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THE STRUCTURE OF PIG PRODUCTION IN ENGLAND

The results of the National Survey of Pig Production Systems, 1st March 2002

SPECIAL STUDIES
IN AGRICULTURAL ECONOMICS

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The Results of the National Survey of Pig Production Systems, 1st March 2002

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SPECIAL STUDIES IN AGRICULTURAL ECONOMICS

University departments of agricultural economics in England and Wales have for many years undertaken economic studies of crop and livestock enterprises, receiving financial and technical support from the Department for Environment, Food and Rural Affairs and previously the Ministry of Agriculture, Fisheries and Food. Since April 1978 this work has been supported in Wales by the Welsh Office following the transfer of responsibilities for agriculture to the Secretary of State for Wales.

The departments in different regions conduct joint studies of those enterprises in which they have a particular interest. This community of interest is recognised by issuing reports prepared and published by individual Departments in a common series entitled *Special Studies in Agricultural Economics*. Titles of recent publications in this series are given in Appendix II.

The addresses of other departments involved in the collection of data in the Special Studies Programme are given in Appendix III.

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FOREWORD

A four-year gap between surveys of production of any of our mainstream farm enterprises might not seem excessive. Short of a major war or natural disaster, we would not normally expect trends established over decades to be dramatically over-turned.

Yet, since 1998, when the University of Exeter last examined the structure of pig production, the UK pig industry has experienced such an upheaval that even industry experts are unsure of the approximate current state of the industry, still less of its immediate prospects. This report describes an industry that in four years has lost more than one-third of its productive capacity, with a large consequential loss of share of the UK market for pork, bacon and ham. The wider social and financial consequences for farmers, farm workers and their families, not to mention knock-on effects on other businesses, must have been considerable.

Following a long period of low profitability, pig industry leaders agreed with the Government that some restructuring of the industry was desirable, and the Pig Industry Restructuring Scheme (PIRS) resulted. Pig farmers' experiences of that scheme were investigated by our survey, as were their concerns for the future of their businesses. It seems that many businesses accepted for the Ongoers or Outgoers elements of the PIRS have not taken up the aid offered. The survey also shows that the majority of pig farmers rate the threat to their business of pigmeat imported from countries not subject to the same regulations as in the UK to be higher than that of a food scare relating to pigmeat, or the difficulty of finding and retaining suitable labour.

In view of the events of recent years, it is not surprising that pig producers judge profit margins to be insufficient for them to invest with confidence for the future. That has relevance to the second phase of the current Special Study, a twelve-month economic survey of a sample of 300 pig farms. The economic survey commenced on 1st October 2002 and is being conducted by ourselves in conjunction with the seven other English regional centres of rural and farm business research working within the DEFRA Commissioned Work Programme.

The second phase of the study will update not only our own, but the collective industry, government and public sector knowledge of the economics of pig production. We are very pleased to continue our involvement with an industry with which we have enjoyed a long association and that has so recently undergone (and arguably continues to undergo) a period of major upheaval.

Meanwhile, we wish to record our gratitude to all who responded to our Structure Survey questionnaire and the enormous good will and continuing interest in pig production expressed by the more than 2,700 who responded to our request for information. Bearing in mind that less than 60 per cent of those who responded to the survey can still be described as pig producers, that response was particularly pleasing.

Professor Michael Winter
Director, Centre for Rural Research

SUMMARY

This document reports on the National Survey of the Structure of Pig Production Systems of 1st March 2002. It was the third such survey. Others were conducted on similar lines on 1st February 1996 and 1st February 1998.

Much of the past four years has been characterised by low returns for pigmeat and the size of the national pig herd has been dramatically reduced. The past four years have also seen the end of stalls and tethers as accommodation for non-lactating sows, an outbreak of Swine Fever in Eastern England, new wasting diseases affecting many pig herds, and the 2001 outbreak of Foot and Mouth Disease. There may never have been a time when information gathered four or more years ago on the structure, efficiency and economics of pig production was more in need of updating. The survey reported on here updates the available information on the structure of pig production in England. A full economic survey, involving a sample of 300 farms, is being undertaken over the 12 months from October 2002.

A postal questionnaire researching numbers of pigs on 1st March 2002 was sent to farm holdings in England known from the June Agricultural Censuses of 1998, 1999 and 2000 to have had at least 20 breeding sows and/or 200 trading pigs on at least one of the Census dates. The information sought was for numbers of pigs by type, ownership and housing system, producer's experience of the Pig Industry Restructuring Scheme, and their views on the future of their businesses. In order to measure changes since February 1998, many of the questions were the same as those of the earlier survey, but sections on participation in and experience of the Ongoers and Outgoers elements of the Pig Industry Restructuring Scheme and on Respondents' greatest concerns regarding the future of their businesses were new.

It was known that many producers recorded as having pigs in any of the 1998, 1999 and 2000 census years, especially the earlier ones, would have gone out of production by March 2002. However, those producers were still of interest, especially in view of the section relating to the Pig Ongoers and Outgoers schemes.

The objective of the survey was to gather information on important aspects of pig production that is otherwise unavailable, incomplete, or out of date. Of particular interest were how many pigs (by type) are kept outdoors; how many pigs are bred, reared and/or finished on a contract basis for a third party such as a feed company or meat processor; and how many units specialise in rearing only. Because similar questions were asked by the two previous surveys, a three survey trend, covering a period of six years, has now been obtained.

The initial response to the survey was speedy and encouraging and, as with the earlier surveys, the amount of goodwill shown by respondents was quite remarkable. Twenty letters were enclosed, more fully explaining a situation, or offering considered opinions, and 46 per cent of respondents (68 per cent of respondents with pigs) requested a copy of a summary sheet of the results of the survey. Eighty-four per cent of those with an e-mail address and pigs provided an address for notification of when the summary information is placed on the University of Exeter's World Wide

Web site. Although Freepost reply envelopes were provided, 18 per cent of returned questionnaires were sent at the respondent's own expense.

As in both 1996 and 1998, no respondent expressed any grudge against the University of Exeter or any other centre engaged in the DEFRA Commissioned Work Programme. However, ten offered negative remarks about DEFRA/MAFF, 30 about the Government, and six about the Prime Minister. The apparent unpopularity of the Government amongst pig farmers was responsible for the total number of negative remarks being more than double that of either of the two previous surveys. Nevertheless, the total number of responses bearing a negative remark was still rather less than 1.5 per cent.

Total response by the final deadline for replies was 61 per cent, five per cent less than in 1998, 15 per cent less than in1996. Of 2738 usable returns, 1158 (42 per cent) were nil returns (i.e. no pigs on the survey date, 1st March 2002). The corresponding percentages in 1996 and 1998 were 14 per cent and 13 per cent.

Of the more than 900 respondents who volunteered some information beyond that strictly required by completion of the designated spaces of the questionnaire, 587 did so to confirm that they did not have pigs on the holding, or to add background information. Predominant amongst reasons given were sustained losses, or other financial circumstances; retirement, ill health or death of the farmer; disease in the national or their own pig herd; a change of farm policy; and withdrawal from the market of integrated third-party "contractors". A few indicated that the circumstance of no pigs on 1st March was unusual and that they would shortly be re-stocking.

Twenty-one respondents recorded that they had been culled-out because of Foot and Mouth Disease. Only two had so far re-stocked and six stated that they definitely would not. Nineteen respondents noted that they were in the process of de-stocking and would soon be out of production.

Reasons for the poorer response than hitherto were examined. They were identified as having been that the "age" of the mailing list was greater, the three Census years covered not including the most recent, June 2001; that the survey was conducted following a long period of low profitability in pig production; and the large number of surveyed holdings no longer having any pigs. Farmers were inclined to presume that information from a holding out of production, or in the process of going out of production, would not be of interest, or they were disinclined to supply the information at such a time.

In the circumstances, a measure of satisfaction can be taken from the fact that the response rate was as good as it was. The inclusion of Section F, questions on respondents' concerns about the future of their businesses, is believed to have been a factor in encouraging the response that was achieved.

Numbers of holdings and numbers of pigs kept were analysed by herd type. Virtually all sectors were marked by major reductions since 1998 in numbers of pigs and holdings. Contract production continued to dominate the specialist rearing and specialist finishing sectors. Nevertheless, 95 per cent of all breeding sows are farmer owned and 72 per cent of all rearing and finishing pigs (78 per cent of all pigs).

Estimates were made of the total situation in England on 1st March 2002. Total pig numbers were estimated as being 32.4 per cent lower on 1st March 2002 than on 1st June 2000. That is a greater reduction than is indicated by the June 2002 Agricultural Census, the most likely reason for the discrepancy being the entry of new herds that appeared in the Census for the first time in 2001 or 2002. The overall reduction in pig numbers on farms in the 2002 Census that were also in the 2000 Census was 26 per cent.

Apart from the disappearance of stalls and tethers, changes to types of pig accommodation used were well spread and generally unremarkable. Cubicles and free-access stalls, yards with electronic feeders, and yards or kennels with short stall feeders have assumed a greater proportion of the dry sow accommodation. Of the housing types that continue, the greatest losses of total share have been sustained by the most traditional forms of housing, yards with individual sow feeders and yards or kennels with floor/trough feeders.

The total number of sows kept outdoors declined between the two survey years by almost 70,000, (42 per cent), whilst the proportion that outdoor sows were of all sows decreased by five per cent to 27 per cent. Outdoor housing of rearing pigs assumed a bigger share of the total sector in 2002, though the total number of rearing pigs kept outdoors still fell short of the total number kept outdoors in 1998.

In the case of finishing pigs, outdoor accommodation has yet to take off. With both rearing and finishing pigs, houses with fully slatted floors showed some proportional gains. As with sow accommodation, it appears to have been older, traditional accommodation that was most heavily decommissioned.

The number of holdings where some or all of the pigs belonged to a third party decreased, but a proportionally greater reduction in holdings where the pigs were owned by the operator of the holding meant that the share of holdings with third party owned pigs increased to 34 per cent of the total (30 per cent in 1998).

The proportion of breeding sows owned by third parties was 4.9 per cent. That was a decrease on both 1996 and 1998. Reduced numbers of finishing pigs belonging to third parties nevertheless became a greater part of the total and the percentage of third party owned finishing pigs increased to 36 per cent. The corresponding figure for rearing pigs belonging to third parties increased to 16 per cent of all rearing pigs.

