

Farm Business Survey

2014/2015

Pig Production in England



Lucy Peacock

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2014/15

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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. 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 Tenth Series

This series of reports on the economics of agriculture and horticulture in England celebrates ten years of *Rural Business Research (RBR)* providing independent data and analysis to the individual sectors of the agricultural and horticultural industry. Drawing upon Farm Business Survey data from the 2014/15 financial year our reports are set against a modest decrease in overall Farm Business Income (FBI) of around 8% to an average £39,700 per farm. Of this overall measure of farm business profitability, the income derived from the Single Payment Scheme accounted for around 55%, highlighting the importance of support payments to the average farm business in England. The 2014/15 data relates to the 2014 harvest / production year – since this time there have been some marked downturns in a number of output prices for farm businesses – it is therefore clear that the importance of policy support to businesses at the start of 2016 is even greater than the above data indicates.

Over the ten years that RBR has been presenting this series of reports, farm businesses have witnessed widely fluctuating fortunes due to the vagaries of world market input and output prices and fluctuations in weather patterns. Throughout this period our reports have sought to demonstrate the variation in performance across farm businesses, within the specific sectors covered in each report, and also to provide businesses with the independent data required to benchmark their own performance and explore possibilities for production within the sectors. Ten years on, our aim to provide comprehensive and independent analysis remains at the very core of our work on the Farm Business Survey research programme for England.

The wider agricultural and horticultural market place in the mid-2010s clearly demonstrates the need for farm businesses to focus on the market opportunities for their produce and to understand the wider economic environment in which they operate. There are a number of technical and weather-related issues facing farm businesses at the start of 2016. But arguably the largest political issue over recent decades – the EU referendum which the current government will hold on the 23 June 2016 – represents the greatest uncertainty. There will be numerous debates and discussions about this major political issue over the coming months and, potentially, years. Given the importance of the EU Common Agricultural Policy support to the average FBI figures for 2014/15, the outcome of the EU referendum will be closely watched by those managing UK farm businesses. At the same time, the wider global economy continues to exhibit rather sluggish performance, with UK inflation remaining around the 0% mark, oil prices substantially lower than a year ago and signs of any interest rate increase in the UK being continually pushed further out into the future. With recent price volatility, and generally lower output prices, it remains important for businesses to plan ahead and focus on financial margins in contrast to physical output performance.

Against this wider economic context we hope that this tenth series of reports helps farm businesses in England to examine and benchmark their own performance. Our research work within the FBS programme could 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 are given to them all.

Professor Paul Wilson

Chief Executive Officer, Rural Business Research
March 2016

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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Table of Contents

Summary	1
1.0 Commentary on the UK Pig Industry	2
1.1 June Survey 2015 – Pig Production.....	2
1.2 Regional Specialist Pig Holdings and Number of Pigs.....	4
1.3 Structure of the Industry.....	5
1.3.1 Pig Slaughter data for England.....	5
1.3.2 UK Supply and use of Pork and Bacon.....	7
1.3.3 UK Pig Prices.....	8
2.0 Financial Performance Of Specialist Pig Farms	10
2.1 Classification of Farms.....	10
2.2 Financial Results.....	10
3.0 Margins for Pig Enterprises	18
3.1 Classification of Farms.....	18
3.2 Net Margin Results.....	18
4.0 Appendix A	24
5.0 Appendix B: Reports in Series	25

List of Figures

Figure 1.1 Breakdown of the female pig breeding herd 1st June 2005-2015	3
Figure 1.2 Pigs Slaughtered in England 2004-2015 (thousand head)	5
Figure 1.3 Average Carcase Weights 2000-2015	6
Figure 1.4 Deadweight Average Pig Price (DAPP) 2005-2015	8
Figure 1.5 Deadweight Average Pig Prices (DAPP) 2014-2015	9

List of Tables

Table 1.1 Breeding Pigs on Agricultural Holdings in England 1 st June ('000)	2
Table 1.2 Specialist Pig Holdings by Region 2010-2014	4
Table 1.3 Number of Pigs by Region 2010-2014	4
Table 1.4 Supply and Use of Pigmeat 2005-2014	7
Table 2.1 Specialist Pig Farms – Financial Results	12
Table 2.2 Specialist Pig Farms 2014/15 – Grouped by MII per Farm	13
Table 2.3 Specialist Pig Farms 2014/15 – Grouped by FBI per Farm	14
Table 2.4 Financial Data for Specialist Pig Farms 2014/15 – Grouped by Type	15
Table 2.5 Financial Data for Specialist Pig Farms 2014/15 – Grouped by Standard Output per Farm	16
Table 2.6 Financial Data for Specialist Pig Farms 2014/15 – Grouped by Performance Ratio	17
Table 3.1 Specialist Pig Farms – Average Net Margins (£/farm)	20
Table 3.2 Specialist Pig Farms 2014/15 – Average Net Margins by Farm Type	21
Table 3.3 Specialist Pig Farms 2014/15 – Average Costs and Margins per £100 Pig Output	22
Table 3.4 Specialist Pig Farms – Average Net Margins per Sow (£/sow)	23

Summary

This report presents the results collated from those farms with pig enterprises in the 2014/15 Farm Business Survey. They relate to farm businesses with financial year ends between 31st December 2014 and 31st March 2015. Most of the data is drawn from those farms defined as Specialist Pig Farms, that is, more than two-thirds of their total standard output is derived from pigs.

Pig numbers have declined by 39.3% in the years between 1990 and 2015. The total number of pigs fell by 3.2% between 2014 and 2015 alone, this decline was primarily due to the reduction in fattening pigs which fell by a further 3.6% from last year. Breeding pigs surprisingly showed an increase of 0.5% with numbers of sows in pig and 'other breeding pigs' growing marginally.

The Yorkshire and the Humber and Eastern regions taken together account for 64.2% of the pigs in England. In consequence, the other six Government Office regions only account for the remaining 35.8%.

Slaughter statistics indicate that 8,652 thousand head of clean pigs were killed in England and Wales in 2015, an increase of 4% on the previous year. Due to the increasing slaughter numbers the percentage contribution made by home produced meat to total supply remained constant at 61% for the UK, mirroring trends seen in previous years.

In 2011 and 2012 prices averaged 145 pence per kg and 150 pence per kg respectively. In 2013 prices improved again and the annual average price was 165 pence per kg. However, in 2014 the average pig price fell to 158 pence per kg and unfortunately this pattern continued into 2015 with prices falling as low as 125 pence per kg, reverting to prices seen in 2009.

