2017 pig cost of production in selected countries

Contents

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 2017.

In 2016, the EU pig market managed to shrug off two years of challenging financial conditions. The early months of that year were characterised by increased production, subdued consumer demand and Russia's continued ban on imports of most pork products. However, export sales to China underpinned a reversal of fortunes in spring, leading to higher prices in the second half of the year. Prices ended the year at around €1.50 per kg, having reached a peak of over €1.60 per kg in late September, and it was against the backdrop of an export-led recovery in the market that 2017 began.

China continued to draw pig meat from overseas, and European exporters were able to respond to the higher demand, as well as increasing the range of products accessible to that important market. By July, the EU average pig reference price had exceeded €1.75 per kg because of tighter European supplies earlier in the year. Inside China, the far-reaching effects of a national programme to modernise and expand the domestic herd were soon felt, putting pressure on the domestic price. By the summer, import demand had begun to fall and, combined with growing US production, then impacted on global and EU pig prices, which gave up over €0.30 per kg in the last half of the year. December closed with prices around €1.40 per kg.

The positive trends in the EU market were not lost on Great Britain. Weakening sterling following the EU membership referendum provided a boost to UK competitiveness during 2016 and, since mid-October that year, the UK reference price has consistently maintained a premium to the EU reference price in sterling terms. Starting 2017 at around £1.50 per kg, the UK price tracked higher, along with EU prices. It reached a peak of over £1.60 per kg in late August before the increase in production that was to follow later in the year, both in the EU and elsewhere, proved too much for the UK, with the market closing the year at about the same level as it had opened.

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Methodology

This report examines the relative costs of production in selected countries. This is a joint project, involving the following organisations in 17 countries, 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 submits 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 Canada are excluded due to deadlines; and data from Hungary is included for the first time. We continue to work with other countries and organisations that wish to provide standardised results for international comparison.

The cost and performance data relate to average performance data available from 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).

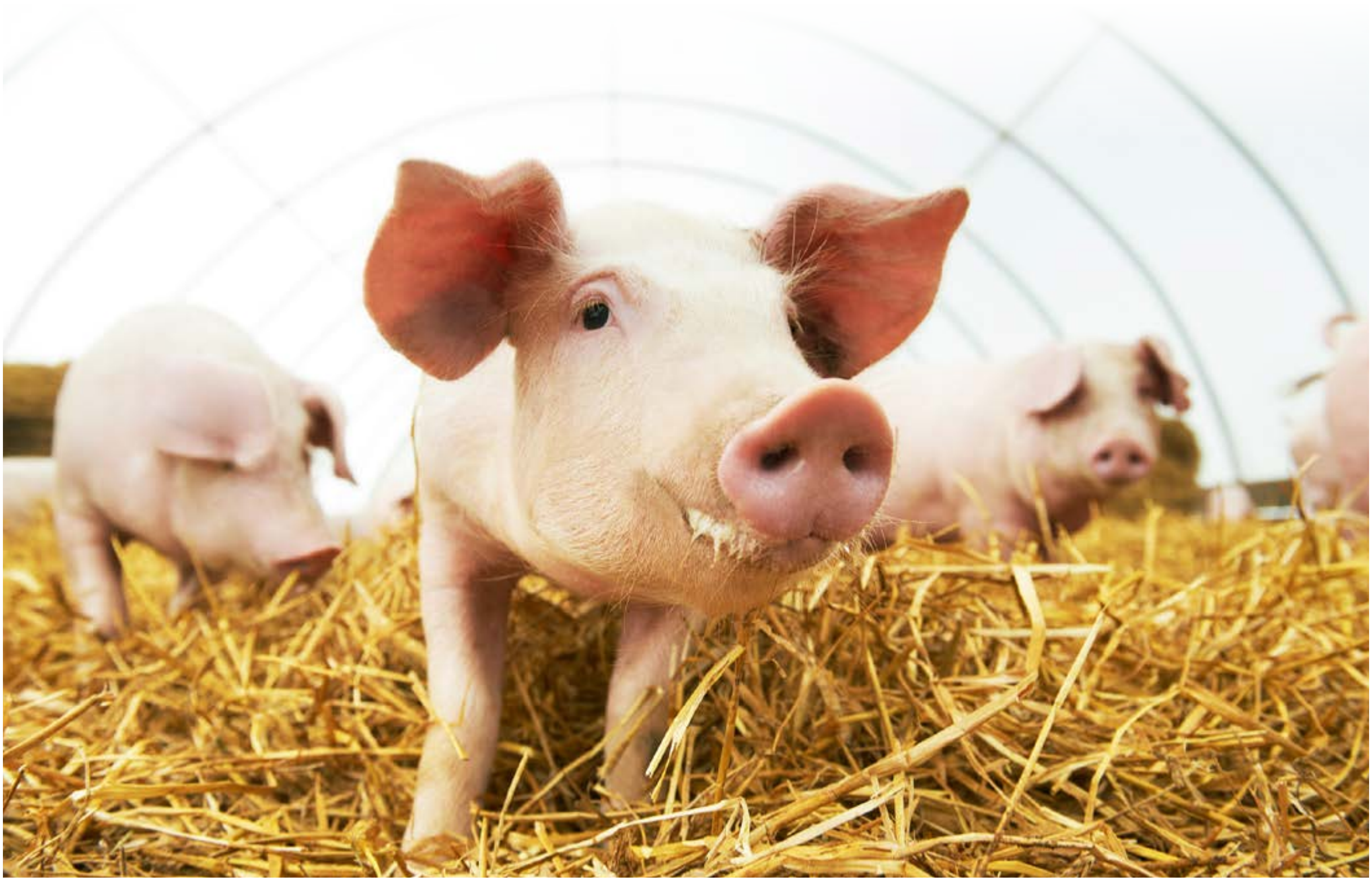
There will inevitably still be some national differences in definition but where this has occurred, the data is adjusted in the most appropriate way. The results are believed to provide a clear indication of the relative average costs of production within each country and to deliver an accurate comparison. 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, due to changes in data or participating countries, previous years' analyses may be updated. As a result, there may be some discrepancies between previous publications as definitions and formulae are realigned.

NOTE: In GB, there is a difference between the methodology used for producing the national quarterly Cost of Production and the methodology used by InterPIG. In GB, abattoir costs (transport to slaughter, meat hygiene, carcase classification and statutory levy) are included in the quarterly published cost of production figures. In InterPIG, these costs are excluded from the cost of production and are deducted from the price received at sale.

Key points

- The cost of pig meat production in Great Britain increased by 8% in 2017, to £1.37 per kg. The average cost of production in the EU was £1.36 per kg deadweight, a 7% increase in sterling terms compared with 2016
- All sampled EU countries experienced an increase in the costs of production (in sterling terms) compared with 2016
- EU average reference price of £1.41 per kg was higher in 2017 than in 2016, with four of the sampled EU countries (Finland, Ireland, Italy, Sweden) having higher production costs than this
- Average feed prices were higher in 2017 than in 2016, increasing by an average of nearly 7% across the EU countries
- In 2017 as a whole, EU feed costs per kg increased by 6% compared with a year earlier, in sterling terms. All InterPIG member countries, except Hungary, experienced an increase in feed costs compared with 2016
- The overall average number of pigs weaned per sow per year in the EU InterPIG countries showed nearly 2% increase in 2017, up from 27.32 in 2016 to 27.79, with Denmark achieving 33. There was a 4% increase in pigs weaned per sow per year in Great Britain to 25.75 overall. Indoor sow production achieved 26.97 and outdoor sows 23.95 on average; increases compared with 2016
- There is a difference of 8.5 pigs weaned per sow per year between the highest and lowest performing EU countries
- The average number of pigs finished per sow in Great Britain again increased in 2017. At 24.09 pigs per sow, average performance was 0.87 pigs higher than in 2016 but lower than the EU average of 26.20
- Great Britain produced nearly 2 tonnes of carcase meat per sow in 2017, 5% higher than in 2016, due to a combination of the increase in the number of pigs finished per sow and an increase in finishing weight.

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 updated quarterly, based on Agrosoft data. The section provides average, top third and top 10% 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 and Herd Performance).



Cost of production

Aggregate results for 2017

The production costs of pig meat in 2017 for all the countries covered in this report are shown below in Figure 1. This data includes all variable and overhead costs, other than transport of pigs to abattoirs and abattoir-related deductions, such as carcase classification and statutory levies paid at slaughter. Overhead costs include depreciation and interest costs for capital items such as buildings and equipment. Costs for regular and casual labour are included but directors' salaries or partners' drawings are not taken into account.

The average cost of production in the EU in 2017 for the countries below was £1.36 per kg deadweight, a 7% increase on the previous year. Costs of production in Great Britain were near the EU average at £1.37, an over 8% increase on the previous year. In 2017, Italy continued to have the highest costs at £1.65 per kg deadweight. The country with the lowest production costs in the EU was Denmark (£1.18).

The average UK reference price was 22% higher during 2017 than in 2016, averaging £1.56 per kg and 10% above the EU average of £1.41 per kg. On average, margins were positive throughout 2017, with the UK price above the estimated costs of production for each month of the year. Across the EU countries sampled, there was a technical margin of 5p on every kg of pig meat produced, with four EU countries (Finland, Ireland, Italy and Sweden) having production costs higher than the EU average reference price.

Reference prices

The UK reference price is gross, before abattoir deductions such as carcase classification. It includes premium pigs (e.g. outdoor bred) and point-of-sale price adjustments, such as those based on probe measurements.

EU reference price is usually after the deductions of any abattoir-paid costs, which, in many countries, includes transport to abattoir, carcase classification and insurance.

Neither price includes any bonus or price adjustment paid later than the point-of-sale transaction.

Comparisons with previous years (sterling)

Costs of production in sterling terms in 2017, 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 6% higher than 2016 levels for the same countries and stood at £1.36 per kg. All EU countries experienced an increase in the costs of production on this basis, largely due to an increase in feed costs. Exchange rate volatility will also have an impact.

Comparisons with previous years (euros)

Costs of production in euro terms in 2017 are shown in Table 2. Although feed prices have increased during this period, with continued improvements in production the combined effect results in similar costs to 2016 on €1 per kg deadweight basis.

