

**Farm Business Survey
2005/06**

Pig Production in England



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Foreword

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 lead 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 new 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)

Cover photograph courtesy of Graham Bulmer.

Summary

This report presents the results collated from those farms with pig enterprises in the 2005/06 Farm Business Survey. Typically they relate to farm businesses with financial year ends between December 2005 and April 2006. Most of the data is drawn from those farms defined as Specialist pig farms, that is, more than two-thirds of their output is derived from pigs.

Census data indicates that the UK pig population has declined by 36% during the last ten years. There has been a 35% decline in pig meat production during the same period. The rate of decline has steadied in recent years and the 2006 census data shows a slight increase in the total number of pigs compared to 2005.

Falling numbers has inevitably had a major impact on the percentage contribution made by home produced meat to total supply. Pork production as a percentage of supply has fallen from 104% in 1995-97 to 62% in 2006. Imports have increased nearly three-fold in the same time period. Bacon and ham production as a percentage of supply has fallen from 51% to 44% in the same time period. However, since 2001, this figure has been relatively stable and the level of imports has not changed dramatically during this period.

Pig prices fluctuated considerably during the late 1990s following the typical so called 'pig cycle'. This was followed by a period of very low prices resulting in very heavy losses in the sector and consequent decline in pig numbers. In more recent years the monthly pig price data is noticeably much more stable. In the period 2004-2006 prices have fluctuated by only a few pence on a monthly basis. The average annual price for 2004 and 2005 was 103 pence and in 2006 it was 105 pence per kg. This has brought a period of much needed stability to the sector.

The full sample of 60 Specialist pig holdings recorded a gross margin of £135332 after deduction of variable costs amounting to £149964. Feed costs accounted for 79% of total variable costs. Fixed costs amounted to £122233 resulting in a Management and Investment Income (MII) of £13099. Net Farm Income (NFI) was £29043. There is always a great variation in profit performance between farms and it was noticeable that one-half of all farms showed a negative MII figure and one-quarter showed a negative NFI figure. The top 25% show a MII of £76872 whilst the bottom 25% show a negative MII of £30490. The high MII farms are significantly larger than the others with a pig output 77% more than the middle 50% band.

This report has presented for the first time data on net margins for pigs derived from the FBS. On the full sample of 60 Specialist Pig Farms there was a net margin of £15804. This average figure masks a huge variation in performance with 43% of farms showing a negative net margin result. The highest net margins were recorded by those farms selling weaners. Indeed, on a per £100 output basis their net margin was four times higher than those farms selling fat pigs.

During the period covered by this report feed prices were comparatively low and stable. In 2006/07 there has been a considerable rise in cereal prices (since August 2006) which has not been fully compensated for in terms of a rise in pig prices.

Chapter 1

Economic Background

The purpose of this chapter is to collate relevant pig data for the UK. Data has been presented for the years 1995 to 2006. The following figures clearly portray the dramatic structural change that has taken place in the industry during this period.

Pig slaughterings

Tables 1.1 and 1.2 show the figures for pig slaughterings in UK abattoirs each month for the period January 1995 to December 2006. For the period 1995 to 1998 clean pig slaughterings increased but since 1998 the numbers killed has declined substantially. Indeed, from the peak in 1998, the total number of clean pigs slaughtered has fallen by 43%. The rate of decline has fallen in recent years with 2006 slaughterings being less than 1% lower than 2005. During 2001 slaughterings were affected by the Foot and Mouth Disease (FMD) with some 436000 pigs slaughtered which did not enter the food chain and therefore not included in the figures.

The figures for sows and boars generally match those of clean pigs except that in 2001 there was a sharp decline in slaughterings due to the impact of FMD. It is also noticeable that in 2005 there was a 16% fall in slaughterings compared to 2004 and a further fall recorded in 2006.

UK Pig Population, Production and Prices

Table 1.3 shows that the pig population in the UK has declined by 36% during the last ten years. There has been a 35% decline in production of dressed carcass weight during the same period. This is less than number of pigs killed (marketings), which declined by 41%, due to an increase in the carcass weight. Average carcass weight in 2006 was 75kg, a rise of 12% on the average weight in 1995-1997. The value of production has fallen by 45% due to a combination of lower prices and reduced numbers. Price levels were much higher in 1995-1997 compared to 2006. The rate of decline has steadied in recent years and the 2006 census data shows a slight increase in the total number of pigs compared to 2005.

UK Supply and use of Pork and Bacon

Table 1.4 shows the impact on the falling numbers on the percentage contribution made by home produced meat to total supply. Pork production as a percentage of supply has fallen from 104% in 1995-97 to 62% in 2006. Imports have increased nearly three-fold in the same time period. Bacon and ham production as a percentage of supply has fallen from 51% to 44% in the same time period. This figure has been relatively stable since 2002 and the level of imports has not changed dramatically during this period.

UK Pig prices

Table 1.5 shows the pig prices for the period 1995-2006. During 1995-1997 prices were both high and fluctuated considerably from month to month. For the next two years there was a period of very low prices resulting in very heavy losses in the sector and consequent decline in pig numbers. In more recent years the monthly pig price data is noticeably much more stable. In the period 2004-2006 prices have fluctuated by only a few pence on a monthly basis. The average annual price for 2004 and 2005 was 103 pence and in 2006 it was 105 pence per kg.