Specialist pig farms recorded an average gross margin of £211,721 after deduction of variable costs amounting to £275,362. Feed costs accounted for 81% of total variable costs and 56% of all costs. Fixed costs amounted to £183,820 resulting in an average Management and Investment Income (MII) of £27,901 (previous year £41,897) and average Net Farm Income (NFI) was £49,416 (£64,383 in 2013/14). Average Farm Business Income (FBI) was £49,420 (down from £65,216 in 2013/14).

There is always a great variation in economic performance between farms and it was noticeable that 21% of farms had a negative MII and 18% showed a negative FBI. The top 25% show an average MII of £177,682 whilst the bottom 25% shows an average negative MII of -£49,292. The high MII farms are significantly larger than the others with a pig output ten times larger than the middle 50% band. The gap between the top and bottom performers remains very wide.

Enterprise Net Margins for pigs derived from the FBS sample are also presented in this report. For Specialist Pig Farms there was an average Net Margin of £18,689 compared to an average of £22,148 in 2013/14. Breeding farms selling finished pigs made a Net Margin of £15,654, while the contract rearing only farms showed positive Net Margins of £6,760.

In the 2014/15 financial year feed prices have decreased while other variable costs have remained similar to 2013/14, however, deadweight pig prices declined to the lowest level since 2009, resulting in significant effects throughout the industry. Home-fed production has remained high within the UK, however, pig numbers overall have fallen slightly. Furthermore competition on price from neighbouring EU countries has resulted in an over stocked market. Unfortunately industry reports have suggested these prices will remain until there is an improvement in consumer demand for pork and therefore it is expected that in the 2015/16 financial year profits will continue to fall compared to 2014/15.

1.0 Commentary on the UK Pig Industry

This chapter collates relevant background data from a variety of sources.. The following figures clearly portray the structural change that has taken place in the industry during the financial year 2014/15.

1.1 June Survey 2015 – Pig Numbers

Table 1.1 illustrates pig numbers in England according to the June survey data. Data for the past five years 2010-2015 is presented in addition to historical data ranging from 1990-2000 for comparison purposes. The 2009 data has been revised resulting in the break of data series.

Pig numbers have shown a significant decline in the years between 1990 and 2015. Total pigs have reduced by 39.3% with total breeding pigs down by 45.4% and fattening pigs having reduced by 38.5% (See table 1.1).

The total number of pigs in England in 2015 fell by 3.2% to 3.8 million animals, similar to the decline of 2014. The fall was mainly driven by the drop in the number of fattening pigs down 3.6% to 3.4 million in 2015. However, surprisingly the breeding herd showed a marginal increase of 0.5% from 2014, specifically sows in pig.

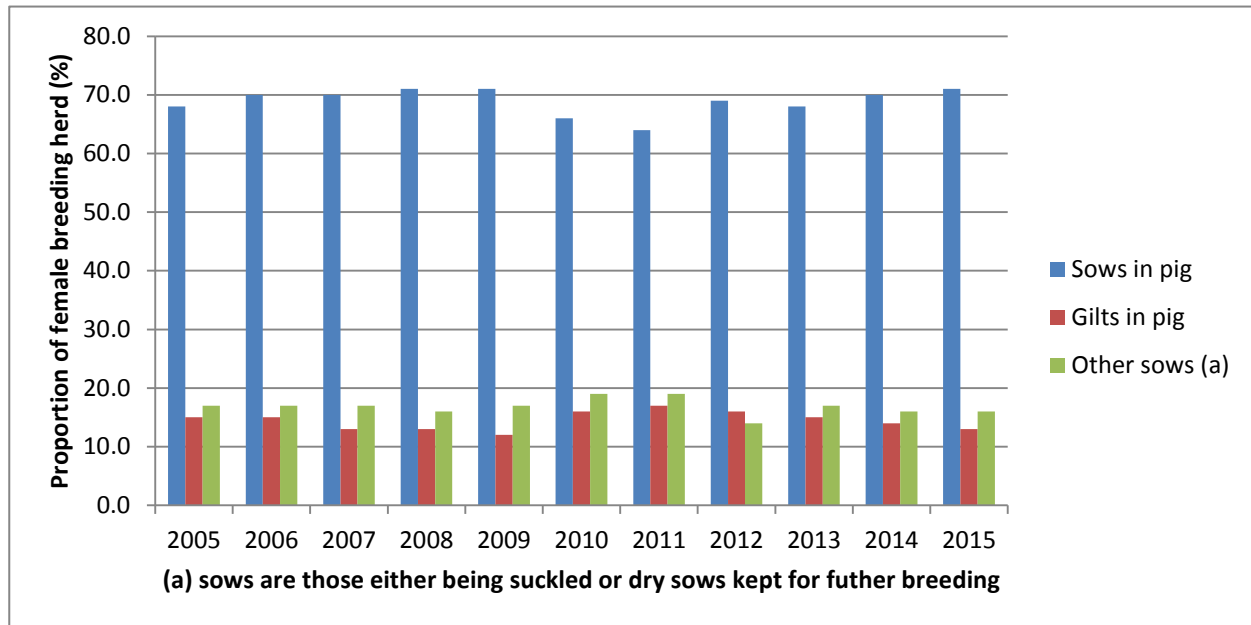
Table 1.1 Breeding Pigs on Agricultural Holdings in England 1st June ('000)

	1990	2000	2009	Revised 2009	2010	2011	2012	2013	2014	2015	% 14/15 change
Total pigs	6 308	5 442	3 872	3 689	3 606	3 600	3 662	4 066	3 954	3 826	-3.2%
Total breeding pigs	757	595	444	421	423	433	437	434	411	413	0.5%
Female breeding herd	647	503	371	352	346	354	351	346	329	328	-0.3%
Sows in pig	417	340	264	250	228	227	244	234	230	232	0.9%
Gilts in pig	92	60	43	41	54	58	57	53	46	43	-6.5%
Other sows ^(c)	137	103	65	61	64	68	51	59	54	52	-3.7%
Other breeding pigs	110	93	73	69	77	79	85	88	82	85	3.7%
Boars for service	37	25	16	15	14	14	14	13	12	13	8.3%
Gilts not yet in pig	73	68	57	54	63	65	72	75	70	72	2.8%
Fattening pigs (liveweight)	5 552	4 847	3 428	3 268	3 183	3 167	3 225	3 632	3 542	3 413	-3.6%
110kg and over (incl. barren sows)	52	47	39	38	38	38	39	40	43	41	-4.6%
80kg and under 110kg	513	643	532	511	503	500	510	559	560	539	-3.8%
50kg and under 80kg	1 473	1 280	821	770	796	792	806	868	886	853	-3.7%
20kg and under 50 kg	1 785	1 468	1 029	982	921	917	934	1 041	1 026	988	-3.7%
under 20kg	1 728	1 409	1 006	967	925	920	937	1 123	1 029	992	-3.6%

Source: Defra, 2015

Figure 1.1 displays the trends in the relative components of the breeding herd on agricultural holdings in England from Defra's June survey data. In 2015 the English female breeding herd consisted of 71% sows in pig, 16% other sows and 13% gilts in pig. Over the past decade figure 1.1 shows the variation in each category with the most difference being displayed in 2010 and 2011, with sows in pig falling slightly with the increase in both gilts in pig and other sows.