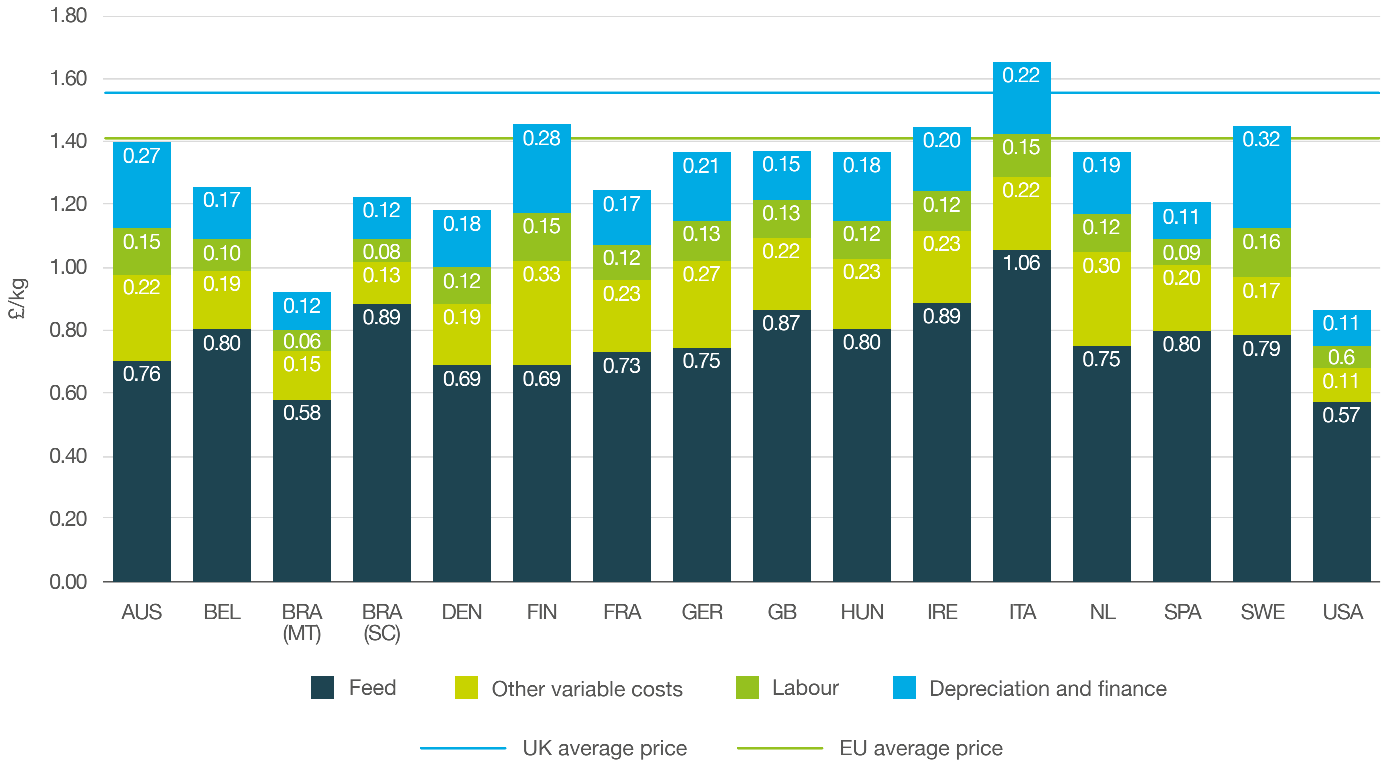


Figure 1. Cost of production in selected countries, 2017

Table 1. Average costs of production, 2012–2017 (£/kg deadweight)

Country	2012	2013	2014	2015	2016	2017	2017/16 % change
Austria	1.46	1.54	1.35	1.16	1.31	1.39	6
Belgium	1.42	1.48	1.26	1.08	1.17	1.25	7
Brazil (MT)	0.95	0.96	0.84	0.70	0.91	0.92	1
Brazil (SC)	1.19	1.13	1.04	0.87	1.16	1.22	5
Canada	1.18	1.20	0.98	0.92	1.01	-	-
Denmark	1.37	1.44	1.24	1.09	1.16	1.18	2
Finland	-	-	1.42	1.22	1.37	1.45	6
France	1.39	1.49	1.29	1.09	1.19	1.24	4
Germany	1.49	1.56	1.33	1.15	1.25	1.36	9
Great Britain	1.55	1.61	1.41	1.33	1.26	1.37	8
Hungary	1.83	1.81	1.41	1.31	1.30	1.33	2
Ireland	1.47	1.63	1.40	1.25	1.32	1.44	9
Italy	1.61	1.71	1.58	1.34	1.50	1.65	10
Netherlands	1.36	1.50	1.32	1.18	1.29	1.36	5
Spain	1.34	1.39	1.20	1.06	1.13	1.20	6
Sweden	1.70	1.77	1.47	1.27	1.39	1.45	4
USA	1.08	1.04	0.83	0.80	0.86	0.86	-0
EU	**1.50**	**1.58**	**1.36**	**1.19**	**1.28**	**1.36**	**6**

Table 2. Average costs of production, 2012–2017 (€/kg deadweight)

Country	2012	2013	2014	2015	2016	2017	2017/16 % change
Austria	1.79	1.80	1.66	1.58	1.59	1.59	0
Belgium	1.75	1.74	1.56	1.49	1.43	1.43	0
Brazil (MT)	1.17	1.13	1.05	0.96	1.11	1.05	-5
Brazil (SC)	1.46	1.33	1.29	1.19	1.42	1.39	-2
Canada	1.46	1.42	1.22	1.27	1.24	-	-
Denmark	1.69	1.69	1.53	1.49	1.41	1.35	-4
Finland	-	-	1.75	1.68	1.66	1.65	-1
France	1.70	1.74	1.57	1.50	1.43	1.41	-1
Germany	1.84	1.84	1.65	1.58	1.53	1.56	2
Great Britain	1.91	1.89	1.75	1.83	1.54	1.56	1
Hungary	2.22	2.11	1.73	1.78	1.58	1.52	-4
Ireland	1.81	1.92	1.74	1.72	1.61	1.64	2
Italy	1.98	2.02	1.96	1.84	1.83	1.88	3
Netherlands	1.67	1.77	1.64	1.62	1.57	1.55	-1
Spain	1.65	1.64	1.49	1.46	1.38	1.37	-0
Sweden	2.08	2.07	1.81	1.74	1.69	1.64	-3
USA	1.33	1.22	1.02	1.10	1.05	0.98	-7
EU	**1.84**	**1.85**	**1.68**	**1.64**	**1.56**	**1.55**	**-0**

Financial performance summary

Table 3 contains financial performance data for 2017, while Table 4 presents comparisons with 2015 and 2016. Among the EU countries, there was a range of 27p per kg between the highest-cost and the lowest-cost producer, a 10 pence decrease in the range observed in 2016. The recorded differences are due to a combination of physical performance and input costs (e.g. feed, depreciation).

Table 3. Summary of financial performance, 2017 (£/kg deadweight)

	AUS	BEL	BRA	BRA	DEN	FIN	FRA	GER	GB
Feed	0.76	0.80	0.58	0.89	0.69	0.69	0.73	0.75	0.87
Other variable costs	0.22	0.19	0.15	0.13	0.19	0.33	0.23	0.27	0.22
Total variable costs	0.98	0.98	0.73	1.02	0.88	1.02	0.96	1.02	1.09
Labour	0.15	0.10	0.06	0.08	0.12	0.15	0.12	0.13	0.13
Depreciation and finance	0.27	0.17	0.12	0.12	0.18	0.28	0.17	0.21	0.15
Total fixed costs	0.41	0.27	0.18	0.20	0.30	0.43	0.29	0.34	0.28
Total	**1.39**	**1.25**	**0.92**	**1.22**	**1.18**	**1.45**	**1.24**	**1.36**	**1.37**

	HUN	IRE	ITA	NL	SPA	SWE	USA	EU AVERAGE
Feed	0.80	0.89	1.06	0.75	0.80	0.79	0.57	0.80
Other variable costs	0.23	0.23	0.22	0.30	0.20	0.17	0.11	0.23
Total variable costs	1.03	1.12	1.28	1.05	1.01	0.97	0.68	1.03
Labour	0.12	0.12	0.15	0.12	0.09	0.16	0.06	0.13
Depreciation and finance	0.18	0.20	0.22	0.19	0.11	0.32	0.11	0.20
Total fixed costs	0.30	0.32	0.37	0.31	0.20	0.48	0.18	0.33
Total	**1.33**	**1.44**	**1.65**	**1.36**	**1.20**	**1.45**	**0.86**	**1.36**

Feed prices and costs

Market developments in 2017

Nearby UK feed wheat futures started the year at their highest level since January 2014, at £145.76 per tonne. This was £35.99 per tonne (33%) higher than the same period a year earlier when consecutive years of global grain surpluses had exerted increased pressure on prices. Despite a fourth year of global grain surplus, a relatively small UK wheat crop in 2016 plus a tighter domestic supply situation supported prices in the latter half of 2016 and into 2017.

Prices rose slightly during the first half of the year, with weather worries in major global growing regions driving much of this movement. However, this trend subsided somewhat, as 2017 UK wheat production levels were up 3% on the year earlier. That said, the UK domestic supply and demand situation continued its tightness, driven largely by the bioethanol and poultry sectors, and sustained the support to prices. Nearby UK feed wheat futures ended the year at £137.95 per tonne, which was £1.37 per tonne (1%) higher than the same period a year earlier.

Similar to wheat, soya beans started the year at a stronger price than in January 2016. The price of imported Brazilian soya meal (48%, ex-store, Liverpool) started the year at £342.75 per tonne, some £78.75 per tonne more than year-earlier prices, which had been pressured by ample global supplies. Prices showed a slight downward trend in the first half of the year, with the progress of the Brazilian harvest exerting pressure on global prices. However, they were still above year-earlier levels. The slight weakening of sterling against the dollar in the latter half of the year helped to provide some support to prices, staying above year-earlier levels for the majority of the period. By the end of 2017, imported Brazilian soya meal (48%, ex-store, Liverpool) was £320.33 per tonne, which, while £22.42 per tonne lower than the start of the year, was £60.00 per tonne higher than the December 2016 price.

