



# Farm Business Survey

2016/17

## Pig Production in England



**Simon Walton & David Hildreth**

**RBR**

*Independent research, data and analysis*

Rural Business Research

**Farm Business Survey**

**2016/17**

## **Pig Production in England**

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## **Foreword to the First Series**

This report is one of a series being produced based on the results of the Farm Business Survey (FBS) for England. The annual Farm Business Survey is the most comprehensive and independent survey of farm incomes and provides a definitive data source on the economic and physical performance of farm businesses in England. It is conducted by a Consortium comprising the Universities of Cambridge, Newcastle upon Tyne, Nottingham and Reading, and Askham Bryan, Duchy and Imperial Colleges. The Consortium is led by the University of Nottingham and its members work in partnership, using uniform and standard practices in reporting on their findings to ensure consistent data quality, accuracy and validity. The Survey is financed by Defra and the Consortium values greatly the input of their staff.

These detailed reports for various farm types and enterprises are in addition to the comprehensive Farm Business Survey Reports for Government Office Regions published at [www.farmbusinesssurvey.co.uk](http://www.farmbusinesssurvey.co.uk). The Consortium is seeking by these additional reports to ensure that timely and relevant information is available to farmers, consultants, advisers and other organisations and individuals interested in farming and land management. The analysis and publication of these reports uses data from farm businesses across England, with an individual member of the Consortium undertaking the research analysis. In line with the ethos of the Consortium, these reports present results in such a way as to ensure a significant element of continuity and consistency from one report to the other, whilst also ensuring that each report captures the contemporary issues of relevance to the sector of agriculture in England to which it relates.

We believe these reports will make a valuable and useful contribution to the farming industry and we commend them to you.

**Prof. Martin Seabrook**

(Chief Executive of the Consortium)

Spring 2007

## Foreword to the Twelfth Series

This series of reports on the economics of agriculture and horticulture in England from *Rural Business Research (RBR)* represents the twelfth series of outputs that focus on providing independent data and analysis to the individual sectors of agriculture and horticulture. As farmers and growers look towards the future for their businesses, the policy landscape is beginning to emerge. The direction of policy travel for UK agriculture and horticulture will be more focused upon the market and the provision of specific environmental goods, and land-area based payments are likely to be reduced or removed in the future. The direction of policy travel has been accompanied with a guarantee that the Basic Payment will remain until at least 2022. These signals provide both an indication of policy outcomes and a time-frame within which businesses can begin to adapt to a new future. The UK's decision to leave the EU will of course have major implications for agriculture and horticulture; these impacts are likely to bring both challenges and opportunities. While many factors remain uncertain, at the level of the individual business what is required is to position the business to meet the challenges that lie ahead while maximising the outcome of the opportunities that will present themselves. For individual businesses this begins with a need to understand current performance, and to place this within the context of the wider market environment and understand the relative strengths of the business against others within the sector. Within this series of reports, RBR seeks to help businesses to identify their relative strengths and challenges through independent data presented to highlight the key findings and data as appropriate to individual sectors of agriculture and horticulture. It is not possible to manage a process or activity successfully without knowing the underlying data or performance of the process or activity. This series of reports sets out to provide this information at this crucial planning stage for agriculture and horticulture.

The headline data from the Farm Business Survey (FBS) for the 2016/17 financial year, shows that average Farm Business Income (FBI) increased by 20% to £38,000 per farm, taking farm incomes upwards again after a period of six years of falling income levels. At £38,000 per farm FBI is still the second lowest average income from the previous six years. Examining results by farm type, on average, with the exception of Poultry farms, all farm types benefited from an increase in FBI in 2016/17. One of the main drivers for the increased FBI results was a generally lower cost base, with increases in the price of beef, sheep and combinable crops also playing an important part in the increased FBI results. The contribution of increased output from agri-environment, diversification activities and the Basic Payment were also features of the increased FBI result. The exchange rate movement that weakened the value of Sterling in the aftermath of the EU referendum result in 2016, that led to increased output prices during 2016/17, has recently moderated. Should Sterling gain momentum moving forward this will place downward pressure on output prices, but offer some input price advantage, in particular for imported inputs.

As we produce this twelfth series of independent reports, agricultural and horticultural businesses need to prepare for the future if they are to prosper as the market and policy landscapes change. Businesses that understand their costs of production and their relative strengths within a sector will be best placed to compete irrespective of what the future may bring. With this series of reports we aim to help inform agricultural and horticultural businesses about the economics of the sector in which they operate, in order to aid management decision making. It is of crucial importance to recognise that this valuable series of reports would not be possible without the direct support of our farmer and grower co-operators and the wider support of agricultural and horticultural businesses and sector stakeholders. Our thanks therefore go to the farmers and growers who assist us in this valuable work through their participation in the FBS.

**Professor Paul Wilson**

Chief Executive Officer, Rural Business Research  
February 2018

[www.ruralbusinessresearch.co.uk](http://www.ruralbusinessresearch.co.uk)

**Acknowledgements**

The Rural Business Research (RBR) Consortium thanks sincerely all those farmers and growers who have voluntarily provided records and information on which the annual Farm Business Survey, and this report, is based. Thanks also to Keith Robbins (Duchy College) for extracting the data.

The basic information on which this report is based was collected on behalf of, and largely financed by, the Department for Environment, Food and Rural Affairs (Defra) and is Crown Copyright. The views expressed in this report are those of the authors and are not necessarily shared by other members of RBR or by Defra.

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## **Key Findings**

### The Pig Sector

- The total number of pigs in the UK herd increased by 1.5% in 2017 compared to the previous year, led mainly by a 1.7% increase in fattening pigs.
- The average clean pig weight increased again in 2017 to 83.3kg, a 1.1kg increase compared to the previous year, also a 7.1kg increase over the last 10 years.
- SPP average pig price peaked in July 2017 at over 164ppk, the highest it has been since January 2014.

### Farm Level Results

- Farm Business Survey data from 2016/17 shows that the average Farm Business Income (FBI) on Specialist Pig Farms was £57,815, which was an increase of 167% compared to 2015/16. The top 25% of Specialist Pig Farms generated an income £151,523 whilst the bottom 25% generated a total FBI of -£14,087.
- Overall Management and Investment Income (MII) for the group of 66 Specialist Pig Farms ranged from £161,937 for the top 25% to a loss of -£34,350 in the bottom 25%
- The farms with the largest standard output had a much higher MII than the 2 smaller groups, with £141,258 for the largest and £8,277 and £1,807 for the middle and smallest farms respectively.

### Pig Enterprise Results

- Enterprise level analysis shows that in 2016/17 the net margin increased to £42,339, which is a substantial increase when compared to the previous year's net margin of £-4,604.
- Average costs and margins per £100 pig output showed a net margin of £12.4, and a feed cost of £50.2, down £10.8 per £100 from the previous year.
- Net margin per sow increased from £-57 in 2015/16 to £265 in 2016/17, with total variable costs decreasing by £161 per sow from the previous year.