Table 1.1 Clean Pigs slaughtered in the UK 1995-2006 (thousand head)

| | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|--------|--------|--------|--------|
| Jan | 1361.5 | 1278.1 | 1411.8 | 1522.1 | 1546.7 | 1325.2 | 1065.0 | 982.3 | 917.2 | 848.0 | 867.0 | 818.3 |
| Feb | 1099.3 | 1026.3 | 1168.7 | 1220.5 | 1171.1 | 1026.9 | 702.3 | 817.7 | 719.9 | 701.2 | 695.7 | 684.6 |
| Mar | 1055.9 | 1054.4 | 1138.0 | 1198.2 | 1096.5 | 995.0 | 781.8 | 775.0 | 713.0 | 666.3 | 648.2 | 681.0 |
| Apr | 1303.5 | 1268.3 | 1409.9 | 1416.3 | 1315.1 | 1151.2 | 958.5 | 953.9 | 839.6 | 804.9 | 835.6 | 782.7 |
| May | 1025.7 | 1000.8 | 1060.7 | 1123.3 | 1061.4 | 962.0 | 782.7 | 751.6 | 668.6 | 658.8 | 666.6 | 665.1 |
| Jun | 1080.8 | 1053.1 | 1140.6 | 1191.6 | 1080.2 | 947.1 | 781.5 | 729.1 | 695.6 | 668.1 | 691.2 | 665.6 |
| Jul | 1327.0 | 1314.8 | 1442.3 | 1459.0 | 1346.9 | 1203.0 | 984.9 | 981.5 | 841.9 | 843.1 | 836.7 | 832.4 |
| Aug | 1055.9 | 1060.0 | 1134.9 | 1213.4 | 1060.0 | 926.1 | 794.1 | 781.3 | 679.4 | 704.9 | 686.2 | 686.0 |
| Sep | 1104.3 | 1125.3 | 1221.5 | 1219.6 | 1108.0 | 912.2 | 856.6 | 819.0 | 728.0 | 705.0 | 706.5 | 725.6 |
| Oct | 1399.0 | 1422.4 | 1525.9 | 1600.8 | 1396.5 | 1112.8 | 1074.0 | 1028.4 | 901.8 | 896.6 | 881.3 | 915.3 |
| Nov | 1135.6 | 1179.8 | 1277.9 | 1292.5 | 1172.0 | 938.6 | 866.2 | 849.6 | 737.3 | 764.0 | 744.2 | 749.5 |
| Dec | 1068.6 | 1113.8 | 1200.2 | 1414.4 | 995.3 | 870.3 | 798.7 | 791.1 | 691.0 | 889.6 | 711.3 | 694.0 |
| Total | 14021.3 | 13897.1 | 15132.5 | 15871.7 | 14349.7 | 12370.3 | 10446.3 | 10260.4 | 9133.2 | 9150.5 | 8970.6 | 8900.2 |

Footnotes:

1998 and 2004 are 53 week statistical years

2006 data is provisional and subject to revision

Some months are 5 weeks

Annual totals may not appear to be the sum of monthly figures due to rounding

Source: Slaughterhouse surveys, Defra, SEERAD, DARD (NI)

Table 1.2 Sows and Boars slaughtered in the UK 1995-2006 (thousand head)

| | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Jan | 37.5 | 32.0 | 32.4 | 38.2 | 41.0 | 42.6 | 25.8 | 31.6 | 28.9 | 23.6 | 20.8 | 17.1 |
| Feb | 30.0 | 25.7 | 27.7 | 32.4 | 26.6 | 30.7 | 16.7 | 28.9 | 21.7 | 19.8 | 18.3 | 14.3 |
| Mar | 30.3 | 26.0 | 28.3 | 31.4 | 25.3 | 28.2 | 3.4 | 28.3 | 20.4 | 19.0 | 17.7 | 15.3 |
| Apr | 32.9 | 29.3 | 35.0 | 36.5 | 32.1 | 29.2 | 9.2 | 33.1 | 22.0 | 21.2 | 21.2 | 17.4 |
| May | 25.6 | 22.3 | 26.8 | 27.4 | 26.5 | 23.8 | 9.4 | 24.7 | 16.8 | 16.5 | 16.1 | 14.2 |
| Jun | 27.3 | 24.9 | 28.1 | 30.8 | 27.2 | 23.1 | 10.9 | 24.3 | 17.6 | 18.0 | 16.4 | 14.3 |
| Jul | 33.1 | 30.6 | 32.4 | 40.1 | 32.8 | 28.8 | 18.8 | 29.0 | 20.4 | 22.2 | 19.5 | 19.7 |
| Aug | 25.2 | 25.2 | 26.5 | 33.2 | 25.8 | 19.9 | 14.7 | 22.3 | 16.8 | 18.4 | 16.0 | 15.2 |
| Sep | 28.9 | 27.7 | 29.7 | 37.5 | 32.3 | 22.2 | 13.7 | 22.6 | 18.4 | 19.5 | 14.3 | 17.0 |
| Oct | 34.8 | 33.8 | 38.5 | 42.0 | 43.1 | 29.1 | 15.4 | 27.7 | 22.2 | 21.9 | 16.0 | 21.2 |
| Nov | 27.1 | 26.9 | 31.5 | 31.2 | 35.3 | 23.6 | 24.9 | 23.9 | 17.9 | 17.4 | 14.5 | 17.2 |
| Dec | 22.0 | 19.3 | 26.2 | 33.8 | 30.7 | 20.2 | 16.6 | 17.9 | 17.7 | 22.1 | 11.5 | 13.7 |
| Total | 354.7 | 323.8 | 363.1 | 414.5 | 378.7 | 321.5 | 179.6 | 314.3 | 240.8 | 239.6 | 202.4 | 196.4 |

Footnotes:

1998 and 2004 are 53 week statistical years

2006 data is provisional and subject to revision

Some months are 5 weeks

Annual totals may not appear to be the sum of monthly figures due to rounding

Source: Slaughterhouse surveys, Defra, SEERAD, DARD (NI)

Figure 1 Clean Pigs slaughtered in the UK 1995-2006 (thousand head)

