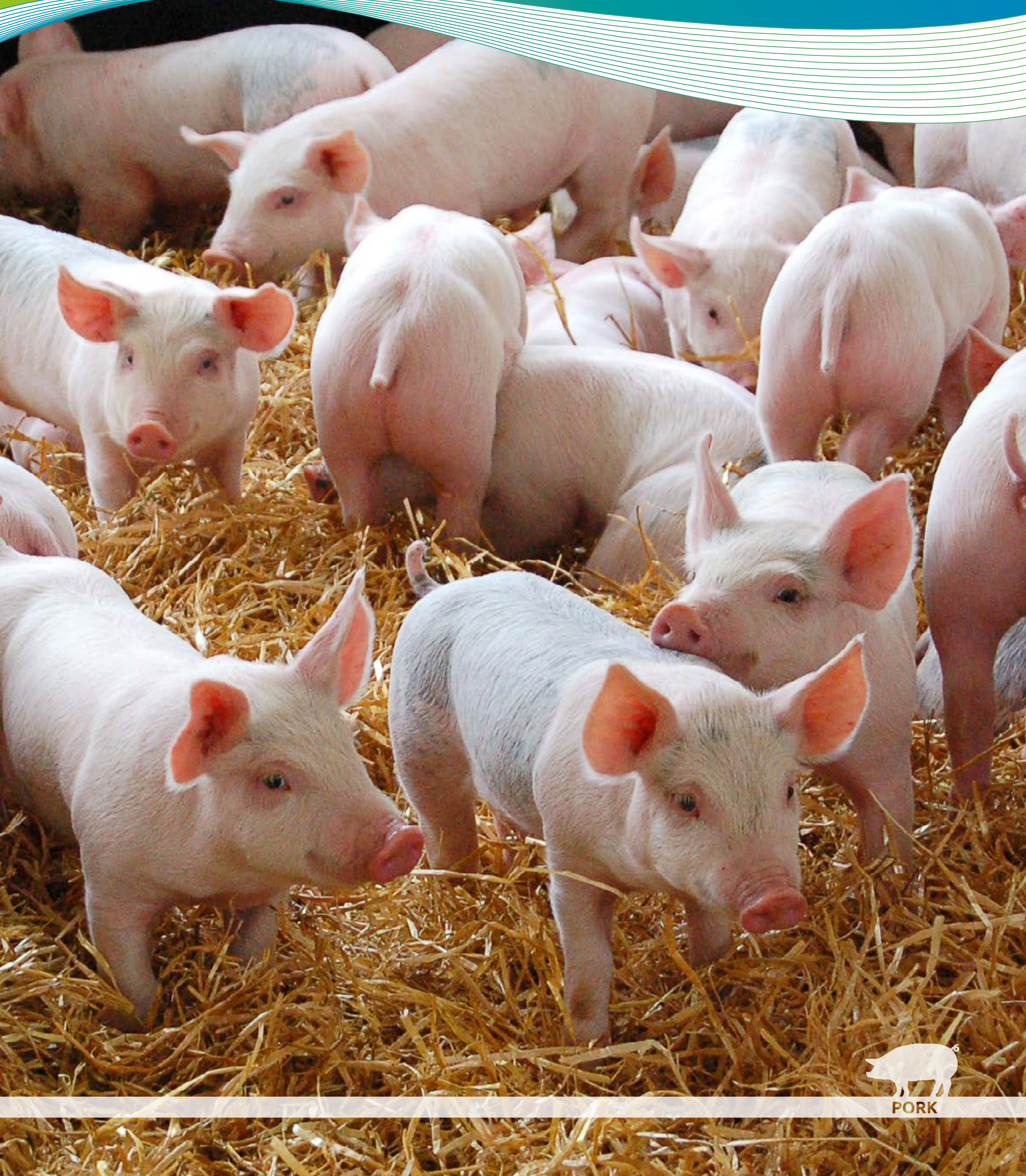
2016 Pig cost of production in selected countries



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Introduction

Welcome to the latest in a series of annual reports examining the relative costs of pig meat production up to farmgate level in selected countries. All these figures relate to 2016.

Pig prices had fallen sharply across the EU in the second half of 2014 and this was followed by another year that brought challenges for the industry. So once again, there was little optimism among producers at the start of 2016. The results of the December 2015 pig census showed that the EU pig breeding herd declined slightly during 2015 following the difficult financial conditions faced by producers that year. A fall in the breeding herd in northwest Europe was however offset to a large degree by significant growth in the Spanish herd, making it the EU's largest. The number of pigs overall remained largely unchanged, and so therefore did market prices.

The EU average pig price closed 2015 at around €1.26 per kg, the lowest level in over a decade. The price remained at these levels throughout the early months of 2016. As well as increased production, the market continued to feel the effects of subdued consumer demand for pork on most key EU markets and Russia's continuing ban on imports of most pig meat products. It was export sales to China that really underpinned the reversal of fortunes in spring, leading to higher prices in the second half of the year. Increased exports from countries across Europe enabled supplies to be diverted east, releasing some pressure on domestic markets still experiencing weak demand. Prices began to recover during May, when they rallied to over €1.60 per kg, peaking in late September before ending the year somewhat lower at €1.50 per kg.

The positive trends in the EU market were also eventually reflected in Great Britain. Prices started the year at around £1.20 per kg and continued falling to what would be multi-year lows in March and April. By May, this market had also started to recover, closing the year at £1.50 per kg. The trend of increasing slaughterings that had been seen since mid-2014 came to an end in May, leading supplies to begin to tighten. Similar supply and demand factors to those in the rest of the EU were at play, with China drawing product, but with the added dynamic of a weakened currency, especially after the referendum on EU membership in June. The fall in the value of the pound made imports to the UK more expensive, while making UK exports more competitive. Nevertheless, tighter domestic supplies led to a rise in UK pork imports, despite the EU average pig price moving above the UK price in sterling terms between June and October. UK retail demand for pork continued to fall in 2016, with both the price and the volume of pork sold being lower for much of the year.

To assist producers in comparing their physical performance with other pig businesses in England, AHDB Pork has a Key Performance Indicators (KPIs) section on its website that is updated quarterly, based on Agrosoft data. The section provides average, top third and top 10 per cent performance for KPIs for indoor and outdoor breeding herds, rearing and finishing herds.

For more information visit **pork.ahdb.org.uk** and go to the Prices & Stats section (Costings & Herd Performance).

Methodology

This report examines the relative costs of production in selected countries. This is a joint project, currently involving the following organisations in 17 countries, which are known collectively as InterPIG:

- Great Britain – Agriculture and Horticulture Development Board (AHDB)
- Austria – VLV Upper Austria
- Belgium – Flemish Government and Boerenbond Belgie
- Brazil – Embrapa Swine and Poultry

  Brazil submit data for two regions: Mato Grosso (MT) and Santa Catarina (SC)
- Canada – Canadian Pork Council
- Czech Republic – Institute of Agricultural Economics and Information (UZEI)
- Denmark – SEGES
- Finland – Atria
- France – IFIP
- Germany – Thuenen Institute and Interessengemeinschaft der Schweinehalter (ISN)
- Hungary – AKI Research Institute of Agricultural Economics
- Ireland – Teagasc
- Italy – Research Centre for Animal Production (CRPA)
- Netherlands – Wageningen Economic Research
- Spain – SIP Consultors
- Sweden – Svenska Pig
- USA – Iowa State University

Czech Republic and Hungary data are excluded due to deadlines. We continue to work with other countries and organisations who wish to provide standardised results for international comparison.

The cost and performance data relates to average performance available from the national recording systems operating in the participating countries. Definitions have been standardised across countries. For example, the definition of a sow is from first insemination to slaughter and the results are based on average present sows (average daily number of sows in the year).

There will inevitably still be some national differences in definition but where this has occurred, the data has been adjusted in the most appropriate way. The results are believed to provide a clear indication of the relative average costs of production within each country and to deliver an accurate comparison. In an attempt to continue to improve the accuracy of the data provided, the glossary of terms and formulae used in calculations is monitored and updated. In some instances, previous years' data may be updated. As a result, there may be some discrepancies between previous publications as definitions and formulae are realigned.

Key points

- The cost of pig meat production in Great Britain reduced by four per cent in 2016, to £1.26 per kg. The average cost of production in the EU was £1.27 per kg deadweight, a nearly eight per cent increase in sterling terms compared to 2015
- All EU countries, except Great Britain, experienced an increase in the costs of production (in sterling terms) compared to 2015
- EU average reference price of £1.20 per kg was higher in 2016 than in 2015, with three EU countries (Belgium, Denmark, Spain) having production costs below this
- Average feed prices were higher in 2016 than in 2015, increasing by an average of four per cent across the EU countries
- In 2016 as a whole, EU feed costs per kg increased by five per cent compared with a year earlier, in sterling terms. All InterPIG member countries, except Great Britain, experienced an increase in feed costs compared to 2015. The fall in Great Britain was seven per cent.
- The overall average number of pigs weaned per sow per year in the European InterPIG countries showed a two per cent increase in 2016, up from 26.81 in 2015 to 27.53, with Denmark achieving 32. There was a two per cent increase in pigs weaned per sow in Great Britain to 24.83 overall. Indoor sow production achieved 26.2, a small increase compared to 2015
- The main reason Great Britain has a below average number of pigs weaned per sow lies in the number of pigs born alive per litter, with Great Britain still performing below the EU average of 13.8. The 2016 Great Britain average of 12.5 (indoor sows 13, outdoor sows 11.7) was an increase compared to 12.3 in 2015
- The average number of pigs finished per sow in Great Britain again increased in 2016. At 23.22 pigs per sow, average performance was 0.17 pigs higher than in 2015 but lower than the EU average of 25.94
- Great Britain produced 1.90 tonnes of carcase meat per sow in 2016, two per cent higher than in 2015 due to a combination of the increase in the number of pigs finished per sow and an increase in finishing weight.

Cost of production

Aggregate results for 2016

The production costs of pig meat in 2016 for all the countries covered in this report are shown below in Figure 1. This data includes all variable costs (other than transport of pigs to abattoirs) and fixed costs. Fixed costs include depreciation and interest costs for capital items such as buildings and equipment. Costs for regular and casual labour are included but no allowances are made for directors' salaries or partners' drawings.