## 1.0 Commentary on the UK Pig Industry

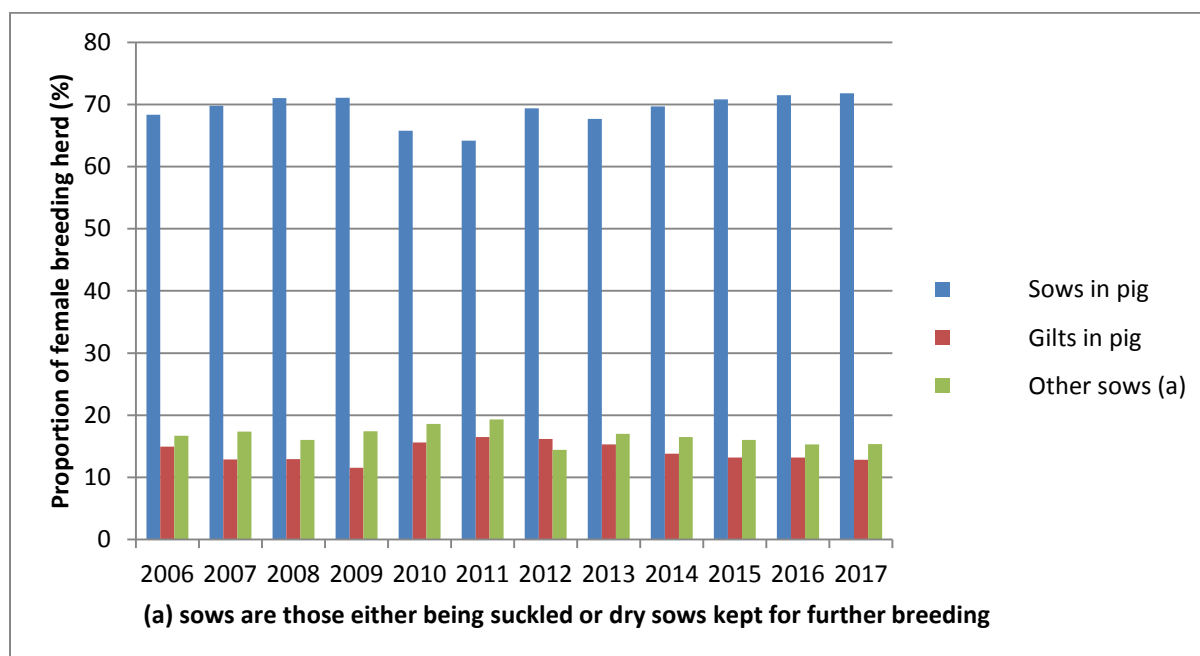
- Pig numbers have remained fairly stable between 2006 and 2017 with numbers hovering around 4 million across the period. Reduced numbers were seen between 2009 and 2012 though numbers improved into 2013.
- Total number of pigs in England in 2017 increased by 1.5% to almost 4 million animals when compared to 2016. The increase was mainly driven by the increase in the number of fattening pigs up by 1.7%; the number of breeding pigs remained almost unchanged.
- In 2017 the English breeding herd consisted of 71.9% Sows in pig, 12.9% Gilts in pig, and 15.2% Other sows which is very similar to the previous year. The only noticeable change was a 2.9% reduction in the number of Gilts in pig.
- In 2017 the number of boars used for service dropped by 15.4% on the previous year.
- The total number of Specialist Pig Holdings in England increased by 14.8% in 2016 compared to 2015, this more than cancelling out the reduction in holdings seen a year earlier. All regions saw an increase of pig holdings, though the North East and South East saw the comparatively biggest increases.
- In 2016 Yorkshire and the Humber accounted for 37.6% of the total pigs in England the Eastern region accounted for a further 27.6% and the South West for another 9.2%.
- Pig prices started lower at the beginning of 2017 than the month previous though prices were still 33.29p/kg higher than they were the January before. Prices were fairly static in the first quarter of 2017 though noticeable price increases were seen in April. Prices continued to grow to highs of 164.28p/kg in July though subsequent price slips left December's price at 150.76p/kg.

**Table 1.1 Breeding Pigs on Agricultural Holdings in England 1<sup>st</sup> June ('000)**

	2006	2007	2008	2009	Revised 2009	2010	2011	2012	2013	2014	2015	2016	2017	% change 16/17
<b>Total pigs</b>	<b>4057</b>	<b>3943</b>	<b>3854</b>	<b>3872</b>	<b>3689</b>	<b>3606</b>	<b>3600</b>	<b>3662</b>	<b>4066</b>	<b>3954</b>	<b>3826</b>	<b>3911</b>	<b>3969</b>	<b>1.5%</b>
<b>Total breeding pigs</b>	<b>462</b>	<b>445</b>	<b>410</b>	<b>444</b>	<b>421</b>	<b>423</b>	<b>433</b>	<b>437</b>	<b>434</b>	<b>411</b>	<b>413</b>	<b>417</b>	<b>416</b>	<b>-0.1%</b>
<b>Female breeding herd</b>	<b>386</b>	<b>375</b>	<b>346</b>	<b>371</b>	<b>352</b>	<b>346</b>	<b>354</b>	<b>351</b>	<b>346</b>	<b>329</b>	<b>328</b>	<b>334</b>	<b>334</b>	<b>-0.2%</b>
Sows in pig	264	262	245	264	250	228	227	244	234	230	232	239	240	0.2%
Gilts in pig	58	48	45	43	41	54	58	57	53	46	43	44	43	-2.9%
Other sows (c)	65	65	55	65	61	64	68	51	59	54	52	51	51	0.2%
<b>Other breeding pigs</b>	<b>75</b>	<b>70</b>	<b>64</b>	<b>73</b>	<b>69</b>	<b>77</b>	<b>79</b>	<b>85</b>	<b>88</b>	<b>82</b>	<b>85</b>	<b>82</b>	<b>82</b>	<b>0.2%</b>
Boars for service	17	16	15	16	15	14	14	14	13	12	13	13	11	-15.4%
Gilts not yet in pig	58	54	49	57	54	63	65	72	75	70	72	69	71	3.1%
<b>Fattening pigs (liveweight)</b>	<b>3596</b>	<b>3499</b>	<b>3445</b>	<b>3428</b>	<b>3268</b>	<b>3183</b>	<b>3167</b>	<b>3225</b>	<b>3632</b>	<b>3542</b>	<b>3413</b>	<b>3494</b>	<b>3553</b>	<b>1.7%</b>

Source: Defra, 2017 Department for Environment Food and Rural Affairs – Defra June Survey of Agriculture

**Figure 1.1 Breakdown of the female pig breeding herd 1st June 2006-2017**



Source: Defra, 2017 Department for Environment Food and Rural Affairs – Defra June Survey of Agriculture

**Table 1.2 Specialist Pig Holdings by Region 2010-2016\***

	2010	2011	2012	2013	2014	2015	2016
North East	39	46	43	45	48	37	47
North West and Merseyside	110	125	127	114	131	102	136
Yorkshire and The Humber	410	464	464	485	499	480	515
East Midlands	159	174	178	167	174	156	190
West Midlands	133	161	153	137	163	131	153
Eastern	369	398	382	393	406	410	422
South East	137	159	159	134	172	133	170
South West	244	283	274	260	330	252	320
England	1,601	1,810	1,780	1,735	1,923	1701	1953

Footnote: \* Data for 2010-2012 based on 2007 Standard Output coefficients, 2013 and 2014 based on 2010 Standard Output coefficients

<https://www.gov.uk/guidance/structure-of-the-agricultural-industry-survey-notes-and-guidance>