The questions on respondents' experience of the Ongoers and Outgoers schemes produced a good number of comments on reasons for application or non-application. Financial motivations for application were freely admitted, particularly in relation to hardship being suffered following the extended period of low profitability. Non-applicants mostly had business objectives incompatible with the schemes, were convinced that the likely returns from a successful application would not merit the effort and expense of application, or believed themselves ineligible.

Significant numbers of respondents who stated that they had been accepted for one or another of the schemes, had not taken it up. Many negative comments about the Government were offered.

Section F, farmers' greatest concerns for the future of their business, was well answered. Respondents to that section included many no longer in pig production. Field of Survey respondents (i.e. those who had 20 or more breeding sows and/or 200 or more finishing pigs on 1st March 2002) proved to be most concerned about imported pigmeat from countries not subject to the same legislation, profit margins insufficient to invest with confidence for the future, and the power over the industry of supermarket groups. The difficulty of finding and retaining suitable labour was not placed high on the list of concerns, but the largest businesses were the most concerned. Conversely, the largest businesses were least concerned about the power within the industry of large commercial businesses.

Key findings of the survey, relative to 1996 and 1998, were as follows:-

	1996	**1998**	**2002**
Holdings with breeding sows	2746	2377	1504
Average number of breeding sows	201	238	249
Percent breeding sows kept outdoors	25.7	29.4	27.1
Average outdoor breeding herd size	328	395	469
Average indoor breeding herd size	170	207	209
Percent sows belonging to a third party	5.6	6.8	4.9
Average third party owned breeding herd size	302	420	369
Average farmer owned breeding herd size	197	230	245
Percent breeding sows kept in stalls or tethers	17.9	6.9	-
Percent breeding sow holdings with stalls or tethers	19.7	16.4	-
Holdings with rearing and/finishing pigs	2953	2503	1977
Percent of rearing/finishing pigs kept outdoors	3.3	4.0	6.1
Average outdoor rearing/finishing herd size	944	1110	1076
Average indoor rearing/finishing herd size	1003	1129	1273
Percent rearing/finishing pigs belonging to a third party	17.5	22.1	27.3
Average third party owned rearing/finishing herd size	871	983	1015
Average farmer owned rearing/finishing herd size	1206	1212	1371

THE STRUCTURE OF PIG PRODUCTION IN ENGLAND

1. INTRODUCTION

UK pig numbers peaked in 1997-98 at rather more than 8 million. Since then, they have contracted sharply. The June 2001 Agricultural Census recorded 5.8m, 28 per cent less than in June 1998 and almost ten per cent less than in June 2000.

Given that the reduction in pig numbers between June 1998 and June 1999 brought the industry back to a size closer to its longer term average, rather than the 1997-98 peak, it could be argued that represented a desirable trimming of surplus capacity. That argument could conceivably be extended to June 2000, but the decline has continued and pig numbers are now well below any figure seen in recent decades. More importantly, despite greatly improved efficiency of production and heavier average carcase weights, the volumes of home-produced pigmeat and the proportion of the home market held by home-produced pigmeat are also well below the levels achieved over many years past. For example, in 2001 the United Kingdom was 64 per cent self-sufficient in pigmeat, compared with 91 per cent in 1998 and an 82 per cent average in the years 1990-92; total home production was 0.99m tonnes in 1990-92, 1.14m tonnes in 1988 and 0.78m tonnes in 2001.

Much of the past four years has been characterised by low returns for pigmeat, and those years have also seen the end of stalls and tethers as accommodation for non-lactating sows, an outbreak of Swine Fever in Eastern England, new wasting diseases affecting many pig herds, and the 2001 outbreak of Foot and Mouth Disease. There may never have been a time when information gathered four or more years ago on the structure, efficiency and economics of pig production was of more questionable value. Some parts of it will still hold good, but which parts?

A survey of the structure of pig production corresponding to the present one was last carried out in February 1998. The associated economic survey completed a three-year cycle in September 1999. Clearly, an update of those studies was now due.

A full economic survey, involving a sample of 300 English pig farms, is currently being undertaken (1st October 2002 to 30th September 2003). Meanwhile, and in part as a preliminary to that study, a survey of the structure of pig production in England was undertaken by postal questionnaire on 1st March 2002. This document reports on the results of that postal study, designated the National Survey of Pig Production Systems.

Similar surveys were conducted on 1st February 1996 and 1st February 1998.[1] To facilitate direct comparison of the key measures, most questions relating to ownership and housing of pigs were presented in exactly the same form in all three surveys. Survey methodology was also identical or closely similar in most respects (though see Footnote 2, below).

[1] They were reported on in "The Structure of Pig Production in England and Wales, the results of the National survey of Pig Production Systems, 1 February 1996", report number 33 in this series, and The Structure of Pig Production in England and Wales, the results of the National Survey of Pig Production Systems, 1 February 1998", report number 40 in this series. Both reports are still available and can be obtained from the University of Exeter's Centre for Rural Research, or see the Centre for Rural Research Website, http://www.ex.ac.uk/crr

For the 2002 survey, postal questionnaires were sent to farm holdings in England known from the June Agricultural Censuses of 1998, 1999 and 2000 to have had at least 20 breeding sows and/or 200 trading pigs on at least one of the Census dates. It was known that many producers recorded as having pigs in any of those census years, especially the earlier ones, would have gone out of production by March 2002. However, those producers were still of interest to the study, especially as a section was included investigating participation in and experience of the Pig Ongoers and Outgoers schemes, both part of the Pig Industry Restructuring Scheme (PIRS).

The two Outgoers schemes ran from 4^{th} December 2000 to 2^{nd} March 2001 and from 12^{th} March to 20^{th} April 2001. To be accepted for the schemes, it was not necessary to have breeding pigs at the date of application; June 1998 was the key date for participation. Thus, those who were already out of production by June 1999 could apply to take part, and whether or not they did so, and why, was a matter of interest to the present survey.

As with the earlier structure surveys, the objective of the survey was to gather information on important aspects of pig production that is otherwise unavailable, incomplete, or out of date. Of particular interest were:

- How many breeding sows are kept in outdoor systems?
- How many rearing pigs and how many finishing pigs are kept outdoors?
- How many pigs are bred, reared and/or finished on a contract basis for a third party such as a feed company or meat processor?
- How many units specialise in just the rearing stage of production?

Because similar questions were asked by the two previous surveys, a three survey trend, covering a period of six years, has now been obtained.[2]

The survey was commissioned and supported financially by the Department for Environment, Food and Rural Affairs, but was conducted independently and with total confidentiality by the University of Exeter Centre for Rural Research. Farmer participation in the survey was entirely voluntary.

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[2] As with most series of data collected over an extended period, some caution is required in making strict comparisons. The selection criteria for the initial mailing list for the 2002 survey was different from that of its two predecessors in three ways.

- Wales was included in both the 1996 and 1998 surveys (less than 100 pig farms in both cases), but not in 2002.
- In 2002, farms were selected if on one or more of the relevant Agricultural Census dates they had recorded 20 or more breeding sows and/or 200 or more rearing/finishing pigs. In 1996 and 1998 they were selected if they met those criteria, or if they had recorded 200 or more other pigs on one or more of the relevant Censuses.
- The mailing list in 2002 was thirteen months "older" than that of the 1998 survey. i.e. the most recent Agricultural Census data used in establishing the mailing list was not that of the calendar year immediately preceding the survey (2001), but the year before that (2000) and the survey date was 1^{st} March, rather than 1^{st} February. The 2001 Census data was not fully available at the time the mailing list was prepared and, because of Foot and Mouth Disease, the Census sample was restricted to 35,000 holdings, instead of the more usual 85,000. In any case, because of the intention to investigate experiences of the PIRS, it was considered desirable to include farms established as having been in the field of survey in June 1998. Had a normal Agricultural Census been conducted in 2001 and the results been available for selection in February 2002, the mailing list selection would in all likelihood have been extended to four years' Census data. The mailing list for the 1996 survey was based on returns from only the June 1994 and 1995 Agricultural Censuses.

The 2000 Agricultural Census

Table 1 details pig numbers recorded by the June 2000 Agricultural Census on all holdings in England having 20 or more breeding sows and/or 200 trading pigs. Those parameters defined the "field of survey" of the present study.

The number of holdings meeting the criteria was 3264, having 483,254 sows and 3,324,784 trading pigs at 1st June 2000. The number of holdings having at least 20 breeding sows at that date was 2081, the number of holdings with at least 200 trading pigs was 2662 and the number having any 'other pigs' (pigs other than breeding sows and trading pigs of more than 20kg liveweight) was 2344. The total number of pigs on those holdings at 1st June 2000 was 5,194,953.

Table 1 Total pigs, by type, England, 1st June 2000, 3264 holdings with 20 or more breeding sows and/or 200 or more feeding pigs

	Number
Breeding sows	
Sows in pig	329,416
Gilts in pig	56,075
Other breeding sows	97,763
Total breeding sows	**483,254**
Trading pigs	
20 kg to 49 kg	1,419,457
50 kg to 79 kg	1,242,873
80 kg to 109 kg	625,063
110 kg and over	37,391
Total trading pigs	**3,324,784**
Other pigs	
Piglets under 20 kg	1,300,365
Gilts 50 kg & over, not yet in pig but expected to be used or sold for breeding	59,808
Boars being used for service	22,107
Barren sows for fattening	4,635
Total other pigs	**1,386,915**
Total pigs	**5,194,953**

Source: 2000 Agricultural Census

2. THE POSTAL SURVEY

Questionnaires, each with a covering letter and a FREEPOST return envelope, were posted in time for completion on 1st March 2002 to every holding in England recorded as having 20 or more breeding sows and/or 200 or more trading pigs at 1st June 2000, 1st June 1999 or 1st June 1998. The total number of questionnaires mailed out was 4527. That was 3218 to holdings known from the census data to have been inside the field of survey in June 2000, 626 from June 1999 and 683 from June 1998. The apparent discrepancy between the 3218 June 2000 field of survey holdings to which questionnaires were sent and the 3264 holdings appearing in Table 1 is accounted for by holdings that have requested that they should not be contacted by organisations independent of DEFRA, even for research purposes.

The covering letter explained the purpose and benefits of the survey. It also stressed the strict confidentiality with which individual farm data would be treated and emphasised the voluntary nature of the survey. It further indicated that completion of the questionnaire should take only a few minutes.

A copy of the questionnaire is to be found in Appendix I. Questionnaires were "mail-merged", such that they showed details of the name, address and holding number for which they were intended. All accompanying letters were personally addressed by the same process.