Figure 1.1 Breakdown of the female pig breeding herd 1st June 2005-2015



Source: Defra, 2015 <https://www.gov.uk/government/statistics/farming-statistics-final-crop-areas-and-cattle-sheep-and-pig-populations-as-at-1-june-2015-england>

1.2 Regional Specialist Pig Holdings and Number of Pigs

Table 1.2 shows the number of holdings in 2014 classified as Specialist Pig holdings in England. The methodology for classifying farms is based on Standard Outputs (SO). 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. Holdings on which pigs account for more than two thirds of their total SO are classified as Specialist Pig holdings

In 2014, the number of holdings classified as pigs, using 2010 SO typology, had increased around 11%.

Table 1.2 Specialist Pig Holdings by Region 2010-2014*

	2010	2011	2012	2013	2014
North East	39	46	43	45	48
North West and Merseyside	110	125	127	114	131
Yorkshire and The Humber	410	464	464	485	499
East Midlands	159	174	178	167	174
West Midlands	133	161	153	137	163
Eastern	369	398	382	393	406
South East	137	159	159	134	172
South West	244	283	274	260	330
England	1,601	1,810	1,780	1,735	1,923

Source: Defra, June Survey

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 shows the distribution of pigs by region from 2010 to 2014. Overall, Yorkshire and the Humber account for 36% of the total pigs in England with the Eastern region accounting for a further 28.0%. All regions showed a reduction however the most significant was the South East with an overall decrease of 13.2% in the total number of pigs.

Table 1.3 Number of Pigs by Region 2010-2014

	2010	2011	2012	2013	2014
North East	54,564	66,658	68,557	76,780	71,704
North West and Merseyside	100,800	106,292	115,782	122,932	115,403
Yorkshire and The Humber	870,824	962,479	971,222	1,112,342	1,090,853
East Midlands	255,962	269,572	276,616	301,143	287,896
West Midlands	130,248	143,809	145,102	164,078	155,057
Eastern	746,132	762,199	749,944	894,763	844,314
South East and London	130,158	129,613	140,746	136,977	118,858
South West	273,235	296,704	295,118	329,961	326,314
England	2,561,924	2,737,325	2,763,086	3,138,976	3,010,399

Source: Defra, June Survey

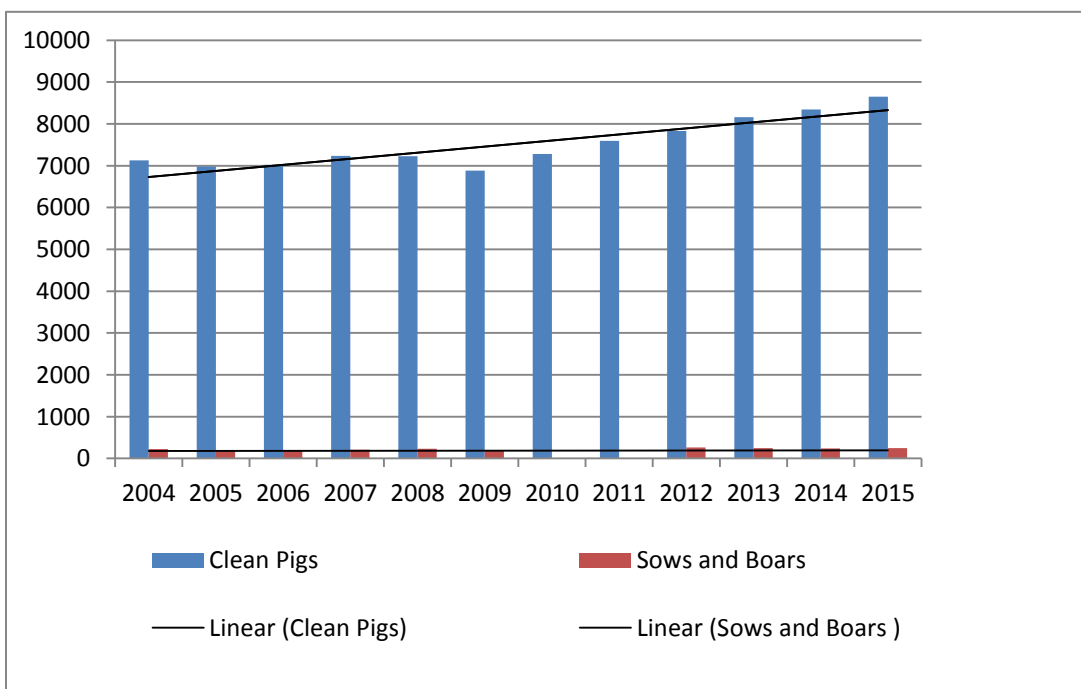
1.3 Structure of the Industry

1.3.1 Pig slaughter data for England and Wales

Figure 1.2 shows the number of clean pigs, sows and boars slaughtered in England for the period 2004-2015. In 2010 and 2011 Defra were unable to release data on the number of sows and boars slaughtered, due to confidentiality reasons.

In 2009 the number of pigs slaughtered in England reached its lowest recorded level at 6,886 thousand. However, over the last few years the industry has seen a steady increase to 8,652 thousand pigs slaughtered in 2015, an increase of 4% from 2014.