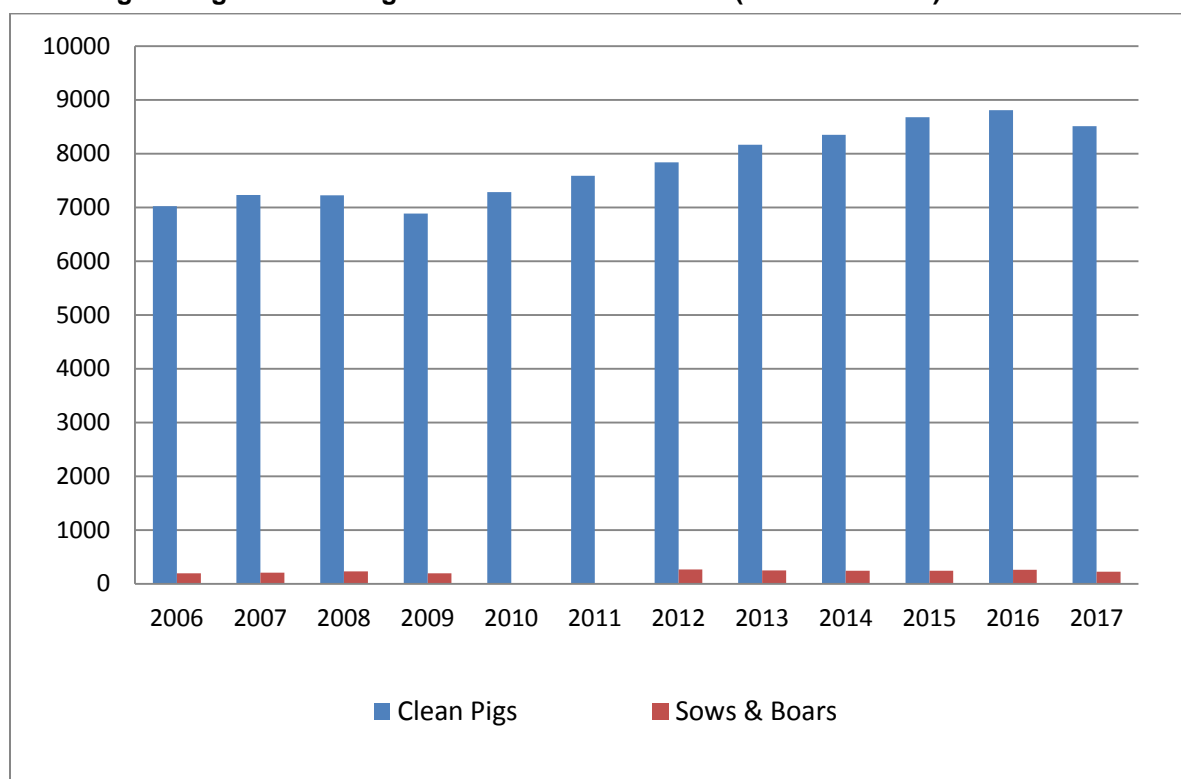
**Table 1.3 Number of Pigs by Region 2010-2016**

	2010	2011	2012	2013	2014	2015	2016
North East	54,564	66,658	68,557	76,780	71,704	69,924	84,381
North West and Merseyside	100,800	106,292	115,782	122,932	115,403	99,333	112,815
Yorkshire and The Humber	870,824	962,479	971,222	1,112,342	1,090,853	1,078,610	1,145,337
East Midlands	255,962	269,572	276,616	301,143	287,896	277,785	299,486
West Midlands	130,248	143,809	145,102	164,078	155,057	137,067	133,713
Eastern	746,132	762,199	749,944	894,763	844,314	818,347	839,666
South East and London	130,158	129,613	140,746	136,977	118,858	143,267	150,675
South West	273,235	296,704	295,118	329,961	326,314	279,379	279,829
England	2,561,924	2,737,325	2,763,086	3,138,976	3,010,399	2,903,712	3,045,901

Source: Defra, June Survey

<https://www.gov.uk/guidance/structure-of-the-agricultural-industry-survey-notes-and-guidance>

**Figure 1.2 Pigs Slaughtered in England and Wales 2005-2017 (thousand head)**

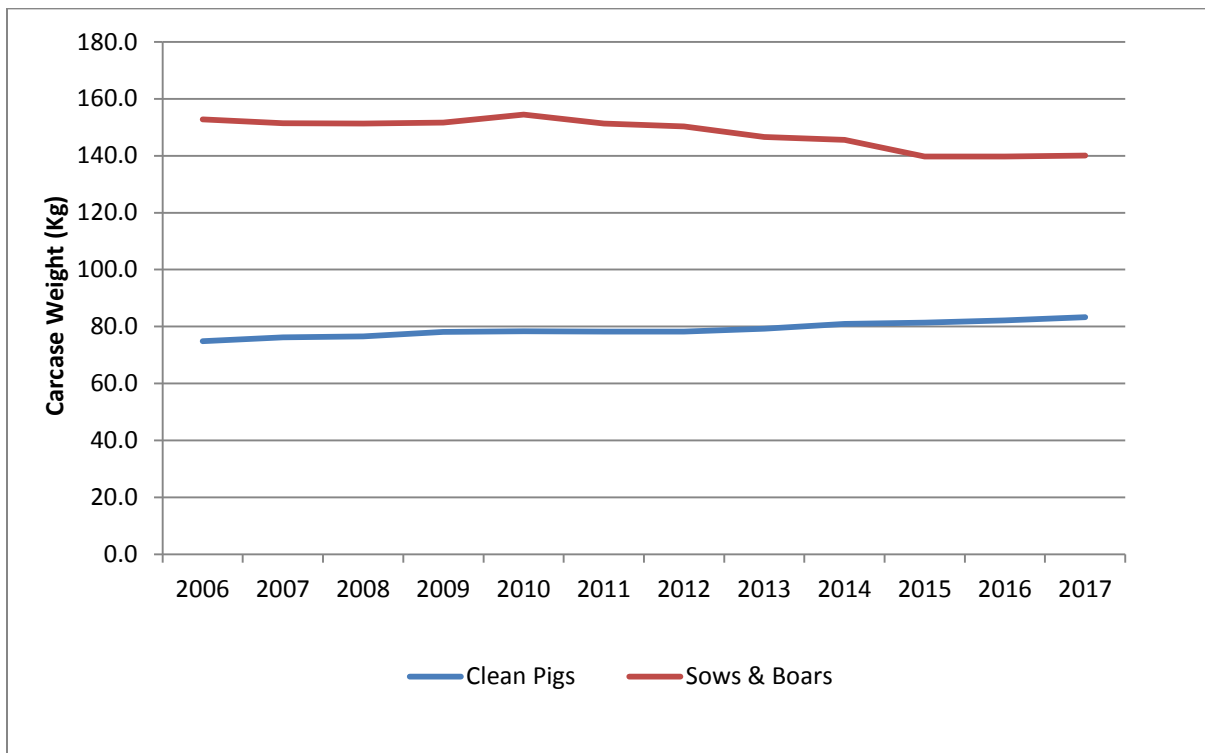


Source: Defra, <https://www.gov.uk/government/statistics/cattle-sheep-and-pig-slaughter>

Footnotes:

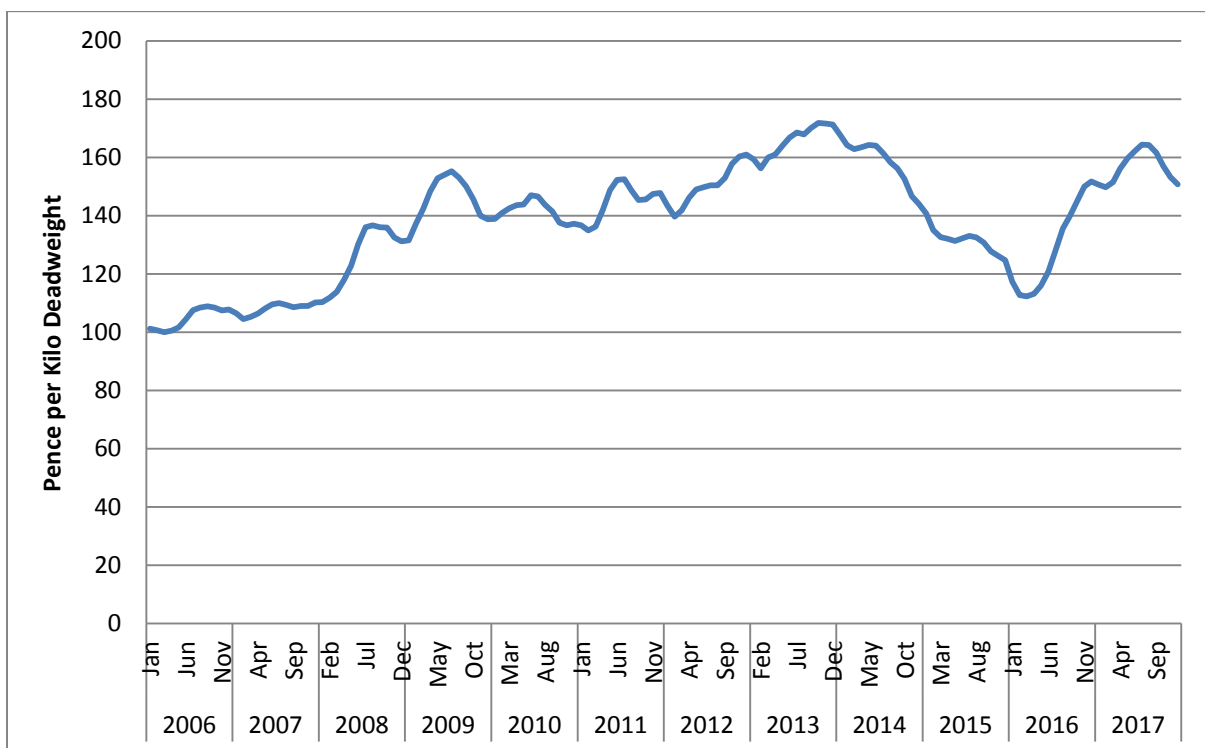
Sow and boar data missing in years 2010 and 2011 due to confidentiality constraints.

**Figure 1.3 UK Average Carcass Weights 2006-2017**



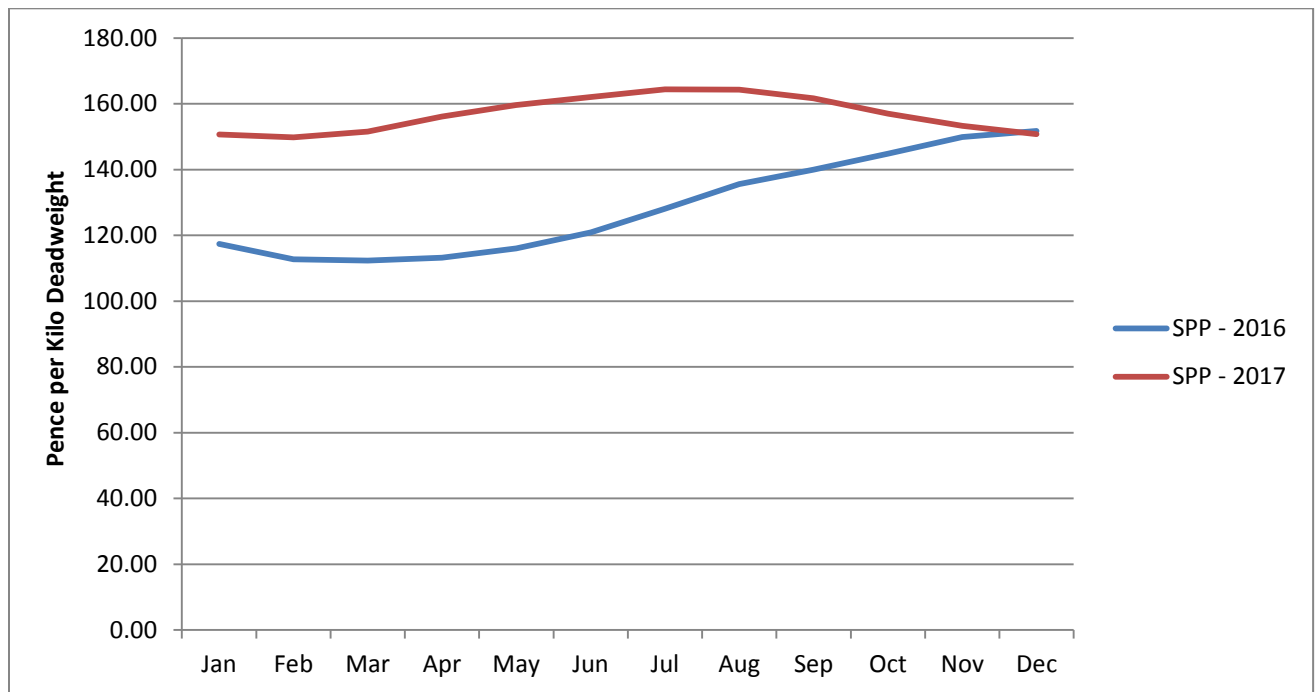
Source: Defra, <https://www.gov.uk/government/statistics/cattle-sheep-and-pig-slaughter>

**Figure 1.4 Deadweight Average Pig Price (SPP) 2006-2017**



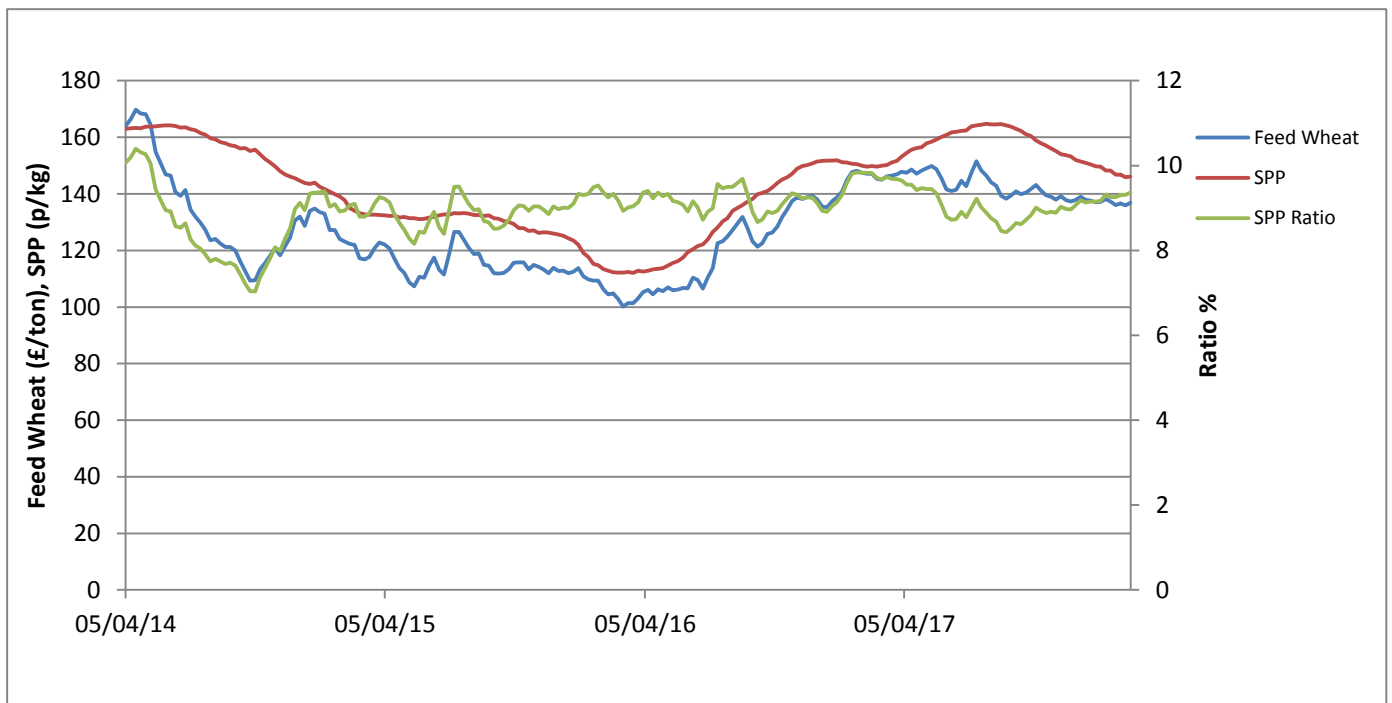
Source: AHDB, <http://pork.ahdb.org.uk/prices-stats/prices/pig-prices-uk-spec/>