With year-on-year price increases during 2017 recorded for the main components of animal feed, it was unsurprising that this was reflected in compound feed prices. The average price for compound pig feed in the final quarter of 2016 was £222 per tonne, while a year later it had risen by £9 per tonne (4%) to £231 per tonne.

Tables 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), 2017

	£/tonne								
	AUS	BEL	BRA	BRA	DEN	FIN	FRA	GER	GB
Sow	203.27	221.23	129.28	194.34	182.24	187.49	212.96	199.85	206.72
Rearer	273.36	324.17	450.36	561.84	261.31	265.47	293.10	298.15	273.01
Finisher	196.26	215.79	138.51	223.28	186.46	177.86	187.54	188.55	220.04
Average farm feed price per tonne	**202.46**	**226.61**	**161.10**	**245.08**	**190.89**	**176.60**	**196.85**	**202.51**	**226.97**

	£/tonne							
	HUN	IRE	ITA	NL	SPA	SWE	USA	EU AVERAGE
Sow	199.41	228.67	235.27	219.39	199.48	209.92	142.66	208.15
Rearer	281.86	340.51	321.11	312.61	348.40	324.17	365.61	301.33
Finisher	193.45	228.67	222.50	208.37	219.91	191.61	126.84	202.85
Average farm feed price per tonne	**192.05**	**250.58**	**230.02**	**219.53**	**226.42**	**196.86**	**148.84**	**210.64**

Table 5. Compound feed prices per tonne (euros), 2017

	€/tonne								
	AUS	BEL	BRA	BRA	DEN	FIN	FRA	GER	GB
Sow	232.00	252.50	147.56	221.81	208.00	214.00	243.07	228.10	235.94
Rearer	312.00	370.00	514.02	641.27	298.26	303.00	334.54	340.30	311.60
Finisher	224.00	246.30	158.09	254.85	212.82	203.00	214.05	215.20	251.15
Average farm feed price per tonne	**231.08**	**258.65**	**183.88**	**279.73**	**217.87**	**201.57**	**224.68**	**231.14**	**259.06**

	€/tonne							
	HUN	IRE	ITA	NL	SPA	SWE	USA	EU AVERAGE
Sow	227.60	261.00	268.53	250.40	227.68	239.60	162.82	237.57
Rearer	321.70	388.65	366.50	356.80	397.65	370.00	417.30	343.92
Finisher	220.80	261.00	253.96	237.83	251.00	218.70	144.77	231.52
Average farm feed price per tonne	**219.20**	**286.00**	**262.54**	**250.56**	**258.43**	**224.69**	**169.88**	**240.42**

Summary of financial performance

The impact on pig producers' feed costs in 2017

With continued higher prices for raw materials, on average, pig feed prices were higher in 2017 than in 2016. Across the EU members of InterPIG, prices increased (in sterling terms) by an average of nearly 7% compared with the previous year. There was a range of feed prices across the EU countries, with a difference of £74 per tonne between the highest and lowest average farm feed price in 2017.

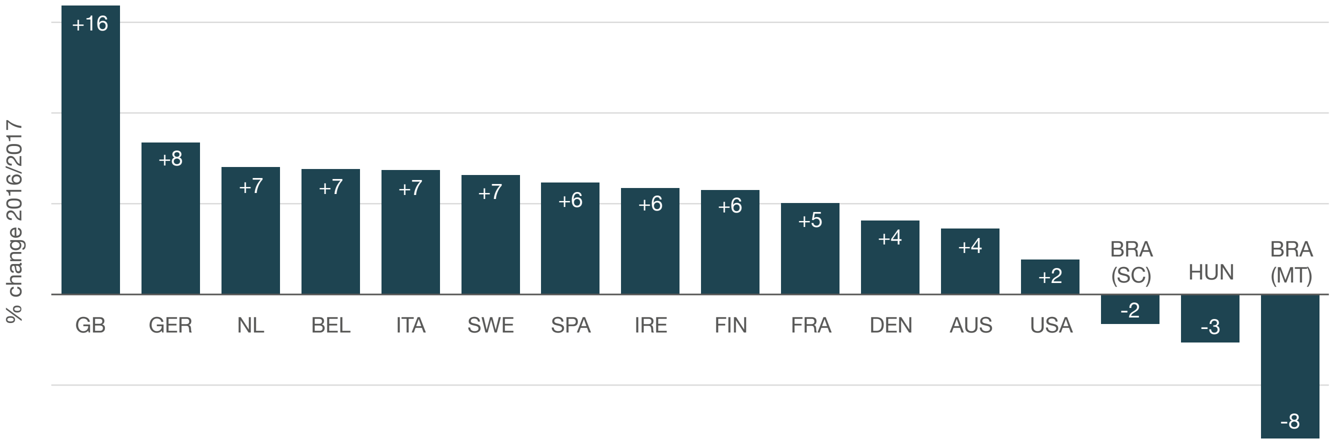


Figure 2. Changes in feed costs, 2017

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 Hungary and Brazil, experienced an increase in feed costs, the highest of which was 16% in Great Britain following the greatest fall of the previous year. Within the EU countries, 2017 feed costs increased on average by 6% compared with 2016. Hungary had a fall of 3% compared with the 16% increase in Great Britain.

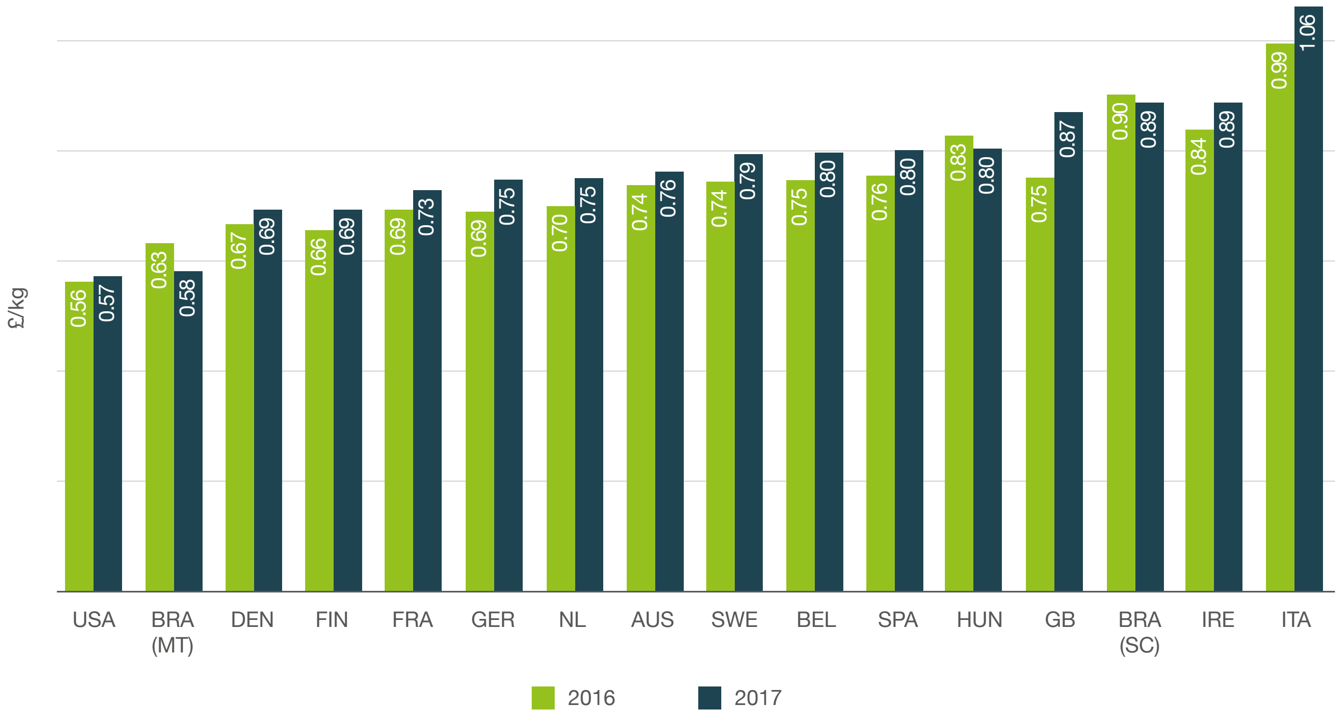


Figure 3. Feed costs, 2017

As shown in Figure 3, feed costs averaged 87p per kg in Great Britain, compared with the 75p recorded in 2016, an increase of 16%. The increase in feed costs in Great Britain during 2017 compared with the average EU increase of 6%. Feed costs in Great Britain were higher than the EU average of 80p per kg compared with the zero difference in 2016.

Table 6 summarises the cost of production by country for each of the past three years. 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, 2015–2017 (£/kg deadweight)

	AUS			BEL			BRA (SC)			DEN		
	2015	2016	2017	2015	2016	2017	2015	2016	2017	2015	2016	2017
Feed	0.67	0.74	0.76	0.71	0.75	0.80	0.65	0.90	0.89	0.63	0.67	0.69
Other variable costs	0.18	0.20	0.22	0.14	0.17	0.19	0.09	0.10	0.13	0.18	0.19	0.19
Total variable costs	0.85	0.94	0.98	0.85	0.92	0.98	0.74	1.00	1.02	0.81	0.85	0.88
Labour	0.10	0.13	0.15	0.09	0.10	0.10	0.05	0.06	0.08	0.10	0.12	0.12
Depreciation and finance	0.20	0.24	0.27	0.15	0.16	0.17	0.07	0.10	0.12	0.17	0.19	0.18
Total fixed costs	0.31	0.37	0.41	0.23	0.25	0.27	0.12	0.16	0.20	0.28	0.30	0.30
Total	**1.16**	**1.31**	**1.39**	**1.08**	**1.17**	**1.25**	**0.87**	**1.16**	**1.22**	**1.09**	**1.16**	**1.18**