Figure 1.2 Pigs Slaughtered in England and Wales 2004-2015 (thousand head)



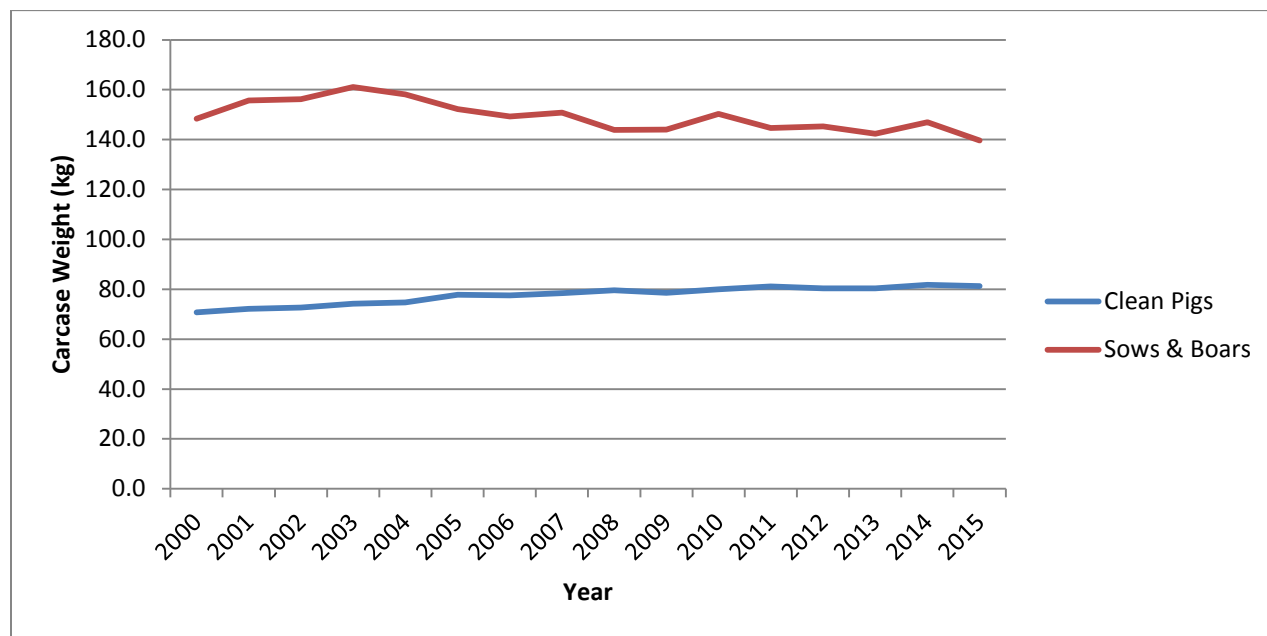
Source: Defra, <https://www.gov.uk/government/statistics/cattle-sheep-and-pig-slaughter>

Footnotes:

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

Figure 1.3 shows average UK carcass weights. In 2000 the average carcass weight for clean pigs was 70kg, however over the last decade this has increased by over 10%, with average carcass figures reported in 2015 at 81.3kg. In contrast, however, cull sows and boar carcass weights seem to be on a downward trend, 2014 to 2015 showed a 7.3% decrease between 2014 and 2015.

Figure 1.3 UK Average Carcass Weights 2000-2015



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

1.3.2 UK Supply and use of Pork and Bacon

Table 1.4 illustrates the level of supply and use of pigmeat for the UK. The level of home production of pig meat fluctuated at around 50% of total supply from 2005-2009, however, recent years have shown a steady increase, both 2013 and 2014 saw home production increase to 61% of total supply.

Imports from both the EU and the rest of the world slightly increased in 2014 compared to 2013, with a rise of 2% from the EU and 10% from the rest of the world. Imports from the EU have been on the decline since 2007 with a total 13.1% loss from 2005 to 2014. However, 2014 has shown an increasing supply trend due to an increase in home-fed production.

During the past year exports have increased on 2013 by 2.6% to the EU and a further 14.8% to the rest of the world. The rate of export growth has slowed slightly in 2014, in comparison to 2013 figures when there was a substantial 9.2% increase to the EU and a 25.5% rise to the rest of the world. Table 1.4 demonstrates that between 2005-2014 exports overall to the EU have increased substantially by 55.4% and fivefold to the rest of the world, which highlights the growth of UK export markets.

Table 1.4 Supply and Use of Pigmeat 2005-2014

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	% Change 2013-14
Home-fed production	669	667	707	706	681	712	759	781	791	820	3.5
Imports from:											
the EU	836	837	864	801	804	801	770	719	712	726	2.0
the rest of the world	6	7	5	12	12	12	11	10	10	11	10.0
Exports to:											
the EU	101	110	113	130	109	146	154	140	153	157	2.6
the rest of the world	12	10	12	25	26	25	39	43	54	62	14.8
Total new supply	1,398	1,391	1,451	1,364	1,362	1,353	1,347	1,327	1,306	1,337	2.4
Home-fed production as % of total new supply for use in the UK	48%	48%	49%	52%	50%	53%	56%	59%	61%	61%	0%

Footnotes:

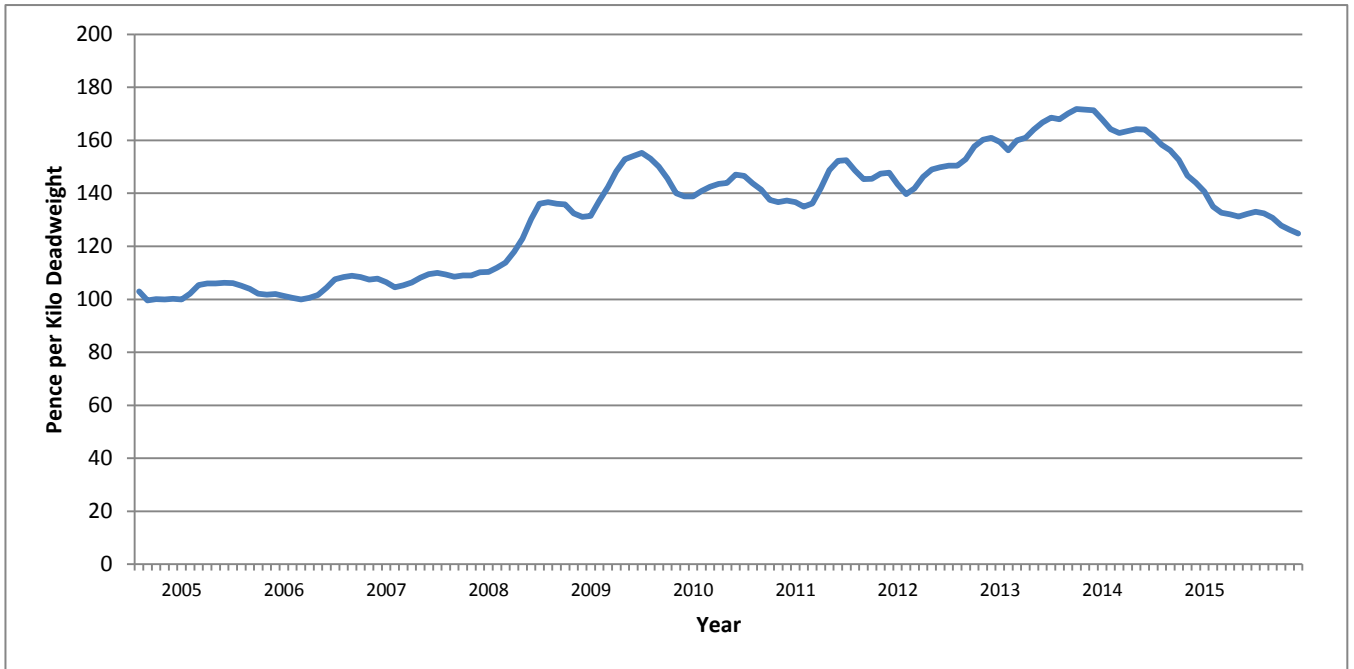
The figures for 2014 are provisional and have been adjusted from a 53-week to a 52-week basis where appropriate.