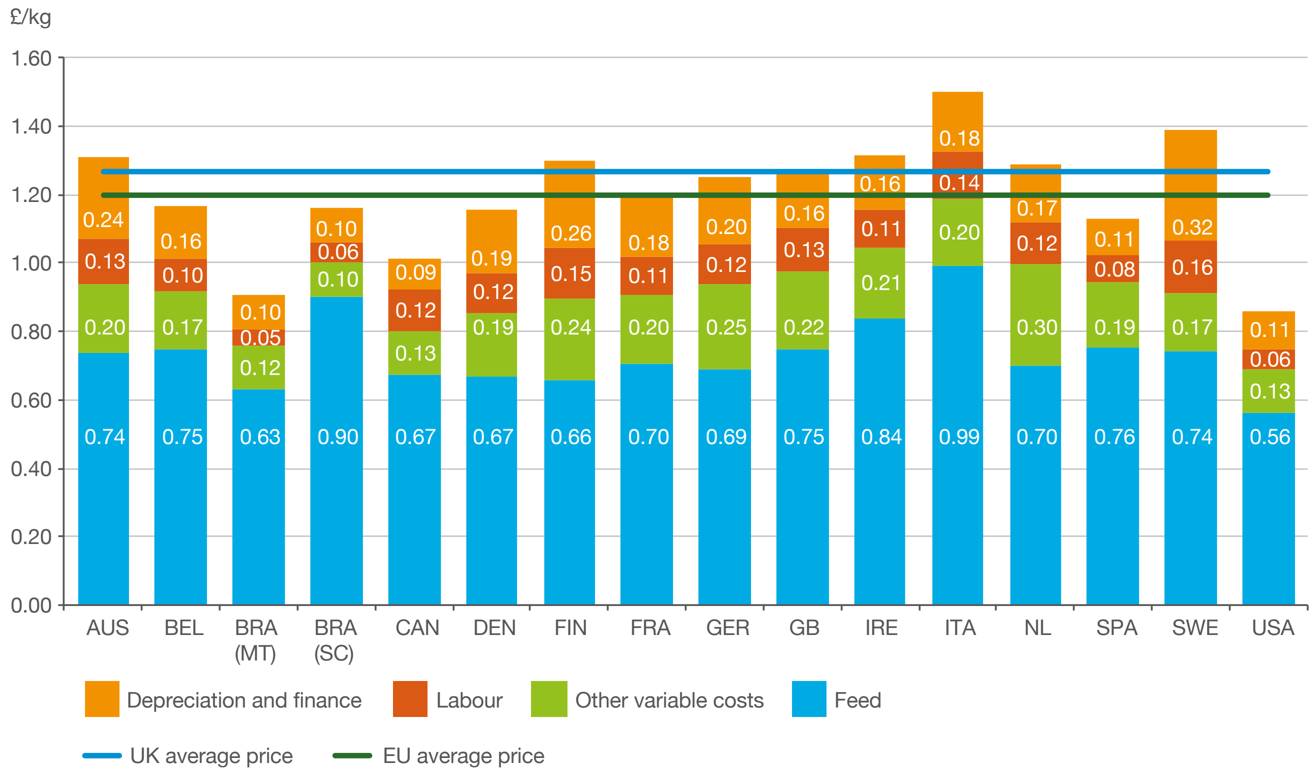

Figure 1. Cost of production in selected countries, 2016

The average cost of production in the EU in 2016 for the countries above was £1.27 per kg deadweight, a nearly eight per cent increase on the previous year. Costs of production in Great Britain were near the EU average at £1.26, an over four per cent decrease on the previous year. In 2016, Italy continued to have the highest costs at £1.50. The country with the lowest production costs in the EU continued to be Spain (£1.13).

The average UK reference price was two per cent lower during 2016 than in 2015, averaging £1.27 per kg, but this was five per cent above the EU average of £1.20 per kg. On average, margins fluctuated throughout 2016, with the UK price below the estimated costs of production for the first seven months of the year. Across the EU countries that were sampled, there was a technical loss of seven pence on every kg of pig meat produced, with only three EU countries (Belgium, Denmark, Spain) having production costs below the EU average reference price.

Comparisons with previous years (sterling)

Costs of production in sterling terms in 2016, compared with results for the five previous years, are shown in Table 1. The average cost of production in sterling terms in the EU countries was eight per cent higher than 2015 levels for the same countries and stood at £1.27 per kg. All EU countries, except Great Britain, experienced an increase in the costs of production on this basis, largely due to the weakening of the pound against the euro. Historic exchange rates are given in Appendix 2, Table 9.

Table 1. Average costs of production, 2011–2016 (£/kg deadweight)

Year	2011	2012	2013	2014	2015	2016	2016/15 % change
Austria	1.47	1.46	1.54	1.35	1.16	1.31	13
Belgium	1.41	1.42	1.48	1.26	1.08	1.17	8
Brazil (MT)	1.03	0.95	0.96	0.84	0.70	0.91	30
Brazil (SC)	1.18	1.19	1.13	1.04	0.87	1.16	34
Canada	1.13	1.18	1.20	0.98	0.92	1.01	10
Denmark	1.39	1.37	1.44	1.24	1.09	1.16	6
Finland	na	na	na	1.35	1.17	1.30	11
France	1.44	1.39	1.49	1.29	1.10	1.20	9
Germany	1.55	1.49	1.56	1.33	1.15	1.25	9
Great Britain	1.51	1.55	1.61	1.41	1.33	1.26	-5
Ireland	1.50	1.47	1.63	1.40	1.25	1.32	5
Italy	1.70	1.61	1.71	1.58	1.34	1.50	12
Netherlands	1.40	1.36	1.50	1.32	1.18	1.29	9
Spain	1.40	1.34	1.39	1.20	1.06	1.13	6
Sweden	1.71	1.70	1.77	1.47	1.27	1.39	9
USA	1.01	1.08	1.04	0.83	0.80	0.86	7
EU	**1.50**	**1.47**	**1.56**	**1.35**	**1.18**	**1.27**	**8**

Comparisons with previous years (euros)

Costs of production in euro terms in 2016 are shown in Table 2. Although feed prices have increased during this period, continued improvements in production have resulted in lower costs on a per kg basis.

Table 2. Average costs of production, 2011–2016 (€/kg deadweight)

Year	2011	2012	2013	2014	2015	2016	2016/15 % change
Austria	1.69	1.79	1.80	1.66	1.58	1.59	0
Belgium	1.63	1.75	1.74	1.56	1.49	1.43	-4
Brazil (MT)	1.19	1.17	1.13	1.05	0.96	1.11	16
Brazil (SC)	1.36	1.46	1.33	1.29	1.19	1.42	19
Canada	1.30	1.46	1.42	1.22	1.27	1.24	-2
Denmark	1.60	1.69	1.69	1.53	1.49	1.41	-6
Finland	na	na	na	1.67	1.61	1.58	-2
France	1.64	1.70	1.74	1.57	1.50	1.46	-3
Germany	1.78	1.84	1.84	1.65	1.58	1.53	-4
Great Britain	1.74	1.91	1.89	1.75	1.83	1.54	-16
Ireland	1.73	1.81	1.92	1.74	1.72	1.61	-7
Italy	1.95	1.98	2.02	1.96	1.84	1.83	-0
Netherlands	1.61	1.67	1.77	1.64	1.62	1.57	-3
Spain	1.61	1.65	1.64	1.49	1.46	1.38	-6
Sweden	1.96	2.08	2.07	1.81	1.74	1.68	-3
USA	1.17	1.33	1.22	1.02	1.10	1.05	-5
EU	**1.72**	**1.81**	**1.83**	**1.67**	**1.62**	**1.55**	**-4**

Financial performance summary

Table 3 contains financial performance data for 2016, while Table 4 presents comparisons with 2014 and 2015. Among the EU countries, there was a range of 37p per kg between the highest-cost and the lowest-cost producer, a nine pence increase in the range observed in 2015. The recorded differences are due to a combination of physical performance and input costs (eg feed, depreciation).

Table 3. Summary of financial performance, 2016 (£/kg deadweight)

	AUS	BEL	BRA (MT)	BRA (SC)	CAN	DEN	FIN	FRA	GER	GB	IRE	ITA	NL	SPA	SWE	USA	EU AVE
Feed	0.74	0.75	0.63	0.90	0.67	0.67	0.66	0.70	0.69	0.75	0.84	0.99	0.70	0.76	0.74	0.56	0.75
Other variable costs	0.20	0.17	0.12	0.10	0.13	0.19	0.24	0.20	0.25	0.22	0.21	0.20	0.30	0.19	0.17	0.13	0.21
Total variable costs	**0.94**	**0.92**	**0.76**	**1.00**	**0.80**	**0.85**	**0.90**	**0.91**	**0.94**	**0.98**	**1.05**	**1.19**	**1.00**	**0.94**	**0.91**	**0.69**	**0.96**
Labour	0.13	0.10	0.05	0.06	0.12	0.12	0.15	0.11	0.12	0.13	0.11	0.14	0.12	0.08	0.16	0.06	0.12
Depreciation and finance	0.24	0.16	0.10	0.10	0.09	0.19	0.26	0.18	0.20	0.16	0.16	0.18	0.17	0.11	0.32	0.11	0.19
Total fixed costs	**0.37**	**0.25**	**0.15**	**0.16**	**0.21**	**0.30**	**0.40**	**0.29**	**0.32**	**0.29**	**0.27**	**0.31**	**0.29**	**0.19**	**0.48**	**0.17**	**0.31**
Total	**1.31**	**1.17**	**0.91**	**1.16**	**1.01**	**1.16**	**1.30**	**1.20**	**1.25**	**1.26**	**1.32**	**1.50**	**1.29**	**1.13**	**1.39**	**0.86**	**1.27**

Note: Totals may not add up due to rounding

Feed prices and costs

Market developments in 2016

Following three consecutive years of record global grain surpluses, cereal prices started 2016 at lower levels than in recent years. Nearby UK Feed Wheat Futures prices started the year at around £112 per tonne, 15 per cent lower than the same period in 2015 and around 30 per cent down on the start of 2014. Prices generally followed a downward trend into the early spring when Nearby UK Feed Wheat Futures hit a near six-year low at the beginning of March at around £99 per tonne. However, as the year progressed, the tables turned for UK feed wheat, with values climbing, despite a fourth consecutive year of strong global harvest. In fact, 2016 marked the first year that Nearby UK Feed Wheat Futures recorded an annual average gain since 2012.

There is no denying that currency volatility, especially in the midst of Brexit, helped to support UK prices in 2016. Since the EU Referendum vote, sterling fell by 10 per cent against the euro and 18 per cent against the US dollar by the end of the year, which on the surface supported UK wheat prices. However, it was not just currency volatility that influenced UK markets in 2016; a tighter supply and demand situation domestically had its part to play. This was due to a combination of a relatively smaller UK wheat crop in 2016 combined with strong demand for feed wheat, driven namely by the poultry and bioethanol sectors. As such, Nearby UK Feed Wheat Futures ended the year at around £139 per tonne, nearly 25 per cent up on the start of the year.

Like wheat, soyameal prices started the year relatively lower than at the beginning of 2015, with ample global supply weighing on markets. The price of imported Brazilian soyameal (48 per cent, ex-store, Liverpool) started the year at £260 per tonne, around 25 per cent lower than at the same point in 2015. However, with a combination of a weakening pound and strong demand for vegetable oil globally, soyameal prices started to climb, peaking in June before coming back down slightly in the second half of the year. By the end of 2016, imported Brazilian soyameal (48 per cent, ex-store, Liverpool) was around £325 per tonne, 25 per cent higher than at the start of the year.

With both the main components of animal feed increasing in price in 2016, it was inevitable that compound feed would also climb in price. The average price for compound pig feed in the final quarter of 2015 was £218 per tonne, while a year later it had risen by two per cent to £222 per tonne.

Table 4 and 5 below indicate the annual average compound feed prices in various countries. Table 4 in sterling and, in Table 5, the same prices converted into euros using an annual exchange rate.