	FIN			FRA			GER			GB		
	2015	2016	2017	2015	2016	2017	2015	2016	2017	2015	2016	2017
Feed	0.61	0.66	0.69	0.65	0.69	0.73	0.65	0.69	0.75	0.81	0.75	0.87
Other variable costs	0.26	0.31	0.33	0.18	0.21	0.23	0.22	0.25	0.27	0.22	0.22	0.22
Total variable costs	0.88	0.96	1.02	0.84	0.90	0.96	0.87	0.94	1.02	1.02	0.98	1.09
Labour	0.13	0.15	0.15	0.10	0.11	0.12	0.10	0.12	0.13	0.13	0.13	0.13
Depreciation and finance	0.21	0.26	0.28	0.16	0.18	0.17	0.17	0.20	0.21	0.17	0.16	0.15
Total fixed costs	0.35	0.41	0.43	0.26	0.29	0.29	0.28	0.32	0.34	0.30	0.29	0.28
Total	**1.22**	**1.37**	**1.45**	**1.09**	**1.19**	**1.24**	**1.15**	**1.25**	**1.36**	**1.33**	**1.26**	**1.37**

	HUN			IRE			ITA			NL		
	2015	2016	2017	2015	2016	2017	2015	2016	2017	2015	2016	2017
Feed	0.79	0.83	0.80	0.81	0.84	0.89	0.90	0.99	1.06	0.66	0.70	0.75
Other variable costs	0.23	0.20	0.23	0.19	0.21	0.23	0.16	0.20	0.22	0.24	0.30	0.30
Total variable costs	1.01	1.03	1.03	0.99	1.05	1.12	1.06	1.19	1.28	0.91	1.00	1.05
Labour	0.12	0.10	0.12	0.10	0.11	0.12	0.12	0.14	0.15	0.12	0.12	0.12
Depreciation and finance	0.18	0.18	0.18	0.15	0.16	0.20	0.16	0.18	0.22	0.16	0.17	0.19
Total fixed costs	0.30	0.28	0.30	0.26	0.27	0.32	0.28	0.31	0.37	0.27	0.29	0.31
Total	**1.31**	**1.30**	**1.33**	**1.25**	**1.32**	**1.44**	**1.34**	**1.50**	**1.65**	**1.18**	**1.29**	**1.36**

	SPA			SWE			USA			EU AVERAGE		
	2015	2016	2017	2015	2016	2017	2015	2016	2017	2015	2016	2017
Feed	0.72	0.76	0.80	0.70	0.74	0.79	0.54	0.56	0.57	0.72	0.75	0.80
Other variable costs	0.17	0.19	0.20	0.15	0.17	0.17	0.11	0.13	0.11	0.19	0.22	0.23
Total variable costs	0.89	0.94	1.01	0.85	0.91	0.97	0.65	0.69	0.68	0.91	0.97	1.03
Labour	0.07	0.08	0.09	0.13	0.16	0.16	0.05	0.06	0.06	0.11	0.12	0.13
Depreciation and finance	0.10	0.11	0.11	0.29	0.32	0.32	0.10	0.06	0.11	0.17	0.19	0.20
Total fixed costs	0.17	0.19	0.20	0.42	0.48	0.48	0.15	0.12	0.18	0.28	0.31	0.33
Total	**1.06**	**1.13**	**1.20**	**1.27**	**1.39**	**1.45**	**0.80**	**0.81**	**0.86**	**1.20**	**1.29**	**1.38**

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 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

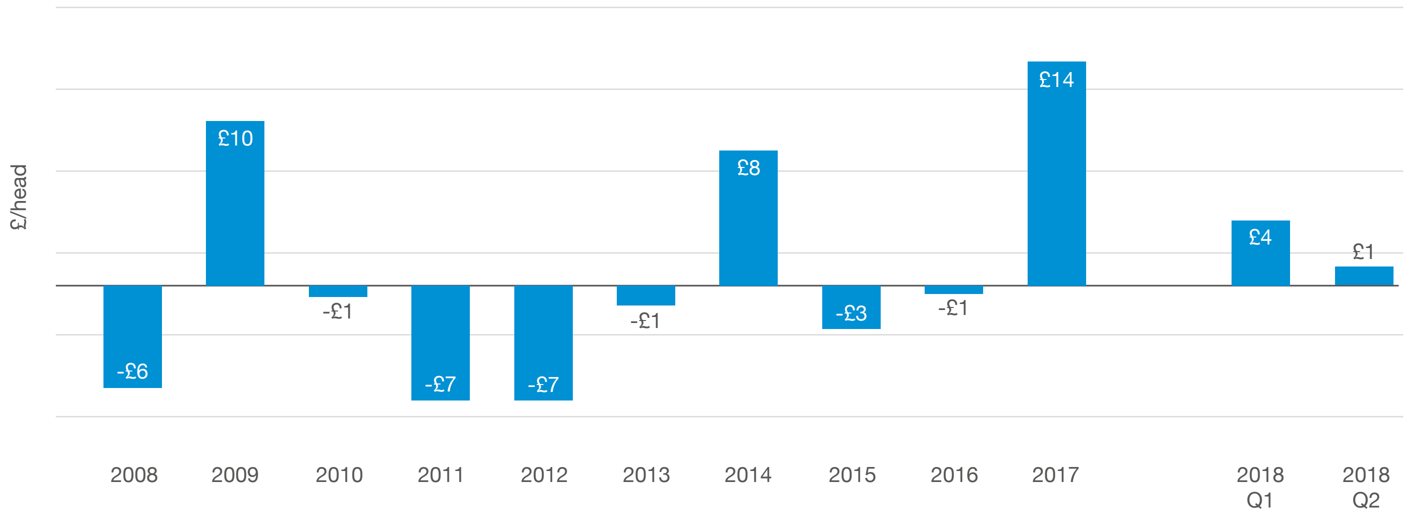


Figure 4. Changes in feed costs, 2017

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 achieved a positive margin on an annual average basis for only 2 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 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 at 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 at around £14 per pig. This resulted in an overall breakeven situation for 2016. In 2017, despite an increase in the cost of production, rising pig prices resulted in healthy margins throughout the year.

In the first half of 2018, the combination of increasing costs of production and lower pork prices resulted in significantly lower, but still positive, net margins.

Physical performance summary

Table 7. Summary of physical performance, 2015–2017

	AUS			BEL			BRA (MT)		
	2015	2016	2017	2015	2016	2017	2015	2016	2017
Pigs weaned/sow/year	24.40	24.90	24.90	28.40	30.13	29.83	25.36	26.15	27.40
Pigs reared/sow/year	23.71	24.16	24.15	27.43	28.74	28.64	24.85	25.63	26.86
Pigs sold/sow/year	23.31	23.74	23.71	26.61	27.91	27.75	24.31	25.06	26.27
Litters/sow/year	2.30	2.33	2.29	2.33	2.38	2.34	2.41	2.37	2.41
Rearing mortality (%)	2.80	3.00	3.00	3.40	4.60	4.00	2.00	2.00	2.00
Finishing mortality (%)	1.70	1.74	1.81	3.00	2.90	3.10	2.20	2.20	2.20
Finishing Daily Liveweight Gain (g/day)	778	802	810	678	680	694	831	831	831
Finishing Feed Conversion Ratio	2.95	2.88	2.86	2.86	2.83	2.76	2.60	2.60	2.60
Average liveweight at slaughter (kg)	120	121	121	113	114	116	122	123	120
Average carcase weight - Cold (kg)	93.8	94.5	94.7	91.2	91.2	94.4	91.1	91.6	89.3
Carcase meat production/sow/year (kg)	2,187	2,243	2,245	2,428	2,546	2,620	2,215	2,295	2,346

	BRA (SC)			DEN			FIN		
	2015	2016	2017	2015	2016	2017	2015	2016	2017
Pigs weaned/sow/year	26.66	26.82	27.72	31.26	32.10	33.29	25.82	26.91	27.13
Pigs reared/sow/year	26.13	26.28	27.17	30.29	31.10	32.26	25.28	26.32	26.51
Pigs sold/sow/year	25.55	25.71	26.35	29.17	30.08	31.26	24.62	25.58	25.77
Litters/sow/year	2.30	2.30	2.33	2.27	2.27	2.28	2.22	2.22	2.23
Rearing mortality (%)	2.00	2.00	2.00	3.10	3.10	3.10	2.08	2.20	2.30
Finishing mortality (%)	2.20	2.20	3.00	3.70	3.30	3.10	2.60	2.82	2.80
Finishing Daily Liveweight Gain (g/day)	820	820	820	947	950	971	956	967	970
Finishing Feed Conversion Ratio	2.60	2.60	2.60	2.67	2.69	2.66	2.70	2.70	2.70
Average liveweight at slaughter (kg)	120	123	122	110	111	114	122	121	121
Average carcase weight - Cold (kg)	89.6	91.8	90.7	83.3	84.2	85.8	90.6	89.8	90.3
Carcase meat production/sow/year (kg)	2,289	2,361	2,390	2,429	2,531	2,683	2,230	2,296	2,326

	FRA			GER			GB		
	2015	2016	2017	2015	2016	2017	2015	2016	2017
Pigs weaned/sow/year	27.86	27.48	28.19	28.64	29.07	29.66	24.38	24.83	25.75
Pigs reared/sow/year	27.17	26.73	27.40	27.90	28.14	28.74	23.70	23.94	24.78
Pigs sold/sow/year	26.19	25.72	26.41	27.17	27.35	27.96	23.05	23.22	24.09
Litters/sow/year	2.38	2.33	2.37	2.34	2.33	2.33	2.27	2.28	2.29
Rearing mortality (%)	2.48	2.72	2.79	2.60	3.20	3.10	2.79	3.56	3.78
Finishing mortality (%)	3.59	3.75	3.63	2.60	2.80	2.70	2.74	3.03	2.79
Finishing Daily Liveweight Gain (g/day)	810	819	815	817	824	832	817	850	833
Finishing Feed Conversion Ratio	2.73	2.78	2.72	2.82	2.81	2.81	2.69	2.65	2.86
Average liveweight at slaughter (kg)	120	120	121	122	122	122	106	107	109
Average carcase weight - Cold (kg)	91.6	92.1	92.4	94.1	94.0	94.2	81.0	81.9	83.0
Carcase meat production/sow/year (kg)	2,398	2,369	2,440	2,556	2,571	2,634	1,868	1,901	1,998