Response to the survey

The initial response to the survey was speedy and encouraging, 900 completed questionnaires being returned in the first week. Curiously, almost a quarter of the incoming responses were stamped, many first class, despite provision of a FREEPOST return envelope. For the first week, the response was better than in either 1996 or 1998, but numbers thereafter quickly reached a relative plateau and, but for a short boost following despatch of a first reminder (with duplicate questionnaire and FREEPOST envelope), settled into a curve that lay a few percentage points below 1998 and rather further below 1996.

Figure 1 Responses received, by day

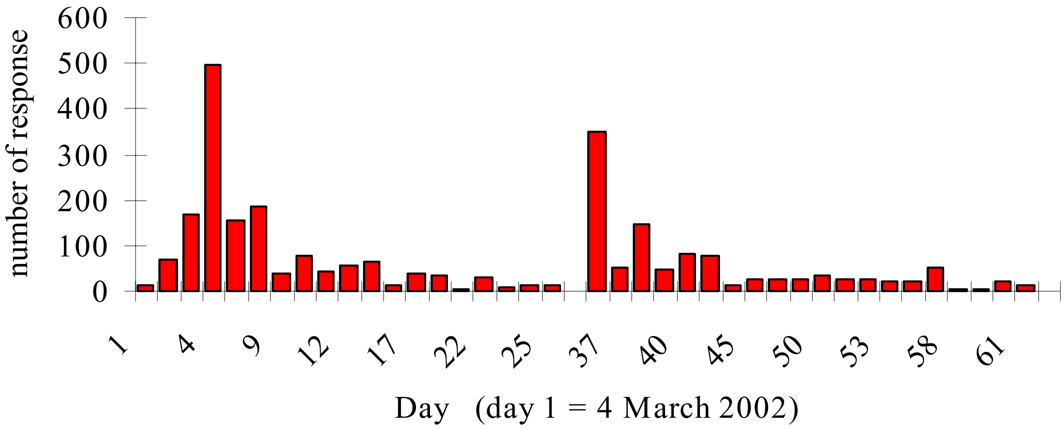
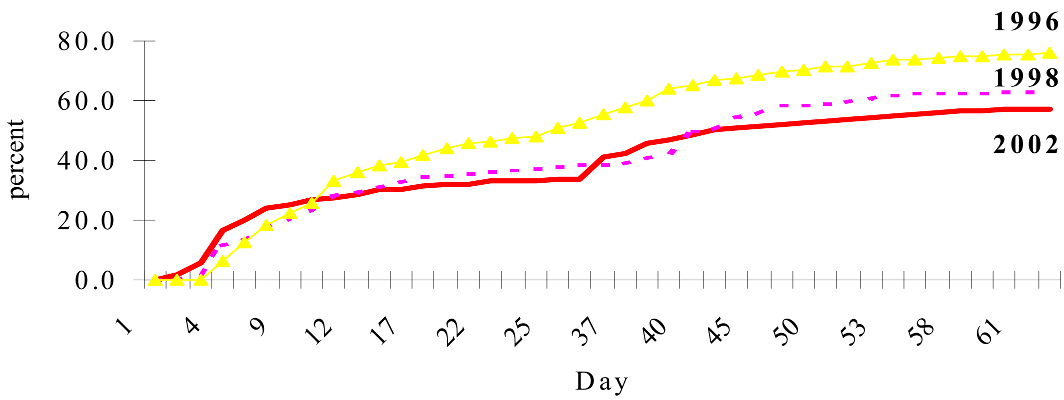


Figure 2 Cumulative response, as percent of forms mailed out, 1998 compared with 1996



As in the case of both the previous surveys, a second and final reminder, consisting only of a personalised letter, was despatched at about day 44. Final response at closedown was 61 per cent, compared to 66 per cent in 1998 and 78 per cent in 1996.

The flow of responses is illustrated in Figures 1 and 2 and Table 2 offers some numerical comparisons between the 1996, 1998 and 2002 surveys.

Table 2 Comparative responses to the 1996, 1998 and 2002 Postal Surveys

Year of survey		**1996**	**1998**	**2002**
Forms sent out		4594	4485	4527
Forms returned		3555	3027	2764
Returned before first reminder	%	48	38	33
Returned before second reminder	%	70	62	52
Returned by closedown	%	78	66	61

As with the earlier surveys, the amount of goodwill shown by respondents was quite remarkable. Despite the first and second reminder letters re-emphasising that the reply envelopes provided were Freepost and did not need stamping, a significant proportion continued to arrive bearing stamps, or a response arrived by way of fax or a telephone call. The final proportion of responses sent at the respondent's own expense was 18 per cent. The corresponding figure for the 1998 survey was five per cent.

Forty six per cent of respondents (68 per cent of respondents with pigs) requested a copy of a summary sheet of the results of the survey. Eighteen per cent declared that they had an e-mail address and 84 per cent of those with an e-mail address and pigs provided an address for notification of when the summary information is placed on the University of Exeter's World Wide Web site.

Twenty letters were enclosed, more fully explaining a situation, or offering considered opinions – often inspired by Section F, which requested respondents' views about the future of their businesses. One attached a copy of a report on the UK Pig Industry from the House of Commons' Agriculture Select Committee.

Sixteen envelopes were returned by the Post Office with a note that the addressee had "Gone away" or "Not known at this address" and nine respondents declared that they had not kept pigs for ten or more years, in one case forty years.

As in both 1996 and 1998, no respondent expressed any grudge against the University of Exeter or any other centre engaged in the DEFRA Commissioned Work Programme. However, ten offered negative remarks about DEFRA/MAFF, 30 about the Government, six about the Prime Minister and one about the European Union. Just one declared himself unwilling to co-operate other than for a fee – of £200, though one enquired, presumably rhetorically, "How much are you paying for all the information you want?" and another declared that pig numbers were the "same as last year - will count if you pay me for my time", going on to complete the rest of the form.

The apparent unpopularity of the Government amongst pig farmers is responsible for the total number of negative remarks being more than double that of either of the two previous surveys. Whether that is a measure of a real difference between Government policy and pronouncements around the time of the previous surveys and the present survey, or more a matter of greater farmer frustration because of a longer period of low profitability, must be a matter for conjecture. Nevertheless, seen in perspective, the number of responses bearing a negative remark was still rather less than 1.5 per cent.

Of the more than 900 respondents who volunteered some information beyond that strictly required by completion of the designated spaces of the questionnaire, 65 per cent did so to confirm that they did not have pigs on the holding on 1st March, or to add background information. Predominant amongst reasons given were sustained losses, or other financial circumstances; retirement, ill health or death of the farmer; disease in the national or their own pig herd; a change of farm policy; and withdrawal from the market of integrated "contract" suppliers and buyers. A few indicated that the circumstance of no pigs on 1st March was unusual and that they would shortly be re-stocking.

Twenty-one respondents recorded that they had been culled-out because of Foot and Mouth Disease, either as actual cases or as contiguous premises. Only two had so far re-stocked and six stated that they definitely would not.

Nineteen respondents noted that they were in the process of de-stocking and would soon be out of production. Of those, seven did not specify how many pigs they had on 1st March.

Following the 12 per cent reduction in response from the remarkably good 78 per cent of the 1996 structure survey to the 66 per cent of 1998, reasons for the decline in response were carefully examined. They were identified as having been primarily an extension of the mailing list to include names and addresses from three previous June Agricultural Censuses, rather than just two (increasing the number who had long gone out of production, or moved from the holding to which the questionnaire was addressed), and inclusion on the questionnaire of questions about weaning ages, teeth clipping and tail docking.

Perhaps most important of all, at the time the 1998 survey forms arrived on farms, pig prices were only just beginning to show some slight recovery following seven months of sustained decline. During the previous two months (December 1997 and January 1998), even the most efficient producers would have been hard-pressed to show a profit on pigs sold. The general mood in the industry was of depression, with many producers either having taken the decision to cease pig production or fearing that such a decision would shortly be forced upon them.

The present survey did not include questions likely to be considered particularly sensitive, but it was despatched following a period of low profitability in pig production that had continued for most of the four years since the previous survey, and the sharp contraction in the size of the industry referred to in the opening paragraphs above. Furthermore, the "age" of the mailing list was greater[3], covering

[3] See Footnote 2, above, for more detail

three June Census years as in 1998, but not including the most recent Census, June 2001. Thus, many of those producers who had already taken a decision to cease pig production at the time of the 1998 survey were included on the mailing list for the present survey.

As with the previous surveys, farmers were inclined to presume that the information from a holding out of production, or in the process of going out of pig production, would not be of interest, or they were disinclined to supply the information at such a time. This was confirmed by a number of telephone conversations with farmers, some of whom could not be persuaded to supply the information requested even when the importance of including cases such as their own was explained to them. In view of the intention to gather information on those who had gone out of production and who may or may not have applied for one or other of the Outgoers schemes, that was particularly unfortunate.

In the circumstances, although a 61 per cent response was somewhat disappointing, particularly when compared with the 78 per cent response of 1996, it is not unreasonable to take a measure of satisfaction from the fact that the response rate was as good as it was. On the evidence, the inclusion of Section F, questions on respondents' concerns about the future of their businesses, to which many clearly gave careful attention, was a factor in encouraging the response that was achieved. Many forms with a nil pigs return, and some that were otherwise blank, were returned with section F complete.

As can be seen from Table 3, 2738 usable forms were returned, 60.5 per cent of the number sent out. This was after rejection of 16 returned as undeliverable and 10 identified as non-cooperators, either by return of the form or other communication.

Table 3 Response to the survey, by year that holding was last in field of survey

	Holding last in field of survey at June			**All**
	1998	**1999**	**2000**	**years**
Forms sent out	683	626	3218	4527
Usable forms returned	416	397	1925	2738
%	60.9	63.4	59.8	60.5

The mailing list (derived, for reasons explained above, from three years' Agricultural Census returns) was 41 per cent greater than it would have been if had it been restricted to field of survey holdings identified by the June 2000 Agricultural Census alone. Contrary to what might be expected, the response from holdings not recorded as having been in the field of survey since 1998 or 1999 did not detract from the overall response to the survey. The best response rate, 63.4 per cent, was recorded by those last known to have been in the field of survey in June 1999, with 1998 field of survey herds responding better than those recording field of survey numbers as recently as June 2000.