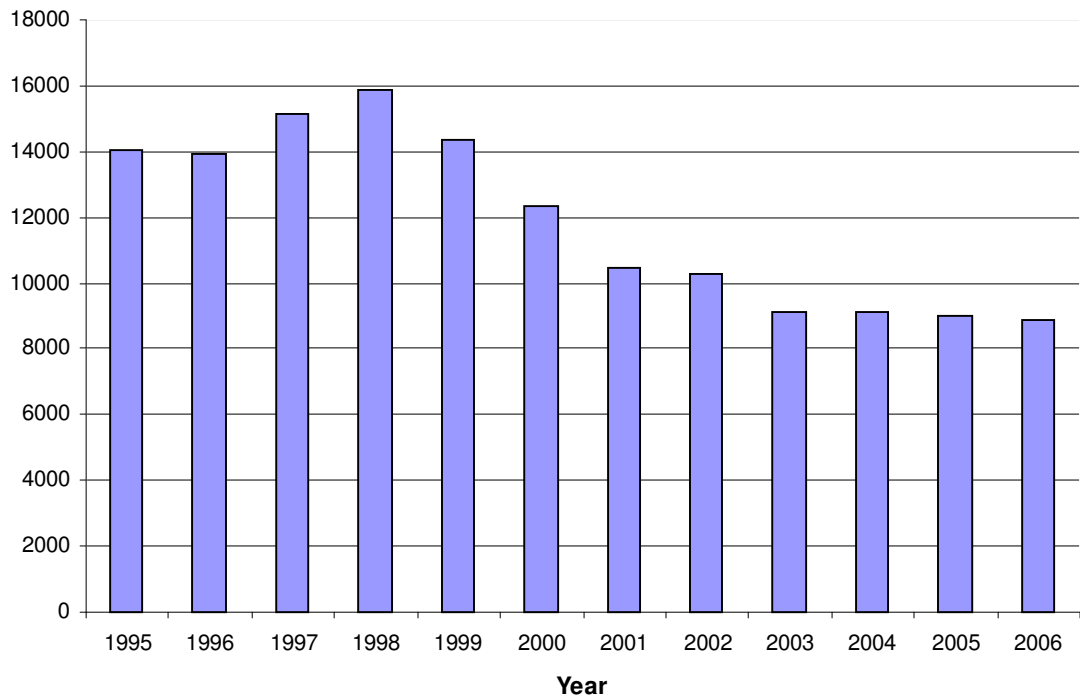


Figure 2 Sows and Boars slaughtered in the UK 1995-2006 (thousand head)

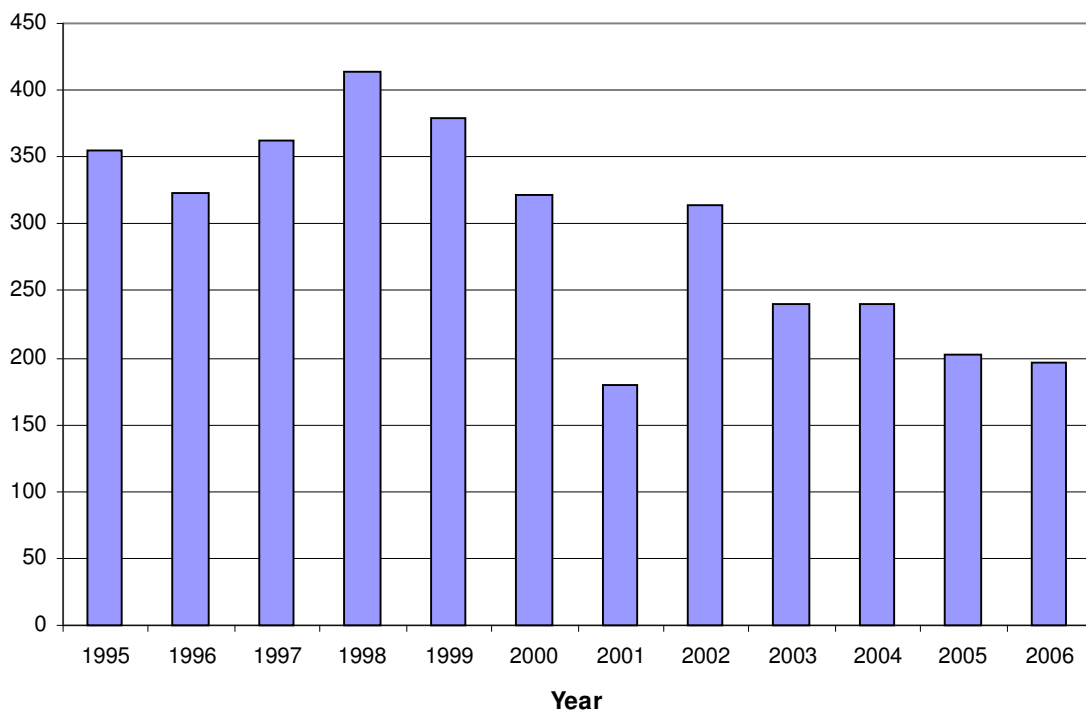


Table 1.3 UK Pig Population, Production and Prices 1995-2006

| | Average of 1995-97 | 2002 | 2003 | 2004 | 2005 | 2006 |
|---|--------------------------|-------|-------|-------|-------|-------|
| Population | | | | | | |
| Total pigs (thousand head at June) | 7763 | 5588 | 5046 | 5159 | 4862 | 4933 |
| of which: | | | | | | |
| sows in pig and other sows for breeding | 662 | 483 | 442 | 449 | 403 | 401 |
| gilts in pig | 108 | 74 | 73 | 66 | 67 | 67 |
| other | 6993 | 5031 | 4531 | 4644 | 4392 | 4465 |
| Production (a) | | | | | | |
| Total home-fed marketings (thousand head) | 14828 | 10282 | 9007 | 8827 | 8777 | 8746 |
| of which: | | | | | | |
| clean pigs | 14460 | 9966 | 8760 | 8582 | 8561 | 8538 |
| sows and boars | 368 | 316 | 247 | 245 | 216 | 208 |
| Average dressed carcass weight (kg) (b): | | | | | | |
| clean pigs | 68 | 73 | 74 | 75 | 75 | 75 |
| sows and boars | 140 | 156 | 161 | 158 | 156 | 153 |
| Production (dressed carcass weight): | | | | | | |
| home-fed production | 1032 | 774 | 688 | 678 | 675 | 670 |
| gross indigenous production | 1031 | 774 | 689 | 678 | 676 | 671 |
| Value of production (£ million) | | | | | | |
| of which: | | | | | | |
| value of home-fed production | 1237 | 694 | 682 | 677 | 671 | 681 |
| change in work-in-progress (c) | 1 | -10 | -14 | -1 | - | -1 |
| less imported livestock | | | | | | |
| plus breeding animals exported | 7 | 2 | 3 | 3 | 6 | 7 |
| Prices (pence per kg deadweight) | | | | | | |
| Clean pigs | 122.5 | 93.3 | 102.6 | 102.9 | 102.1 | 104.2 |

Footnotes:

The figures for 2006 are provisional

(a) Pigs slaughtered during outbreaks of foot and mouth disease and classical swine fever and under Livestock Welfare Disposal Schemes are not included in marketings, production and value as these animals were removed from the food chain. Foot and mouth disease compensation payments are not included in the value of production as these have been treated as payments for the loss of capital assets.

