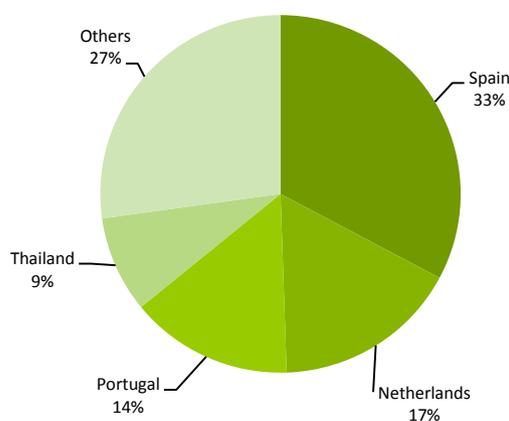


Chart 13.21 Trade with all countries: exports of unmilled wheat in 2015 (provisional)



## Fresh vegetables

26. The United Kingdom runs a large trade deficit in fresh vegetables. Imports have generally increased year on year, and now stand at 2.3 million tonnes in 2015. Exports increased by 31% in 2015 to 156 thousand tonnes, resulting in a slight widening of the trade gap by volume since 2014. In 2015, 40% of all fresh vegetables imports came from Spain and 28% came from the Netherlands, with Poland and France both providing 4.0% imports.

Chart 13.22 World trade: fresh vegetables

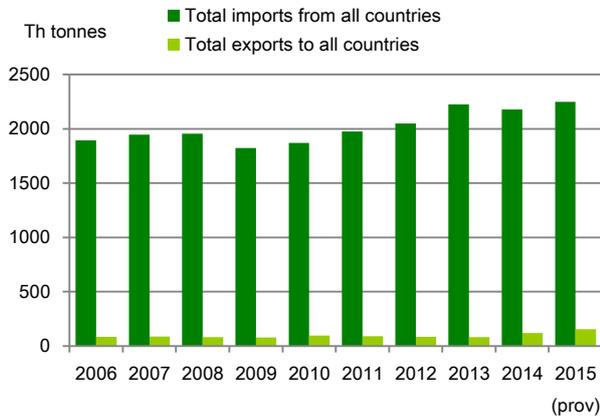
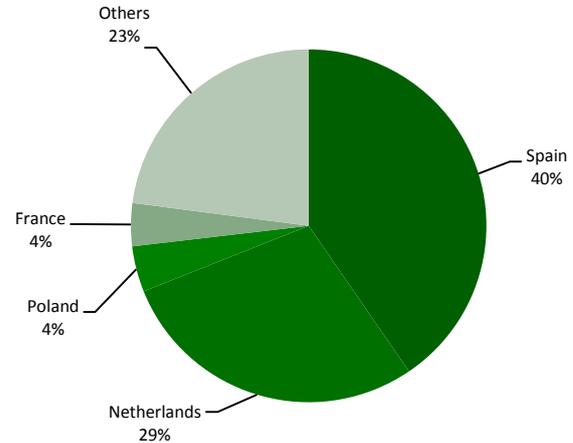


Chart 13.23 Trade with all countries: imports of fresh vegetables in 2015 (provisional)



## Fresh fruit

27. Imports of fresh fruit have historically been far in excess of exports and stood at an all-time high of 3.7 million tonnes in 2015. Annual exports of fresh fruit have historically been stable, and reached a high of 149 thousand tonnes in 2011. The UK exported 128 thousand tonnes of fresh fruit in 2015, or just 3.5% of annual imports. Spain was the largest single source of imports with 18% in 2015, followed by South Africa with 9.4%. Costa Rica and Colombia both contributed 8.1% of imports.

Chart 13.24 World trade: fresh fruit

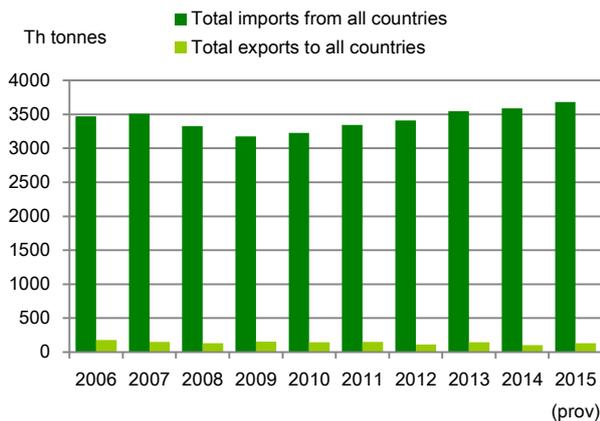
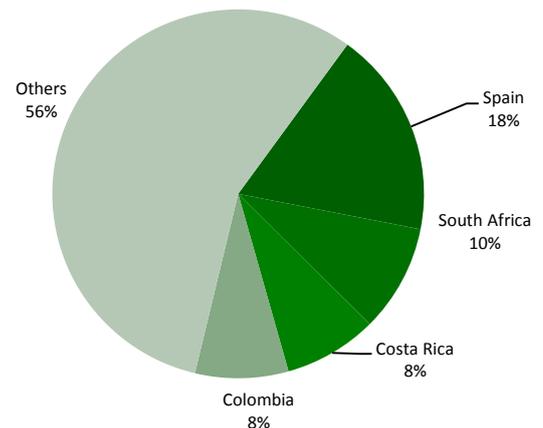