Table 4. Compound feed prices per tonne (sterling), 2016

	AUS	BEL	BRA (MT)	BRA (SC)	CAN	DEN	FIN	FRA	GER
£/tonne									
Sow	204.82	201.22	139.86	202.19	160.12	173.41	170.41	200.34	182.78
Rearer	273.64	297.97	394.22	494.83	249.26	262.11	245.78	282.39	275.52
Finisher	198.27	190.07	159.50	234.00	164.12	174.51	167.95	176.72	173.44
Average farm feed price per tonne	**191.51**	**201.84**	**174.19**	**249.08**	**172.77**	**180.96**	**166.67**	**186.62**	**186.76**

	GB	IRE	ITA	NL	SPA	SWE	USA	EU AVE
£/tonne								
Sow	182.02	212.19	216.89	203.26	185.21	196.41	141.83	194.08
Rearer	249.25	316.73	298.20	294.04	322.52	304.34	367.85	285.21
Finisher	198.78	212.19	206.36	193.76	206.63	176.70	126.58	189.62
Average farm feed price per tonne	**204.23**	**232.66**	**213.14**	**204.35**	**212.01**	**182.15**	**140.60**	**196.91**

Table 5. Compound feed prices per tonne (euros), 2016

	AUS	BEL	BRA (MT)	BRA (SC)	CAN	DEN	FIN	FRA	GER
€/tonne									
Sow	250.00	245.60	170.71	246.79	195.44	211.67	208.00	244.54	223.10
Rearer	334.00	363.70	481.18	603.98	304.24	319.93	300.00	344.69	336.30
Finisher	242.00	232.00	194.68	285.62	200.33	213.00	205.00	215.70	211.70
Average farm feed price per tonne	**233.75**	**246.37**	**212.61**	**304.02**	**210.88**	**220.88**	**203.43**	**227.79**	**227.95**

	GB	IRE	ITA	NL	SPA	SWE	USA	EU AVE
€/tonne								
Sow	222.17	259.00	264.73	248.10	226.06	239.74	173.12	236.89
Rearer	304.23	386.60	363.98	358.90	393.67	371.47	448.99	348.12
Finisher	242.63	259.00	251.88	236.49	252.21	215.68	154.50	231.44
Average farm feed price per tonne	**249.28**	**283.98**	**260.15**	**249.43**	**258.77**	**222.34**	**171.61**	**240.34**

Summary of financial performance

The impact on pig producers' feed costs in 2016

With higher prices for raw materials, on average, pig feed prices were higher in 2016 than in 2015. Across the EU members of InterPIG, prices increased (in sterling terms) by an average of four per cent compared to the previous year. There was a range of feed prices across the EU countries, with a difference of £80 per tonne between the highest and lowest average farm feed price in 2016.

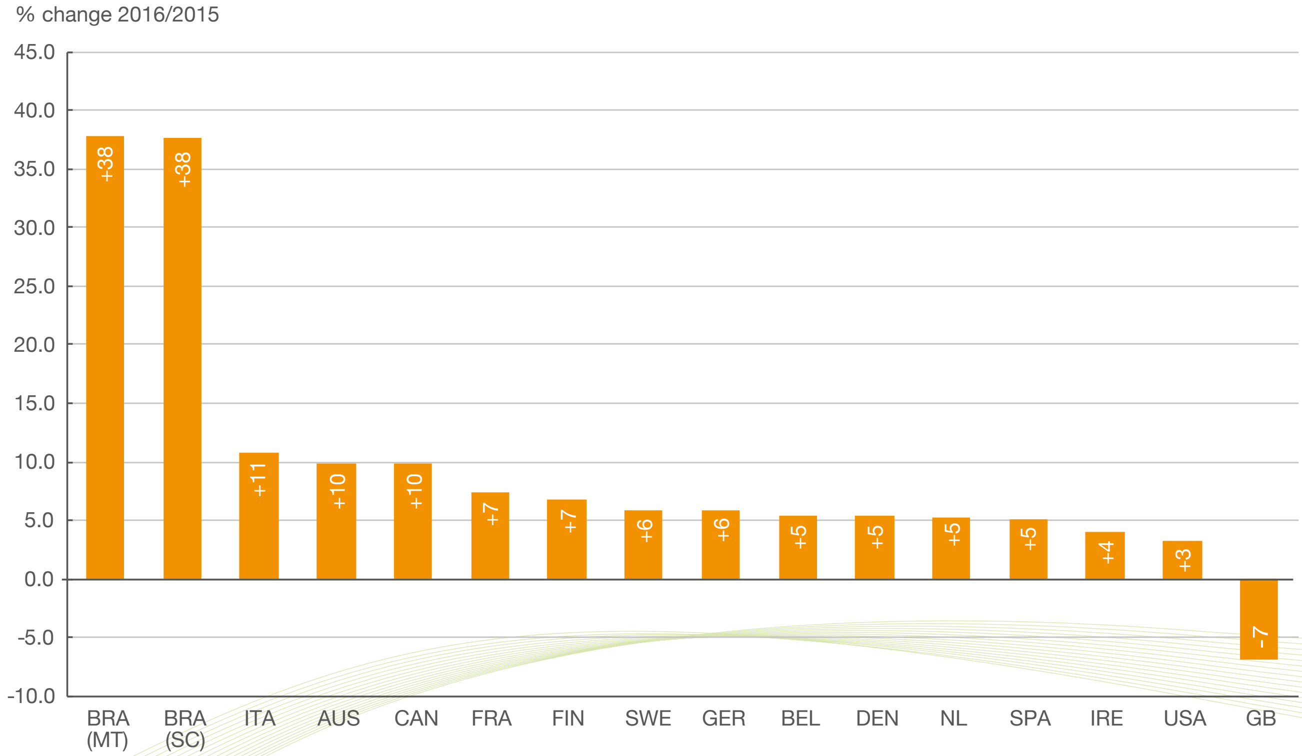

Figure 2. Changes in feed costs, 2016

The impact of feed prices on the feed cost per kg is also affected by physical performance. As shown in Figure 2, all countries, except Great Britain, experienced an increase in feed costs, the highest increase of 38 per cent in Brazil following the previous year when they experienced the greatest fall. Within the EU countries, 2016 feed costs increased on average by five per cent compared to 2015. GB had a fall of seven per cent compared to the 11 per cent increase in Italy.

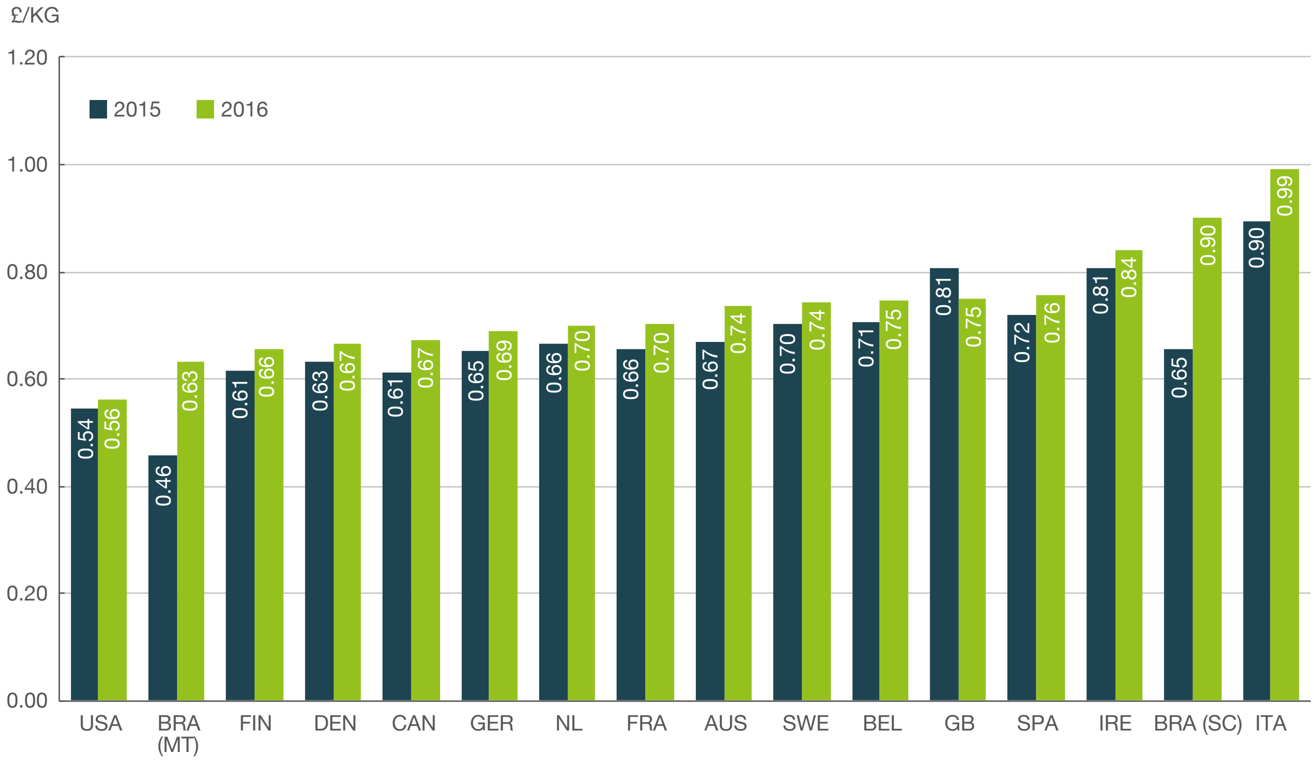

Figure 3. Feed costs, 2016

As shown in Figure 3, feed costs averaged 75p per kg in Great Britain, compared with the 81p recorded in 2015, a decrease of seven per cent. The decrease in feed costs in Great Britain during 2016 compared to the average EU increase of over five per cent. Feed costs in Great Britain were equal to the EU average of 75p per kg, lower than the 14 per cent difference in 2015.

Table 6 summarises the cost of production by country for each of the past three years. All costs are expressed in sterling and therefore the actual costs in each country are affected by exchange rates.

Table 7 summarises the physical performance by country for each of the past three years.