(b) Average dressed carcass weight of animals fed and slaughtered in the UK.

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

Source: Agriculture in the United Kingdom 2006

Table 1.4 Supply and Use of Pork and Bacon 1995-2006 (thousand tonnes)

| | Average of 1995-97 | 2002 | 2003 | 2004 | 2005 | 2006 |
|---|--------------------------|------|------|------|------|------|
| Supply & use of pork (dressed carcase weight) (b)(c) | | | | | | |
| Home-fed production (a) | 820 | 613 | 569 | 576 | 577 | 582 |
| Imports from: the EU (d) | 181 | 310 | 421 | 420 | 467 | 454 |
| the rest of the world | 1 | 6 | 3 | 8 | 4 | 8 |
| Exports to: the EU (e) | 185 | 80 | 67 | 79 | 92 | 90 |
| the rest of the world | 26 | 15 | 7 | 15 | 10 | 16 |
| Total new supply | 791 | 834 | 919 | 910 | 947 | 938 |
| Change in stocks | 2 | -2 | -2 | -1 | 2 | 1 |
| Total domestic uses | 790 | 836 | 921 | 911 | 945 | 937 |
| | | | | | | |
| Production as % of total new supply for use in the UK | 104 | 73 | 62 | 63 | 61 | 62 |
| | | | | | | |
| Closing stocks | 14 | 10 | 8 | 8 | 9 | 11 |
| | | | | | | |
| Supply & use of bacon and ham (product weight) (b) | | | | | | |
| Home-cured production (a) | 244 | 215 | 214 | 211 | 214 | 199 |
| Imports from: the EU | 243 | 292 | 301 | 302 | 283 | 264 |
| the rest of the world | - | - | - | - | - | - |
| Exports to: the EU | 6 | 10 | 14 | 12 | 10 | 9 |
| the rest of the world | - | 1 | - | 1 | - | 1 |
| Total new supply | 481 | 496 | 502 | 499 | 487 | 454 |
| Change in stocks | - | -2 | 2 | 1 | -1 | 1 |
| Total domestic uses | 481 | 498 | 500 | 498 | 488 | 453 |
| | | | | | | |
| Production as % of total new supply for use in the UK | 51 | 43 | 43 | 42 | 44 | 44 |
| | | | | | | |
| Closing stocks | 3 | 3 | 5 | 7 | 6 | 6 |

Footnotes:

The figures for 2006 are provisional

(a) Pigs slaughtered during outbreaks of foot and mouth disease and classical swine fever and under Livestock Welfare Disposal Schemes are not included in marketings, production and value as these animals were removed from the food chain. Foot and mouth disease compensation payments are not included in the value of production as these have been treated as payments for the loss of capital assets.

(b) Does not include meat offals or trade in preserved or manufactured meat products.

(c) Boneless meat has been converted to bone-in weights.

(d) Includes meat from finished animals imported from the Irish Republic.

(e) Adjusted, as necessary, for unrecorded trade in live animals.

Source: Agriculture in the United Kingdom 2006

Table 1.5 Pig Prices 1995-2006**Clean Pigs (AESAs) UK (a)**

pence per kg dwt

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1995 | 104.13 | 109.65 | 116.15 | 117.16 | 119.32 | 122.41 | 118.19 | 117.48 | 123.95 | 127.01 | 129.28 | 133.60 |
| 1996 | 136.15 | 140.78 | 139.38 | 142.10 | 143.52 | 150.40 | 152.19 | 144.03 | 141.34 | 134.42 | 118.82 | 115.17 |
| 1997 | 106.37 | 102.64 | 108.06 | 114.34 | 133.40 | 134.03 | 124.49 | 108.79 | 105.90 | 106.51 | 100.03 | 91.99 |
| 1998 | 89.33 | 93.55 | 97.31 | 96.51 | 93.62 | 91.38 | 84.51 | 69.73 | 60.76 | 63.01 | 67.81 | 68.72 |
| 1999 | 65.54 | 72.42 | 79.63 | 83.84 | 84.72 | 84.51 | 85.82 | 83.69 | 81.68 | 77.61 | 75.55 | 75.34 |
| 2000 | 75.27 | 80.21 | 91.07 | 93.65 | 93.66 | 98.96 | 101.41 | 100.92 | 100.38 | 100.80 | 102.91 | 102.62 |
| 2001 | 98.14 | 96.50 | 97.40 | 95.96 | 96.44 | 103.01 | 104.20 | 95.74 | 92.81 | 94.11 | 99.50 | 102.60 |
| 2002 | 93.38 | 88.29 | 95.03 | 98.06 | 101.07 | 103.39 | 95.55 | 88.76 | 88.07 | 88.66 | 90.31 | 91.50 |
| 2003 | 94.78 | 98.93 | 108.36 | 105.88 | 110.02 | 112.39 | 102.32 | 96.52 | 97.48 | 103.75 | 106.90 | 101.97 |
| 2004 | 98.71 | 99.35 | | | | | | | | | | |