Chart 13.25 Trade with all countries: imports of fresh fruit in 2015 (provisional)



# Chapter 14 The Food Chain

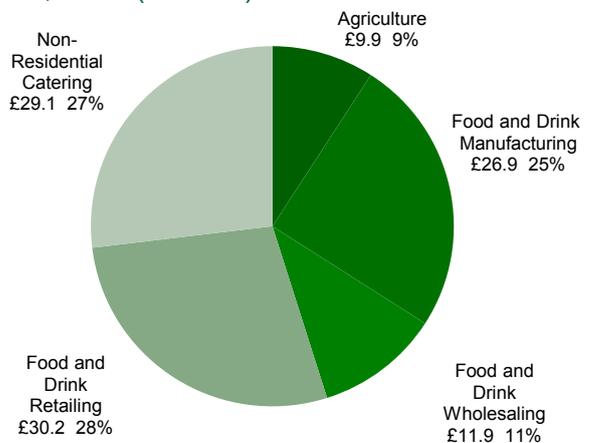
## Summary

- In 2014, the agri-food sector in the United Kingdom accounted for a total estimated Gross Value Added (GVA) of £108 billion or 7.2% of national GVA, up from 6.7% in 2013. The wholesaling sector increased 17%, followed by non-residential catering at 6.5% and retailing at 4.0%.
- Employment in the agri-food sector rose 2.3% over the 12 month period to the fourth quarter of 2015 to around 3.9 million. The largest increase was in manufacturing, rising by 22,000 employees (5.7%).
- Total factor productivity of the UK food chain beyond the farmgate has decreased by 2.4% between 2013 and 2014. Productivity in the wider economy has increased in 2014 by 1.7%. Benchmarking against a wider economy measure shows that the average annual growth in the food chain between 2005 and 2014 was 0.1% compared to 0.2% in the wider economy.
- Excluding the effect of price rises, consumers' expenditure increased 0.5% in 2015 but remains 4.8% lower than at the start of the economic downturn in 2007. Expenditure on food eaten out increased 0.3% in 2015, whilst expenditure on household food increased 0.7%.

## Contribution of the agri-food sector to the national economy (chart 14.1, table 14.1)

1. In 2014, the agri-food sector contributed £108 billion to the economy, around 7.2% of the national GVA. Within this, manufacturing, retailing and non-residential catering accounted for around one quarter each. Food wholesaling covers 11% of the sector and agriculture made the smallest contribution at 9.1%.
2. Comparing 2014 with 2013, retailing had the largest drop in productivity (3.1%); manufacturing decreased by 2.4%, wholesaling was 1.6% lower than in 2013 and non-residential catering showed a 0.2% decrease. Between 2005 and 2014, the average annual growth rate of the food chain was 0.1% whereas the wider economy's average annual growth rate was 0.2%.

Chart 14.1 Gross Value Added of the agri-food sector, 2014 (£ billion)



Source: Annual Business Survey (ONS) and Aggregate Agricultural Accounts (Defra).