**Figure 1.5 Deadweight Average Pig Prices (SPP) 2016-2017**



Source: AHDB, <http://pork.ahdb.org.uk/prices-stats/prices/pig-prices-uk-spec/>

**Figure 1.6 Feed Wheat to SPP Comparison 2014 -2017**



Source: AHDB, <http://pork.ahdb.org.uk/prices-stats/prices/pig-to-feed-wheat-price/>

## 2.0 Financial Performance of Specialist Pig Farms

The data in this report has been extracted from the 2016/17 Farm Business Survey (FBS). This presents data for all farm types on both a national and Government Office region (GOR) basis. The basis for the classification of farms in the FBS is described in Appendix A.

In the 2016/17 FBS there were 66 farm businesses that were classified as Specialist Pig farms. This is slightly higher than the previous year when there were 62 recorded pig farms. Farms are classified according to Standard Outputs (SO). Please see the explanatory document at <https://www.gov.uk/government/collections/farm-business-survey> for further details on Standard Outputs.

To be classified as a Specialist Pig farm at least two-thirds of the total SO from the enterprises on the farm must have been generated by pigs.

All the results presented in this report are based on weighted data.

### 2.1 Classification of farms

The 66 Specialist Pig farms subdivided into three EU Particular Farm Types (PFT) as follows:

EU PFT	No of farms	Description
5110	6	Specialist pig rearing
5130	30	Pigs rearing and fattening combined
5120	30	Specialist pig fattening

Due to the small sample numbers for type 5110, types 5110 and 5130 have been combined. Thus this group refers to farms predominantly with sows selling either weaners or fat pigs and type 5120 are predominantly farms without sows but selling fat pigs, many on a contract basis.

### 2.2 Financial Results

Across all Specialist pig farms, total farm business income amounted to £57,815 (Table 2.1) which was 167% higher than the previous year. Pig output accounted for 82.8% of total output which is around 0.6% less than the previous year. These farms recorded an average gross margin of £238,459 after deduction of variable costs amounting to £227,172. This margin is 12% higher compared to 2015/16 figures, mainly due to a decrease in average feed costs per holding of £52,761.

Fixed costs amounted to £207,690 resulting in a Management and Investment Income (MII) of £31,185. Net Farm Income (NFI) averaged £54,116.

Table 2.2 shows the range in performance in terms of FBI for Specialist Pig Farms. The table demonstrates the range of farm business incomes seen in the sector with the top performing 25% achieving an average FBI of £151,523 whilst the bottom 25% have a negative income, £-14,087.

Table 2.3 shows the range in performance in terms of MII for Specialist Pig farms, with the top 25% achieving £161,937 and the bottom making a loss of -£34,350.

An analysis of the results split between businesses classed as 'predominantly sows' and those classed as 'predominantly growing and fattening pigs' is presented in Table 2.4. The overall gross margin and FBI per farm is higher for 'predominately sows' businesses.

In order to examine the influence of size on financial performance the results have been analysed in terms of SO. Table 2.5 shows the results and indicates the range of SO for each size category. The results show a clear difference between the largest sized group and those of the other two groups. The largest sized group records an average MII of £141,258; whilst the other two size groups record MII's of £-8,277 and £1,807.

The farms have been grouped by a measure of financial performance in order to compare the breakdown of financial data between different performance bands. The performance ratio is calculated by dividing the farm business output by total farm costs, including unpaid labour, and then divided into 3 groups. The results show a clear difference in average output between the low performing farms and then the middle and high performers which has around 8 – 9 times the output. When comparing the feed costs between the high and medium performing farms the high performing farms have a much lower average feed cost in comparison to the medium performers. The feed is equal to 45% of total output for medium performers, whereas only 33% for high performers. There is a vast difference in farm business income between high and low performers, with low performers losing £2,318 compared to high performers earning an average of £127,103.



**Table 2.1 Specialist Pig Farms – Financial Results**

	2015/16	2016/17	% Change
Number of farms	62	66	
<b>Output</b>	<b>£</b>	<b>£</b>	
Pigs	420,478	385,576	-8
Other livestock	7,005	5,395	-23
Crops	29,528	27,737	-6
Miscellaneous	47,061	46,923	-
<b>Total output</b>	<b>504,071</b>	<b>465,631</b>	<b>-8</b>
<b>Variable costs</b>			
Feed	228,502	175,741	-23
Vet and medicines	14,345	11,082	-23
Other livestock costs	32,791	28,915	-12
Crop costs	14,644	11,434	-22
<b>Total variable costs</b>	<b>290,282</b>	<b>227,172</b>	<b>-22</b>
<b>Farm gross margin</b>	<b>213,789</b>	<b>238,459</b>	<b>12</b>
<b>Fixed costs</b>			
Labour			
- Paid	60,988	49,530	-18
- Unpaid	24,311	28,948	19
Machinery			
- Contract	14,240	15,283	7
- Depreciation	26,150	25,979	-1
- Repairs	12,620	13,269	5
- Fuel and oil	9,655	9,050	-6
Occupiers repairs	10,542	9,104	-14
Rent and rates	33,976	34,081	-
Other farm costs	26,020	22,030	-15
<b>Total fixed costs</b>	<b>218,502</b>	<b>207,274</b>	<b>-5</b>
<b>Management and investment income</b>	<b>-4,714</b>	<b>31,185</b>	<b>762</b>
Less management charges	98	416	325
Plus farmer and spouse labour	24,311	23,347	-4
<b>Net farm income</b>	<b>19,499</b>	<b>54,116</b>	<b>178</b>
Less net interest payments	7,738	6,282	-19
Less building depreciation and insurance	17,098	17,043	-
Less directors remuneration	1,313	2,606	99
Plus rental value and imputed rent	23,904	24,028	1
Plus imputed labour	4,391	5,601	28
<b>Farm business income</b>	<b>21,645</b>	<b>57,815</b>	<b>167</b>