Deadweight Pig Prices (DAPP GB (EU)) (a)

pence per kg dwt

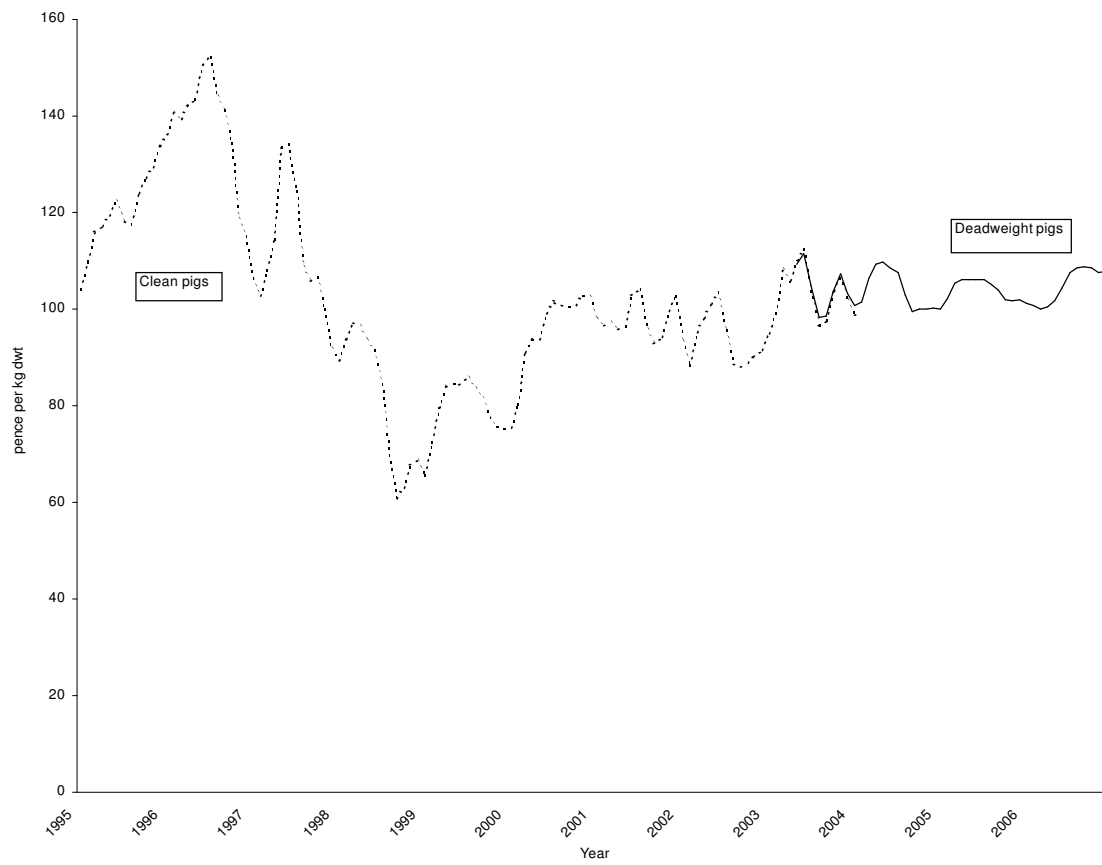
| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 2003 | | | | | 109.24 | 111.53 | 104.00 | 98.26 | 98.49 | 103.75 | 107.27 | 103.28 |
| 2004 | 100.80 | 101.56 | 106.26 | 109.27 | 109.64 | 108.54 | 107.52 | 102.96 | 99.57 | 100.08 | 99.95 | 100.18 |
| 2005 | 99.99 | 102.09 | 105.39 | 106.03 | 106.01 | 106.19 | 106.06 | 105.12 | 103.95 | 102.07 | 101.74 | 101.95 |
| 2006 | 101.23 | 100.61 | 99.96 | 100.54 | 101.68 | 104.37 | 107.59 | 108.42 | 108.87 | 108.42 | 107.47 | 107.82 |

Footnotes:

- (a) In 2003 the Meat and Livestock Commission, with the support of the British Pig Executive, launched a new deadweight pig price reporting survey – the Deadweight Average Pig Price (DAPP). The DAPP replaced the Adjusted Euro Spec Average (AESAs), the price formally reported. In March 2004 the AESAs ceased to be calculated and the DAPP became the official pig price indicator.

Source: The Meat and Livestock Commission

Figure 3 Average Pig Prices 1995-2006



Chapter 2

Financial Performance of Specialist Pig Farms

The data in this report has been extracted from the 2005/06 Farm Business Survey. Full results for this survey, together with previous years, can be accessed at <http://www.farmbusinesssurvey.co.uk>. 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 2005/06 Farm Business Survey there were 60 holdings that were classified as Specialist Pig holdings. The data for these holdings are presented in this chapter. To be classified as a Specialist Pig holding at least two-thirds of the total Standard Gross Margin (SGM) from the enterprises on the farm must have been generated by the pigs.

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

Classification of farms

The 60 Specialist Pig farms subdivided into three EU Particular Farm Types as follows :

| EU PFT | No of farms | Definition | Description |
|--------|-------------|-----------------------------------|--|
| 5011 | 40 | Sows > 66% SGMs | Predominantly sows |
| 5012 | 11 | Piglets and other pigs > 66% SGMs | Predominantly growing and fattening pigs |
| 5013 | 9 | Other | |

Due to the small sample numbers results have been presented for 'predominantly sows' (type 5011) and 'predominantly growing and fattening pigs' (types 5012 and 5013 combined). Some of the farms in types 5012 and 5013 had breeding sows and in total there were 48 farms with breeding sows.

Financial Results

For the full sample of 60 farms total farm output amounted to £285295 (Table 2.1). Pig output accounted for 87% of total output with miscellaneous income accounting for 10%. This was the first year that Single Payment Scheme (SPS) receipts would have been included in the account. The average SPS income on these farms was £4545. Many farms would have received little or no SPS income because they had no historic entitlement and occupied a very small land area.

These farms recorded a gross margin of £135332 after deduction of variable costs amounting to £149964. Feed costs accounted for 79% of total variable costs. Fixed costs amounted to £122233 resulting in a Management and Investment Income (MII) of £13099. Net Farm Income (NFI) was £29043. One-half of all farms showed a negative MII figure and one-quarter showed a negative NFI figure.

Table 2.2 shows the range in performance in terms of MII for Specialist Pig farms. The top 25% show a MII of £76872 whilst the bottom 25% show a negative MII of £30490. The high MII farms are significantly larger than the others with a pig output 77% more than the middle 50% band. In contrast those farms with low MII are only 16% smaller than the middle band in terms of pig output. It should also be noted that farms with high MII figures have a higher proportion of output from crops and miscellaneous income. These two outputs combined account for 20% of total output on these farms compared to 5% for the other two bands.