3. ANALYSIS OF SURVEY RESULTS

The survey respondents

The 3218 holdings sent a questionnaire and known to have had the qualifying number of pigs (i.e. within the field of survey) at the time of the 2000 June Census are classified in Table 4, column 1. From those holdings, the response rate was 59.8 per cent. Column 2 provides the corresponding data for 1309 holdings sent a form (because they were inside the field of survey at 1st June 1998 or 1st June 1999) even though they were outside the field of survey at 1st June 2000. From those holdings, the response rate was 62.1 per cent.

Table 4 Responses to the survey, by status (based on numbers of sows and trading pigs at 1st June 2000) relative to the field of survey

	Inside field of survey at 1st June 2000	Outside field of survey at 1st June 2000	Total
Non-respondents	1293	496	1789
Respondents	1925	813	2738
Nil returns	589	567	1156
Positive returns	1336	246	1582
Inside field of survey on 1st March 2002	1226	163	1389
Outside field of survey on 1st March 2002	110	83	193
Total	3218	1309	4527
Respondents as % of total	59.8	62.1	60.5

Of the 2738 usable responses, 1156 (42 per cent) were nil returns, recording no pigs. Of those, 589 had been inside the field of survey at 1st June 2000. The number of holdings returning a questionnaire recording at least some pigs on 1st March 2002 was 1582. Of those, 193 had less than 20 breeding sows or 200 trading pigs on that date and were thus outside the field of survey.

Table 5 Holdings with pigs and within the field of survey at the survey date, 1996, 1998 and 2002

Survey year	**1996**	**1998**	**2002**
Questionnaire forms sent out	4594	4485	4527
Usable responses	3507	2980	2738
Nil returns (no pigs)	477	396	1156
Nil returns as % of usable responses	14	13	42
Positive returns (with pigs)	3030	2584	1582
Positive returns outside field of survey	217	146	193
% of positive returns outside field of survey	7	6	12
% moved into field of survey	5	21	12
% remaining outside field of survey	70	41	80
% moved out of field of survey	11	9	36

The numbers and percentages of holdings that a) still had pigs and b) still fell within the field of survey at the survey date in 2002 make a striking comparison with the corresponding figures for 1998 and 1996 (Table 5). Because the mailing list took account of three years' June Census returns in 1998 and 2002, but only two in 1996, and because the most recent Census data used in 2002 (June 2000) was one year further back in time, the figures have to be interpreted with some care. Nevertheless, the fact that 42 per cent of responding holdings had no pigs, compared to 13 per cent and 14 per cent, is clearly significant. At the same time, 12 per cent of positive returns proved to be outside the field of survey (i.e. no longer having 20 or more sows or 200 or more feeding pigs), compared to 6 per cent and 7 per cent in the two previous survey years. Taken together, these measures indicate a large *and continuing* exodus from the industry.

Of the 1389 herds established as being inside the field of survey at 1st March 2002, 12 per cent (163) were not (or had simply not returned a census form) at 1st June 2000. Eighty per cent (650) of respondents outside the field of survey at 1st June 2000, but known to have been inside in one or both of the two previous years, remained outside the field of survey at 1st March 2002. Of respondents known to have been inside the field of survey at 1st June 1997, 36 per cent (699) were outside at 1st February 1998. These figures indicate that between June 2000 and March 2002, pig producing holdings were more likely to move out of pig production, or former pig holdings to remain out, than to move in, and provide a stark contrast with 1996 and 1998.

Figures relating to the 1389 holdings inside the field of survey at 1st March 2002, and on which data was successfully collected, are given in Table 6.

Table 7 offers some further analysis of responding holdings, by field of survey. Of the 1582 holdings responding positively, i.e. with the information that they had at least *some* pigs on 1st March 2002, 926 kept breeding sows and 1490 kept trading pigs. The corresponding figures relating to the field of survey (those with at least 20 breeding sows and/or 200 trading pigs) at 1st June 2000 were somewhat lower, with higher average herd sizes.

The number of responding holdings inside the field of survey at 1st March 2002 was greater than in June 2000 because of the addition to the field of survey of holdings outside the field of survey in June 2000. They were sent a form because they were known to have been inside the field of survey in either June 1998 or June 1999, even though they were not at 1st June 2000.

The increase between June 2000 and March 2002 in number of respondents inside the field of survey should not be taken as indicative of a wider increase in numbers of pig-keeping holdings in England and Wales. It is simply that the survey's approach to collecting data succeeded in gathering information on farms that, for one reason or another, had not been recorded as having 20 or more breeding sows and/or 200 or more trading pigs in the June 2000 Agricultural Census.

Table 6 Results from 1389 holdings responding to the survey and having at least 20 breeding sows and/or 200 trading pigs at 1st March 2002

	Number of responses	Total	Average
SECTION A: Number of pigs on the holding			
Total pigs on the holding	1389	2,243,285	1615
Pigs owned by the farm business			
Breeding sows, farrowing sows and served gilts	777	189,380	244
Trading pigs			
Suckling piglets	766	309,708	404
Rearing pigs (to approx. 35 kg)	770	585,370	760
Finishing pigs	793	642,205	810
Other pigs	680	23,042	34
Total	925	1,749,709	1892
Pigs owned by a third party			
Breeding sows, farrowing sows and served gilts	29	9,804	338
Trading pigs			
Suckling piglets	20	13,830	692
Rearing pigs (to approx. 35 kg)	114	112,313	985
Finishing pigs	390	356,494	914
Other pigs	21	1,139	54
Total	480	493,580	1028

SECTION B: Breeding sow accommodation			
Breeding sows in indoor farrowing accommodation	593	37,225	63
Breeding sows in outdoor farrowing accommodation	108	21,247	197
Dry sows/served gilts in:-			
Cubicles and free access stalls	123	11,774	96
Yards with electronic sow feeders	107	19,003	178
Yards with individual sow feeders	133	12,021	90
Yards or kennels with short stall feeders	92	17,565	191
Yards or kennels with floor/trough feeders	373	42,820	115
Outdoor accommodation	120	32,737	273
Unspecified or other	45	4,792	106

Table 6 Results from 1389 holdings responding to the survey and having not less than 20 breeding sows and/or 200 trading pigs at 1st March 2002 (continued)

	Number of responses	Total	Average
SECTION C: Rearing accommodation			
Number of weaners in:-			
Houses with fully slatted floors/flat-decks	243	189,017	778
Houses with partly slatted floors	270	112,208	416
Houses with solid lying area and solid dung passage	338	143,093	423
Deep straw yards	249	127,013	510
Outdoors	86	90,132	1048
Other	56	36,220	647
SECTION D: Finishing accommodation			
Number of finishing pigs in:-			
Houses with fully slatted floors	192	164,256	856
Houses with partly slatted floors	274	153,748	561
Houses with solid lying area and solid dung passage	629	407,774	648
Deep straw yards	424	233,932	552
Outdoors	24	13,138	547
Other	42	25,945	618

Table 7 Analysis by field of survey, holdings with pigs, sows and trading pigs on 1st March 2002

	All positive respondents	Respondents inside the field of survey at: 1st June '00	1 Mar '02
Holdings with pigs on 1st March 2002	1582	1336	1389
Average number of pigs	1427	1541	1615
Holdings with sows on 1st March 2002	926	826	803
Average number of sows	218	229	248
Holdings with trading pigs on 1st March 2002	1491	1272	1356
Average number trading pigs	1142	1208	1251

Table 8 takes the analysis further, examining holdings, total and average pig numbers by herd type and size, for those holdings inside the 2002 field of survey, i.e. holdings with at least 20 breeding sows and/or 200 feeding pigs at 1st March 2002. Four key herd types are identified; specialist breeding herds selling weaners or stores, specialist rearing herds taking in small weaners and selling stores, specialist finishing herds and all-through breeder-finishers. Each herd type has been sub-divided into those owning the pigs they keep (non-contract) and those whose pigs are owned by a third party (contract). A fifth category, embracing herds not conforming to the defined groups, completes the picture. However, the number of herds is so few, for reasons of confidentiality the data is not presented.

Table 8 Numbers of pig holdings and of breeding sows/trading pigs, by herd size, identified as conforming to certain production types (field of survey, March 2002)

	Herd size 1	Herd size 2	Herd size 3	All herds
Ai Specialist breeder selling weaners or stores (non-contract)				
Holdings	125	87	76	288
Sows	6516	15645	50465	72626
Average	52	180	664	252
Aii Specialist breeder selling weaners or stores (contract)				
Holdings	detail of holdings		14	22
Sows	withheld		7746	8698
Average	for reasons of confidentiality		553	395
Bi Specialist rearer - weaner to store (non-contract)				
Holdings		detail of holdings		5
Trading pigs		withheld		8598
Average		for reasons of confidentiality		1720
Bii Specialist rearer - weaner to store (contract)				
Holdings	17	14	37	68
Trading pigs	5700	10205	59753	75658
Average	335	729	1615	1113
Ci Specialist finisher buying weaners/stores (non-contract)				
Holdings	50	27	64	141
Trading pigs	17118	18687	143811	179616
Average	342	692	2247	1274
Cii Specialist finisher buying weaners/stores (contract)				
Holdings	99	130	147	376
Trading pigs	34934	93264	249530	377728
Average	353	717	1697	1005
Di All-through producers - Breeder-finishers (non-contract)				
Holdings	146	215	118	479
Sows	8559	39893	68198	116650
Average	59	186	578	244
Dii All-through producers - Breeder-finishers (contract)				
Holdings		detail of holdings		6
Sows		withheld		1146
Average		for reasons of confidentiality		191
E Herds of 20 or more breeding sows and/or 200 or more trading pigs not selected for any of the above groups				
Holdings				4
Sows		detail of holdings		32
Average sows		withheld		8
Trading pigs		for reasons of confidentiality		1391
Average trading pigs				348

Note on size groups: For herds with breeding sows, groups A and D, size group one is 20 to 99 sows, size group two 100 to 299 sows, size group three 300 or more sows.

For herds without breeding sows, groups B and C, size group one is 200 to 499 trading pigs, size group two 500 to 999 trading pigs, size group three 1000 or more trading pigs.

Two sub-groups, non-contract specialist rearers and contract all-through producers, proved only just large enough for publication of statistics. Two other sub-groups, contract weaner producers and contract specialist rearers, were small, but sufficiently large to be considered of some importance in the industry.

Whilst the majority of non-contract breeding herds are of less than 300 sows, the contract breeding sector is dominated by large herds. In consequence, the average number of sows in contract breeding herds is greater than that of owner-operated herds. Nevertheless, at 395 sows per herd, the average size is a marked reduction on the figure established by the 1998 survey (507 sows), the largest herds having taken a greater proportionate share of the reduction in activities of some formerly dominant contract operators.