**Table 2.2 Specialist Pig Farms 2016/17 – Grouped by FBI per Farm**

	<b>*Top 25%</b>	<b>Middle 50%</b>	<b>Bottom 25%</b>
Number of farms	8	40	18
<b>Output</b>	<b>£</b>	<b>£</b>	<b>£</b>
Pigs	634,495	349,376	185,645
Other livestock	0	8,018	6,345
Crops	31,276	37,167	6,607
Miscellaneous	66,346	53,116	14,741
<b>Total output</b>	<b>732,118</b>	<b>447,677</b>	<b>213,338</b>
<b>Variable costs</b>			
Feed	239,556	177,483	104,216
Vet and medicines	14,388	12,115	5,642
Other livestock costs	38,170	30,342	16,384
Crop costs	12,764	14,249	4,833
<b>Total variable costs</b>	<b>304,878</b>	<b>234,189</b>	<b>131,075</b>
<b>Farm gross margin</b>	<b>427,240</b>	<b>213,488</b>	<b>82,263</b>
<b>Fixed costs</b>			
Labour			
- Paid	72,267	48,390	27,284
- Unpaid	30,971	28,372	27,842
Machinery			
- Contract	32,212	10,751	5,491
- Depreciation	55,005	18,761	8,174
- Repairs	19,762	13,418	6,043
- Fuel and oil	17,586	7,124	3,454
Occupiers repairs	9,107	11,239	5,176
Rent and rates	43,320	34,948	22,593
Other farm costs	20,515	26,241	15,909
<b>Total fixed costs</b>	<b>300,745</b>	<b>199,244</b>	<b>121,967</b>
<b>Management and investment income</b>	<b>126,496</b>	<b>14,243</b>	<b>-39,704</b>
Less management charges	461	616	0
Plus farmer and spouse labour	21,414	23,361	25,390
<b>Net farm income</b>	<b>147,449</b>	<b>36,988</b>	<b>-14,314</b>
Less net interest payments	8,805	5,996	4,108
Less building depreciation and insurance	19,841	17,091	13,956
Less directors remuneration	265	4,753	1,163
Plus rental value and imputed rent	23,428	28,198	17,002
Plus imputed labour	9,557	5,011	2,451
<b>Farm business income</b>	<b>151,523</b>	<b>42,358</b>	<b>-14,087</b>

\*Data is derived from a modest sample size

**Table 2.3 Specialist Pig Farms 2016/17 – Grouped by MII per Farm**

	<b>Top 25%</b>	<b>Middle 50%</b>	<b>*Bottom 25%</b>
Number of farms	15	43	8
<b>Output</b>	<b>£</b>	<b>£</b>	<b>£</b>
Pigs	894,381	278,888	78,968
Other livestock	2,282	8,955	1,433
Crops	39,875	34,729	1,278
Miscellaneous	82,461	50,320	3,729
<b>Total output</b>	<b>1,018,998</b>	<b>372,891</b>	<b>85,408</b>
<b>Variable costs</b>			
Feed	363,986	147,325	40,108
Vet and medicines	22,409	9,647	2,368
Other livestock costs	59,384	24,726	6,138
Crop costs	15,733	14,219	1,443
<b>Total variable costs</b>	<b>461,512</b>	<b>195,918</b>	<b>50,057</b>
<b>Farm gross margin</b>	<b>557,486</b>	<b>176,974</b>	<b>35,352</b>
<b>Fixed costs</b>			
Labour			
- Paid	98,107	45,110	8,682
- Unpaid	30,055	28,695	28,322
Machinery			
- Contract	43,115	7,759	1,897
- Depreciation	65,032	17,009	4,012
- Repairs	25,626	11,856	3,456
- Fuel and oil	21,298	6,343	1,949
Occupiers repairs	14,409	9,313	3,257
Rent and rates	64,647	30,235	10,515
Other farm costs	33,258	23,488	7,611
<b>Total fixed costs</b>	<b>395,547</b>	<b>179,810</b>	<b>69,701</b>
<b>Management and investment income</b>	<b>161,937</b>	<b>-2,836</b>	<b>-34,350</b>
Less management charges	1,638	0	0
Plus farmer and spouse labour	23,619	23,858	22,042
<b>Net farm income</b>	<b>183,918</b>	<b>21,022</b>	<b>-12,307</b>
Less net interest payments	13,573	5,125	1,143
Less building depreciation and insurance	31,312	13,881	8,783
Less directors remuneration	5,801	2,275	0
Plus rental value and imputed rent	38,226	23,797	9,960
Plus imputed labour	6,437	4,837	6,280
<b>Farm business income</b>	<b>177,894</b>	<b>28,376</b>	<b>-5,994</b>

**Note:** The farms are ranked in descending order according to performance and allocated to quartiles with the top quartile (25percent) representing the top band (Premium Group). Note that the farm weights are used to allocate farms to quartiles so the number of farms in a quartile will not necessarily be equivalent to a quarter of the sample. \*Data is derived from a modest sample size

**Table 2.4 Financial Data for Specialist Pig Farms 2016/17 – Grouped by Type**

	<b>Predominantly sows</b>	<b>Predominantly growing/fattening pigs</b>
Number of farms	36	30
<b>Output</b>	<b>£</b>	<b>£</b>
Pigs	996,217	103,753
Other livestock	7,374	4,481
Crops	70,664	7,925
Miscellaneous	58,207	41,715
<b>Total output</b>	<b>1,132,462</b>	<b>157,875</b>
<b>Variable costs</b>		
Feed	518,507	17,548
Vet and medicines	33,085	927
Other livestock costs	70,929	9,525
Crop costs	27,245	4,137
<b>Total variable costs</b>	<b>649,765</b>	<b>32,137</b>
<b>Farm gross margin</b>	<b>482,697</b>	<b>125,738</b>
<b>Fixed costs</b>		
Labour		
- Paid	102,463	25,099
- Unpaid	33,586	26,808
Machinery		
- Contract	40,835	3,490
- Depreciation	51,109	14,380
- Repairs	26,403	7,207
- Fuel and oil	16,901	5,427
Occupiers repairs	18,150	4,930
Rent and rates	61,043	21,637
Other farm costs	42,288	12,681
<b>Total fixed costs</b>	<b>392,778</b>	<b>121,659</b>
<b>Management and investment income</b>	<b>89,917</b>	<b>4,079</b>
Less management charges	13	602
Plus farmer and spouse labour	25,497	22,355
<b>Net farm income</b>	<b>115,400</b>	<b>25,832</b>
Less net interest payments	12,674	3,332
Less building depreciation and insurance	36,166	8,216
Less directors remuneration	6,015	1,032
Plus rental value and imputed rent	42,959	15,291
Plus imputed labour	8,090	4,453
<b>Farm business income</b>	<b>111,594</b>	<b>32,995</b>