An analysis of the results split between businesses classed as 'predominantly sows' and those classed as 'predominantly growing and fattening pigs' (Table 2.3) shows that there is a considerable difference in terms of output and cost structure between these two types of farms.

Crop output is significantly more for the second type of farm. This, together with higher pig output, results in a higher level of total output. However, their variable and fixed costs were also correspondingly larger with higher crop costs being an obvious component of this. Nevertheless average MII and NFI is higher for those farms classed as 'predominantly growing and fattening pigs'.

In order to examine the influence of size on financial performance the results have been analysed in terms of Standard Gross Margins (SGMs). This is the only meaningful way to look at size factors. For instance, the size of the breeding herd cannot be used because not all pig farms have breeding herds. The sample has been divided into four groups of equal number. Table 2.4 shows the results and indicates the range of SGM for each size category.

The results are as one would expect with farm profitability increasing with farm size. It is noticeable that there is little difference in profitability between the first two size groups. MII is negative for both groups and is higher for the second group compared to the first. The smaller farms in terms of SGMs actually record a higher level of miscellaneous income than the second group. Indeed, it is a higher level than the very largest size category.

Table 2.1 Specialist Pig Farms – Financial Results

| | |
|---|----------------------|
| Number of farms | 60 |
| Output | £ |
| Pigs | 248937 |
| Other livestock | 512 |
| Crops | 6517 |
| Miscellaneous | 29330 |
| Total output | 285295 |
| Variable costs | |
| Feed | 119049 |
| Vet and medicines | 8417 |
| Other livestock costs | 19136 |
| Crop costs | 3362 |
| Total variable costs | 149964 |
| Farm gross margin | 135332 |
| Fixed costs | |
| Labour | - Paid 36230 |
| | - Unpaid 20343 |
| Machinery | - Contract 4119 |
| | - Depreciation 10289 |
| | - Repairs 6846 |
| | - Fuel and oil 4245 |
| Occupiers repairs | 6290 |
| Rent and rates | 18926 |
| Other farm costs | 14946 |
| Total fixed costs | 122233 |
| Management and investment income | 13099 |
| Less management charges | 98 |
| Plus unpaid labour | 16042 |
| Net farm income | 29043 |

Table 2.2 Specialist Pig Farms – Grouped by MII per Farm

| | Top 25% | Middle 50% | Bottom 25% |
|---|---------------|---------------|---------------|
| Output | £ | £ | £ |
| Pigs | 423597 | 238713 | 200477 |
| Other livestock | 193 | 1246 | 245 |
| Crops | 18674 | 2586 | 2718 |
| Miscellaneous | 86338 | 11190 | 7976 |
| Total output | 528803 | 253734 | 211416 |
| Variable costs | | | |
| Feed | 191544 | 116003 | 103318 |
| Vet and medicines | 11939 | 8805 | 9683 |
| Other livestock costs | 28214 | 19226 | 19390 |
| Crop costs | 9606 | 1207 | 1555 |
| Total variable costs | 241304 | 145240 | 133946 |
| Farm gross margin | 287498 | 108494 | 77470 |
| Fixed costs | | | |
| Labour | | | |
| - Paid | 78019 | 29715 | 26115 |
| - Unpaid | 18916 | 19830 | 23185 |
| Machinery | | | |
| - Contract | 9821 | 1797 | 3595 |
| - Depreciation | 20472 | 6950 | 8827 |
| - Repairs | 13552 | 4981 | 5774 |
| - Fuel and oil | 8749 | 2847 | 2708 |
| Occupiers repairs | 9769 | 7101 | 5612 |
| Rent and rates | 30452 | 16290 | 15907 |
| Other farm costs | 20876 | 14182 | 16237 |
| Total fixed costs | 210626 | 103693 | 107960 |
| Management and investment income | 76872 | 4801 | -30490 |
| Less management charges | | 266 | |
| Plus unpaid labour | 14272 | 17140 | 16050 |
| Net farm income | 91144 | 21675 | -14440 |

Table 2.3 Specialist Pig Farms – Grouped by Type

| | Predominantly sows | Predominantly growing/fattening pigs |
|---|-----------------------|--|
| Number of farms | 40 | 20 |
| Output | £ | £ |
| Pigs | 244734 | 257068 |
| Other livestock | 454 | 624 |
| Crops | 1907 | 15435 |
| Miscellaneous | 29690 | 28635 |
| Total output | 276784 | 301762 |
| Variable costs | | |
| Feed | 117112 | 122797 |
| Vet and medicines | 7792 | 9626 |
| Other livestock costs | 20116 | 17239 |
| Crop costs | 1443 | 7074 |
| Total variable costs | 146463 | 156736 |
| Farm gross margin | 130321 | 145026 |
| Fixed costs | | |
| Labour | | |
| - Paid | 39907 | 29116 |
| - Unpaid | 22291 | 16576 |
| Machinery | | |
| - Contract | 2066 | 8089 |
| - Depreciation | 8907 | 12961 |
| - Repairs | 5852 | 8770 |
| - Fuel and oil | 3193 | 6281 |
| Occupiers repairs | 6230 | 6407 |
| Rent and rates | 16815 | 23009 |
| Other farm costs | 15047 | 14750 |
| Total fixed costs | 120307 | 125958 |
| Management and investment income | 10014 | 19067 |
| Less management charges | | 288 |
| Plus unpaid labour | 16782 | 14612 |
| Net farm income | 26795 | 33391 |