**Table 14.1 Agri-food sector contribution to the national economy**

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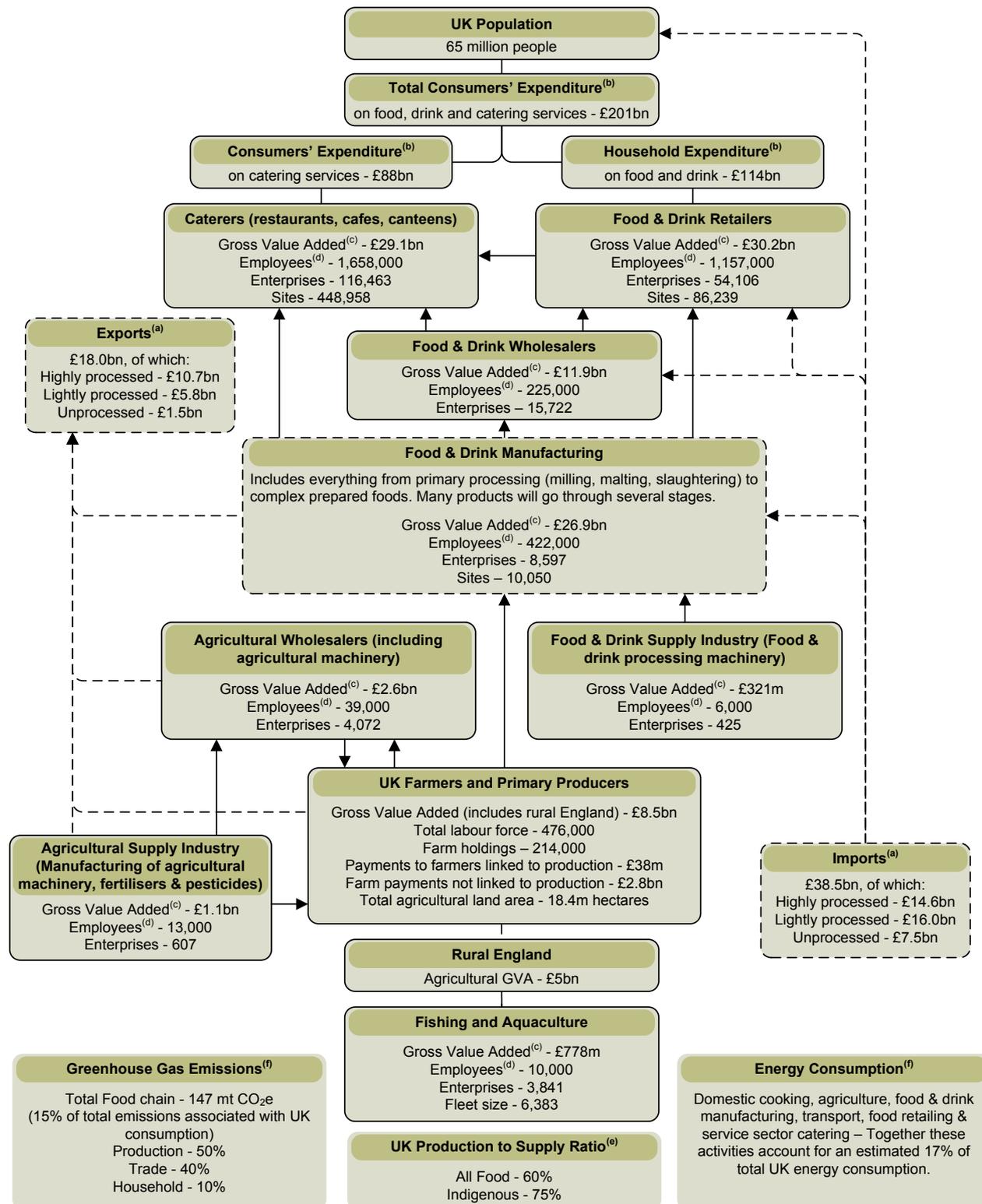
email: [david.lee@defra.gsi.gov.uk](mailto:david.lee@defra.gsi.gov.uk)

£ million (unless otherwise specified)

	2011	2012	2013	2014	2015 (provisional)
<b>Agri-food sector's contribution to total economy gross value added</b>					
at current prices					
Agriculture	8 671	8 640	9 382	9 869	8 495
Food Manufacturing	25 048	24 543	26 271	26 930	..
Food Wholesaling	9 586	9 740	10 240	11 943	..
Food Retailing	27 268	27 158	29 051	30 204	..
Food Non-Residential Catering	24 988	26 615	27 298	29 064	..
% of national gross value added (current prices)	6.6	6.5	6.7	7.2	..
<b>Workforce in the food sector (thousand persons)</b>					
Agriculture	432	439	426	429	437
Food Manufacturing	369	369	371	381	403
Food Wholesaling	209	228	221	228	232
Food Retailing	1 145	1 145	1 154	1 174	1 170
Food Non-Residential Catering	1 377	1 419	1 469	1 552	1 609
% of total workforce in employment	13.4	13.4	13.5	13.4	13.6
<b>Trade in food, feed and drink (in real terms at 2015 prices)</b>					
Imports of food, feed and drink	38 842	39 085	41 100	39 674	38 524
% of total UK imports	9.1	8.8	9.7	9.4	9.3
Exports of food, feed and drink	19 211	18 909	19 278	18 866	18 048
% of total UK exports	6.0	6.2	5.5	6.1	5.9
<b>UK Food Production to Supply Ratio ('Self-Sufficiency')</b>					
% of all food	64	63	60	62	61
% of indigenous type food	78	77	73	76	76
<b>Household final consumption expenditure on food and alcoholic drinks</b>					
at current prices	181 920	189 148	197 972	201 098	201 497
of which:					
household food	87 009	91 377	96 199	95 385	93 298
food eaten out	51 095	51 851	53 635	55 571	56 959
alcoholic drinks	43 816	45 920	48 138	50 142	51 240
at constant 2010 prices (£ million)	188 515	189 148	191 791	192 172	193 183
of which:					
household food	89 709	91 377	92 780	92 119	92 720
food eaten out	53 147	51 851	52 361	52 693	52 858
alcoholic drinks	45 659	45 920	46 650	47 360	47 605
% of total household final consumption expenditure	18.4	18.4	18.4	18.0	17.5
of which:					
household food	8.8	8.9	9.0	8.5	8.1
food eaten out	5.2	5.0	5.0	5.0	4.9
alcoholic drinks	4.4	4.5	4.5	4.5	4.4
<b>Producer prices for agricultural products (2010 = 100)</b>					
	113.0	118.6	125.4	114.1	104.6
<b>Consumer price index (2010 = 100):</b>					
food	105.5	108.9	113.0	112.8	109.9
alcoholic drinks	105.8	108.8	112.6	113.0	110.6
all items	104.5	107.4	110.2	111.8	111.8

Sources: Annual Business Survey (ONS), Aggregate Agricultural Accounts (Defra), Labour Force Survey GB Q3 2015 (ONS), Overseas Trade Statistics (HMRC), Consumer Price Indices (ONS).