Table 6. Summary of financial performance, 2014–2016 (£/kg deadweight)

	AUS			BEL			BRA (SC)			CAN		
	2014	2015	2016	2014	2015	2016	2014	2015	2016	2014	2015	2016
Feed	0.79	0.67	0.74	0.84	0.71	0.75	0.80	0.65	0.90	0.65	0.61	0.67
Other variable costs	0.22	0.18	0.20	0.16	0.14	0.17	0.10	0.09	0.10	0.13	0.12	0.13
Total variable costs	1.01	0.85	0.94	1.00	0.85	0.92	0.90	0.74	1.00	0.78	0.73	0.80
Labour	0.11	0.10	0.13	0.10	0.09	0.10	0.06	0.05	0.06	0.12	0.11	0.12
Depreciation and finance	0.23	0.20	0.24	0.16	0.15	0.16	0.07	0.07	0.10	0.09	0.08	0.09
Total fixed costs	0.34	0.31	0.37	0.26	0.23	0.25	0.14	0.12	0.16	0.21	0.19	0.21
Total	**1.35**	**1.16**	**1.31**	**1.26**	**1.08**	**1.17**	**1.04**	**0.87**	**1.16**	**0.98**	**0.92**	**1.01**

	DEN			FIN			FRA			GER		
	2014	2015	2016	2014	2015	2016	2014	2015	2016	2014	2015	2016
Feed	0.74	0.63	0.67	0.70	0.61	0.66	0.77	0.66	0.70	0.76	0.65	0.69
Other variable costs	0.21	0.18	0.19	0.25	0.21	0.24	0.20	0.18	0.20	0.25	0.22	0.25
Total variable costs	0.95	0.81	0.85	0.95	0.83	0.90	0.97	0.84	0.91	1.02	0.87	0.94
Labour	0.11	0.10	0.12	0.16	0.13	0.15	0.12	0.10	0.11	0.12	0.10	0.12
Depreciation and finance	0.18	0.17	0.19	0.24	0.21	0.26	0.20	0.16	0.18	0.20	0.17	0.20
Total fixed costs	0.29	0.28	0.30	0.40	0.35	0.40	0.31	0.26	0.29	0.32	0.28	0.32
Total	**1.24**	**1.09**	**1.16**	**1.35**	**1.17**	**1.30**	**1.29**	**1.10**	**1.20**	**1.33**	**1.15**	**1.25**

	GB			IRE			ITA			NL		
	2014	2015	2016	2014	2015	2016	2014	2015	2016	2014	2015	2016
Feed	0.85	0.81	0.75	0.93	0.81	0.84	1.07	0.90	0.99	0.77	0.66	0.70
Other variable costs	0.22	0.22	0.22	0.20	0.19	0.21	0.20	0.16	0.20	0.26	0.24	0.30
Total variable costs	1.07	1.02	0.98	1.13	0.99	1.05	1.27	1.06	1.19	1.03	0.91	1.00
Labour	0.14	0.13	0.13	0.10	0.10	0.11	0.14	0.12	0.14	0.13	0.12	0.12
Depreciation and finance	0.20	0.17	0.16	0.17	0.15	0.16	0.17	0.16	0.18	0.17	0.16	0.17
Total fixed costs	0.34	0.30	0.29	0.27	0.26	0.27	0.32	0.28	0.31	0.30	0.27	0.29
Total	**1.41**	**1.33**	**1.26**	**1.40**	**1.25**	**1.32**	**1.58**	**1.34**	**1.50**	**1.32**	**1.18**	**1.29**

	SPA			SWE			USA			EU AVE		
	2014	2015	2016	2014	2015	2016	2014	2015	2016	2014	2015	2016
Feed	0.84	0.72	0.76	0.81	0.70	0.74	0.57	0.54	0.56	0.82	0.71	0.75
Other variable costs	0.16	0.17	0.19	0.17	0.15	0.17	0.11	0.11	0.13	0.21	0.19	0.21
Total variable costs	1.00	0.89	0.94	0.98	0.85	0.91	0.68	0.65	0.69	1.03	0.90	0.96
Labour	0.07	0.07	0.08	0.15	0.13	0.16	0.05	0.05	0.06	0.12	0.11	0.12
Depreciation and finance	0.13	0.10	0.11	0.34	0.29	0.32	0.09	0.05	0.11	0.20	0.17	0.19
Total fixed costs	0.20	0.17	0.19	0.49	0.42	0.48	0.15	0.10	0.17	0.32	0.28	0.31
Total	**1.20**	**1.06**	**1.13**	**1.47**	**1.27**	**1.39**	**0.83**	**0.75**	**0.86**	**1.35**	**1.18**	**1.27**

Note: Totals may not add up due to rounding

Net margins in Great Britain

The net margins shown in Figure 4 are based on the difference between the monthly Average Pig Price (APP) and the total cost of producing pig meat (including depreciation costs) for an average producer. The results shown in the chart should, however, only be considered as indicative of general trends, because:

- Physical and financial performance levels can vary greatly between producers
- The assumptions used for feed costs using spot compound prices will not apply to all producers, due to the range of feed procurement strategies in the industry

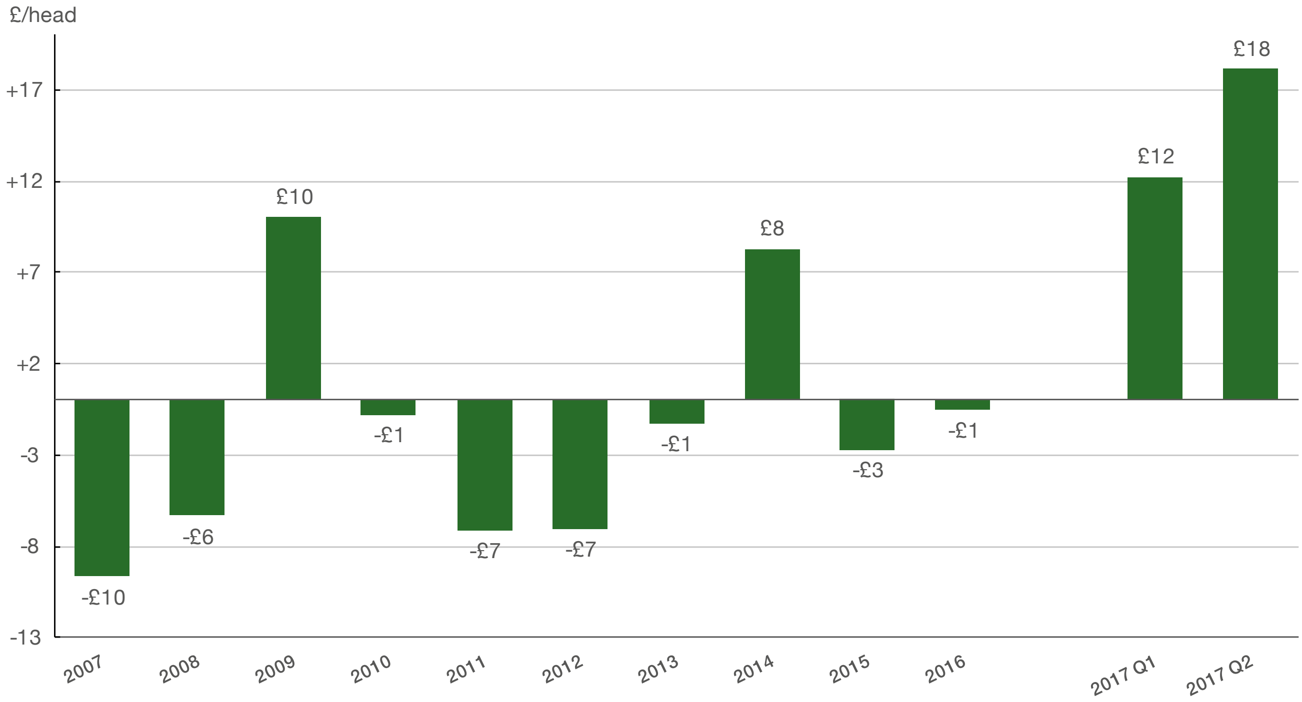

Figure 4. Estimated net margins in the United Kingdom, 2007–2017

The volatility of net margin returns for pig producers in Great Britain is clearly illustrated in the above chart. Until 2017, in the preceding 10 years producers in Great Britain had only achieved a positive margin on an annual average basis for two out of the 10 years. During prolonged periods of negative margins, specialist pig producers with no other farm enterprises or farm diversification are particularly vulnerable and may leave the industry. Many producers make little or no investment during these periods and some depopulate for a period of time.

In 2014, early higher pig prices were followed by declining pig prices, resulting in a breakeven point at the end of 2014 and a positive average margin for 2014 overall. With lower feed costs but continued declining prices, 2015 resulted in an average negative margin. In 2016, low prices in the first seven months of the year resulted in negative margins estimated as up to £11 per pig. During the rest of 2016, rising prices covered increasing feed costs, with the end of 2016 resulting in positive net margins estimated around £14 per pig. This resulted in an overall breakeven situation for 2016.

In the first half of 2017, pig prices continued to rise and easily covered increasing feed prices, resulting in healthy margins.

Physical performance

Table 7. Summary of physical performance, 2014–2016

	AUS			BEL			BRA (MT)		
	2014	2015	2016	2014	2015	2016	2014	2015	2016
Pigs weaned/sow/year	24.36	24.40	24.90	27.81	28.40	30.13	26.09	25.36	26.15
Pigs reared/sow/year	23.67	23.71	24.16	26.82	27.43	28.74	25.57	24.85	25.63
Pigs sold/sow/year	23.27	23.31	23.74	25.99	26.61	27.91	25.01	24.31	25.06
Litters/sow/year	2.30	2.30	2.33	2.32	2.33	2.38	2.41	2.41	2.37
Rearing mortality (%)	2.80	2.80	3.00	3.58	3.40	4.60	2.00	2.00	2.00
Finishing mortality (%)	1.73	1.70	1.74	3.08	3.00	2.90	2.20	2.20	2.20
Finishing Daily Liveweight Gain (g/day)	796	778	802	676	678	680	831	831	831
Finishing Feed Conversion Ratio	2.89	2.95	2.88	2.86	2.86	2.83	2.60	2.60	2.60
Average liveweight at slaughter (kg)	120	120	121	113	113	114	122	122	123
Average carcase weight – Cold (kg)	93.9	93.8	94.5	90.1	91.2	91.2	91.1	91.1	91.6
Carcase meat production/sow/year (kg)	2185	2187	2243	2342	2428	2546	2279	2215	2295

	BRA (SC)			CAN			DEN		
	2014	2015	2016	2014	2015	2016	2014	2015	2016
Pigs weaned/sow/year	25.73	26.66	26.82	22.73	23.97	23.19	30.46	31.26	32.10
Pigs reared/sow/year	25.22	26.13	26.28	22.28	23.49	22.73	29.58	30.29	31.10
Pigs sold/sow/year	24.66	25.55	25.71	21.50	22.66	21.93	28.48	29.17	30.08
Litters/sow/year	2.30	2.30	2.30	2.27	2.30	2.30	2.26	2.27	2.27
Rearing mortality (%)	2.00	2.00	2.00	2.00	2.00	2.00	2.90	3.10	3.10
Finishing mortality (%)	2.20	2.20	2.20	3.50	3.50	3.50	3.70	3.70	3.30
Finishing Daily Liveweight Gain (g/day)	820	820	820	870	876	876	931	947	950
Finishing Feed Conversion Ratio	2.60	2.60	2.60	3.00	3.00	3.00	2.70	2.67	2.69
Average liveweight at slaughter (kg)	120	120	123	124	126	126	111	110	111
Average carcase weight – Cold (kg)	89.6	89.6	91.8	97.9	98.9	99.3	83.5	83.3	84.2
Carcase meat production/sow/year (kg)	2210	2289	2361	2105	2241	2178	2378	2429	2531