**Table 2.5 Financial Data for Specialist Pig Farms 2016/17 – Grouped by Standard Output per Farm**

<b>000 SO</b>	<b>0-200</b>	<b>200-500</b>	<b>500+</b>
Number of farms	11	21	34
<b>Output</b>	<b>£</b>	<b>£</b>	<b>£</b>
Pigs	84,313	157,083	1,295,757
Other livestock	205	11,915	8,101
Crops	918	17,590	96,116
Miscellaneous	27,280	46,691	88,074
<b>Total output</b>	<b>112,715</b>	<b>233,278</b>	<b>1,488,048</b>
<b>Variable costs</b>			
Feed	13,425	71,420	642,823
Vet and medicines	316	5,031	40,984
Other livestock costs	6,911	13,981	93,219
Crop costs	641	8,417	37,628
<b>Total variable costs</b>	<b>21,293</b>	<b>98,848</b>	<b>814,654</b>
<b>Farm gross margin</b>	<b>91,422</b>	<b>134,430</b>	<b>673,394</b>
<b>Fixed costs</b>			
Labour			
- Paid	16,601	24,663	148,881
- Unpaid	25,057	33,749	31,086
Machinery			
- Contract	2,326	3,964	56,279
- Depreciation	10,561	19,132	66,545
- Repairs	5,137	7,552	37,278
- Fuel and oil	4,135	5,322	23,902
Occupiers repairs	3,197	6,028	25,208
Rent and rates	13,778	23,372	89,601
Other farm costs	8,822	18,927	53,356
<b>Total fixed costs</b>	<b>89,615</b>	<b>142,707</b>	<b>532,136</b>
<b>Management and investment income</b>	<b>1,807</b>	<b>-8,277</b>	<b>141,258</b>
Less management charges	856	0	18
Plus farmer and spouse labour	22,120	25,164	23,644
<b>Net farm income</b>	<b>23,072</b>	<b>16,886</b>	<b>164,884</b>
Less net interest payments	1,437	4,319	18,796
Less building depreciation and insurance	2,314	15,897	49,101
Less directors remuneration	0	1,582	9,296
Plus rental value and imputed rent	7,673	20,909	61,919
Plus imputed labour	2,937	8,585	7,442
<b>Farm business income</b>	<b>29,930</b>	<b>24,583</b>	<b>157,052</b>

**Table 2.6 Financial Data for Specialist Pig Farms 2016/17 – Grouped by Performance Ratio**

Ratio	Low	Medium	High
Number of farms	13	28	25
<b>Output</b>	<b>£</b>	<b>£</b>	<b>£</b>
Pigs	69,949	531,830	542,513
Other livestock	1,940	11,904	3,809
Crops	1,460	58,742	28,128
Miscellaneous	5,109	67,720	66,757
<b>Total output</b>	<b>78,457</b>	<b>670,195</b>	<b>641,207</b>
<b>Variable costs</b>			
Feed	26,423	302,614	211,156
Vet and medicines	1,665	19,168	13,258
Other livestock costs	6,577	47,568	34,434
Crop costs	1,749	21,721	13,346
<b>Total variable costs</b>	<b>36,413</b>	<b>391,072</b>	<b>271,194</b>
<b>Farm gross margin</b>	<b>42,044</b>	<b>279,123</b>	<b>370,012</b>
<b>Fixed costs</b>			
Labour			
- Paid	9,116	76,461	64,101
- Unpaid	30,104	32,169	25,845
Machinery			
- Contract	2,390	15,806	25,362
- Depreciation	5,321	22,605	44,965
- Repairs	3,928	17,960	17,669
- Fuel and oil	2,254	8,912	14,643
Occupiers repairs	1,884	18,258	8,785
Rent and rates	11,581	48,325	42,698
Other farm costs	7,755	39,396	21,891
<b>Total fixed costs</b>	<b>74,333</b>	<b>279,892</b>	<b>265,959</b>
<b>Management and investment income</b>	<b>-32,289</b>	<b>-770</b>	<b>104,054</b>
Less management charges	0	1	1,033
Plus farmer and spouse labour	24,656	24,861	21,269
<b>Net farm income</b>	<b>-7,633</b>	<b>24,090</b>	<b>124,290</b>
Less net interest payments	1,191	9,529	8,216
Less building depreciation and insurance	8,434	27,099	17,238
Less directors remuneration	139	9,174	180
Plus rental value and imputed rent	9,632	41,565	23,872
Plus imputed labour	5,448	7,308	4,576
<b>Farm business income</b>	<b>-2,318</b>	<b>27,163</b>	<b>127,103</b>

### 3.0 Margins for Pig Enterprises

The data in the following section utilises the net margins gathered from specialist pig farms. More data is available for other farm types who keep pigs but not their sole interest, however only those farms specialising in pigs have been included due to the nature of the way the data is collected. Variable costs are allocated to different farm enterprise by estimation; however some of the fixed costs are allocated econometrically, according to the set coefficients that are estimated. Data on the validity of these coefficients is being accumulated with a view to improving them over time. For specialist pig farms, the net margins for the pig enterprise should be reasonably accurate. This is because these farms have few or no other enterprises and therefore the majority of fixed costs are rightly attributable to the pig enterprise.

#### 3.1 Classification of farms

Net and gross margins were completed for 55 Specialist Pig farms. These were classified as follows:

Type	No of farms	Definition
111	1	Breeders selling weaners (rearers)
112	25	Breeders selling fat pigs (finishers)
113	0	Buying weaners, selling fat pigs
114	24	Contract rearing
115	5	Other

Due to the small sample sizes it is not possible to show the results for each type listed above. Consequently, results have only been presented for types 112 and 114.

#### 3.2 Net Margin results

Table 3.1 shows the average Net Margin has increased considerably from £-4,604 in 15/16 to £42,339 in 2016/17. The two most noticeable changes year on year to have this impact is an increase in the average farm output and a decrease in the average feed costs per farm.

Table 3.2 presents the results split into two different categories, namely breeding farms selling finished pigs, and contract rearing only. Breeding farms selling finished pigs made a Net Margin of £121,203 and the contract rearing only farms showed a positive Net Margin of £11,203.

Table 3.3 shows the costs and margins per £100 output for breeders selling finished pigs, (type 112). The feed costs for breeders selling fat pigs are by far the biggest proportion of the costs, 50.2% of the total output in 2016/17, whereas in 2015/16 the feed costs accounted for 61% of output.

Table 3.4 presents the results in terms of Net Margins per sow for breeder finisher farms. In 2016/17 there was a total Net Margin of £265 per sow compared to a net margin of £-57 in 2015/16. The big changes were an increase in output per sow, coupled with a similar decrease in feed per sow.

**Table 3.1 Specialist Pig Farms – Average Net Margins (£/farm)**

	2015/16	2016/17	% Change
Number of farms	62	55	
<b>Output</b>	<b>£ per farm 356,117</b>	<b>£ per farm 373,578</b>	<b>5</b>
<b>Variable costs</b>			
Feed	189,648	162,232	-15
Vet and medicines	11,531	8,834	-23
Other variable costs	27,656	25,533	-8
<b>Total variable costs</b>	<b>228,835</b>	<b>196,599</b>	<b>-14</b>
<b>Gross Margin</b>	<b>127,281</b>	<b>176,979</b>	<b>39</b>
<b>Fixed costs</b>			
Paid labour	42,769	39,842	-7
Unpaid labour	3,422	4,348	27
Contract hire	8,942	12,485	40
Machinery depreciation	14,175	17,698	25
Machinery repairs	7,749	8,819	14
Fuel and oil	5,649	6,346	12
Electricity and heating fuel	5,628	5,493	-2
Water	1,657	1,843	11
Insurance	3,359	3,007	-11
Professional fees	3,148	2,800	-11
General farm costs	2,700	2,860	6
Occupiers repairs	5,539	6,048	9
Rent and rates	9,427	5,941	-37
<b>Total fixed costs</b>	<b>114,164</b>	<b>117,531</b>	<b>3</b>
<b>Net farm income</b>	<b>13,119</b>	<b>59,448</b>	<b>353</b>
Less farmer and spouse labour	17,821	17,586	-1
Plus managerial input	98	477	387
<b>Net margin</b>	<b>-4,604</b>	<b>42,339</b>	