Chart 14.2 Economic summary of the Food Chain



(a) Overseas trade data is provisional for full year 2015 from HM Revenue and Customs. (Data may not equal total due to rounding). Dashed lines indicate main trade flows.

(b) Consumers' expenditure, properly known as household final consumption expenditure, is provisional from the Office for National Statistics for full year 2015 and is calculated at current prices. (Data may not equal total due to rounding).

(c) Gross value added (GVA) is the difference between the value of goods and services produced and the cost of raw materials and other inputs used up in production. GVA figures are from the Annual Business Survey and are provisional data for full year 2014, which is calculated at basic prices (market prices less taxes plus subsidies).

(d) Agricultural wholesaling includes an estimate of employment of wholesalers of agricultural machinery from the Annual Business Survey. (Employee data is rounded.)

(e) UK Production to Supply Ratio (formerly known as the "Self-Sufficiency" Ratio). The UK sources food from diverse stable countries (with 29% of food coming from the European Free Trade Area), and imports can make up for domestic supply shortages.

(f) UK greenhouse gas emissions and energy consumption data does not relate to Q4 2014. Energy consumption does not take into account energy embedded in food that is imported, nor does it subtract energy that went into producing food that is exported. Therefore the 17% of energy consumption cannot be directly compared to the 15% of GHG emissions.

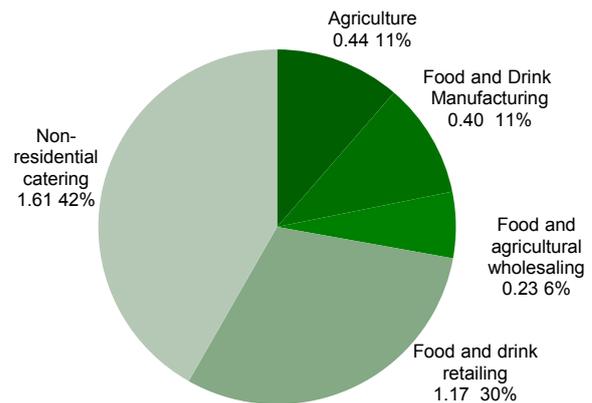
## The food chain (chart 14.2)

- In 2015, the food supply chain in the United Kingdom as a whole received £181 billion, which came from spending by consumers in the United Kingdom, plus exports less imports of agricultural commodities and processed food and drink products (assuming that imports and exports directly to and from consumers are negligible). Chart 14.2 shows the largest elements of the food chain from agriculture as a primary producer through food manufacturing and retail trade to consumers' expenditure.

## Agri-food sector employees and self-employed farmers (chart 14.3)

- In the third quarter of 2015, the agri-food sector employed 3.86 million people, or 14% of all employees in Great Britain. This proportion has been broadly the same since 2001. Agriculture accounts for less than half a million employees or 11% of the agri-food sector (chart 14.3).
- In the twelve months to September 2015, employment in the agri-food sector increased by 2.3%, largely due to an increase in manufacturing (5.7%). There were also increases in non-residential catering (3.6%), wholesaling (1.9%) and agriculture (1.8%). Employment across the whole economy increased 1.6% over the same period.
- Employment in the agri-food sector has risen 6.8% since 2000. Changes in the proportions of each of the sectors since that time show that employment in agriculture and manufacturing reduced by 22% and 16% respectively, while non-residential catering, retailing, and wholesaling increased by 28%, 7.4% and 5.1% respectively.

Chart 14.3 Agri-food sector employees and self-employed farmers (millions)



Source: Labour Market Trends (ONS) and June Survey of Agricultural and Horticultural Holdings (Defra).

## Food manufacturing

- GVA in the food manufacturing sector increased 2.5% in 2014. Food manufacturing productivity has decreased by 2.4% but in the last 10 years has shown an average annual increase of 0.3%.

## Food wholesaling

- GVA in the food wholesaling sector rose in 2014 (17%). At £11.9 billion in 2014, it is 115% higher than in 2000. Food and drink wholesale productivity decreased by 1.6% in 2014 and in the last 10 years has shown an average annual increase of 0.4%.

## Food retailing

- Food retailing GVA was £30.2 billion in 2014, 4.0% up on 2013. Food retail productivity in 2014 decreased by 3.1% and in the last 10 years has remained unchanged.

## Non-residential catering

- In 2014 GVA increased 6.5% to £29.1 billion. Non-residential catering (NRC) showed a fall in productivity of 0.2% in 2014. The decrease in productivity in 2014 was due to the increase in inputs being higher than the increase of outputs. Productivity of NRC was at its strongest prior to the recession, then dipped to its lowest level in 2009, but since the recession has seen an increase. This sector would have been affected strongly by the recession that started in 2008 and lasted through most of 2009. Challenging economic conditions make it difficult for companies to make proportionate savings across all inputs, especially with labour being a relatively high component. Consumers find it easier to cut on this form of spending on food. During periods of economic downturn it is likely that consumers will make savings through eating out less and switching to home cooking.