	FIN			FRA			GER		
	2014	2015	2016	2014	2015	2016	2014	2015	2016
Pigs weaned/sow/year	24.68	25.82	26.91	27.69	27.86	27.48	27.36	28.64	29.07
Pigs reared/sow/year	24.20	25.28	26.32	27.03	27.17	26.73	26.76	27.90	28.14
Pigs sold/sow/year	23.62	24.62	25.58	26.06	26.19	25.72	26.09	27.17	27.35
Litters/sow/year	2.24	2.22	2.22	2.38	2.38	2.33	2.32	2.34	2.33
Rearing mortality (%)	1.92	2.08	2.20	2.38	2.48	2.72	2.20	2.60	3.20
Finishing mortality (%)	2.40	2.60	2.82	3.59	3.59	3.75	2.50	2.60	2.80
Finishing Daily Liveweight Gain (g/day)	914	956	967	803	810	819	805	817	824
Finishing Feed Conversion Ratio	2.79	2.70	2.70	2.75	2.73	2.78	2.83	2.82	2.81
Average liveweight at slaughter (kg)	119	122	121	118	120	120	121	122	122
Average carcase weight – Cold (kg)	89.0	90.6	89.8	90.4	91.6	92.1	93.7	94.1	94.0
Carcase meat production/sow/year (kg)	2101	2230	2296	2357	2398	2369	2444	2556	2571

Table 7. Summary of physical performance, 2014–2016, continued

	GB			IRE			ITA		
	2014	2015	2016	2014	2015	2016	2014	2015	2016
Pigs weaned/sow/year	24.09	24.38	24.83	26.73	26.10	27.92	24.41	23.99	24.30
Pigs reared/sow/year	23.40	23.70	23.94	26.03	25.40	27.12	23.68	23.27	23.52
Pigs sold/sow/year	22.66	23.05	23.22	25.40	24.79	26.45	23.32	22.92	22.93
Litters/sow/year	2.27	2.27	2.28	2.37	2.27	2.38	2.25	2.22	2.22
Rearing mortality (%)	2.84	2.79	3.56	2.61	2.68	2.85	3.00	3.00	3.20
Finishing mortality (%)	3.17	2.74	3.03	2.43	2.38	2.49	1.50	1.50	2.50
Finishing Daily Liveweight Gain (g/day)	801	817	850	824	864	860	650	682	687
Finishing Feed Conversion Ratio	2.67	2.69	2.65	2.81	2.71	2.69	3.68	3.85	3.79
Average liveweight at slaughter (kg)	105	106	107	106	109	109	166	170	170
Average carcase weight – Cold (kg)	80.4	81.0	81.9	82.8	83.0	83.0	126.2	136.5	136.6
Carcase meat production/sow/year (kg)	1823	1868	1901	2103	2058	2195	2942	3128	3132

	NL			SPA			SWE		
	2014	2015	2016	2014	2015	2016	2014	2015	2016
Pigs weaned/sow/year	29.18	29.52	29.80	25.84	26.29	27.00	24.16	25.03	25.88
Pigs reared/sow/year	28.45	28.76	29.06	25.04	25.40	25.94	23.68	24.53	25.34
Pigs sold/sow/year	27.79	28.09	28.39	24.17	24.42	25.02	23.30	24.16	24.91
Litters/sow/year	2.37	2.36	2.36	2.34	2.34	2.34	2.21	2.22	2.23
Rearing mortality (%)	2.50	2.60	2.50	3.10	3.38	3.94	2.00	2.00	2.10
Finishing mortality (%)	2.30	2.30	2.30	3.45	3.85	3.57	1.60	1.50	1.70
Finishing Daily Liveweight Gain (g/day)	800	804	808	681	695	706	905	923	926
Finishing Feed Conversion Ratio	2.59	2.60	2.59	2.57	2.52	2.48	2.88	2.84	2.85
Average liveweight at slaughter (kg)	119	119	119	108	108	110	121	120	121
Average carcase weight – Cold (kg)	92.3	92.6	93.0	81.4	81.2	82.3	90.1	89.8	88.3
Carcase meat production/sow/year (kg)	2565	2601	2640	1969	1984	2060	2099	2170	2199

	USA			EU AVE		
	2014	2015	2016	2014	2015	2016
Pigs weaned/sow/year	24.82	25.26	25.68	26.40	26.81	27.53
Pigs reared/sow/year	23.67	24.15	24.63	25.69	26.07	26.68
Pigs sold/sow/year	22.36	22.95	23.42	25.01	25.38	25.94
Litters/sow/year	2.41	2.41	2.41	2.30	2.29	2.31
Rearing mortality (%)	4.65	4.38	4.10	2.65	2.74	3.08
Finishing mortality (%)	5.51	5.01	4.92	2.62	2.62	2.74
Finishing Daily Liveweight Gain (g/day)	812	821	826	799	814	823
Finishing Feed Conversion Ratio	2.74	2.76	2.72	2.84	2.83	2.81
Average liveweight at slaughter (kg)	129	128	128	119	120	120
Average carcase weight – Cold (kg)	96.6	94.6	94.0	91.2	92.4	92.6
Carcase meat production/sow/year (kg)	2160	2172	2202	2276	2336	2390

Pigs weaned per sow per year

The overall average number of pigs weaned per sow per year in the European InterPIG countries showed over two per cent increase in 2016, up from 26.81 in 2015 to 27.53 in 2016. As shown in Figure 5, performance improved in most EU countries, with Ireland showing the greatest increase, up seven per cent compared with 2015. Denmark and Belgium had the best results for pigs weaned, with Denmark achieving an average of over 32 pigs weaned per sow per year. The non-EU countries all continued to perform below the EU average.

The number of pigs weaned per sow per year in Great Britain increased by two per cent to 24.83 (indoor sows 26.2, outdoor sows 22.8). While Great Britain has a significant proportion of sows kept outdoors, the low number of pigs weaned per sow per year in all systems is still a major cause of the relatively high cost of production and needs to be addressed if costs are to be competitive with the rest of Europe.

Pigs weaned per sow per year is a result of three different elements: pigs born alive per litter, litters per sow per year and pre-weaning mortality.

- The Great Britain result for litters per sow per year was 2.28 (indoor sows 2.29, outdoor sows 2.26), a small outdoor increase compared to 2015. Performance was below the EU average of 2.31
- Pre-weaning mortality, at 12.6 per cent (indoor sows 11.8, outdoor sows 13.8), was higher than in 2015. Indoor sow pre-weaning mortality was lower than the EU average of 13.4 per cent
- As in previous years, the main reason why Great Britain has a below average number of pigs weaned per sow per year lies in the number of pigs born alive per litter. The 2016 average at 12.5 (indoor sows 13, outdoor sows 11.7) was an increase compared to 12.3 in 2015 but lower than the EU average of 13.8.

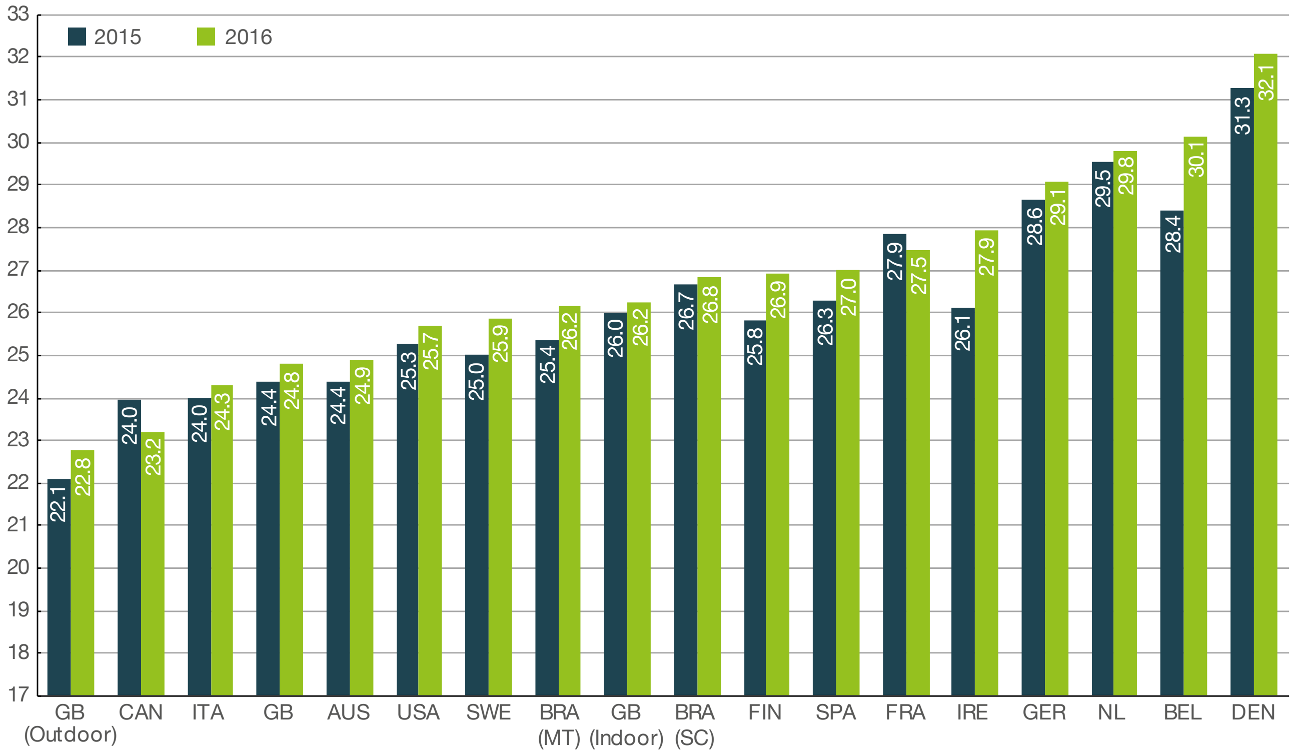

Figure 5. Pigs weaned per sow per year, 2015–2016

Pigs finished per sow per year

As shown in Figure 6, the average number of pigs finished per sow in Great Britain again increased in 2016. At 23.22, performance was 0.17 pigs (1 per cent) higher than in 2015.

In 2016, there was an average 25.94 pigs finished per sow in the EU, two per cent higher than in 2015. Denmark has the highest numbers, finishing 30 pigs per sow per year. Within the EU, Italy has the lowest number of pigs finished per sow per year in 2016, with Canada achieving a lower performance in the InterPIG group.