**Table 3.2 Specialist Pig Farms 2016/17 – Average Net Margins by Farm Type**

<b>Farm type</b>	<b>Breeders selling fat pigs</b>	<b>Contract rearing</b>
Number of farms	25	24
Average number of sows per farm	457	35
<b>Output</b>	<b>£ per farm 978,994</b>	<b>£ per farm 89,050</b>
<b>Variable costs</b>		
Feed	491,008	0
Vet and medicines	25,867	12
Other variable costs	68,640	6,311
<b>Total variable costs</b>	<b>585,514</b>	<b>6,323</b>
<b>Gross Margin</b>	<b>393,480</b>	<b>82,727</b>
<b>Fixed costs</b>		
Paid labour	78,491	19,766
Unpaid labour	9,435	2,791
Contract hire	34,937	2,659
Machinery depreciation	32,534	11,085
Machinery repairs	18,168	5,156
Fuel and oil	11,607	4,194
Electricity and heating fuel	14,163	1,571
Water	3,946	1,006
Insurance	6,268	1,440
Professional fees	4,551	1,748
General farm costs	6,134	1,349
Occupiers repairs	12,135	2,278
Rent and rates	14,737	1,628
<b>Total fixed costs</b>	<b>247,106</b>	<b>56,672</b>
<b>Net farm income</b>	<b>146,374</b>	<b>26,055</b>
Less farmer and spouse labour	25,171	15,566
Plus managerial input	0	714
<b>Net margin</b>	<b>121,203</b>	<b>11,203</b>

**Table 3.3 Specialist Pig Farms – Breeders Selling Fat Pigs, Costs and Margins per £100 Pig Output**

Farm type	£ per £100 output	
	2015/16	2016/17
Feed	61.0	50.2
Vet & other variable costs	11.7	9.7
Gross margin	27.4	40.2
Labour costs	14.5	11.6
Contract and machinery costs	7.9	8.7
Occupiers repairs	1.3	1.2
Rent and rates	2.4	1.5
Other fixed costs	4.1	4.8
<b>Net margin</b>	<b>-2.9</b>	<b>12.4</b>

**Table 3.4 Specialist Pig Farms – Average Net Margins per Sow (£/sow)**

	2015/16	2016/17
<b>Farm Type</b>		<b>Breeders selling fat pigs</b>
Number of farms	32	25
Number of sows	399	457
	<b>£ per sow</b>	<b>£ per sow</b>
<b>Output</b>	<b>1,985</b>	<b>2,142</b>
<b>Variable costs</b>		
Feed	1,210	1,074
Vet and medicines	73	57
Other variable costs	158	150
<b>Total variable costs</b>	<b>1,442</b>	<b>1,281</b>
<b>Gross Margin</b>	<b>544</b>	<b>861</b>
<b>Fixed costs</b>		
Paid labour	215	172
Unpaid labour	14	21
Contract hire	48	76
Machinery depreciation	51	71
Machinery repairs	36	40
Fuel and oil	23	25
Electricity and heating fuel	32	31
Water	8	9
Insurance	16	14
Professional fees	10	9
General farm costs	16	14
Occupiers repairs	26	27
Rent and rates	48	32
<b>Total fixed costs</b>	<b>531</b>	<b>541</b>
<b>Net farm income</b>	<b>13</b>	<b>320</b>
Less farmer and spouse labour	58	55
Add Management	0	0
<b>Net margin</b>	<b>-57</b>	<b>265</b>

## 4.0 Appendix A

### Notes and Definitions

#### Classification of Farms in the FBS

Farms are classified by both type and size. Standard Outputs (SOs) are calculated per hectare of crops and per head of livestock and used to calculate the standard output associated with each part of the Farm Business. They are expressed in terms of euros per ha or per head of livestock. The SOs now in use are based on several years centred on 2010. Holdings on which pigs account for more than two thirds of their total SO are classified as Specialist Pig holdings.

Farms are classified by size by utilising the Standard Labour Requirements (SLR). These are based on standard figures for different enterprises – they are not based on the actual labour utilised on a particular farm. In order to be included in the FBS they generally require at least 0.5 SLR.

Further details on the classification system can be accessed at:

[http://webarchive.nationalarchives.gov.uk/20130123162956/http://www.defra.gov.uk/statistics/files/defra-stats-foodfarm-farmmanage-fbs-UK\\_Farm\\_Classification.pdf/](http://webarchive.nationalarchives.gov.uk/20130123162956/http://www.defra.gov.uk/statistics/files/defra-stats-foodfarm-farmmanage-fbs-UK_Farm_Classification.pdf/)

**Management and Investment Income (MII)** is defined as the return to the farmer and spouse for their management and on the tenant-type capital of the business. Management and investment income is NFI minus an imputed cost for the manual labour of the farmer and spouse plus paid management.

**Net Farm Income (NFI)** assumes all farms are tenanted and that all tenant type assets are owned by the farmer. It represents the return to the farmer and spouse for their manual and managerial labour and on tenant type capital in livestock, crops, machinery, etc., but excluding land and buildings. It is calculated before deduction of interest payments on any farming loans and also excludes interest earned on any financial assets owned. (Breeding livestock appreciation (BLSA) is excluded from total farm output and, therefore, is not included in net farm income).

**Farm Business Income (FBI)** for sole traders and partnerships represents the financial return to all unpaid labour (farmers and spouses, directors, non-principal partners and directors and their spouses and family workers) and on all their capital invested in the farm business, including land and buildings. For corporate businesses it represents the financial return on the shareholders capital invested in the farm business. It is used when assessing the impact of new policies or regulations on the individual farm business. Although Farm Business Income is equivalent to financial Net Profit, in practice they are likely to differ because Net Profit is derived from financial accounting principles whereas Farm Business Income is derived from management accounting principles. For example in financial accounting output stocks are usually valued at cost of production, whereas in management accounting they are usually valued at market price. In financial accounting depreciation is usually calculated at historic cost whereas in management accounting it is often calculated at replacement cost.

**Unpaid Labour costs** are based on the time spent in manual work on the farm, valued at the appropriate prevailing hourly earnings of agricultural workers. Farmer and spouse unpaid labour costs are added back in order to calculate NFI from MII.

#### Weighting of results

All data presented in this report has been weighted to reflect the relative significance of each farm in the population. The weighting adopted has been the same as that used in the main FBS results (see <http://www.farmbusinesssurvey.co.uk>).

All FBS results are weighted so as to represent the whole population of farms rather than just the sample. The population in this case is all farms in England has a Standard Output of 25,000 euros. Weighting of FBS data is a two-stage procedure. The first stage applies a multiple to each farm to bring the number of farms to population level and to correct for differing probabilities of selection from the June agricultural census sampling frame; the second stage readjusts these weights to correct for biases identified from a range of variables in external data sources.

#### Average number of sows

The average number of sows is an annual average calculated from the number of sows and in-pig gilts on the farm.

## **5.0 Appendix B: Reports in Series**

Reports in this series:

**Crop Production in England 2016/17**

**Dairy Farming in England 2016/17**

**Hill Farming in England 2016/17**

**Horticulture Production in England 2016/17**

**Lowland Grazing Livestock Production in England 2016/17**

**Organic Farming in England 2016/17**

**Pig Production in England 2016/17**

**Poultry Production in England 2016/17**

Details available at [www.ruralbusinessresearch.co.uk](http://www.ruralbusinessresearch.co.uk)



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