Source: Defra, Agriculture in the United Kingdom 2014

1.3.3 UK Pig prices

Figure 1.4 shows the fluctuating pig prices for the period 2005-2015. Over the past decade there has been a significant fluctuation in average deadweight price. Prices remained relatively consistent in 2005-2007, however, 2007-2009 saw prices improve and peak at 155 pence per kg in 2009. Prices declined in 2010 to around 140 pence per kg but soon improved in 2011 and 2012 averaging 145 pence per kg and 150 pence per kg respectively. Prices again improved in 2013 reaching an annual average of 165 pence per kg, but 2014 saw a significant decline which continued into 2015, finishing the year at 125 pence per kg in December 2015.

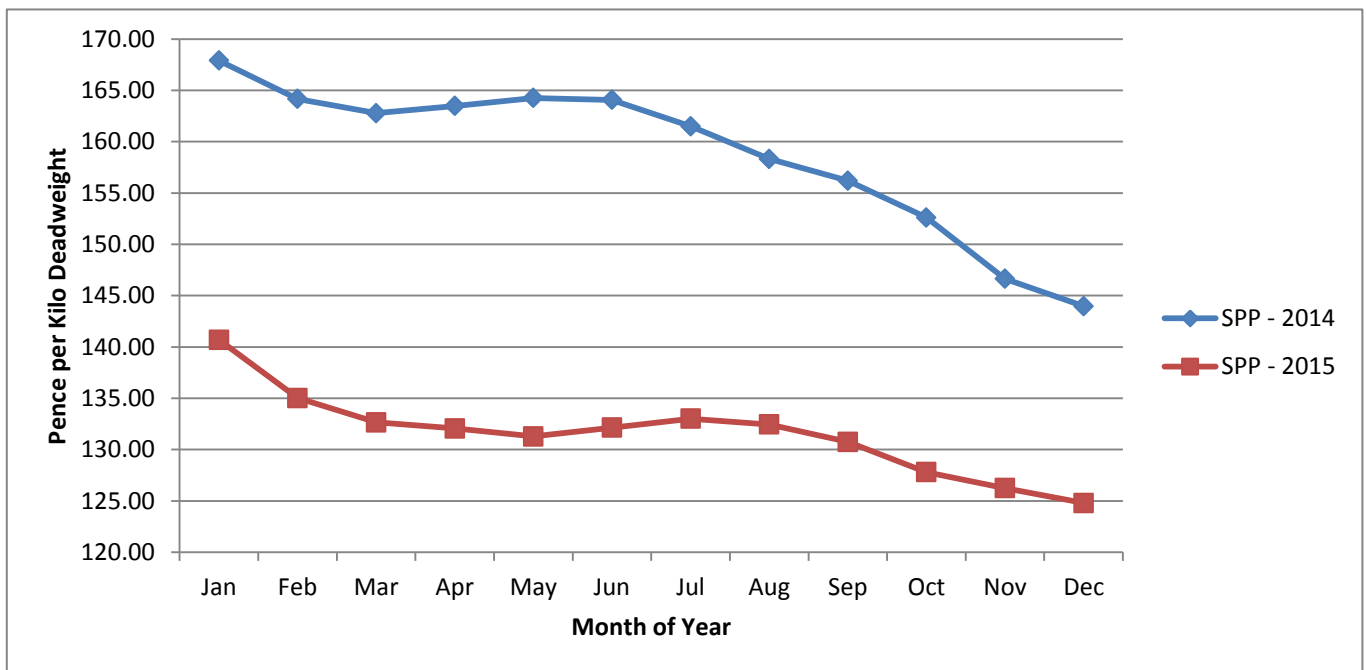
Figure 1.4 Deadweight Average Pig Price (SPP) 2005-2015



Source: ADHB/Defra

Figure 1.5 shows the deadweight pig prices of 2014 and 2015, illustrating the vast changes in the market over the past two years. In 2014 deadweight prices were on a downwards trend with the highest prices being achieved in January at 167 pence per kg; April and May had an overall increase of 1.5 pence per kg, however, there was a sharp decline for the remainder of the year, with prices finishing at 143 pence per kg. Similarly prices at the start of 2015 further declined to 132 pence per kg, the March to August period showed fairly constant prices, however, the end of the year saw further declines to 124 pence per kg. This is the lowest pigmeat price since 2009.

Figure 1.5 Deadweight Average Pig Prices (SPP) 2014-2015



Source: ADHB/Defra

2.0 Financial Performance of Specialist Pig Farms

The data in this report has been extracted from the 2014/15 Farm Business Survey (FBS). Full results for this survey, together with previous years, can be accessed at <http://www.farmbusinesssurvey.co.uk> or <http://www.gov.uk/government/collections/farm-business-survey>. 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 2014/15 FBS there were 68 farm businesses that were classified as Specialist Pig farms. This is slightly lower than the previous year when there were 75 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 68 Specialist Pig farms subdivided into three EU Particular Farm Types (PFT) as follows:

EU PFT	No of farms	Description
5110	7	Specialist pig rearing
5130	39	Pigs rearing and fattening combined
5120	22	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 output amounted to £487,084 (Table 2.1) which was 11% lower than the previous year. Pig output accounted for 88% of total output with miscellaneous income accounting for 6%. Receipts from the Single Payment Scheme (SPS) are included in the account under miscellaneous income. SPS income is not significant on these farms because they have very little land area on which to claim the payment.