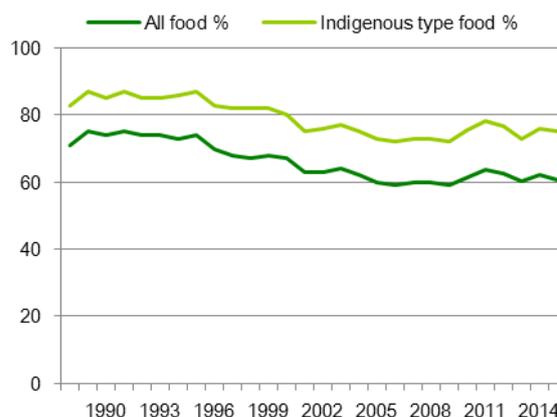
### Trade in food, feed and drink (table 14.1)

11. In 2015 the value of food, feed and drink exports was £18.0 billion, a decrease of 4.3% on 2014. In 2015 the value of food, feed and drink imports decreased by 2.9% to £38.5 billion in real terms, resulting in the trade gap in food, feed and drink narrowing by 1.6%, to £20.5 billion in real terms. See Chapter 13 for more detail on overseas trade.

### Food production to supply ratio (chart 14.4)

12. Food Production to Supply Ratio (commonly referred to as the “Self Sufficiency Ratio”), is calculated as the farm-gate value of raw food production divided by the value of raw food for human consumption, and is estimated to be 61% for all food in 2015 and 75% for indigenous type food. This compares with 62% and 76% respectively in 2014.
13. The food production to supply ratio decreased slightly in 2015. The overall farm gate value of United Kingdom food production decreased 7.8%. For milk there was a 20% decrease worth £931 million in the farm gate value of home production. For potatoes there was a 19% drop worth £128 million to the farm gate value of potatoes.

Chart 14.4 Food production to supply ratio



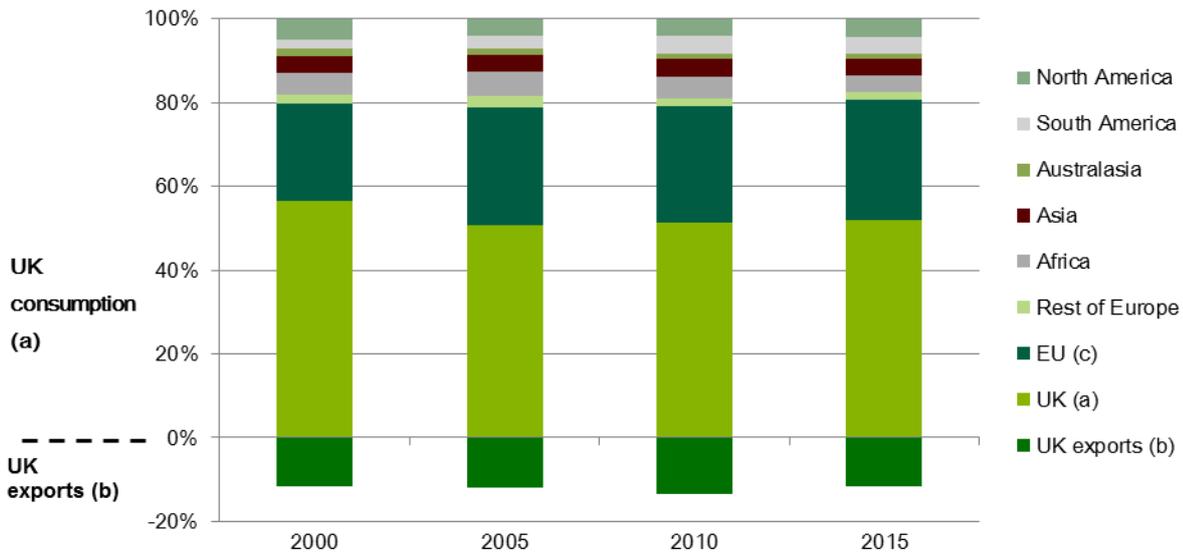
### Distinction between competitiveness and food security

14. The food production to supply ratio provides a very broad indicator of the ability of United Kingdom agriculture to meet consumer demand - also described as competitiveness. The ratio is not an appropriate measure of “food security” since it fails to account for many dimensions of this complex issue.
15. A detailed analysis is given in the Defra publication ‘[UK Food Security Assessment](#)’.
16. The key points on food production to supply ratio and food security from this paper are:
- Diversity enhances security. The United Kingdom sources foods from diverse stable countries, mainly European countries, and imports can make up for domestic supply shortages (see Chart 14.5).
  - A high food production to supply ratio fails to insulate a country against many possible disruptions to its supply chain.
  - Production potential is more relevant at European Union level than United Kingdom level, and the European Union as a whole has a food production to supply ratio of around 90%.
  - Further trade liberalisation is unlikely to affect food security within the European Union.