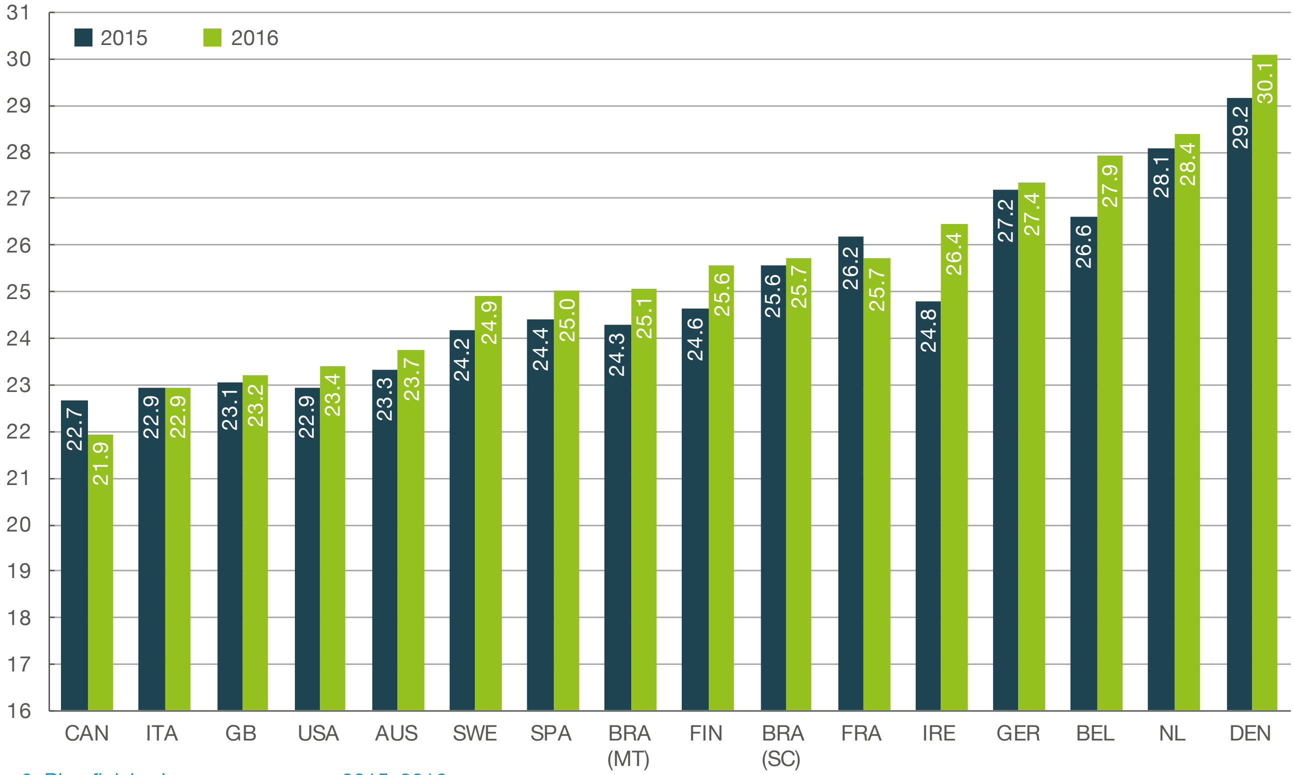

Figure 6. Pigs finished per sow per year, 2015–2016

Photo courtesy of Dingley Dell Pork, Suffolk

Appendix I

InterPIG members pig industry trends, 2016

	AUS	BEL	BRA	CAN	CZE	DEN	FIN	FRA	GER
Breeding sow numbers ('000 head)	232	432	2,945	1,261	134	1,216	108	1,007	1,917
Annual pig slaughterings ('000 head)	5,228	11,181	38,680	21,420	2,428	18,228	2,082	23,817	59,391
Pig meat production ('000 tonnes)	511	1,061	3,700	1,955	220	1,567	190	2,206	5,579
Pig meat imports ('000 tonnes cwe)*	196	158	2	207	331	127	38	477	1,103
Pig meat exports ('000 tonnes cwe)*	256	806	832	1,319	81	1,388	36	540	2,444
Pig meat consumption ('000 tonnes cwe)*	451	413	2,870	843	469	306	192	2,143	4,238
Pig meat consumption (kg per head)*	51.6	36.6	13.8	23.2	44.4	53.3	34.9	33.2	51.8

	HUN	IRE	ITA	NL	POL	SP	SWE	UK	USA
Breeding sow numbers ('000 head)	269	149	572	1,053	854	2,374	139	494	5,979
Annual pig slaughterings ('000 head)	4,676	3,317	11,848	15,374	21,770	47,704	2,527	10,990	118,202
Pig meat production ('000 tonnes)	432	283	1,544	1,453	1,963	4,059	234	919	11,319
Pig meat imports ('000 tonnes cwe)*	203	110	1,086	248	725	171	131	1,049	497
Pig meat exports ('000 tonnes cwe)*	181	254	294	1,112	662	1,803	26	251	2,374
Pig meat consumption ('000 tonnes cwe)*	454	138	2,336	589	2,026	2,427	340	1,716	9,442
Pig meat consumption (kg per head)*	46.1	29.8	38.4	34.8	52.6	52.3	34.8	26.0	29.0

*Estimated figures
cwe = carcase weight equivalent
Breeding sow numbers are for mid-2016 except for Brazil, Czech Republic, Finland (Dec 16)
Sources: AHDB, GTIS, USDA, Eurostat

Appendix II

Additional tables and figures

Labels on bar charts are rounded and may indicate the same results when the bars do not appear equal

Table 8. Ranking of EU production costs, 2011–2016

Year	2011	2012	2013	2014	2015	2016	% of EU AVE
Spain	2	1	1	1	1	1	88.9
Denmark	1	3	2	2	3	2	90.7
Belgium	4	5	4	3	2	3	92.1
France	5	4	3	4	4	4	93.9
Germany	9	8	7	6	6	5	98.6
Great Britain	8	9	8	10	11	6	99.5
Netherlands	3	2	5	5	8	7	101.5
Finland	na	na	na	8	7	8	101.8
Austria	6	6	6	7	5	9	102.3
Ireland	7	7	9	9	9	10	103.7
Sweden	11	11	11	11	10	11	108.6
Italy	10	10	10	12	12	12	118.2

Notes: Rankings – 1 = lowest cost; 12 = highest cost

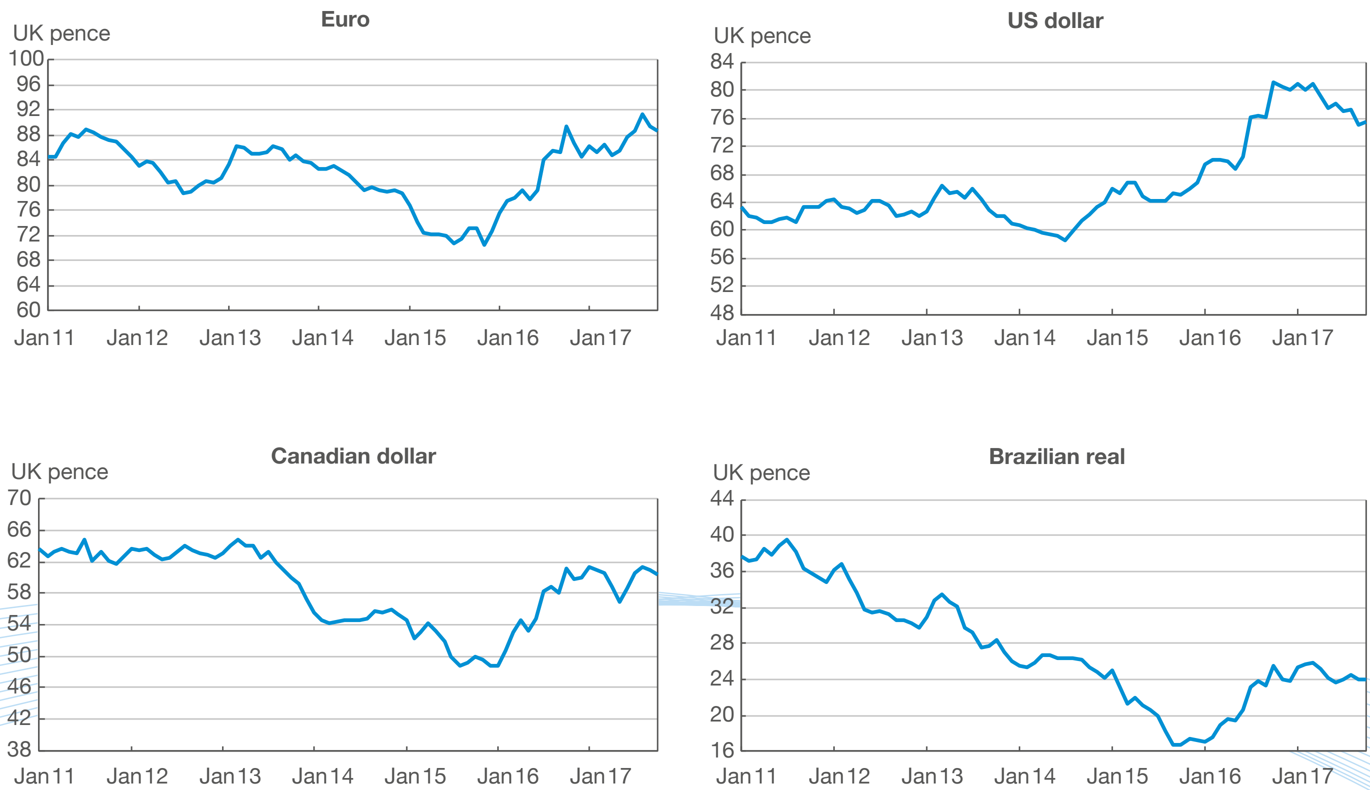

Figure 7. Exchange rate movements, 2011–2017

Table 9. Annual exchange rates

Year	1€ =	€ to £	$US to £	$C to £	Real to £
2011	86.7p	1.153	1.60	1.59	2.68
2012	81.1p	1.233	1.59	1.58	3.10
2013	84.9p	1.178	1.56	1.61	3.38
2014	80.6p	1.241	1.65	1.82	3.87
2015	72.6p	1.378	1.53	1.95	5.09
2016	81.7p	1.224	1.35	1.80	4.74