By contrast, contract rearing and contract finishing herds are more widely spread across the various size groups and the average non-contract finishing herd is larger than the average contract finishing herd. Similarly, the average contract rearing herd is smaller than the average of the five non-contract herds recorded. That being said, contract herds dominate the specialist rearing and finishing sectors.

Unlike those two sectors, non-contract herds constitute the great majority of specialist breeding and all-through breeding-finishing herds, and account for the great majority of breeding sows. The pigs in contract rearing and finishing herds usually belong to a feed compounder or meat processor, sometimes to another farmer or farming company. Those operators are not so active in the breeding sector. The survey shows that 95 per cent of all breeding sows are farmer owned, as are 72 per cent of rearing and finishing pigs (78 per cent of all pigs).

The traditional, all-through breeder-finishers account for 61 per cent more sows than the non-contract specialist breeding group.

Estimating total pig numbers

Having established, from the survey results, various measures of the pig population on those farms that returned a usable questionnaire, the next step was to extrapolate the results. The objective was to make statistically reliable estimates regarding those measures on all field of survey pig farms in England, not just those that took part in the survey.

For the purposes of estimating total pig numbers inside the field of survey at 1st March 2002, various data established by the June 2000 Agricultural Census were placed alongside the information gleaned from the present survey. As has been noted, the key group of holdings was the 1389 responding holdings inside the field of survey on 1st March 2002. That consisted of 1226 holdings (88 per cent) that had also been within the field of survey at 1st June 2000 and 163 (12 per cent) that were not, but were in the field of survey at 1st June 1998 and/or 1999 and had since returned to pig production on a scale that might be considered commercial.

For the 2738 responding holdings, few assumptions had to be made. They were readily established as being inside or outside the field of survey at 1st March 2002. The 2738 were further useful in estimating changes that would have taken place between June 2000 and March 2002 on the 1789 non-responding holdings. In the absence of definite information, the assumption was made that non-respondents to the present survey who were in the field of survey at June 2000 would have moved out of pig production or out of the field of survey - over the period between then and March 2002 - at the same rate as those holdings that responded.

Similarly with the non-responding herds that were inside the field of survey in June 1998 or June 1999, but outside in June 2000. In their case, the assumption was made that the proportion moving back into the field of survey for 1st March 2002 would have been the same as that of survey respondents. It was further assumed that changes in herd size for non-respondents moving into the field of survey would have been the same as for respondents moving into the field of survey.

Separate estimates were then made for breeding sows, trading pigs, other pigs, and the numbers of holdings on which they were kept. The results are summarised in Table 9.

Table 9 Estimates of total field of survey numbers of pigs, by type, and holdings at 1st March 2002 compared with corresponding June 2000 census data

	Holdings			Pigs		
	June '00	Mar. '02	% change	June '00	Mar. '02	% change
Breeding sows	2081	1504	-27.7	483,254	339,503	-29.7
Trading pigs	2662	1977	-25.7	3,324,784	2,201,118	-33.8
Other pigs	2344	1263	-46.1	1,386,915	977,025	-29.6
Total pigs	3264	2112	-35.3	5,194,953	3,513,383	-32.4

Overall, pig numbers were estimated to be 32.4 per cent (1,681,570) less on field of survey holdings in England on 1st March 2002 than at 1st June 2000. The decrease was somewhat greater in terms of trading pigs (33.8 per cent) than breeding sows (29.7 per cent). That may indicate that proportionately more breeding sows had been removed in the months before June 2000, or perhaps that there was some modest reversal of earlier reductions in sow numbers in the months immediately before March 2002.

Numbers of field of survey farm holdings with pigs took a still greater cut between June 2000 and March 2002, and in this instance holdings with sows were more likely to cease production than those with trading pigs. Nevertheless, the number of holdings with trading pigs was reduced by a very significant 26 per cent, and the number of holdings with field of survey numbers of pigs (20 breeding sows and/or 200 trading pigs) reduced by 35 per cent.

With the greater reduction in number of holdings than number of pigs, the average herd size increased from 1592 to 1664 total pigs. The average number of 'other pigs' also increased, but average number of sows decreased, by six from 232 to 226 sows, and average number of trading pigs by 136 from 1249 to 1113. That is 4.5 per cent increase in overall herd size, but a 3 per cent decrease in average number of sows and an 11 per cent decrease in average number of trading pigs.

It seems paradoxical that average number of pigs per holding increased whilst average numbers of sows per holding with sows and average number of trading pigs per holding with trading pigs both decreased. The explanation is that proportionally more specialist breeding herds and specialist rearing and/or finishing herds ceased trading during the period June 2000 to March 2002 than all through breeding-finishing herds.

The long-established trend in the pig industry is of decrease in number of holdings with pigs and increase in average herd sizes. That appears, broadly speaking, to have continued over the period between June 2000 and March 2002, but the reductions both in number of holdings with pigs and number of pigs are very large for a time period of less than two years. The decrease against the trend of average sow numbers (on holdings with sows) and average trading pig numbers (on holdings with trading pigs) confirms a picture of major upheaval, rather than mere acceleration of an established trend. As noted above, there seems to have been a particular movement away from specialisation in just one or two of the breeding-rearing-finishing activities. Anecdotal and other evidence that a large proportion of the industry as it was has now disappeared is thus substantiated[4].

Given that two important objectives of the Pig Industry Restructuring Scheme (PIRS) were a reduction in the size of the national pig herd and some accelerated restructuring, the changes seen in the figures may not be universally unwelcome, the PIRS having been a part of the government's Action Plan for Farming, which was agreed with representatives of the farming industry. A major reduction in the size of the industry has certainly been achieved. Whether or not the restructuring that has occurred is likely to be beneficial in terms of the long-term efficiency of the industry is much more questionable – though it could perhaps be argued that the *constructive* phase of such a restructuring was at March 2002 largely still to follow.

To what extent the changes were brought about by the PIRS, or would have occurred anyway, as a result of market forces, is a matter for further examination. If they were largely brought about by market forces, the level of dissatisfaction, even disenchantment, recorded on survey forms is understandable. For its part, the Government might regret that its efforts to soften the pain of a process that industry representatives had agreed was desirable were not more successful. The relatively high profile that the Government and the Prime Minister took on the matter may be

[4] Notwithstanding the concurrence of the survey results with what many in the industry believe to be true, it has to be recognised that there is an apparent discrepancy between the reduction between June 2000 and March 2002 in pig numbers on farms found by the survey and the results for England of the 2002 June Agricultural Census. The 2002 Census indicates a nine per cent reduction in the sow breeding herd between 2000 and 2002, a 17 per cent reduction in pigs of 20 to 110 kg liveweight and a 16 per cent reduction in total pigs. (UK slaughter statistics record a 21 per cent reduction in clean pig slaughterings between the three months ended July 2000 and the three months ended July 2002).

A number of possible explanations for the discrepancy in the figures have been discussed with the Defra Census Branch and the main reason is thought to be significant entry to the industry between 2000 and 2002 of new herds, herds that missed the Exeter survey because they were not recorded in any of the census years 1998, 1999, or 2000. Census branch note a 26 per cent decline in pig numbers on holdings that completed a Census return in both June 2000 and June 2002. Census Branch also comment that non-response bias (respondents showing a different trend to non-respondents) is always a worry and is very difficult to quantify; also that unregistered holdings are a problem in sectors such as pigs where there are no subsidies to encourage registration.

responsible for the degree to which farmer ire was found by the survey to be directed specifically at them.

Consideration of the raised data

Following estimation of total numbers of pigs and holdings within the field of survey on 1st March 2002, by pig type category, the detailed information collected by the National Survey of Pig Production Systems was used to estimate the total picture pertaining on 1st March 2002 on farms meeting the sow and trading pig number criteria. Details of the estimated total situation on 1st March 2002 in England and Wales on farms having at least 20 breeding sows and/or 200 trading pigs are set out in Table 10.

At the time of the February 1998 survey, 12 per cent of herds with breeding sows were still using stalls as dry sow accommodation and 6 per cent were using tethers. Sixteen per cent of all herds with breeding sows were using either stalls and/or tethers and seven per cent of all sows were accommodated in such systems.

Accommodation of non-lactating sows in those ways became illegal in the United Kingdom on 31st December 1998, and the resource that they represented for the industry has disappeared. In as much as the sows that were accommodated in stalls and tethers have not also disappeared, they have been provided with other forms of accommodation.

Table 10 Estimated situation on 1st March 2002 on farms in England having not less than 20 breeding sows and/or 200 trading pigs

	Number of holdings	Total	Average
SECTION A: Number of pigs on the holding			
Total pigs on the holding	2078	3,355,831	1615
Pigs owned by the farm business			
Breeding sows, farrowing sows and served gilts	1456	354,810	244
Trading pigs			
Suckling piglets	1117	451,477	404
Rearing pigs (to approx. 35 kg)	1122	853,323	760
Finishing pigs	1156	936,175	810
Other pigs	1072	36,318	34
Total	1391	2,632,103	1892
Pigs owned by a third party			
Breeding sows, farrowing sows and served gilts	54	18,368	338
Trading pigs			
Suckling piglets	29	20,161	692
Rearing pigs (to approx. 35 kg)	166	163,724	985
Finishing pigs	569	519,679	914
Other pigs	33	1,795	54
Total	704	723,728	1028

Table 10 Estimated situation on 1st March 2002 on farms in England having not less than 20 breeding sows and/or 200 trading pigs (continued)

	Number of holdings	Total	Average
SECTION B: Breeding sow accommodation			
Breeding sows in indoor farrowing accommodation	1111	69,742	63
Breeding sows in outdoor farrowing accommodation	202	39,807	197
Dry sows/served gilts in:-			
Cubicles and free access stalls	230	22,059	96
Yards with electronic sow feeders	200	35,603	178
Yards with individual sow feeders	249	22,522	90
Yards or kennels with short stall feeders	172	32,909	191
Yards or kennels with floor/trough feeders	699	80,225	115
Outdoor accommodation	225	61,334	273
Unspecified or other	84	8,978	106
SECTION C: Rearing accommodation			
Number of weaners in:-			
Houses with fully slatted floors/flat-decks	354	275,540	778
Houses with partly slatted floors	394	163,571	416
Houses with solid lying area and solid dung passage	493	208,594	423
Deep straw yards	363	185,153	510
Outdoors	125	131,390	1048
Other	82	52,800	647
SECTION D: Finishing accommodation			
Number of finishing pigs in:-			
Houses with fully slatted floors	280	239,444	856
Houses with partly slatted floors	399	224,126	561
Houses with solid lying area and solid dung passage	917	594,433	648
Deep straw yards	618	341,014	552
Outdoors	35	19,152	547
Other	61	37,821	618

The types of dry sow accommodation that have assumed a greater proportion of the total are cubicles and free-access stalls, yards with electronic feeders, and yards or kennels with short stall feeders. However, apart from the disappearance of stalls and tethers, changes are well spread and generally unremarkable. Of the housing types that continue, the greatest losses of total share have been sustained by the most traditional forms of housing, yards with individual sow feeders and yards or kennels with floor/trough feeders.