### Origins of food consumed in the United Kingdom (chart 14.5)

17. Chart 14.5 includes the proportion of United Kingdom food consumption that is produced in the United Kingdom. This should not be confused with the Food Production to Supply Ratio given in chart 14.4. Chart 14.5 looks purely at the breakdown of food that the United Kingdom actually consumes.
18. The Food Production to Supply Ratio (Chart 14.4) considers all United Kingdom food production, including food that the United Kingdom exports instead of consuming. A further, much smaller difference is that the United Kingdom food production used in the food production to supply ratio calculations has been adjusted to take account of the balance of trade in important inputs into agriculture.

Chart 14.5 Origins of food consumed in the United Kingdom: 2000, 2005, 2010, 2015

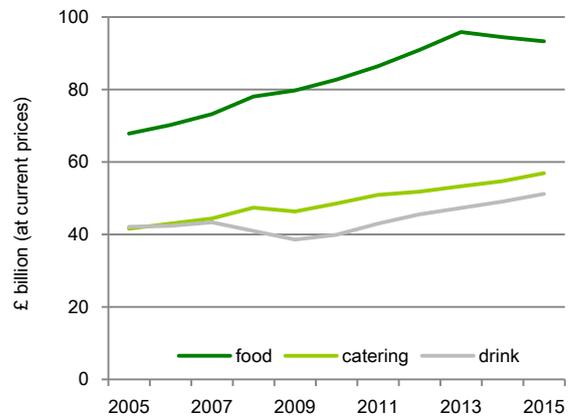


Based on the farm-gate value of raw food.  
 (a) Consumption of UK origin consists of UK domestic production minus UK exports.  
 (b) UK exports are given as a percentage of total UK consumption.  
 (c) Membership of the EU increased between 2002 and 2013, from 15 to 28 countries.

### Consumers' expenditure

19. Consumer expenditure on food, drink and catering increased by 0.2% in 2015 to £201 billion. Household food expenditure fell 2.2% while expenditure on alcoholic drinks rose 2.2% in 2015. At current prices, which incorporate inflation (see chart 14.6), consumers spent 25% more overall in 2015 than in 2007 (the last year before the recession started); 'food' saw the biggest increase at 26%. Excluding the effects of inflation, consumers spent 4.8% less overall in 2015 than in 2007, 2.8% less on food, 14% less on eating out and 3.0% less on alcoholic drinks.

Chart 14.6 Consumers' expenditure on food, drink and catering



Source: Consumer Trends, (ONS).  
 Food includes non-alcoholic drinks; Drink is alcoholic drinks.

Changes in consumers' price indices (chart 14.7)

- 20. Historically (1975 to 2000) food prices tended to rise more slowly than general inflation, as measured by the Retail Price Index (RPI). Food prices in real terms were fairly stable between 2000 and 2007, as measured by the Consumer Price Index (CPI), before rising by 12% and then returning to real terms stability from 2009 onwards. In March 2015, food prices were in real terms 10% above those of 2000.
- 21. Averaged over 2015 the annual rate of food inflation (including non-alcoholic drinks) was -2.5% as measured by the Consumer Price Index. This compares with a general inflation rate of 0% over the same period.

Chart 14.7 Changes in the food price index (in constant prices)



Source: Consumer Price Index (ONS).

# Chapter 15

# Key Statistics for EU Member States

## Summary

For the EU-28 Member States in 2015:

- The United Kingdom was the largest producer of sheep meat and goat meat, accounting for around 40% of EU production.
- UK was the third largest producer of wheat, milk and beef and veal behind France and Germany.
- Almost a quarter of all pig meat was produced in Germany.

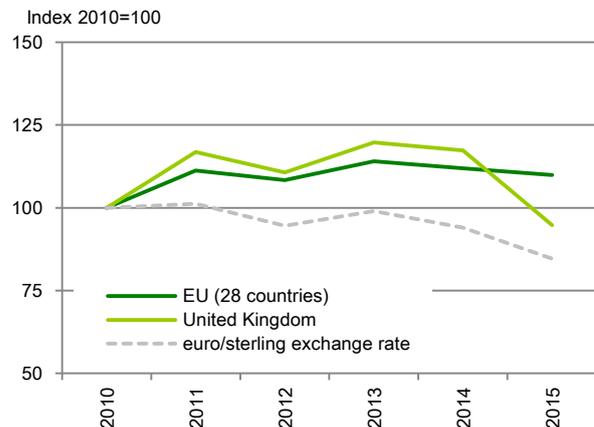
## Introduction

1. This chapter presents simple analyses of agriculture in the European Union to enable comparison of the United Kingdom with other Member States and with the European Union. The source of the data is the Eurostat website at <http://ec.europa.eu/eurostat/en> where a range of data is available. Eurostat is the statistical office of the European Union. Its task is to provide the European Union with statistics at a European level that enables comparisons between countries and regions.

## Agricultural Income (chart 15.1)

2. Eurostat's favoured measure of agricultural income is Indicator A: Index of the real income of factors in agriculture, per annual work unit.
3. This indicator corresponds to the real (i.e. deflated) net value added at factor cost of agriculture, per total annual work unit. Net value added at factor cost is calculated by subtracting from the value of agricultural output at basic prices the value of intermediate consumption, the consumption of fixed capital, and adding the value of the (other) subsidies less taxes on production. The detailed data can be found at the Eurostat website.
4. Chart 15.1 shows indices for Indicator A for the United Kingdom and the European Union (28 countries), including the euro/sterling exchange rate which influences agricultural income in the United Kingdom. Indicator A for the United Kingdom fell by 5.3% between 2010 and 2015 compared to a 10% increase for the European Union as a whole.