	HUN			IRE			ITA		
	2015	2016	2017	2015	2016	2017	2015	2016	2017
Pigs weaned/sow/year	23.92	24.91	25.47	26.10	27.92	28.45	23.99	24.30	24.77
Pigs reared/sow/year	23.46	24.43	24.99	25.40	27.12	27.62	23.27	23.52	23.75
Pigs sold/sow/year	22.78	23.62	24.00	24.79	26.45	27.01	22.92	22.93	23.15
Litters/sow/year	2.21	2.23	2.25	2.27	2.38	2.36	2.22	2.22	2.25
Rearing mortality (%)	1.90	1.90	1.90	2.68	2.85	2.91	3.00	3.20	4.13
Finishing mortality (%)	2.91	3.31	3.96	2.38	2.49	2.21	1.50	2.50	2.50
Finishing Daily Liveweight Gain (g/day)	667	704	710	864	860	866	682	687	687
Finishing Feed Conversion Ratio	3.33	3.23	3.04	2.71	2.69	2.66	3.85	3.79	3.75
Average liveweight at slaughter (kg)	111	113	111	109	109	111	170	170	168
Average carcase weight - Cold (kg)	88.2	89.6	87.6	83.0	83.0	84.6	136.5	136.6	135.0
Carcase meat production/sow/year (kg)	2,010	2,116	2,103	2,058	2,195	2,285	3,128	3,132	3,126

	NL			SPA			SWE		
	2015	2016	2017	2015	2016	2017	2015	2016	2017
Pigs weaned/sow/year	29.52	29.80	30.25	26.29	27.00	26.98	25.03	25.88	26.62
Pigs reared/sow/year	28.76	29.06	29.49	25.40	25.94	25.99	24.53	25.34	26.09
Pigs sold/sow/year	28.09	28.39	28.78	24.42	25.02	25.06	24.16	24.91	25.67
Litters/sow/year	2.36	2.36	2.36	2.34	2.34	2.31	2.22	2.23	2.24
Rearing mortality (%)	2.60	2.50	2.50	3.38	3.94	3.69	2.00	2.10	2.00
Finishing mortality (%)	2.30	2.30	2.40	3.85	3.57	3.56	1.50	1.70	1.60
Finishing Daily Liveweight Gain (g/day)	804	808	822	695	706	701	923	926	941
Finishing Feed Conversion Ratio	2.60	2.59	2.58	2.52	2.48	2.46	2.84	2.85	2.87
Average liveweight at slaughter (kg)	119	119	121	108	110	110	120	121	122
Average carcase weight - Cold (kg)	92.6	93.0	94.1	81.2	82.3	83.0	89.8	88.3	89.8
Carcase meat production/sow/year (kg)	2,601	2,640	2,708	1,984	2,060	2,081	2,170	2,199	2,304

	USA			EU AVERAGE		
	2015	2016	2017	2015	2016	2017
Pigs weaned/sow/year	25.26	25.68	26.43	26.58	27.32	27.79
Pigs reared/sow/year	24.15	24.63	25.32	25.87	26.50	26.95
Pigs sold/sow/year	22.95	23.42	24.15	25.18	25.76	26.20
Litters/sow/year	2.41	2.41	2.44	2.29	2.30	2.30
Rearing mortality (%)	4.38	4.10	4.20	2.68	2.99	3.02
Finishing mortality (%)	5.01	4.92	4.64	2.64	2.79	2.78
Finishing Daily Liveweight Gain (g/day)	821	826	857	803	814	819
Finishing Feed Conversion Ratio	2.76	2.72	2.71	2.87	2.84	2.83
Average liveweight at slaughter (kg)	128	128	127	119	120	120
Average carcase weight - Cold (kg)	94.6	94.0	94.7	92.1	92.3	93.0
Carcase meat production/sow/year (kg)	2,172	2,202	2,287	2,311	2,369	2,427

Pigs weaned per sow per year

The overall average number of pigs weaned per sow per year in the EU InterPIG countries showed nearly 2% increase in 2017, up from 27.32 in 2016 to 27.79 in 2017. As shown in Figure 5, performance improved in most EU countries, with Great Britain's outdoor herds showing the greatest increase, up 5% compared with 2016. Denmark and the Netherlands had the best results for pigs weaned, with Denmark achieving an average of over 33 pigs weaned per sow per year for the first time. 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 4% to 25.75 (indoor sows 26.97, outdoor sows 23.95). While Great Britain has a significant proportion of sows kept outdoors, the lower number of pigs weaned per sow per year in all systems is still a major cause of the relatively high cost of production compared with many other EU countries and needs to be addressed if Great Britain want 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 2.29 (indoor sows 2.30, outdoor sows 2.28), a small increase compared with 2016. Indoor sow performance equalled the EU average of 2.30, although the average hides a significant variation between the lowest at 2.23 (Finland) and the highest at 2.37 (France)
- Pre-weaning mortality, at 12.4% (indoor sows 12.0, outdoor sows 13.1), was lower than in 2016. Indoor sow pre-weaning mortality was lower than the EU average of 13.0%
- Great Britain has a lower number of pigs weaned per sow per year compared with many EU countries and is impacted by the number of pigs born alive per litter. The 2017 average at 12.8 (indoor sows 13.3, outdoor sows 12.1) was an increase compared with 12.5 in 2016. With the new inclusion of Hungary in the reported sample, this now results in Great Britain's overall performance being higher than the EU average of 12.1. However, there is a difference of 8.5 pigs weaned per sow per year between the highest- and lowest-performing EU countries

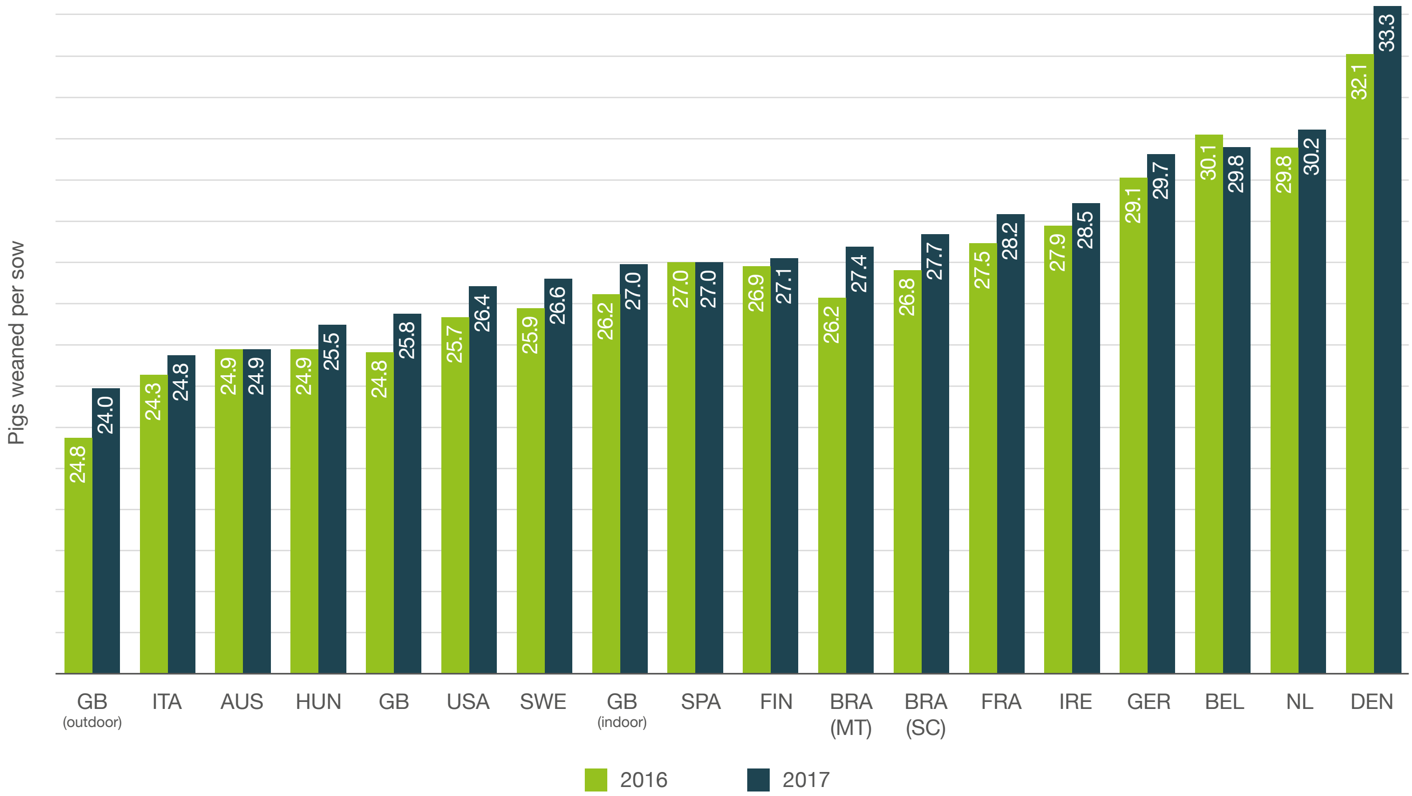


Figure 5. Pigs weaned per sow per year, 2016–2017

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 2017. At 24.09, performance was 0.87 pigs (4%) higher than in 2016.

In 2017, the EU average for pigs finished per sow per year was 26.20, 2% higher than in 2016. Denmark has the highest numbers, finishing more than 31 pigs per sow per year. Within the InterPIG group, Italy has the lowest number of pigs finished per sow per year in 2017.