Table 2.4 Specialist Pig Farms – Grouped by Standard Gross Margin per Farm

| 000 SGMs | 12-44 | 44-109 | 109-211 | 211-749 |
|---|-------|--------|---------|---------|
| Number of farms | 15 | 15 | 15 | 15 |
| Output | £ | £ | £ | £ |
| Pigs | 69142 | 150482 | 318720 | 628164 |
| Other livestock | 281 | 316 | 1515 | 192 |
| Crops | 200 | 2466 | 2670 | 26448 |
| Miscellaneous | 26074 | 10421 | 61857 | 23140 |
| Total output | 95697 | 163685 | 384762 | 677943 |
| Variable costs | | | | |
| Feed | 34313 | 77233 | 167103 | 278755 |
| Vet and medicines | 1656 | 3879 | 11490 | 23070 |
| Other livestock costs | 6233 | 11255 | 27241 | 44187 |
| Crop costs | 934 | 1324 | 1571 | 11796 |
| Total variable costs | 43137 | 93691 | 207404 | 357809 |
| Farm gross margin | 52561 | 69994 | 177357 | 320134 |
| Fixed costs | | | | |
| Labour | | | | |
| - Paid | 6037 | 10568 | 64481 | 93077 |
| - Unpaid | 19413 | 23079 | 20376 | 19426 |
| Machinery | | | | |
| - Contract | 1208 | 1766 | 2832 | 13316 |
| - Depreciation | 5663 | 5575 | 9300 | 24854 |
| - Repairs | 2777 | 3489 | 8059 | 16892 |
| - Fuel and oil | 2559 | 2339 | 4571 | 9083 |
| Occupiers repairs | 1906 | 2789 | 6350 | 18191 |
| Rent and rates | 8231 | 14874 | 20555 | 42119 |
| Other farm costs | 6954 | 10131 | 21755 | 28687 |
| Total fixed costs | 54747 | 74610 | 158280 | 265645 |
| Management and investment income | -2187 | -4616 | 19077 | 54489 |
| Less management charges | | 488 | | |
| Plus unpaid labour | 15271 | 21237 | 13898 | 14479 |
| Net farm income | 13085 | 16134 | 32975 | 68968 |

Chapter 3

Margins for Pig Enterprises

In the autumn of 2004 additional data was 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://www.ex.ac.uk/crr>). 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 Margins approach, the fixed costs are allocated to different enterprises econometrically. That is to say, the total fixed costs within the account are allocated to the different enterprises according to co-efficients for each enterprise. Data on the validity of these co-efficients 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 little or no other enterprises and therefore the majority of fixed costs are rightly attributable to the pig enterprise. However, on those farms with pig enterprises which are not Specialist Pig farms, there are problems with the econometric method of allocation. Consequently, it has not been possible to publish net margins for these farms.

Classification of farms

Net and gross margins were completed for all 60 Specialist Pig farms. These were classified as follows :

| Type | No of farms | Definition |
|------|-------------|---------------------------------------|
| 111 | 11 | Breeders selling weaners (rearers) |
| 112 | 34 | Breeders selling fat pigs (finishers) |
| 113 | 2 | Buying weaners, selling fat pigs |
| 114 | 8 | Contract |
| 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 been presented for type 112 and combined types 111, 113 and 115. The output and cost structure for type 114 (contract farms) is so different to those of non-contract farms that it would be inappropriate to include these farms in the composite group.

Net Margin results

Table 3.1 shows that the full sample of 60 Specialist Pig Farms recorded a net margin of £15902. This average figure masks a huge variation in performance with 43% of farms showing a negative net margin result. Table 3.2 presents the results split into two main categories, namely breeding farms selling finished pigs and all other farms (except contract producers). There is a considerable difference in Net Margin between the two groups with the combined group recording a much higher net margin than those farms producing and selling finished pigs. It should be remembered that the combined group is comprised mainly of farms that are producing and selling weaners. This pattern of results is the same as that recorded in the 2002/03 survey by Shepherd (2004). However, it should also be noted that this combined

group were much larger farms with an average herd size (breeding sows) of 324 compared to 203 on the breeder-finisher farms. Indeed, the weaner producing farms on their own averaged 447.

Table 3.3 presents the costs and margins per £100 output for the two categories of farms.

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. On breeder-finisher farms the net margin was £59 per sow. The figures for pigs produced per sow should be taken as indicative of the annual productivity and it should be noted that this figure has not been calculated the same way as in previous pig studies (see note in Appendix).

Table 3.5 presents the gross margins for non-specialist pig farms. In other words these are the margins recorded for pigs where pigs are not the predominant enterprise. As explained earlier it has not been possible to present net margins for these enterprises because there are difficulties with the allocation of fixed costs to different enterprises. Results are presented for two types of enterprise – contract and breeder finishers. The gross margins for the latter are very much in line with those for Specialist pig farms. This is not immediately apparent when looking at Table 3.5 because the size of enterprise is inevitably smaller in these farms. Consequently both the output and margins are at a lower absolute level. However, in terms of costs and margins per £100 output the results are almost identical to that presented earlier for Specialist pig farms.

Table 3.7 looks in more detail at the fat pig producers and shows the results on a per sow basis. Compared to herds producing fat pigs on Specialist pig farms, average herd size is lower and gross margins per sow are lower by £40. This is mainly due to a lower level of output. Interestingly, pigs produced per sow is lower at 17.7 pigs per sow compared to 18.4 pigs on the comparable Specialist pig farms.

Table 3.1 Specialist Pig Farms – Net Margins

| | |
|-------------------------------|--------|
| Number of farms | 60 |
| | £ |
| Output | 243999 |
| Variable costs | |
| Feed | 116635 |
| Vet and medicines | 8200 |
| Other variable costs | 18558 |
| Total variable costs | 143393 |
| Gross Margin | 100606 |
| Fixed costs | |
| Paid labour | 28644 |
| Unpaid labour | 3537 |
| Contract and rental | 2201 |
| Depreciation | 8372 |
| Machinery repairs | 4233 |
| Fuel and oil | 2314 |
| Electricity and heating fuel | 3828 |
| Water | 1784 |
| Insurance | 2381 |
| Professional fees | 1854 |
| General farm costs | 3248 |
| Occupiers repairs | 5986 |
| Rent and rates | 2784 |
| Total fixed costs | 71166 |
| Net farm income | 29439 |
| Less farmer and spouse labour | 13636 |
| Plus managerial input | 98 |
| Net margin | 15902 |