These farms recorded an average gross margin of £211,721 after deduction of variable costs amounting to £275,362. This margin is lower by £26,953 compared to 2013/2014 figures; this is mainly due to the reduction in total output, which has fallen by £58,535. Feed is another contributing factor accounting for 81% of total variable costs which is 12% down on last year.

Fixed costs amounted to £183,820 resulting in a Management and Investment Income (MII) of £27,901. Net Farm Income (NFI) averaged £49,416. Farm Business Income (FBI) was slightly higher at £49,420.

In summary 2014/15 saw a 24% reduction in Farm Business Income (FBI), this can be explained by the average pig price being 27.2 pence per kilo lower in 2014 compared to 2013. Paid labour has also reduced by 16% and in addition contract machinery work has dropped by 17% compared to 2013/14; this could be the result of producers taking on a greater level of workload themselves and reducing the number of labourers and contractors. However, note it is not an identical sample between the two years.

Table 2.2 shows the range in performance in terms of MII for Specialist Pig farms. The total of 68 farms have been segregated into the top 25%, Middle 50% and Bottom 25%, the numbers in each of these sectors differs as they have been calculated on the sum of the weights as opposed to the number of farms in order to reflect the full population of farms.

There is always a great variation in profit performance between farms and it is noticeable that 36 farms, representing 53% of the sample showed a negative MII figure ranging from, -£8131 to -£49,292. Although some farms are struggling to make a return Table 2.2 also illustrates the remaining 47% that are making a profit, achieving an average MII of £177,682.

Table 2.3 shows the range in performance in terms of FBI for Specialist Pig Farms. The table demonstrates the range of incomes seen in the sector with those in the top 25% gaining an FBI of £194,987 and the bottom 25% making a loss of £17,427.

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 profit measures per farm are higher for 'predominately sows' businesses. For instance the average FBI recorded for the 'predominantly sows' group is £77,018 compared to £29,529 for the 'predominately growing and fattening pigs' category. Please note that this group of farms will include a percentage of contract rearers which will have an influence on the FBI results.

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 £144,690; whilst the other two size groups record MII's of £1,009 and -£4,887. When these results are compared with those from previous years it appears that the gap in profitability between the different size groups is growing. The table also highlights that the small sized farms did not perform as well as the medium and large farms with the average MII at -£4,887. This is most likely due to the higher variable and fixed costs they have with a much lower total output due to the number of pigs kept.

Table 2.1 Specialist Pig Farms – Financial Results

	2013/14	2014/15	% Change
Number of farms	75	68	9
Output	£	£	
Pigs	481,127	430,233	-10.5
Other livestock	8,016	8,207	2.3
Crops	22,050	20,492	-7.0
Miscellaneous	34,426	28,151	-18.2
Total output	545,619	487,084	-10.7
Variable costs			
Feed	254,140	223,220	-12.1
Vet and medicines	11,891	12,323	3.6
Other livestock costs	30,610	30,212	-1.3
Crop costs	10,303	9,608	-6.7
Total variable costs	306,945	275,362	-10.2
Farm gross margin	238,674	211,721	-11.2
Fixed costs			
Labour			
- Paid	57,861	48,525	-16.1
- Unpaid	22,669	21,612	-4.6
Machinery			
- Contract	10,489	8,666	-17.3
- Depreciation	21,146	22,412	6.0
- Repairs	13,301	12,871	-3.2
- Fuel and oil	14,061	11,211	-20.2
Occupiers repairs	8,845	12,071	36.4
Rent and rates	26,417	26,814	1.5
Other farm costs	21,989	19,636	-10.7
Total fixed costs	196,777	183,820	-6.5
Management and investment income	41,897	27,901	-33.4
Less management charges	183	97	-46.9
Plus farmer and spouse labour	22,669	21,612	-4.6
Net farm income	64,383	49,416	-23.2
Less net interest payments	6,462	6,396	-1.0
Less building depreciation and insurance	10,331	13,999	35.5
Less directors remuneration	932	919	-1.3
Plus rental value and imputed rent	13,986	17,200	23.0
Plus imputed labour	4,571	4,118	-9.9
Farm business income	65,216	49,420	-24.2

Table 2.2 Specialist Pig Farms 2014/15 – Grouped by MII per Farm

	Top 25%	Middle 50%	Bottom 25%
Number of farms	32	22	14
Output	£	£	£
Pigs	1,279,538	126,629	217,491
Other livestock	13,587	7,634	3,803
Crops	48,845	8,072	18,567
Miscellaneous	59,300	17,635	18,946
Total output	1,401,269	159,969	258,807
Variable costs			
Feed	630,475	73,372	130,872
Vet and medicines	33,180	4,069	8,906
Other livestock costs	86,519	11,002	14,027
Crop costs	20,181	4,636	9,659
Total variable costs	770,355	93,079	163,463
Farm gross margin	630,914	66,891	95,345
Fixed costs			
Labour			
- Paid	147,282	10,829	29,210
- Unpaid	19,949	20,876	25,041
Machinery			
- Contract	23,499	2,249	7,476
- Depreciation	64,317	7,503	11,754
- Repairs	33,302	4,230	10,786
- Fuel and oil	28,549	5,489	5,790
Occupiers repairs	33,128	3,054	10,176
Rent and rates	61,598	10,730	26,373
Other farm costs	41,608	10,061	18,030
Total fixed costs	453,232	75,022	144,637
Management and investment income	177,682	-8,131	-49,292
Less management charges	395	0	0
Plus farmer and spouse labour	19,949	20,876	25,041
Net farm income	197,236	12,745	-24,251
Less net interest payments	13,675	4,536	2,893
Less building depreciation and insurance	38,577	4,641	9,139
Less directors remuneration	2,589	0	1,230
Plus rental value and imputed rent	35,417	9,033	16,385
Plus imputed labour	3,343	3,901	5,433
Farm business income	181,155	16,503	-15,695