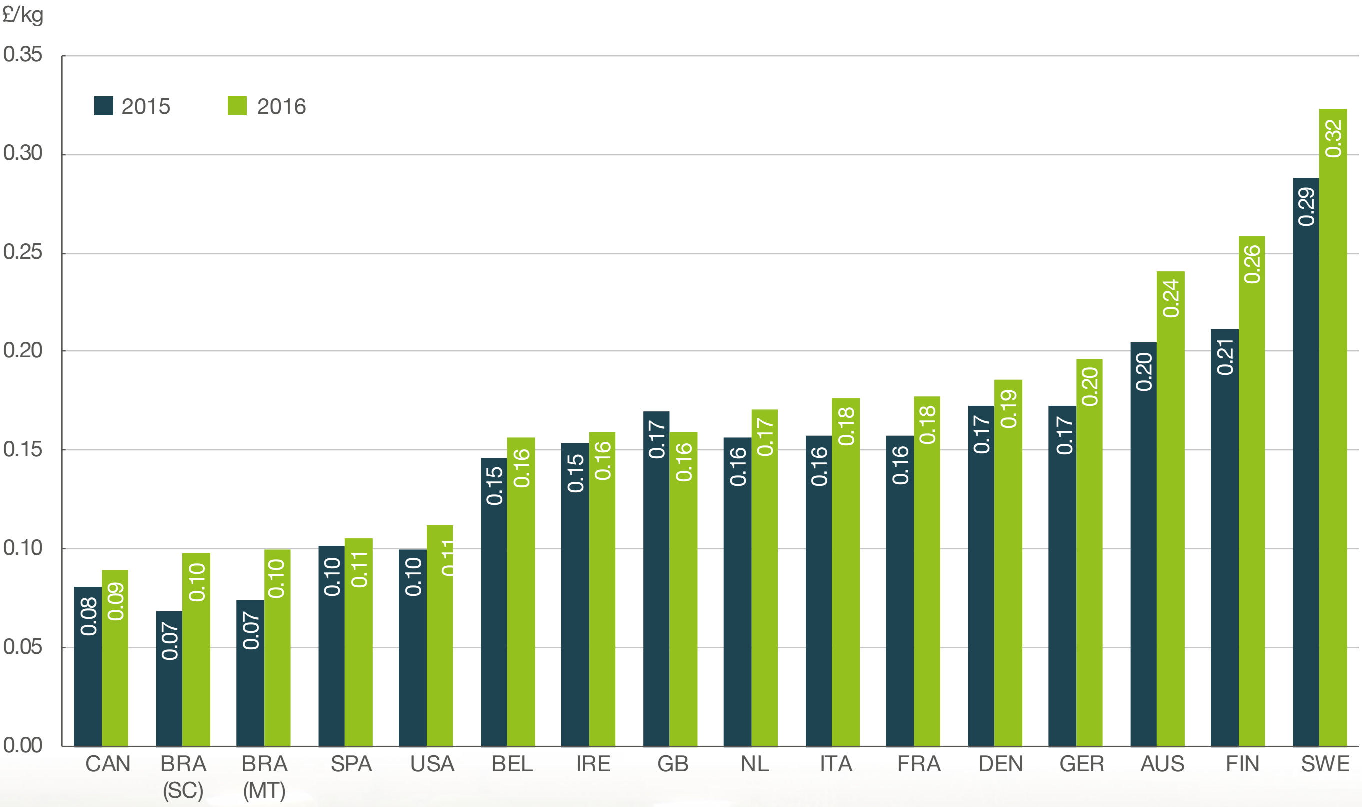

Figure 8. Depreciation and finance costs, 2015–2016

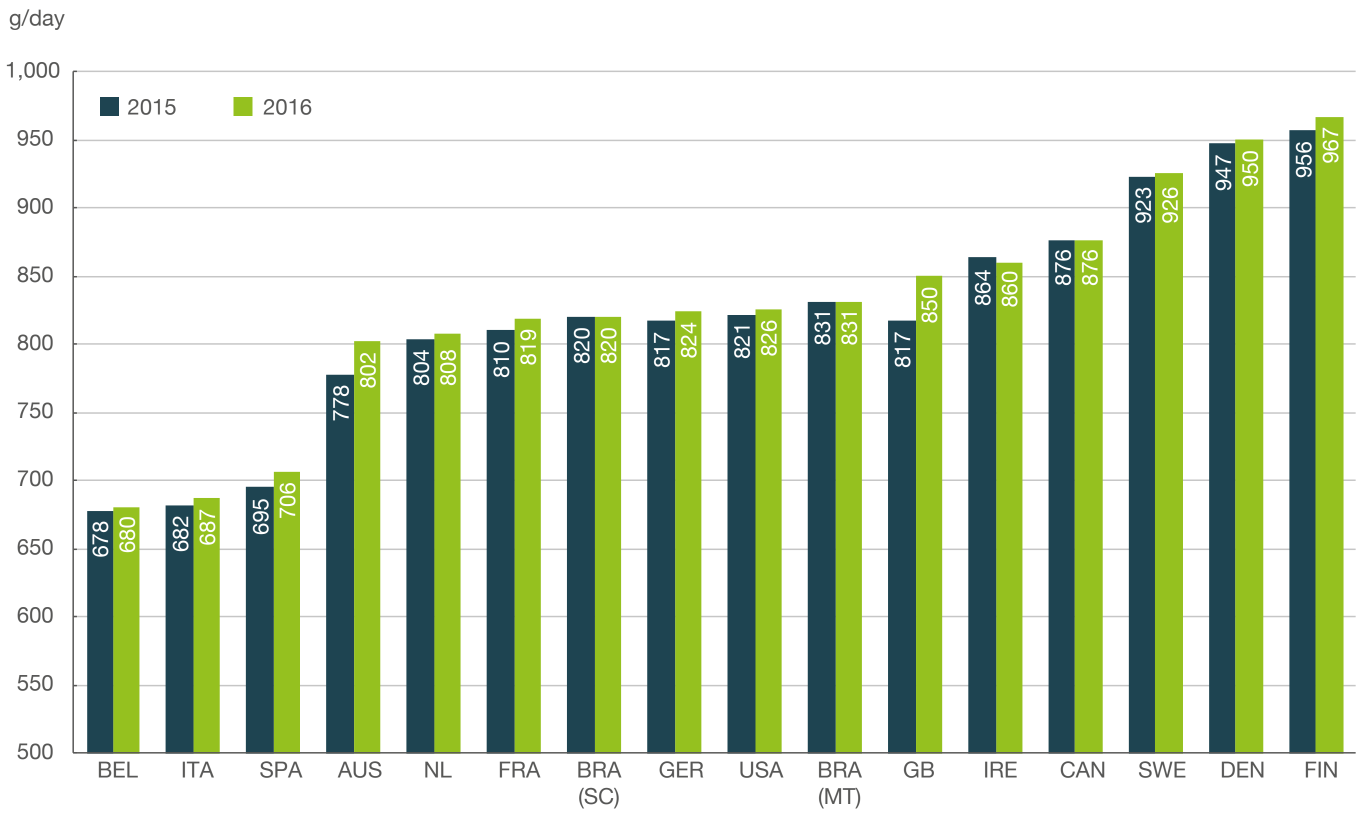

Figure 9. Daily Liveweight Gains (finishing herds), 2015–2016

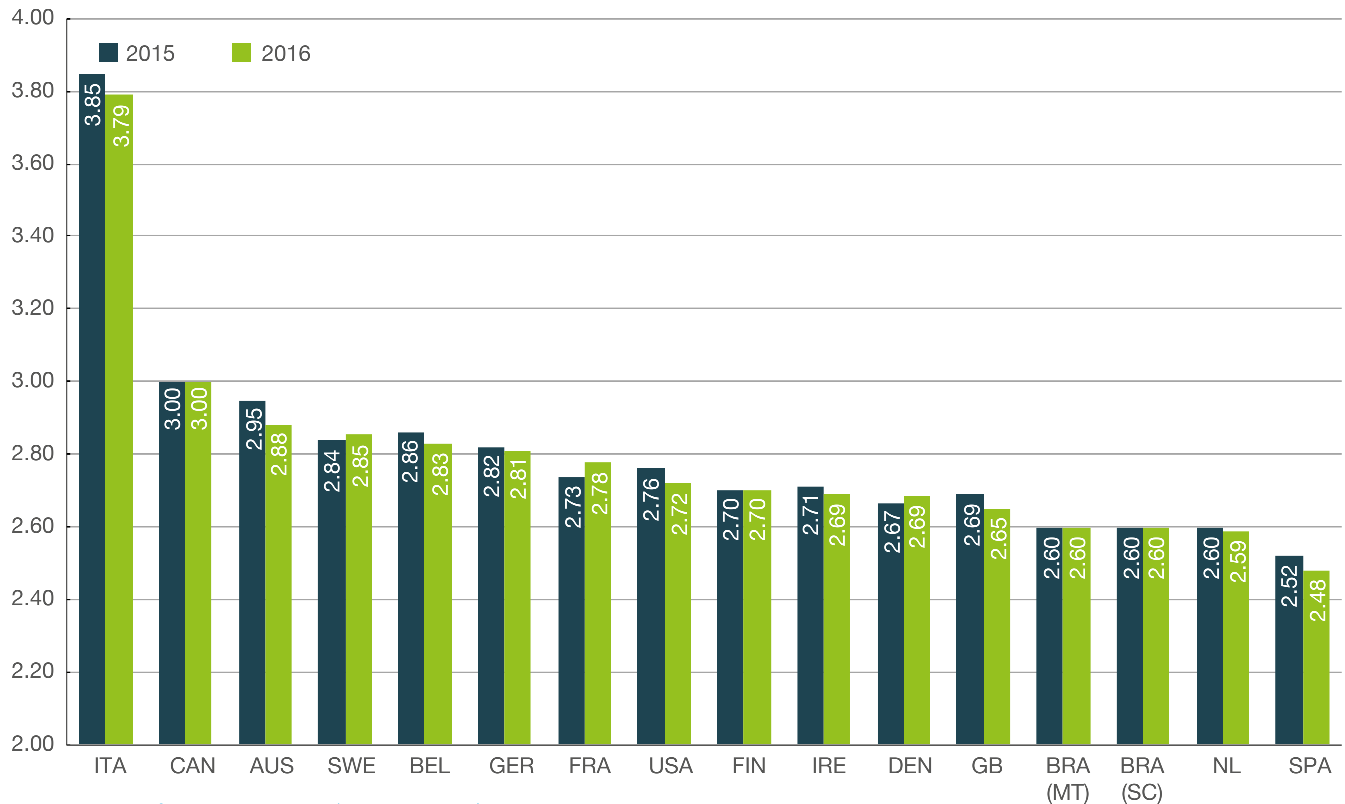

Figure 10. Feed Conversion Ratios (finishing herds), 2015–2016

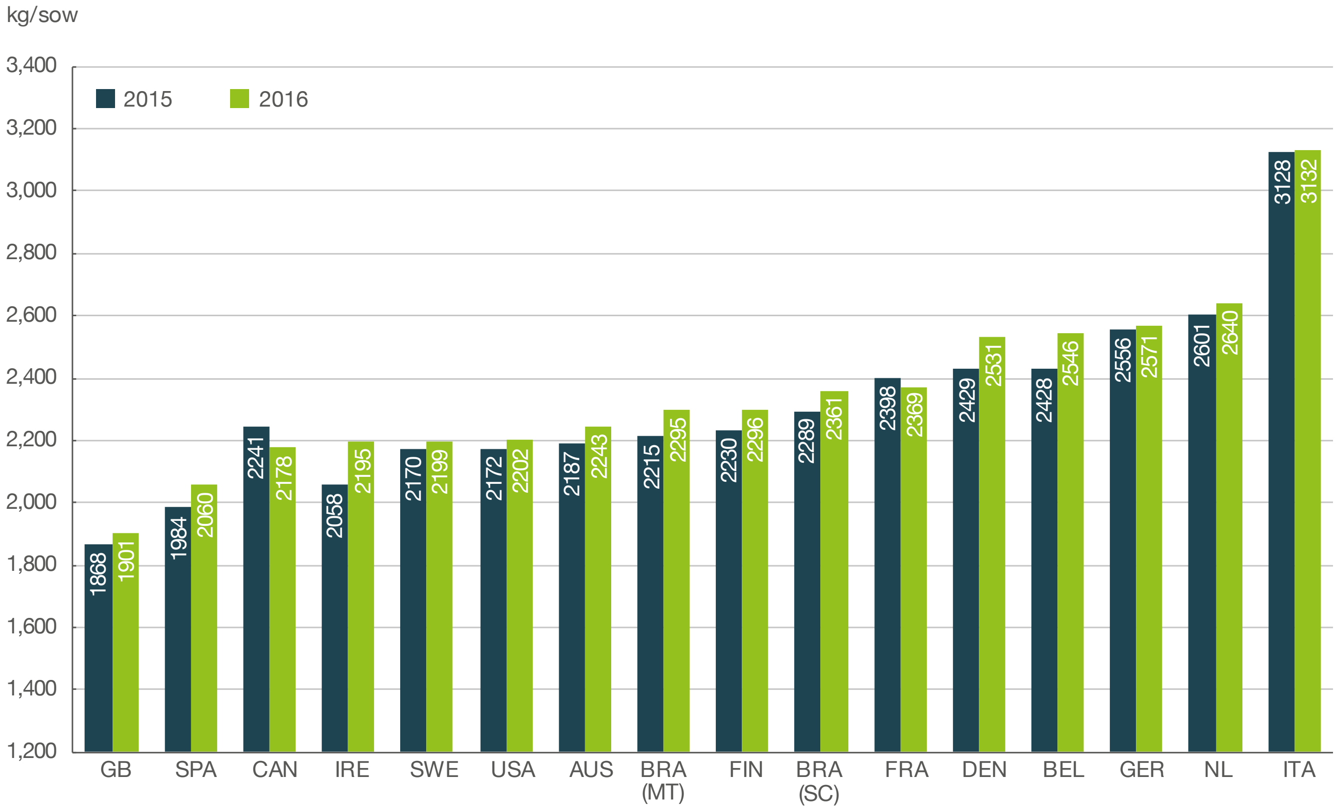

Figure 11. Carcase meat production per sow per year, 2015–2016

Standardising the physical results

Methodology

There is a wide variation in physical performance measures reported by InterPIG countries. Some of these variations could be due to differences between countries in the weight of animals produced. Other things being equal, an increase in slaughter weights and the length of time an animal is in the system will lead to a worsening in both the marginal daily liveweight gain (DLG) and the marginal feed conversion ratio (FCR).