Table 3.2 Specialist Pig Farms – Net Margins by Farm Type

| Farm type | Breeders selling fat pigs | Others except contract |
|-------------------------------|---------------------------|------------------------|
| Number of farms | 34 | 18 |
| Average number of sows | 203 | 324 |
| | £ | £ |
| Output | 273503 | 326533 |
| Variable costs | | |
| Feed | 140288 | 140700 |
| Vet and medicines | 9805 | 10168 |
| Other variable costs | 21194 | 23964 |
| Total variable costs | 171287 | 174832 |
| Gross Margin | 102216 | 151701 |
| Fixed costs | | |
| Paid labour | 30329 | 45219 |
| Unpaid labour | 3944 | 4495 |
| Contract and rental | 2180 | 3314 |
| Depreciation | 9159 | 9453 |
| Machinery repairs | 4434 | 5762 |
| Fuel and oil | 2456 | 2571 |
| Electricity and heating fuel | 4335 | 4621 |
| Water | 1845 | 2445 |
| Insurance | 2627 | 2672 |
| Professional fees | 2155 | 1776 |
| General farm costs | 3482 | 3596 |
| Occupiers repairs | 5159 | 10679 |
| Rent and rates | 3770 | 2008 |
| Total fixed costs | 75875 | 98613 |
| Net farm income | 26341 | 53088 |
| Less farmer and spouse labour | 14459 | 13409 |
| Plus managerial input | | 424 |
| Net margin | 11881 | 40103 |

Table 3.3 Specialist Pig Farms - Costs and Margins per £100 Pig Output

| Farm type | Breeders selling fat pigs | Others except contract |
|------------------------------|------------------------------|---------------------------|
| | £ per £100 output | |
| Feed | 51.3 | 43.1 |
| Other variable costs | 11.3 | 10.5 |
| Gross margin | 37.4 | 46.5 |
| Labour costs | 17.8 | 19.3 |
| Contract and machinery costs | 6.7 | 6.5 |
| Occupiers repairs | 1.9 | 3.3 |
| Other fixed costs | 6.7 | 5.2 |
| Net margin | 4.3 | 12.3 |

Table 3.4 Specialist Pig Farms – Net Margins per Sow

| Farm Type | Breeders selling fat pigs |
|-------------------------------|---------------------------|
| Number of farms | 34 |
| Number of sows | 202.9 |
| Pigs per sow | 18.4 |
| | £ |
| Output | 1348.0 |
| Variable costs | |
| Feed | 691.4 |
| Vet and medicines | 48.3 |
| Other variable costs | 104.4 |
| Total variable costs | 844.2 |
| Gross Margin | 503.8 |
| Fixed costs | |
| Paid labour | 149.5 |
| Unpaid labour | 19.4 |
| Contract and rental | 10.7 |
| Depreciation | 45.1 |
| Machinery repairs | 21.9 |
| Fuel and oil | 12.1 |
| Electricity and heating fuel | 21.4 |
| Water | 9.1 |
| Insurance | 12.9 |
| Professional fees | 10.6 |
| General farm costs | 17.1 |
| Occupiers repairs | 25.4 |
| Rent and rates | 18.6 |
| Total fixed costs | 374.0 |
| Net farm income | 129.8 |
| Less farmer and spouse labour | 71.3 |
| Net margin | 58.6 |

Table 3.5 Non-specialist Pig Farms– Gross Margins by Farm Type

| Farm type | Breeder-finisher | Contract |
|-----------------------------|------------------|----------|
| Number of farms | 18 | 25 |
| | £ | £ |
| Output | 161357 | 18007 |
| Variable costs | | |
| Feed | 83008 | 17 |
| Vet and medicines | 4524 | 8 |
| Other variable costs | 16181 | 1649 |
| Total variable costs | 103713 | 1674 |
| Gross Margin | 57645 | 16333 |

Table 3.6 Non-specialist Pig Farms - Costs and Margins per £100 Pig Output

| Farm type | Breeder-finisher | Contract |
|----------------------|-------------------|----------|
| | £ per £100 output | |
| Feed | 51.4 | - |
| Other variable costs | 12.8 | 9.3 |
| Gross margin | 35.7 | 90.7 |

Table 3.7 Non-specialist Pig Farms - Gross Margins for Breeder-Finisher Farms (type 112)

| | | |
|-----------------------------|----------|---------|
| Number of farms | | 18 |
| Number of sows | | 124 |
| Pigs per sow | | 17.7 |
| | Per farm | Per sow |
| | £ | £ |
| Output | 161357 | 1298.7 |
| Variable costs | | |
| Feed | 83008 | 668.1 |
| Vet and medicines | 4524 | 36.4 |
| Other variable costs | 16181 | 130.2 |
| Total variable costs | 103713 | 834.8 |
| Gross Margin | 57645 | 463.9 |

Appendix A

Notes and Definitions

Classification of Farms in the FBS

Farms are classified by both type and size. The former is done using European size units (ESU) which measures the financial performance of the holding in terms of the margins which might be expected from crops and livestock. The margins used are gross margins standardised at a five year average centred on year 2000 values (SGMs). For a farm to be allocated to a particular type (e.g. Specialist pigs) the contribution of that enterprise must account for more than two-thirds of the total SGMs of that farm. Farms are classified by size by utilising the Standard Labour Requirements. 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 Single Labour Unit.

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.)

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.

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 of size at least 0.5 Single Labour Requirement. 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.

Pigs per sow

The figure for pigs per sow has been estimated by calculating the net increase in total pig numbers on the farm through the year and dividing by the average number of sows.

Appendix B

Reports in this series:

Crop Production in England 2005/06

<http://www.landecon.cam.ac.uk/research/eeprg/rbu/rbupubs.htm>

Dairying Farming in England 2005/06

<http://www.nottingham.ac.uk/rbru/publications.html>

Hill Farming in England 2005/06

http://www.cornwall.ac.uk/rbs/index.php?page=_Home

Pig Production in England 2005/06

http://www.askham-bryan.ac.uk/for_business/rural_business_research_unit

Poultry Production in England 2005/06

<http://www.apd.rdg.ac.uk/AgEcon/research/afit/index.htm>

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