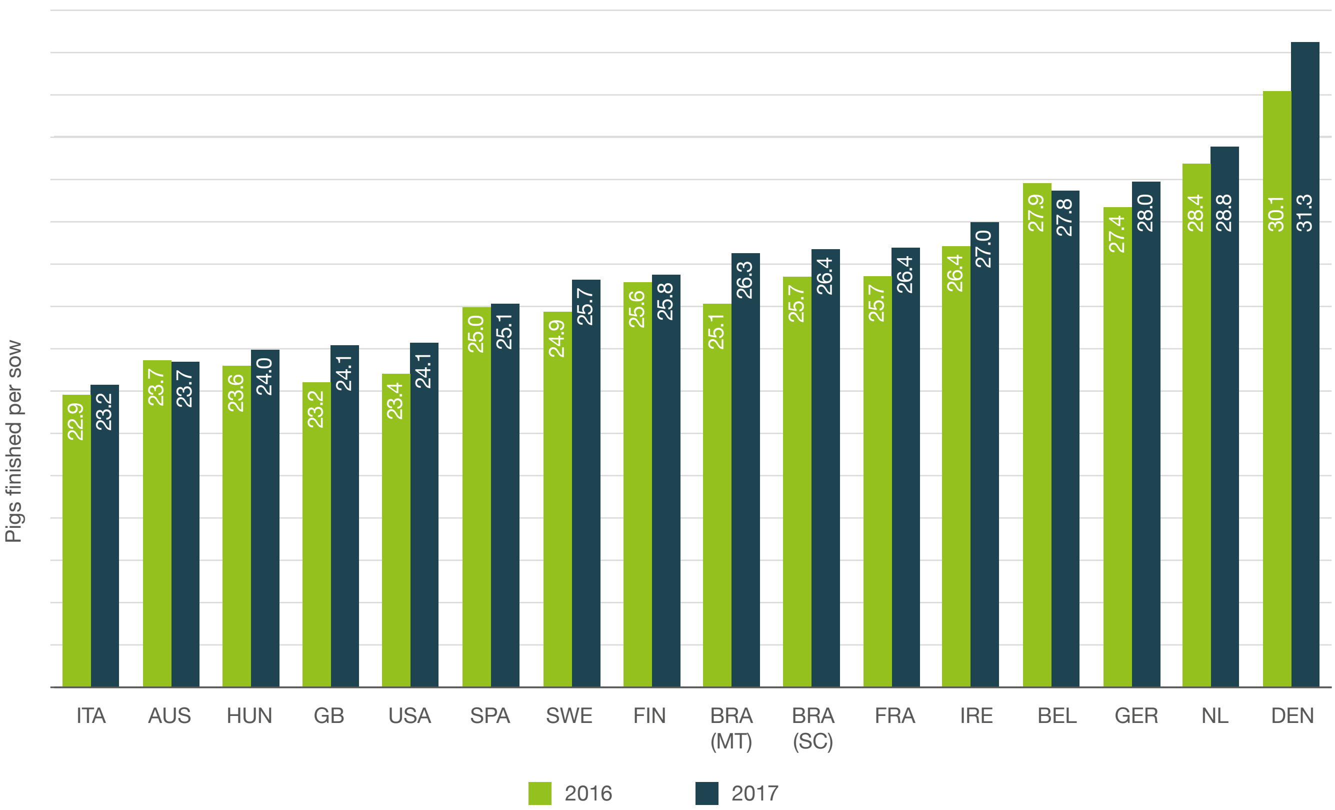


Figure 6. Pigs finished per sow per year, 2016–2017

Appendix I

Table 8. InterPIG members pig industry trends, 2017

	AUS	BEL	BRA	CAN	CZE	DEN	FIN	FRA	GER
Breeding Sow numbers (000 head)	236	417	2,948	1,241	136	1,228	99	984	1,906
Annual pig slaughterings (000 head)	5,154	10,950	39,452	21,758	2,338	17,466	1,961	23,404	57,868
Pig meat production (000 tonnes)	505	1,045	3,725	1,970	211	1,530	179	2,177	5,455
Pig meat imports (000 tonnes cwe)*	189	168	2	213	339	125	36	488	1,093
Pig meat exports (000 tonnes cwe)*	242	787	687	1,047	80	1,336	31	510	2,406
Pig meat consumption (000 tonnes cwe)*	452	426	3,040	1,136	470	319	185	2,155	4,142
Pig meat consumption (kg per head)*	51.7	37.5	14.6	31.3	44.5	55.7	33.7	32.2	50.1

	HUN	IRE	ITA	NL	POL	SP	SWE	UK	USA
Breeding Sow numbers (000 head)	253	143	579	1,064	885	2,561	140	498	6,109
Annual pig slaughterings (000 head)	4,756	3,355	11,381	15,169	22,067	50,073	2,576	10,657	121,308
Pig meat production (000 tonnes)	435	294	1,467	1,456	1,990	4,299	240	903	11,610
Pig meat imports (000 tonnes cwe)*	215	118	1,084	380	758	185	122	1,077	509
Pig meat exports (000 tonnes cwe)*	188	275	288	1,186	761	1,875	29	263	2,085
Pig meat consumption (000 tonnes cwe)*	461	138	2,262	649	1,988	2,609	333	1,717	10,035
Pig meat consumption (kg per head)*	47.0	28.9	37.3	38.1	52.4	56.0	33.7	26.2	30.8

*Estimated figures
cwe = carcase weight equivalent
Breeding sow numbers are for mid-2017 except for Brazil, Czech Republic, Finland (Dec 17)
Sources: AHDB, IHS Maritime & Trade Atlas (Insert R trade mark), USDA and 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 9. Ranking of EU production costs, 2012–2017

	2012	2013	2014	2015	2016	2017	% of EU AVE
Denmark	3	2	2	3	2	1	86.8
Spain	1	1	1	1	1	2	88.5
France	4	3	4	4	4	3	91.2
Belgium	5	4	3	2	3	4	92.3
Hungary	12	12	8	11	8	5	97.9
Netherlands	2	5	5	7	7	6	100.1
Germany	8	7	6	6	5	7	100.4
Great Britain	9	8	11	12	6	8	100.7
Austria	6	6	7	5	9	9	102.4
Ireland	7	9	9	9	10	10	106.0
Sweden	11	11	12	10	12	11	106.1
Finland	na	na	10	8	11	12	106.3
Italy	10	10	13	13	13	13	121.5

Notes: Rankings – 1 = lowest cost; 13 = highest cost

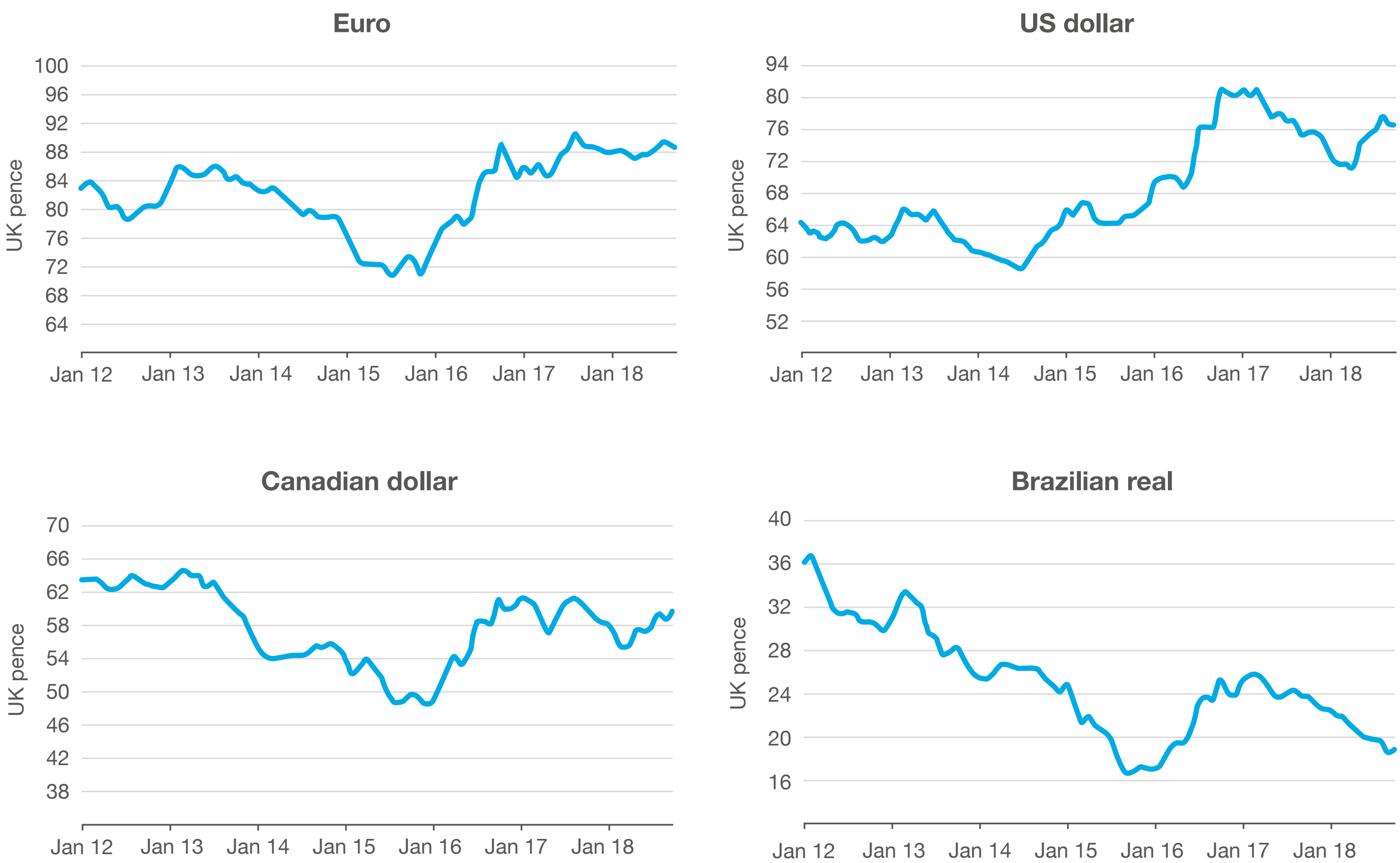


Figure 7. Exchange rate movements, 2012–2018

Table 10. Annual exchange rates

Year	1€ =	€ to £	$US to £	$C to £	Real to £
2012	81.1p	1.233	1.59	1.58	3.08
2013	84.9p	1.177	1.56	1.61	3.36
2014	80.6p	1.240	1.65	1.82	3.87
2015	72.6p	1.377	1.53	1.95	5.01
2016	81.9p	1.221	1.35	1.79	4.66
2017	87.6p	1.141	1.29	1.67	4.11