Whilst yards with electronic sow feeders took a bigger proportion of all accommodation in 2002, it is interesting to note that the average number of sows on such systems was not much changed at 178 (174 in 1998). Such systems are not limited to very large holdings, by cost or livestock management considerations.

Another area where there is significant interest in any movement between housing types is outdoor breeding. Changes between the results of the 1998 survey and the present are somewhat confusing. Apparently, both the proportion and the number of sows kept in outdoor farrowing accommodation increased between 1998 and 2002, whilst the number and proportion of dry sows kept outside declined. That seems an unlikely combination and the conclusion must be that respondents with outdoor herds in 2002 assigned a greater proportion of sows to farrowing accommodation, as distinct from dry sow accommodation.

The total number of sows kept outdoors declined between the two survey years by almost 70,000, (42 per cent), whilst the proportion that outdoor sows were of all sows decreased by five per cent to 27 per cent. That is in keeping with the finding that specialist breeding herds were particularly likely to go out of production, many outdoor breeding herds having belonged to the specialist category. The reduction in the proportion of breeding sows kept outside may in the longer term prove to be an interruption, rather than a reversal of the longer-term trend.

Outdoor housing of rearing pigs assumed a bigger share of the total sector in 2002, though the total number of rearing pigs kept outdoors still fell short of the total number kept outdoors in 1998. Looking at average numbers per herd, it is notable that outdoor rearing was favoured by some of the largest herds. The detail of the answers to the questions on outdoor rearer and finisher accommodation suggest that kennels and tents were used in approximately equal proportions by those keeping rearers outdoors, but that kennels accounted for virtually all outdoor finishers.

The other main proportional increase for accommodation of rearers was deep straw yards. Deep straw yards were also a growth area for finishing pigs (though, again, not more pigs in total). In the case of finishing pigs, outdoor accommodation has yet to take off. With both rearing and finishing pigs, houses with fully slatted floors showed some proportional gains. As with sow accommodation, it appears to be older, traditional accommodation that has been most heavily decommissioned.

Holdings where some or all of the pigs belonged to a third party increased from 937 in 1996 to 1087 in 1998. In the latter year, they constituted almost 30 per cent of all holdings in the field of survey. By the time of the 2002 survey, the number of such herds had decreased to 704, but a proportionally greater reduction in holdings where the pigs were owned by the operator of the holding meant that the share of holdings with third party owned pigs increased to 34 per cent of the total.

The number of breeding sows owned by third parties was equivalent to 4.9 per cent. That was a decrease on both 1996 and 1998, when the proportions were 5.6 and 6.8 per cent, respectively. Reduced numbers of finishing pigs belonging to third parties nevertheless became a greater part of the total and the percentage of third party owned finishing pigs increased from 24.6 in 1996 and 27.5 per cent in 1998 to 35.7 per cent in 2002. The corresponding figure for rearing pigs belonging to third parties increased to 16.1 per cent of all rearing pigs, from 7.8 per cent in 1996 and 14.5 per cent in 1998.

The average number of sows per herd was 226 (238 in 1998 and 201 in 1996). Where all sows were owned the average was 244, but where the sows belonged to a third party (a minority of 54 holdings) average herd size was 338. The average indoor sow herd numbered 209, the average outdoor herd 469 (Table 11).

Table 11 Average number of sows, by ownership and housing

	Breeding sows per herd
All herds with breeding sows	249
Holder owned herds	245
Third party owned herds	369
Indoor herds	209
Outdoor herds	469

Table 12 provides detailed information on ownership of sows and on the ways in which they are housed and fed. Holdings with both owned and third party sows were excluded from the analysis of ownership, as were holdings with mixed indoor and outdoor farrowing from that analysis.

Table 12 Proportion of sows in various forms of ownership, housing and feeding system

	Number of herds	Number of sows	% sows	Av. sows
100% holder owned herds	1385	339932	95.0	245
100% third party owned herds	47	17245	4.8	369
Indoor herds (100% indoor farrowing)	1191	249472	69.8	209
Outdoor herds (100% outdoor farrowing)	198	92745	25.9	469
Herds with 80% or more of dry sows				
in cubicles and free access stalls	84	12272	3.3	146
fed by electronic sow feeder	109	28232	7.6	260
fed in individual feeders	139	20901	5.6	151
Short stall feeders (trickle, single drop/wet)	81	19762	5.3	245
group floor or trough fed	371	67648	18.1	182

Table 13 offers similar analysis of the rearing and finishing activities. As in the earlier surveys, the proportion of rearing and finishing pigs in 100 per cent third party owned herds was much greater than was seen with breeding sows. Furthermore, that proportion was found to have increased since the 1998 survey from 22 to 27 per cent. Meanwhile, the 100 per cent holder owned share declined from 77 to 72 per cent.

Table 13 Proportion of rearing and finishing pigs in various forms of ownership and housing system

	Number of herds	Number of pigs	% pigs	Av. pigs
Ownership				
100% holder owned	1302	1,784,644	72.1	1371
100% third party owned	665	674,769	27.3	1015
Rearing				
100% indoor rearing	1095	799,997	78.7	731
100% outdoor rearing	85	109,187	10.7	1291
Finishing				
100% deep straw yards	343	230,126	15.8	672
100% solid lying area & solid dunging area	592	424,100	29.1	717
100% outdoors	28	15,613	1.1	564

Increase in the proportion that third party owned rearing and finishing pigs are of the total should not be allowed to obscure the fact that the great majority of pigs are owned by the person operating the holding. Neither should it be forgotten that the total number of pigs in third party ownership is much less in 2002 than it was in 1998. It should also be noted that the average size of third party owned rearing and finishing herds is significantly less than that of holder owned pig herds, the converse of the situation with sows. The average number of rearers and finishers on 100 per cent third party owned farms increased by 3 per cent between 1998 and 2000, whilst the corresponding number on holder owned farms decreased by 3 per cent.

The diverse changes in average herd sizes, including the decrease in average number of sows on farms with third party owned stock should probably not be taken as indicative of trends that are likely to be continued, but more of the upheaval that has affected the industry over the past four years. New trends have yet to be established, and in many cases may yet prove to be continuations of the old.

However, the increase in the proportion of pigs kept outdoors during the rearing stage (from 8.5 to 12.9 per cent) may well be a trend that can be depended upon to continue. Increase in the proportion of finishing pigs kept in deep straw yards (from 19.5 to 23.4 per cent) may also be seen as part of the same pattern, especially as finishing pigs outdoors remains, at least for the time being, a relatively insignificant part of the total finishing activity (increase between 1998 and 2002 from 0.9 to 1.3 per cent).

Analysis of type of accommodation by herd size and by geographic area

Detail of the distribution of breeding sows, rearing and finishing pigs across the various housing types is provided by Tables 14 and 15. Information on the number of pigs housed in a particular way by each herd size or geographical group is supplemented with the total number of breeding sows or trading pigs on the same holdings.

Table 14, for instance, reveals the relative numbers of holdings and pigs in the various herd size bands and the relative popularity of the different forms of pig accommodation. Despite much reduced numbers of holdings and pigs, compared to the 1996 and 1998 surveys, and the disappearance of stalls and tethers as a form of dry sow accommodation, the pattern disclosed is much as previously. That is, outdoor sow herds are predominantly large herds; the majority of sow herds with electronic feeders are in the 100 to 299 sow size band; and sow yards with individual feeders and the "traditional" system of yards or kennels with floor or trough feeding are most favoured by medium and small herds.

Differences between herd size groups in inclination to use one housing type or another are less pronounced with rearing and finishing accommodation.

In Table 15, some regional differences are seen in sow, rearer and finisher accommodation. For sows, cubicles and free access stalls find more favour in the north than elsewhere, and yards with electronic sow feeders are also relatively popular there. In East England, yards with individual feeders find greater favour. Slatted weaner accommodation is most used in the north, where deep straw yards are also well used.

Outdoor sow herds are found in all regions, but with a bias towards the south and the west. Outdoor rearing and finishing are skewed towards East England.

Figure 3 E.U. regions, England and Wales

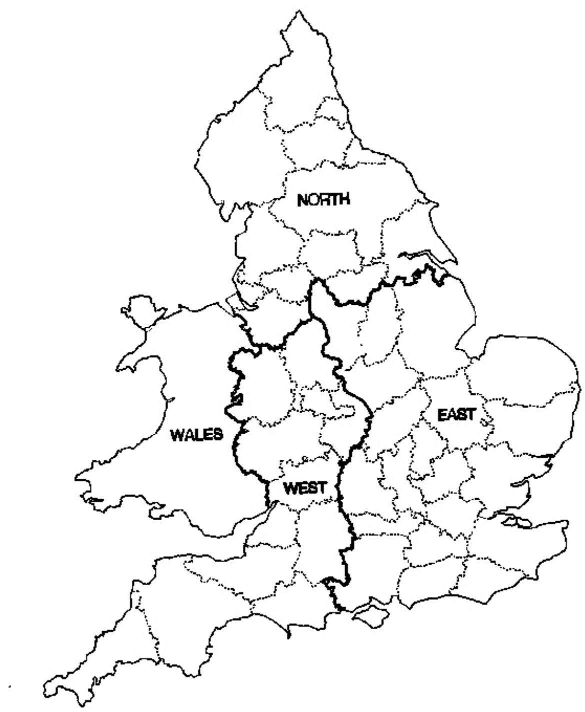


Table 14 Breeding sow, rearing and finishing pig accommodation, by herd size

BREEDING SOWS	20 to 99 sows herds	20 to 99 sows sows so housed	20 to 99 sows Total sows	100 to 299 sows herds	100 to 299 sows sows so housed	100 to 299 sows Total sows	over 299 sows herds	over 299 sows sows so housed	over 299 sows Total sows
Breeding sows in indoor farrowing accommodation	416	8,545	23,429	455	25,390	82,943	230	35,766	125,720
Breeding sows in outdoor farrowing accommodation	37	1,017	2,132	52	3,813	10,548	111	34,975	78,769
Dry sows/served gilts in:-									
Cubicles and free access stalls	64	2,078	3,547	105	8,378	19,867	62	11,603	35,738
Yards with electronic sow feeders	36	1,812	2,497	103	12,272	19,033	62	21,519	33,482
Yards with individual feeders	97	3,934	6,100	114	10,319	20,631	36	8,260	15,211
Yards or kennels with short stall feeders	30	1,306	1,877	77	9,658	16,437	66	21,945	37,100
Yards or kennels with floor/trough feeders	234	7,578	12,909	294	28,438	54,104	167	44,180	88,528
Outdoor accommodation	60	1,628	2,700	54	6,587	10,398	111	53,118	71,723