Table 2.3 Specialist Pig Farms 2014/15 – Grouped by FBI per Farm

	Top 25%	Middle 50%	Bottom 25%
Number of farms	29	27	12
Output	£	£	£
Pigs	1,342,187	113,545	245,401
Other livestock	12,059	7,279	6,609
Crops	54,967	7,372	15,801
Miscellaneous	61,960	20,094	13,936
Total output	1,471,173	148,289	281,747
Variable costs			
Feed	659,310	60,648	157,091
Vet and medicines	34,199	3,394	10,550
Other livestock costs	91,624	8,848	17,841
Crop costs	23,370	4,372	7,731
Total variable costs	808,503	77,261	193,214
Farm gross margin	662,670	71,028	88,534
Fixed costs			
Labour			
- Paid	152,894	13,667	24,603
- Unpaid	19,292	21,685	23,545
Machinery			
- Contract	24,844	2,545	6,392
- Depreciation	68,713	7,252	11,193
- Repairs	35,327	4,295	9,877
- Fuel and oil	30,961	4,193	7,529
Occupiers repairs	35,408	2,976	9,326
Rent and rates	65,374	13,218	19,412
Other farm costs	43,505	10,120	17,253
Total fixed costs	476,318	79,950	129,129
Management and investment income	186,353	-8,922	-40,595
Less management charges	420	0	0
Plus farmer and spouse labour	19,292	21,685	23,545
Net farm income	205,225	12,763	-17,051
Less net interest payments	13,352	4,812	3,324
Less building depreciation and insurance	41,392	4,279	8,863
Less directors remuneration	1,824	418	1,108
Plus rental value and imputed rent	39,217	10,516	10,815
Plus imputed labour	7,114	3,783	2,104
Farm business income	194,987	17,553	-17,427

Table 2.4 Financial Data for Specialist Pig Farms 2014/15 – Grouped by Type

	Predominantly sows	Predominantly growing/fattening pigs
Number of farms	46	22
Output	£/farm	£/farm
Pigs	899,858	91,755
Other livestock	14,343	3,785
Crops	39,327	6,917
Miscellaneous	38,537	20,665
Total output	992,065	123,121
Variable costs		
Feed	513,622	13,916
Vet and medicines	28,976	320
Other livestock costs	65,173	5,014
Crop costs	17,550	3,883
Total variable costs	625,320	23,132
Farm gross margin	366,745	99,989
Fixed costs		
Labour		
- Paid	89,812	18,768
- Unpaid	23,670	20,128
Machinery		
- Contract	17,121	2,571
- Depreciation	35,725	12,817
- Repairs	21,961	6,320
- Fuel and oil	18,734	5,790
Occupiers repairs	24,467	3,139
Rent and rates	44,436	14,114
Other farm costs	33,689	9,508
Total fixed costs	309,616	93,154
Management and investment income	57,129	6,835
Less management charges	12	157
Plus farmer and spouse labour	23,670	20,128
Net farm income	80,787	26,806
Less net interest payments	9,603	4,085
Less building depreciation and insurance	25,888	5,430
Less directors remuneration	1,682	369
Plus rental value and imputed rent	28,013	9,407
Plus imputed labour	5,391	3,201
Farm business income	77,018	29,529

Table 2.5 Financial Data for Specialist Pig Farms 2014/15 – Grouped by Standard Output per Farm

000 SO	0-200	200-500	500+
Number of farms	12	24	32
Output	£	£	£
Pigs	61,242	221,888	1,613,572
Other livestock	5,629	5,349	18,423
Crops	0	15,490	77,085
Miscellaneous	13,863	15,556	80,260
Total output	80,734	258,284	1,789,339
Variable costs			
Feed	17,619	113,093	874,291
Vet and medicines	619	5,372	50,329
Other livestock costs	4,436	14,107	115,026
Crop costs	277	8,550	33,681
Total variable costs	22,952	141,123	1,073,327
Farm gross margin	57,782	117,161	716,012
Fixed costs			
Labour			
- Paid	9,583	25,183	175,294
- Unpaid	20,968	21,650	23,117
Machinery			
- Contract	744	5,596	32,121
- Depreciation	7,606	11,252	73,784
- Repairs	3,719	6,792	43,490
- Fuel and oil	3,679	5,584	37,276
Occupiers repairs	1,683	4,302	48,037
Rent and rates	8,048	18,606	83,680
Other farm costs	6,640	17,188	54,522
Total fixed costs	62,670	116,152	571,321
Management and investment income	-4,887	1,009	144,690
Less management charges	182	0	25
Plus farmer and spouse labour	20,968	21,650	23,117
Net farm income	15,899	22,660	167,782
Less net interest payments	2,685	4,074	18,612
Less building depreciation and insurance	1,428	10,088	49,887
Less directors remuneration	0	0	4,422
Plus rental value and imputed rent	4,516	16,648	48,695
Plus imputed labour	2,041	5,664	7,004
Farm business income	18,343	30,810	150,561

Table 2.6 Financial Data for Specialist Pig Farms 2014/15 – Grouped by Performance Ratio

Ratio	Low	Medium	High
Number of farms	8	37	23
Output	£	£	£
Pigs	37,172	504,148	694,108
Other livestock	988	11,250	9,802
Crops	8,469	15,349	42,851
Miscellaneous	9,222	20,539	62,415
Total output	55,851	551,285	809,175
Variable costs			
Feed	6,519	300,099	298,987
Vet and medicines	663	16,110	17,071
Other livestock costs	2,929	40,814	37,969
Crop costs	4,348	8,420	17,339
Total variable costs	14,460	365,443	371,367
Farm gross margin	41,391	185,842	437,809
Fixed costs			
Labour			
- Paid	10,426	46,295	92,229
- Unpaid	23,340	21,132	20,750
Machinery			
- Contract	3,063	6,819	18,024
- Depreciation	6,676	21,799	39,869
- Repairs	4,324	12,486	22,456
- Fuel and oil	3,530	12,286	17,276
Occupiers repairs	2,920	14,216	17,402
Rent and rates	8,231	24,593	50,319
Other farm costs	7,549	19,862	31,701
Total fixed costs	70,056	179,488	310,024
Management and investment income	-28,666	6,454	127,784
Less management charges	0	0	383
Plus farmer and spouse labour	23,340	21,132	20,750
Net farm income	-5,326	27,585	148,150
Less net interest payments	1,827	6,954	10,045
Less building depreciation and insurance	4,780	15,056	21,495
Less directors remuneration	0	1,265	1,202
Plus rental value and imputed rent	6,265	12,786	37,025
Plus imputed labour	6,497	3,958	1,969
Farm business income	830	21,055	154,403

Note: Farm performance is measured as the ratio of farm business output to farm business costs. An imputed value for unpaid manual labour, including that of the farmer and spouse is added to farm business costs. The value of paid managerial input is subtracted. The farms are ranked in descending order according to this ratio and allocated to quartiles with the top quartile (25percent) representing the high performance 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.

3.0 Margins for Pig Enterprises

Since 2004 additional data has been collected from a sub-set of FBS farms to enable Gross and Net Margins to be calculated for specific enterprises. This was introduced as an alternative to the full survey approach previously undertaken as part of the Special Studies Programme commissioned by Defra. The last full Special Studies survey concerned with Pig production was published in 2004 and related to the financial year ending September 2003 (see Shepherd 2004 at <http://centres.exeter.ac.uk/crpr>). This was a comprehensive survey of over 300 farms recruited from a stratified sample.