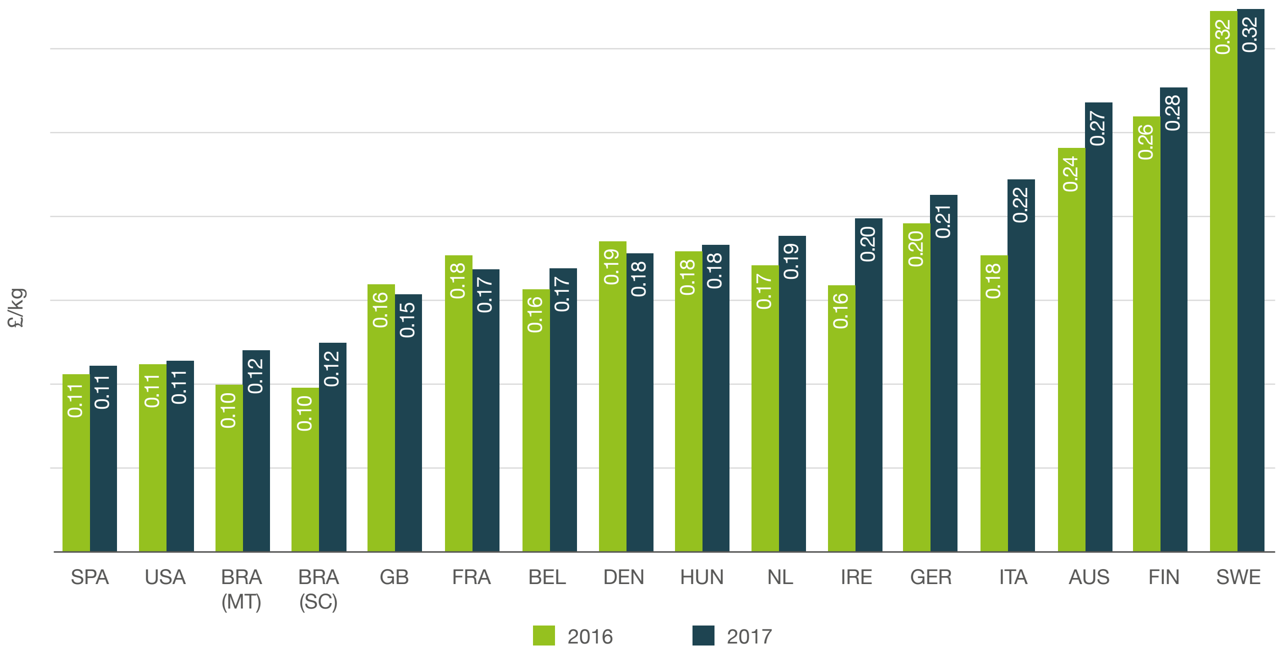


Figure 8. Depreciation and finance costs, 2016–2017

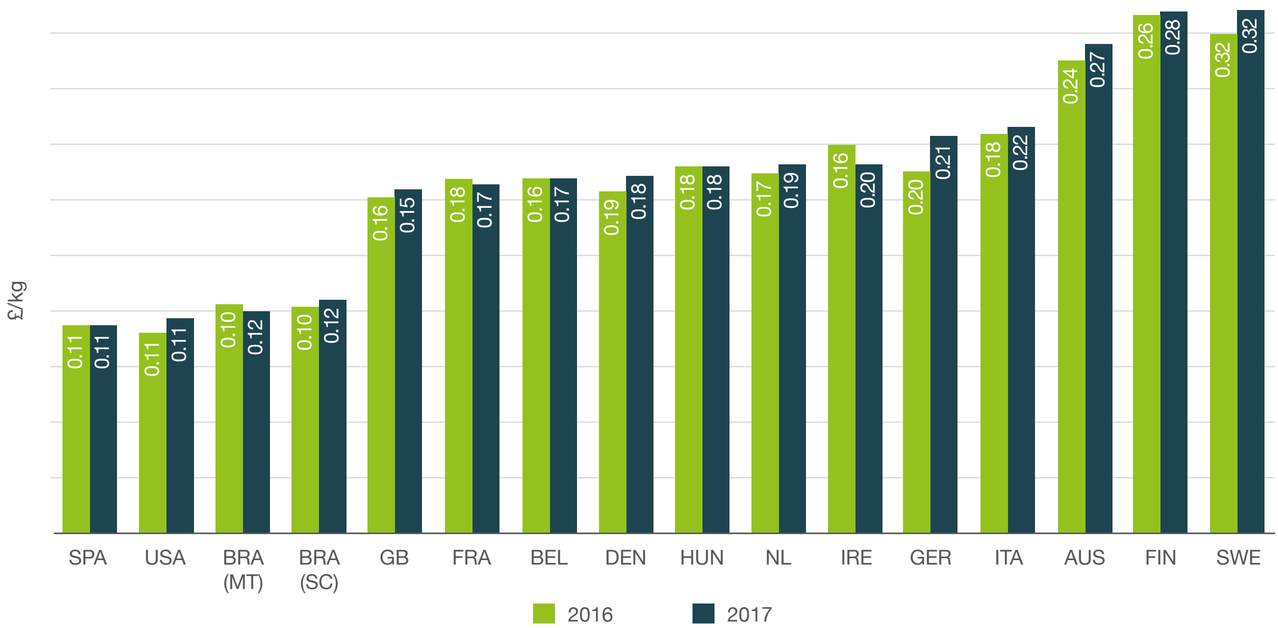


Figure 9. Daily Liveweight Gains (finishing herds), 2016–2017

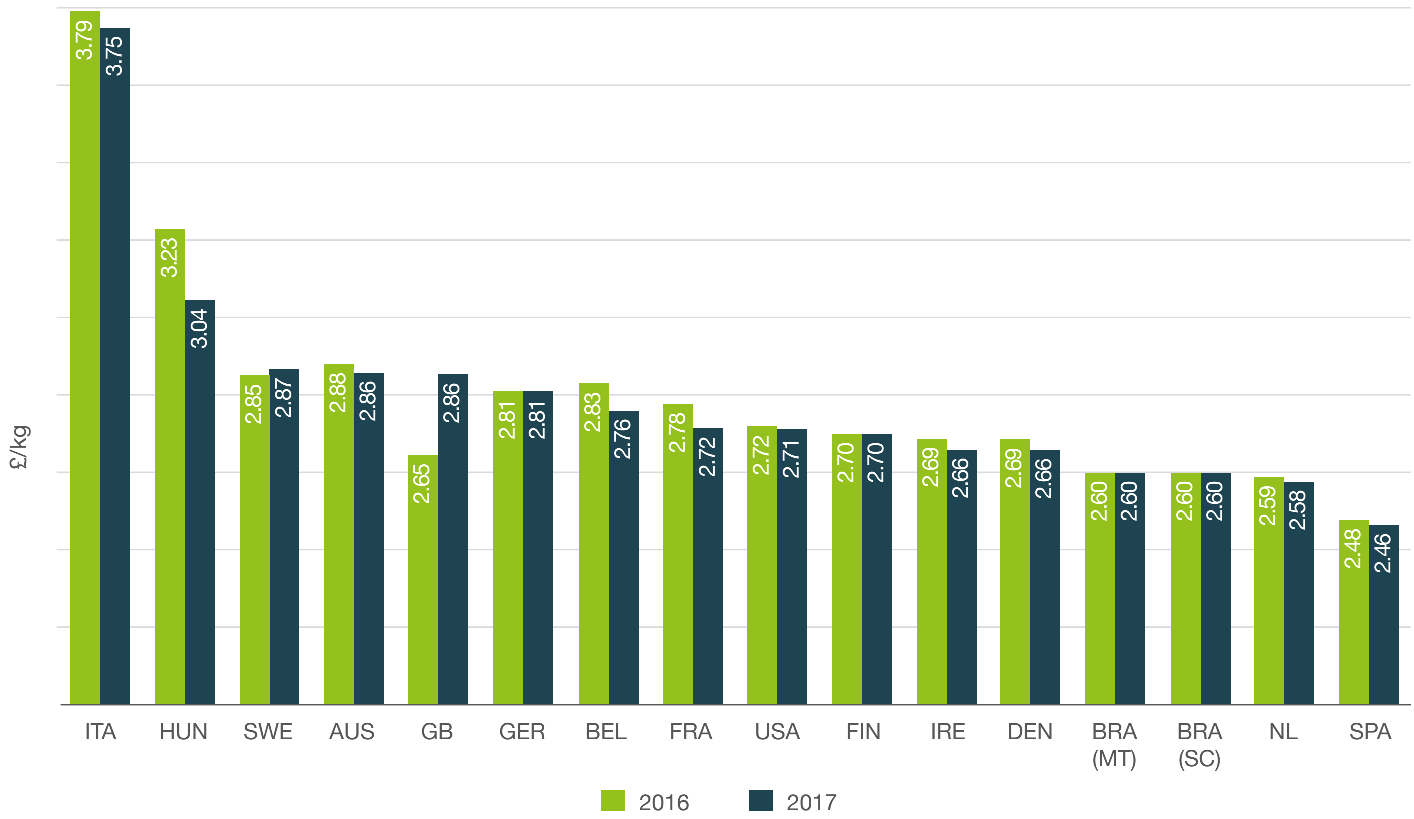


Figure 10. Feed Conversion Ratios (finishing herds), 2016–2017

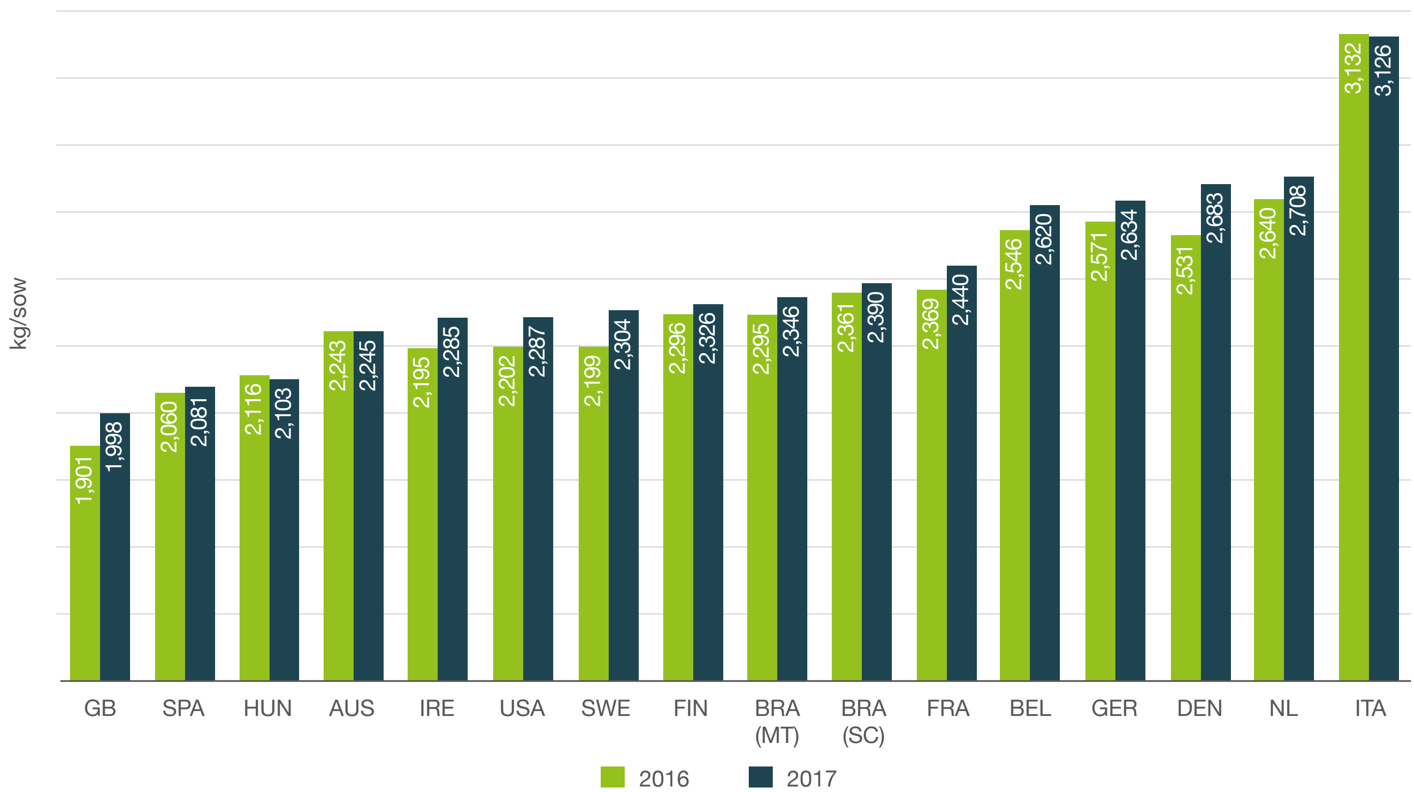


Figure 11. Carcase meat production per sow per year, 2016–2017

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: 8 kg (GB = 7.2 kg in 2017)
- Transfer from rearing unit to finishing unit: 30 kg (GB = 37.5 kg)
- Liveweight at slaughter: 120 kg (GB = 108.8 kg)

This section examines the adjustments 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.

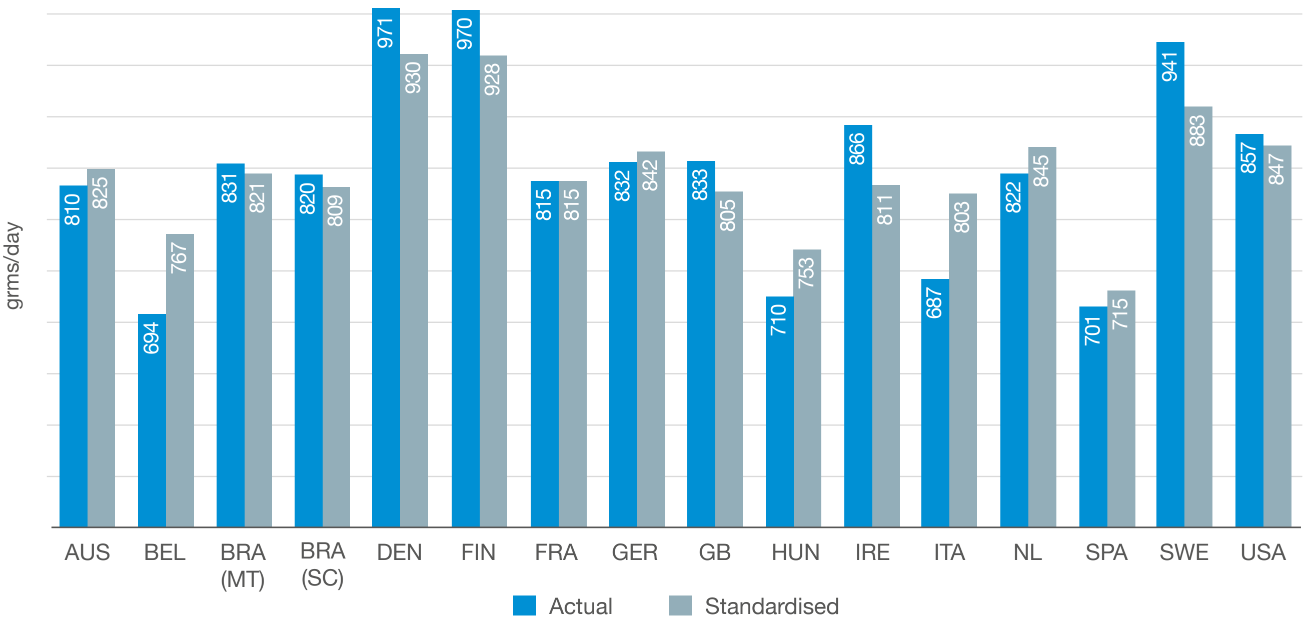


Figure 12. Standardised Daily Liveweight Gains (finishing herds), 2017

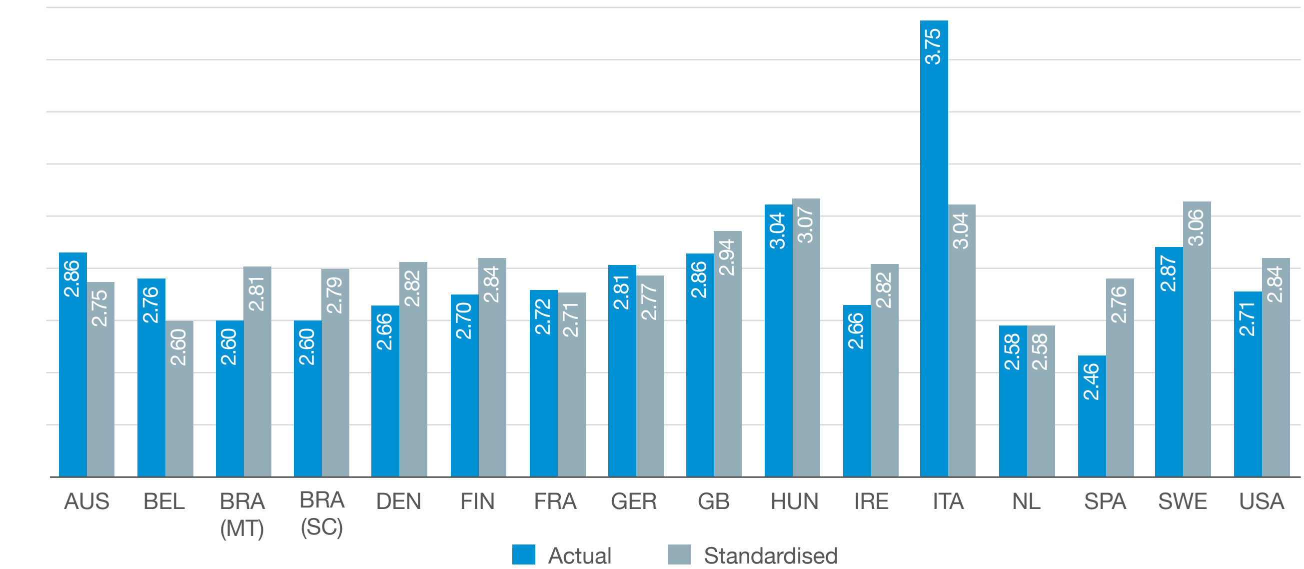


Figure 13. Standardised Feed Conversion Ratios (finishing herds), 2017

Table 11. GB and EU physical results, 2017

	2012	2013	2014	2015	2016
Pigs weaned/sow/year	25.8	27.0	24.0	27.8	-7
Pigs reared/sow/year	24.8	26.0	23.0	27.0	-8
Pigs sold/sow/year	24.1	25.2	22.4	26.2	-8
Pigs born alive/litter	12.8	13.3	12.1	13.9	-8
Pigs weaned/litter	11.2	11.7	10.5	12.1	-7
Litters/sow/year	2.29	2.30	2.28	2.30	-0