REARING PIGS	200 to 499 pigs herds	200 to 499 pigs pigs so housed	200 to 499 pigs total trading pigs	500 to 999 pigs herds	500 to 999 pigs pigs so housed	500 to 999 pigs total trading pigs	over 999 pigs herds	over 999 pigs pigs so housed	over 999 pigs total trading pigs
Number of weaners in:-									
Houses with fully slatted floors/flat-decks	38	6,280	14,424	57	15,739	43,173	254	253,198	758,037
Houses with partly slatted floors	66	9,980	23,244	95	26,181	70,335	219	126,479	518,700
Houses with solid lying area and solid dung passage	114	19,719	37,499	117	34,862	82,818	176	148,682	388,695
Deep straw yards	74	14,162	24,828	79	25,155	58,352	182	143,778	383,642
Outdoors	13	2,582	4,558	28	10,002	21,167	76	118,336	237,074

FINISHING PIGS	200 to 499 pigs herds	200 to 499 pigs pigs so housed	200 to 499 pigs total trading pigs	500 to 999 pigs herds	500 to 999 pigs pigs so housed	500 to 999 pigs total trading pigs	over 999 pigs herds	over 999 pigs pigs so housed	over 999 pigs total trading pigs
Number of finishing pigs in:-									
Houses with fully slatted floors	29	6,637	11,398	44	3,623	32,750	206	219,081	606,137
Houses with partly slatted floors	80	16,435	28,011	90	27,566	65,587	219	179,630	544,790
Houses with solid lying area and solid dung passage	203	42,765	67,998	233	107,202	169,140	407	440,328	890,907
Deep straw yards	160	38,448	55,963	159	70,994	112,069	274	230,205	624,948
Outdoors	6	778	1,851	6	2,821	4,961	12	17,046	32,272

Table 15 Breeding sow, rearing and finishing pig accommodation, by region

	North England			West England			East England		
BREEDING SOWS	herds	sows so housed	Total sows	herds	sows so housed	Total sows	herds	sows so housed	Total sows
Breeding sows in indoor farrowing accommodation	470	25,995	91,118	197	12,721	44,579	444	31,026	96,468
Breeding sows in outdoor farrowing accommodation	30	3,462	11,063	60	16,049	27,562	112	20,296	52,826
Dry sows/served gilts in:-									
Cubicles and free access stalls	114	9,894	23,751	37	4,987	15,174	79	7,178	20,227
Yards with electronic sow feeders	96	14,291	22,406	24	5,293	8,536	81	16,019	24,071
Yards with individual feeders	54	4,019	7,481	52	5,000	8,637	142	13,503	25,832
Yards or kennels with short stall feeders	64	11,352	18,486	39	11,299	18,887	69	10,258	18,040
Yards or kennels with floor/trough feeders	313	37,272	66,705	111	9,051	22,981	275	33,902	65,892
Outdoor accommodation	34	6,353	10,282	73	13,606	23,200	118	41,375	51,339

	North England			West England			East England		
REARING PIGS	herds	pigs so housed	total trading pigs	herds	pigs so housed	total trading pigs	herds	pigs so housed	total trading pigs
Number of weaners in:-									
Houses with fully slatted floors/flat-decks	194	1113,276	330,701	48	63,661	175,375	112	98,602	310,311
Houses with partly slatted floors	195	67,264	261,650	86	42,973	165,979	112	53,335	186,525
Houses with solid lying area and solid dung passage	146	42,593	113,780	77	24,307	75,291	270	141,695	330,504
Deep straw yards	140	54,348	173,722	61	42,744	95,959	162	88,061	200,753
Outdoors	28	16,232	47,587	31	37,352	79,772	67	77,806	136,514
FINISHING PIGS									
Number of finishing pigs in:-									
Houses with fully slatted floors	169	125,428	317,005	51	50,900	161,549	60	63,116	171,924
Houses with partly slatted floors	208	91,510	279,901	90	51,566	141,078	101	81,049	218,919
Houses with solid lying area and solid dung passage	227	96,784	258,254	144	73,382	157,424	545	424,267	721,420
Deep straw yards	309	158,179	318,731	71	48,384	137,603	238	134,451	339,643
Outdoors	6	2,057	5,564	10	1,211	2,625	19	15,884	33,310

4. PIG OUTGOERS/ONGOERS SCHEMES

Section E of the questionnaire investigated some aspects of respondents' experience of the Pig Outgoers and Ongoers schemes, the component parts of the Pig Industry Restructuring Scheme (PIRS), a part of the Government's Action Plan for Farming, agreed between the Prime Minister and industry leaders in March 2000. The objective of the PIRS was to facilitate the longer-term development of an efficient and sustainable pig sector within the UK agricultural industry.

The first Outgoers Scheme was open for applications between 4th December 2000 and 2nd March 2001. Following the outbreak of Foot and Mouth Disease, a second Outgoers Scheme was opened and was available from 12th March to 20th April 2001. To be accepted for the schemes, it was not necessary to have breeding pigs at the date of application; June 1998 was the key date for participation.

The Outgoers schemes sought to reduce production capacity through the removal of less efficient producers, with the consequence that core efficiency within the industry would be improved. Producers were invited to tender a specific payment for ceasing pig production for a ten year period. It was presumed that less efficient producers, those with little recent investment in production facilities, good potential alternative uses for resources, low expectations of future profitability and little desire to continue in pig production would put in the lower bids.

The Ongoers Scheme was intended to assist those producers wishing to continue in production to overcome any competitive disadvantages and was open for applications for six months from 22nd January 2001. It offered a five percentage point contribution for a two year period towards interest payments on an approved term loan, i.e. a loan taken out at 8 per cent would cost the farmer a net 3 per cent.

A further element of the Ongoers Scheme was a measure specifically for larger businesses with pig enterprises, whereby agricultural businesses with the equivalent of more than ten full-time workers were required to decommission, or render unusable for pig breeding, 16 per cent of their June 1998 sow capacity until July 2003.

There were 432 successful applications to the Outgoers Mark 1 Scheme and 505 to Outgoers Mark 2. The number of successful applicants to the Ongoers Scheme was 705. It is understood that all complete and eligible applications to the Ongoers Scheme received by the deadline were successful. A proportion of Outgoers applications were rejected for one or more of the following reasons:-

- the bid was too high,
- the applicant failed to meet eligibility criteria,
- the application missed the deadline,
- the application was not signed by the applicant's landlord
- the application did not include a bid

With reference to the first reason and the Mark 2 scheme, it should particularly be noted that no successful applicant under Outgoers Mark 2 was allowed a greater payment than the highest received by a successful applicant under the original scheme.

The total number of successful PIRS applicants was 1642, 11 per cent of the total number of holdings estimated eligible at June 1998.

Table 16 presents the information collected from the 1386 March 2002 field of survey herds on participation in and experience of the Outgoers and Ongoers schemes. The data is unweighted; application of the same raising factor as is used elsewhere in this report for holdings with breeding sows would increase the number of applicants to Outgoers 1 to 83 (18 acceptances), applications to Outgoers 2 to 27 (11 acceptances), and to the Ongoers scheme 393 (365 acceptances).

In all cases, the field of survey therefore accounts for only a minority of scheme applications and acceptances. In the case of Outgoers 1 and 2, that is not surprising, as implementation of a successful application would result in disappearance from the industry and the March 2002 field of survey. In that context, the high proportion of acceptances that were not taken up is explicable; if the scheme had been taken up, the holding would not feature in the data.

Table 16 Participation in and experience of PIRS Outgoers and Ongoers schemes, field of survey herds, unweighted data.

	Number	Average sow numbers at time of application	Average sow numbers on 1st March 2002
Outgoers 1			
Herds that applied for the scheme	46	238	126
Herds accepted	10	258	215
Outgoers 2			
Herds that applied for the scheme	15	258	189
Herds accepted	6	476	347
Ongoers			
Herds that applied for the scheme	219	454	302
Herds accepted	195	458	315

Outgoers 1: Two respondents offered an explanation of why they did not take up the scheme, even though their application was accepted.
Only two of the ten herds accepted for the scheme had no breeding sows on 1st March 2002

Outgoers 2: One respondent volunteered the information that he did not take up the scheme, even though his application was accepted, adding that it was a "stupid decision"
Only one of the six herds accepted for the scheme had no breeding sows on 1st March 2002

Ongoers: Of the 195 herds reporting that they were accepted for the Ongoers scheme, 50 nevertheless had no breeding sows on 1st March 2002

That a larger proportion of Ongoers applicants were not represented in the field of survey is disappointing, but the high proportion of holdings accepted to the scheme that were nevertheless not keeping breeding sows on 1st March 2002 may offer an explanation for this. Despite being accepted for the Ongoers scheme, many pig producers had nevertheless decided to cease production.

The claim by 11 per cent of "applicants" that they were not accepted for the Ongoers scheme may seem difficult to reconcile with the official information that all complete and eligible applications received in time were accepted. In addition to misapprehension of the survey question and inaccurate answering, it may be that being told at some stage that their holding or investment proposal was ineligible, or having an incomplete application returned for completion and re-submission, was interpreted by some would-be applicants as a refusal.

Within the field of survey, 1007 respondents indicated that they had not applied for any of the schemes and 435 offered a reason for not having done so. A multitude of reasons was dominated by producers not wanting, at the time, to go out of production (in the case of the Outgoers schemes), or to incur new debt (in the case of the Ongoers scheme). Some believed themselves ineligible for any of the schemes, a few claimed not to know anything about the schemes. A couple noted that their business was of a size from which the Ongoers scheme would have required a reduction in sow numbers, and they were not prepared to accept that. More than a few thought the money on offer insufficient as an inducement to end pig production, or even to complete the necessary paperwork. One respondent noted that his accountant had advised that the cost of making the application was likely to exceed any financial benefits of acceptance. Others noted in their answer to the question their distrust of and disdain for the Government.