The data presented in this section is not directly comparable to the Special Study report. This data comes from a smaller sample based on farms already participating in the FBS, no additional physical data was collected and, crucially, the methodology for calculating net margins is completely different. In the Special Studies approach fixed costs are estimated by the researcher in conjunction with the co-operator. In the FBS based approach, the variable costs are allocated to enterprises by estimation but some of the fixed costs are allocated econometrically. That is to say, the total fixed costs within the account are allocated to the different enterprises according to coefficients for each enterprise. 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 65 Specialist Pig farms. This is because of the 68 farms reported in Chapter 2 data for net margins were not available for three farms.

These were classified as follows:

Type	No of farms	Definition
111	2	Breeders selling weaners (rearers)
112	36	Breeders selling fat pigs (finishers)
113	2	Buying weaners, selling fat pigs
114	24	Contract rearing
115	1	Other

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

3.2 Net Margin results

Table 3.1 shows the average Net Margin of £18,689. This is a decrease of £3,459 when compared to the 2013/14 average net margin of £22,148. This reduction in margin can be attributed to the 10.6% decrease in total output since 2013/14.

Table 3.2 presents the results split into two different categories, namely breeding farms selling finished pigs, and contract rearing. The table also highlights the differing models i.e. the lower output and much lower variable costs on the contract rearing units. This analysis shows that the different farm types recorded (on average) a positive Net Margin. Breeding farms selling finished pigs made a net margin of £15,654 and the contract rearing only farms showed a positive Net Margin of £6,670. In comparison to 2013/14 the overall net margins differ significantly in 2014/15, the number of farms have remained fairly constant in each category, however, net margins for breeders selling fat pigs have reduced by 37.6% similarly contract pig rearing has declined considerably by 63.6%.

Table 3.3 presents the costs and margins per £100 output for combined breeding and finishing units (type 112).

Table 3.4 presents the results in terms of Net Margins per sow. It is only possible to do this for the breeder-finisher farms because sample sizes are too small for the other groups. In 2014/15 there was a total Net Margin of £63 per sow compared to a net margin of £112 in 2013/14. One reason for the decrease in profitability per sow is that output is lower by £149 per sow. In addition the output per sow was offset to some extent by reduced variable costs (mainly feed) of £82 per sow.

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

	2013/14	2014/15	% Change
Number of farms	69	65	
	£ per farm	£ per farm	
Output	336,586	300,797	-10.6
Variable costs			
Feed	170,735	149,057	-12.6
Vet and medicines	8,755	8,658	-1.1
Other variable costs	21,112	19,358	-8.3
Total variable costs	200,603	177,074	-11.7
Gross Margin	135,983	123,723	-9.0
Fixed costs			
Paid labour	34,950	30,292	-13.3
Unpaid labour	3,615	3,525	-2.5
Contract hire	3,100	2,958	-4.6
Machinery depreciation	11,112	10,213	-8.0
Machinery repairs	7,484	7,298	-2.4
Fuel and oil	6,028	5,590	-7.3
Electricity and heating fuel	5,107	4,725	-7.5
Water	2,108	1,841	-12.7
Insurance	2,701	2,629	-2.7
Professional fees	2,653	2,595	-2.2
General farm costs	2,699	2,782	-2.9
Occupiers repairs	5,945	5,806	-2.3
Rent and rates	8,627	7,688	-10.9
Total fixed costs	96,127	87,944	-8.8
Net farm income	39,856	35,779	-10.2
Less farmer and spouse labour	17,899	17,189	-4.0
Plus managerial input	192	99	-48.4
Net margin	22,148	18,689	-15.6

Table 3.2 Specialist Pig Farms 2014/15 – Average Net Margins by Farm Type

Farm type	Breeders selling fat pigs	Contract rearing
Number of farms	36	24
Average number of sows per farm	249	50
	£ per farm	£ per farm
Output	615,618	84,501
Variable costs		
Feed	372,699	9
Vet and medicines	21,305	5
Other variable costs	42,733	5,285
Total variable costs	436,737	5,300
Gross Margin	178,881	79,201
Fixed costs		
Paid labour	52,413	16,290
Unpaid labour	5,417	2,991
Contract hire	5,219	1,370
Machinery depreciation	10,458	10,581
Machinery repairs	11,264	5,222
Fuel and oil	7,249	4,963
Electricity and heating fuel	10,127	1,121
Water	3,491	851
Insurance	4,648	1,433
Professional fees	4,093	1,822
General farm costs	4,714	1,440
Occupiers repairs	11,514	2,668
Rent and rates	10,957	5,712
Total fixed costs	141,566	56,463
Net farm income	37,315	22,738
Less farmer and spouse labour	21,675	16,156
Plus managerial input	15	178
Net margin	15,654	6,760

Table 3.3 Specialist Pig Farms 2014/15 – Average Costs and Margins per £100 Pig Output

Farm type	Breeders selling fat pigs
	£ per £100 output
Feed	60.5
Other variable costs	10.4
Gross margin	29.0
Labour costs	12.9
Contract and machinery costs	5.5
Occupiers repairs	1.8
Rent and rates	1.7
Other fixed costs	4.4
Net margin	2.5

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

	2013/14	2014/15
Farm Type	Breeders selling fat pigs	
Number of farms	36	36
Number of sows	224	249
	£ per sow	£ per sow
Output	2,621	2,472
Variable costs		
Feed	1,587	1,497
Vet and medicines	83	86
Other variable costs	166	172
Total variable costs	1,836	1,754
Gross Margin	785	718
Fixed costs		
Paid labour	183	211
Unpaid labour	25	22
Contract hire	23	21
Machinery depreciation	45	42
Machinery repairs	41	45
Fuel and oil	31	29
Electricity and heating fuel	44	41
Water	16	14
Insurance	20	19
Professional fees	17	17
General farm costs	18	19
Occupiers repairs	44	46
Rent and rates	60	44
Total fixed costs	566	569
Net farm income	219	150
Less farmer and spouse labour	107	87
Add Management	0.0	0.0
Net margin	112	63

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/

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 2014/15

Dairying Farming in England 2014/15

Hill Farming in England 2014/15

Horticulture Production in England 2014/15

Lowland Grazing Livestock Production 2014/15

Organic Farming in England 2014/15

Pig Production in England 2014/15

Poultry Production in England 2014/15

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