Chart 15.1 Indicator A of the income from agricultural activity (a)



Source: Eurostat

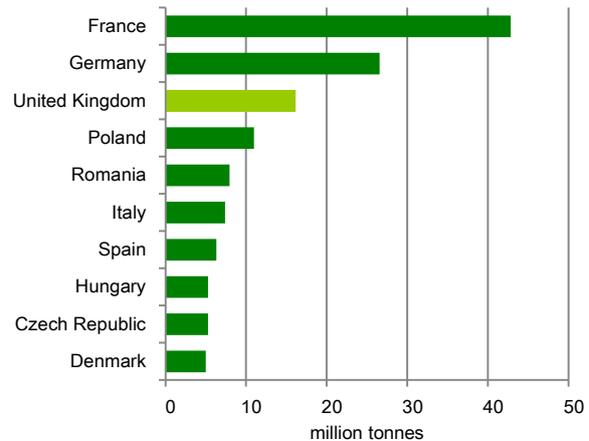
(a) 2015 forecast data for Member States whereas 1<sup>st</sup> estimate for United Kingdom

## Agricultural production

### Wheat

5. Chart 15.2 shows the quantity of common wheat and durum wheat produced by the top 10 producing Member States in 2015.
6. France was the largest producer of wheat in the European Union, producing just over 42.8 million tonnes in 2015, followed by Germany (26.5 million tonnes) and the United Kingdom (16.2 million tonnes). These three countries produced over half of wheat output in the European Union in 2015.

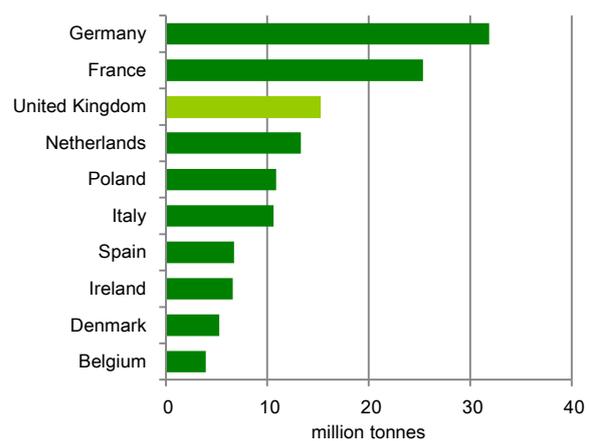
Chart 15.2 Production of wheat



### Cows' milk

7. Chart 15.3 shows the quantity of cows' milk produced by the top 10 producing Member States in 2015.
8. Germany was the largest producer of cows' milk in the European Union, producing 31.9 million tonnes in 2015, followed by France (25.4 million tonnes). The United Kingdom produced 15.2 million tonnes.

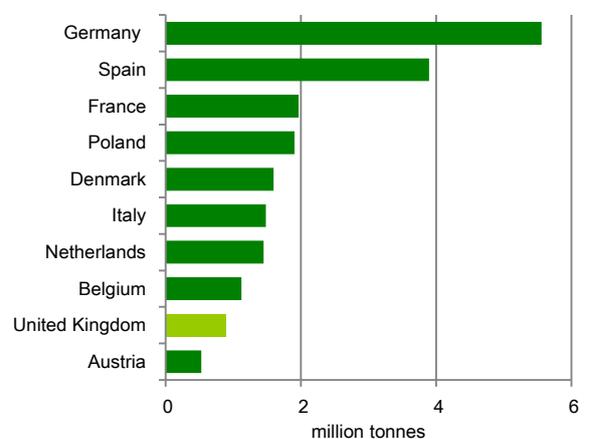
Chart 15.3 Production of cows' milk



### Pig meat

9. Chart 15.4 shows the quantity of pig meat produced by the top 10 producing Member States in 2015.
10. Germany was also the largest producer of pig meat in the European Union, producing 5.6 million tonnes in 2015 followed by Spain (3.9 million tonnes). Germany and Spain produced around 41% of pig meat in the European Union in 2015. The United Kingdom produced 0.9 million tonnes.

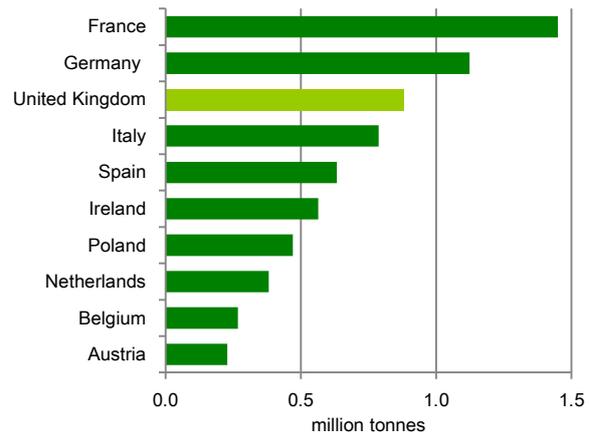
Chart 15.4 Production of pig meat



## Beef and veal

11. Chart 15.5 shows the quantity of beef and veal produced by the top 10 producing Member States in 2015.
12. France was the largest producer of beef and veal in the European Union, producing 1.5 million tonnes in 2015, followed by Germany (1.1 million tonnes) and the United Kingdom (0.9 million tonnes). These three countries produced nearly half of all beef and veal in the European Union in 2015.