Sow mortality (%)	5.5%	6.3%	4.3%	6.0%	-9
Pre-weaning mortality (%)	12.4%	12.0%	13.1%	13.0%	-5
Rearing mortality (%)	3.8%			3.0%	+25
Finishing mortality (%)	2.8%			2.8%	+0
Transfer weight from breeding to rearing unit (kg)	7.2	7.2	7.3	7.2	+0
Lactation period (days)	26.6	26.7	26.3	27.2	-2
Transfer weight from rearing to finishing unit (kg)	37.5			29.5	+27
Rearing Daily Liveweight Gain (g/day)	516			420	+23
Rearing Feed Conversion Ratio	1.8			1.8	+0
Finishing Daily Liveweight Gain (g/day)	833			819	+2
Finishing Feed Conversion Ratio	2.9			2.8	+1
Average number of days in rearing unit	59			53	+12
Average number of days in finishing unit	86			114	-25
Empty finishing unit days per cycle	7			9	-26
Pigs/pig place/year (finishing)	3.9			3.1	+27
Average live weight at slaughter (kg)	108.8			120.4	-10
Average carcase weight - Cold (kg)	83.0			93.0	-11
Killing-out percentage (cold weight)	76.3%	76.3%	76.3%	77.1%	-1
Carcase meat production/sow/year (kg)	1,998	2,111	1,860	2,427	-18
Sow feed/sow/year (kg)	1,365	1,299	1,463	1,336	+2
Weaner/rearer feed/reared pig (kg)	54			40	+36
Finishing pigs feed consumption/slaughter (kg)	205			263	-22

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

Appendix III

List of tables and charts

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