Using methodology created by our French InterPIG partner ITP, the figures have been standardised on the basis of three weights:

- Transfer from breeding unit to rearing unit: 8kg (GB = 7.3kg in 2016)
- Transfer from rearing unit to finishing unit: 30kg (GB = 36.8kg)
- Liveweight at slaughter: 120kg (GB = 107.4kg)

This section examines the adjustments that have been made to the finishing FCR and DLG figures in the European InterPIG countries to exclude the differences caused by variations in national transfer and slaughter weights.

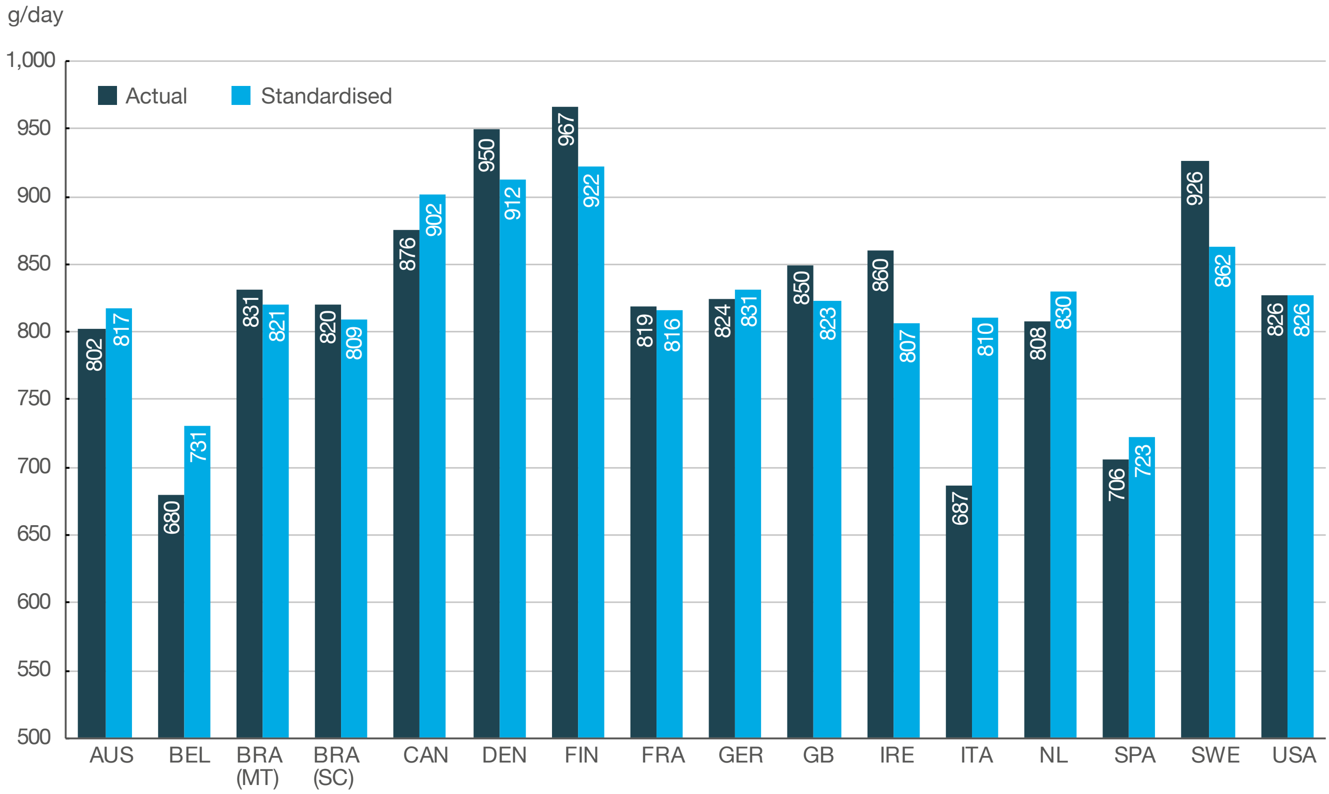

Figure 12. Standardised Daily Liveweight Gains (finishing herds), 2016

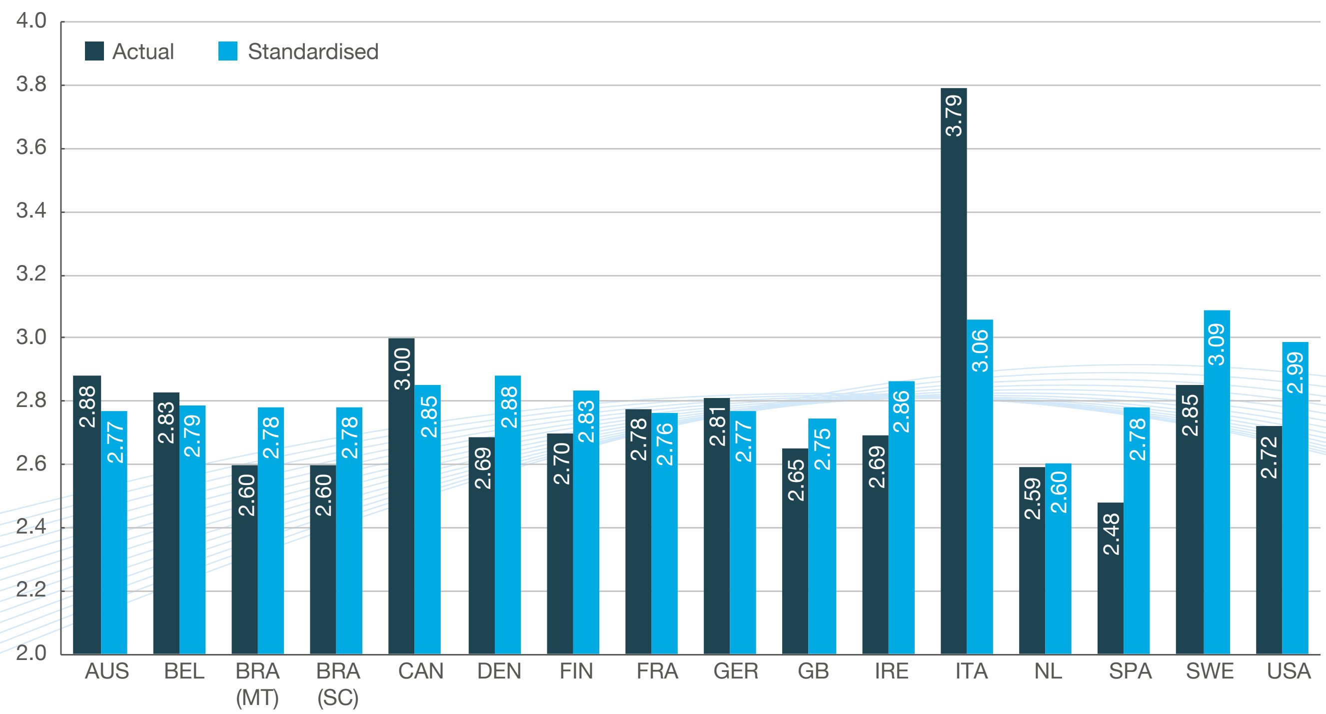

Figure 13. Standardised Feed Conversion Ratios (finishing herds), 2016

Table 10. GB and EU physical results, 2016

	GB Overall	GB Indoor*	GB Outdoor*	EU average	GB overall difference with EU average 2016%
Pigs weaned/sow/year	24.8	26.2	22.8	27.5	-10
Pigs reared/sow/year	23.9	25.3	22.0	26.7	-10
Pigs sold/sow/year	23.2	24.5	21.3	25.9	-11
Pigs born alive/litter	12.5	13.0	11.7	13.8	-9
Pigs weaned/litter	10.9	11.5	10.1	11.9	-9
Litters/sow/year	2.28	2.29	2.26	2.31	-1
Sow mortality (%)	5.1%	6.0%	3.8%	6.1%	-16
Pre-weaning mortality (%)	12.6%	11.8%	13.8%	13.4%	-6
Rearing mortality (%)	3.6%	–	–	3.1%	+16
Finishing mortality (%)	3.0%	–	–	2.7%	+11
Transfer weight from breeding to rearing unit (kg)	7.3	7.3	7.3	7.3	+0
Lactation period (days)	26.6	26.7	26.5	26.9	-1
Transfer weight from rearing to finishing unit (kg)	36.8	–	–	30.0	+22
Rearing Daily Liveweight Gain (g/day)	484	–	–	421	+15
Rearing Feed Conversion Ratio	1.7	–	–	1.8	-4
Finishing Daily Liveweight Gain (g/day)	850	–	–	823	+3
Finishing Feed Conversion Ratio	2.6	–	–	2.8	-6
Average number of days in rearing unit	61	–	–	54	+14
Average number of days in finishing unit	83	–	–	112	-26
Empty finishing unit days per cycle	7	–	–	10	-27
Pigs/pig place/year (finishing)	4.1	–	–	3.2	+28
Average live weight at slaughter (kg)	107.4	–	–	120.4	-11
Average carcase weight - Cold (kg)	81.9	–	–	92.6	-12
Killing-out percentage (cold weight)	76.3%	76.3%	76.3%	76.8%	-1
Carcase meat production/sow/year (kg)	1901	2033	1744	2390	-20
Sow feed/sow/year (kg)	1389	1265	1575	1320	+5
Weaner/rearer feed/reared pig (kg)	51	–	–	41	+24
Finishing pigs feed consumption/slaughter (kg)	189	–	–	261	-28

Notes: All pigs from indoor and outdoor sows are assumed to be reared in the same type of straw-based system after weaning.

List of tables and charts

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