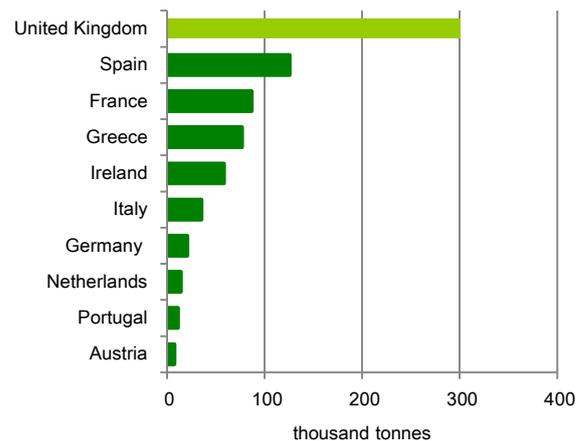
Chart 15.5 Production of beef and veal



## Sheep and goat meat

13. Chart 15.6 shows the production of sheep meat and goat meat by the top 10 producing Member States in 2015.
14. The United Kingdom was the largest producer of sheep meat and goat meat in the European Union in 2015, producing 301 thousand tonnes or 40% of all the sheep and goat meat in the European Union in 2015. Spain (126 thousand tonnes), France (87 thousand tonnes) and Greece (77 thousand tonnes) produced a further 39% of the sheep and goat meat in the European Union in 2015.

Chart 15.6 Production of sheep and goat Meat (a)

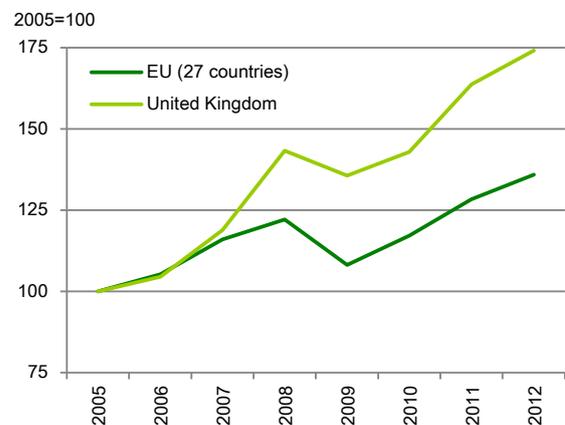


(a) Netherlands-estimated data based on 2014

## Price Indices

15. The data shown in Chart's 15.7 and 15.8 show data to 2012, the latest year for which data is published by the European Statistical Office.
16. Chart 15.7 shows producer price indices for total agricultural production for the United Kingdom and the European Union (27 countries). These indices give information on the trends in the producer price of agricultural production as a whole. The sub-indices were weighted by the values of sales in 2005.
17. The index for the United Kingdom has risen by 74 per cent between 2005 and 2012, the latest year for which data are available, compared to 36% for the European Union as a whole.

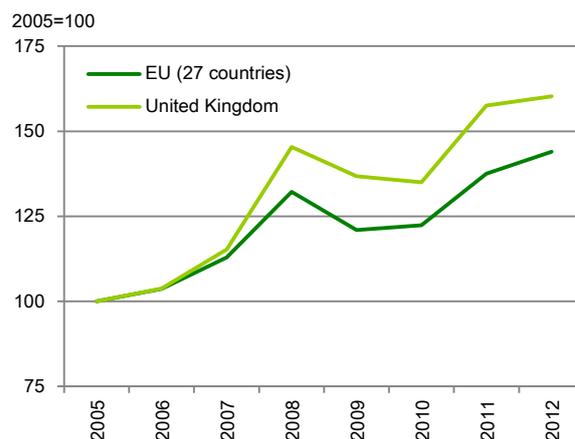
Chart 15.7 Producer price indices, total agricultural production



Source: Eurostat

18. Chart 15.8 shows purchase price indices for the total means of agricultural production for the United Kingdom and the European Union (27 countries). The indices in this table give information on the trends in the purchase price of the means of agricultural production as a whole. The sub-indices were weighted by the values of purchases in 2005.
19. The index for the United Kingdom has risen by 60% between 2005 and 2012, the latest year for which data are available, compared to 44% for the European Union as a whole.

Chart 15.8 Producer price indices, total means of agricultural production



Source: Eurostat

### Data Revisions

There are minor amendments to the Agricultural Income index following updates to data obtained from Eurostat. For indicator A of the income from agricultural activity the base year is now 2010=100. All other production indices index years have not been changed.