Of the 46 who applied for Outgoers 1, 37 provided a reason. Almost all related to poor profitability of the unit, some noting that they were already out of production at the time of application, or that they had already taken the decision to exit the industry anyway. Some referred to the financial benefit, in some cases relating it to their own indebtedness. Again, there was reference to the Government, “thought the Government was looking to do away with the small pig producers”.

Twelve of the 15 applying for Outgoers 2 provided a reason. The reasons given were very similar to those for Outgoers 1.

One hundred and seventy-seven Ongoers applicants provided a reason. Key words in the reasons were “finance”, “money”, “restructure” (in some cases the pig unit, in others financial arrangements), “assistance”, “need” and “reduce” (borrowings and debts). Most positively, a few were on the lines of “a consultant drew up a ten year plan, which was supported by the bank and looked workable”. Somewhat less positive were, “Outgoers refused, so went for Ongoers”, and, “To try and keep business, but I am doubtful”.

Table 17 Participation in and experience of PIRS Outgoers and Ongoers schemes, all usable responses, unweighted data

	Number	Average sow numbers at time of application	Average sow numbers on 1st March 2002
Outgoers 1			
Herds that applied for the scheme	190	179	42
Herds accepted	112	176	18
Outgoers 2			
Herds that applied for the scheme	55	169	58
Herds accepted	36	212	53
Ongoers			
Herds that applied for the scheme	230	781	378
Herds accepted	202	626	383

Table 17 includes all responses relating to the Ongoers and Outgoers schemes from all 2733 usable forms returned. Inclusion of herds that were not in the field of survey at 1st March 2002 greatly increases the number of responses from Outgoers 1 and 2 applicants (from 46 and 16) and adds data on a further 11 Ongoers applicants. Average herd sizes of the Outgoers were significantly less, both at the time of application and on 1st March 2002, than those of the relatively few who remained in the field of survey in March 2002. Ongoers' herd sizes were greater.

Reasons for application were provided by 147 Outgoers 1 applicants, 41 Outgoers 2 applicants and 167 Ongoers. In all cases, the pattern was much as for herds within the field of survey. Ongoers 1 applicants' reasons featured "retirement" somewhat prominently, along with "production already ceased". One each explained, "Too many enterprises on farm", "Pig unit sold for development" and, "Went into liquidation".

An Outgoer 2 stated as his reason, "To get some cash to change use of buildings" and an Ongoer, "Assistance was being made available – we need all the help we can get."

5. RESPONDENTS' VIEWS OF THE FUTURE

Section F, the last main section of the questionnaire, asked respondents about their greatest concerns regarding the future of their business. They were asked to tick no more than three of eight suggested concerns, or write in a ninth and make that one of their three.

The section was not intended as a substitute for economic or other analysis, but to discover the views of those who own and manage pig producing businesses. The perceived relative magnitudes of various problems are not necessarily the same as those that would be identified by cold economic analysis. Perceptions may be influenced at any particular time by current or recent events, political, newspaper or other campaigns. In any event, the perspective of a working farmer, embroiled in the day-to-day practicalities of his business, is unlikely to be entirely dispassionate. The size and nature of the business is also likely to influence perspectives. None of these considerations detract from the value of the opinion-finding exercise, or of its results. Quite the contrary, in fact.

The section was well received, and is believed to have encouraged some who might not otherwise have done so to respond to the survey. Some questionnaires were returned with that section alone completed, and more than 400 were returned with the information that the holding was now out of pigs, but Section F nevertheless completed – often with thoughtful additional comments and, in some cases, covering letters.

More than a few respondents found it difficult to select only three concerns and some added a comment on the lines of, "All of these factors of great concern", even, "All apply. It is stupid to try and select three". However, as can be seen by the average numbers of "votes" in Table 18, most field of survey respondents answered the section and the majority managed to select just three concerns.

More than forty write-in comments referred to the government, typically its perceived indifference, even hostility, to the pig industry, small farmers, or farming in general. The comment, “All of the above and the reluctance of the government to admit to the crisis in farming and support us” could be used as a summary of many of the comments.

Disease problems, particularly Wasting Diseases, Foot and Mouth Disease and Swine Fever, also featured prominently in the write-in concerns, and in some cases were associated with “imported pigmeat”.

The analysis presented in Table 18 is limited to field of survey herds, those still with commercial numbers of pigs at the time of the survey. The responses are tabulated by size of the enterprise as well as in total.

All herd size groups identified “Imported pigmeat from countries not subject to the same legislation” as their greatest concern, 29 to 30 per cent of respondents marking that choice, regardless of size of enterprise.

Ranking second and third across all size groups were “Profit margins insufficient to invest with confidence for the future” and “The power over the industry of supermarket groups”, with about 22 and 20 per cent, respectively. Given the large number of comments about lack of profitability, in the Outgoers/Ongoers section as well as this section and in general, it is perhaps surprising that “Profit margins insufficient to invest with confidence for the future” did not receive a yet higher rating.

“Ever tighter welfare, hygiene and other regulations” formed a third rank, standing alone, at about 13 per cent, again fairly uniform across all size groups.

“Increased feed cost because of legislation/supermarket demands”, “The risk of a food scare relating to pigmeat”, “Difficulty of finding and retaining suitable labour” and “The power within the industry of large commercial businesses” were all fairly close in the rankings given, garnering three to five per cent of selections. However, an interesting difference across herd size groups is seen with the latter two. A higher overall rating might perhaps have been expected for “Difficulty of finding and retaining suitable labour” and it was accorded that by the larger businesses. Presumably, those are the ones employing labour, as distinct from the essentially self-employed and family labour forces of the smaller businesses.

Conversely, larger businesses were rather less concerned than smaller businesses about “The power within the industry of large commercial businesses”. Respondents in the larger size groups were in some cases a part of what might be regarded as “large commercial businesses”, others probably felt more secure in competing and bargaining with the larger organisations than did many of the smaller operators.

Table 18 Pigs farmers' greatest concerns for the future of their businesses, 1389 field of survey holdings, March 2002

	Size group 1		Size group 2		Size group 3		All Fof S herds	
	number	%	number	%	number	%	number	%
Ever tighter welfare, hygiene and other regulations	174	13	179	13	167	12	**520**	13
Increased feed cost because of legislation/supermarket demands	70	5	56	4	56	4	**182**	4
Imported pigmeat from countries not subject to the same legislation	368	28	415	29	397	29	**1180**	28
Profit margins insufficient to invest with confidence for the future	284	21	306	22	312	22	**902**	22
Difficulty of finding and retaining suitable labour	20	2	38	3	60	4	**118**	3
The power within the industry of large commercial businesses	53	4	32	2	25	2	**110**	3
The power over the industry of supermarket groups	263	20	284	20	261	19	**808**	20
The risk of a food scare relating to pigmeat	52	4	55	4	60	4	**167**	4
Other	49	4	54	4	53	4	**156**	4
Total	**1291**		**1375**		**1353**		**4019**	
Number of holdings	444		483		459		1386	
"Votes" per holding	3.0		2.9		3.0		3.0	

6. ORGANIC PRODUCTION

The questionnaire was headed with a tick box for organic production. Only four respondents ticked the box to indicate that they were not organic producers, but 190 usable forms were ticked to indicate organic production and 150 of those proved to be within the field of survey. Table 19 presents raised data, representing estimates of the total figures for all field of survey organic pig farms in England.

Table 19 Organic pig production

	Herds	Breeding sows		Trading pigs	
		Total	per herd	Total	per herd
Specialist breeding (incl. contract)	47	8,796	188	22,266	475
Specialist rearing (incl. contract)	16	-	-	22,958	1,432
Specialist finishing	23	-	-	42,989	1,843
Contract specialist finishing	41	-	-	49,903	1,223
Breeding-finishing (incl. contract)	131	29,664	226	172,996	1,319
Total	**258**	**38,460**	**216**	**311,112**	**1,205**

Numbers of Contract specialist breeding farms, non-contract specialist rearers and contract breeder-finishers were too small for publication without breech of confidentiality, so have been included in Table 19 in a combined contract and non-contract figure for those groups. It is notable, however, that all pig herd production types, contract and non-contract were represented within the organic sector. Furthermore, the majority of organic specialist rearing and specialist finishing herds were contract producers.

Average breeding herd sizes were somewhat smaller than those of specialist breeding herds and breeding-feeding herds as seen, for instance in Table 8. However, the numbers of pigs per herd for all the specialist rearing and finishing groups in Table 19 are greater than the corresponding all herd figures for those production types.

Unfortunately, the figures have to be regarded with caution, informed industry opinion being that there are no more than about 50 organic pig holdings of significant size, with no more than about 10,000 breeding sows and 70,000 to 80,000 growing pigs. Whether the appearance in the survey of four times that number was due to farms that are in the process of grading-up to organic (perhaps with land and enterprises other than the pig herd), or to ticks inadvertently being placed in the wrong box , must largely be a matter for conjecture until time and the gathering of further statistics can settle the matter. To some extent, because it is based on on-farm fieldwork, the economic phase of the current National Survey of the Economics of Pig Production will help to determine if and why farmers were overstating their organic status.

APPENDICES

APPENDIX I

The questionnaire form

APPENDIX II

Latest publications in this series

APPENDIX III

Addresses of other university departments publishing in this series

APPENDIX I Questionnaire

Centre for Rural Research
Lafrowda House, St German's Road, EXETER EX4 6TL
Tel. 01392 263850 Fax 01392 263852

CONFIDENTIAL
National Survey of Pig Production Systems 1st March 2002

- Please complete this form *only for pigs kept on the specific holding opposite.*
- If you operate more than one holding, we should have sent a separate form for each holding. If we have not, please let us know.
- If the pigs on the holding are farmed by someone else, please pass this form to that person.

Type of production (please tick)	**Non-organic**		**Organic**	

Section A: Number of pigs on the holding on 1 March 2002

(a)	**How many pigs (of all ages) are there on the holding?**	1		The total of boxes 2 and 3 should equal the figure entered in box 1
	Of these pigs: How many are **owned** by you (or your business)?	2		
	How many **belong to a third party**? e.g. a feed firm or other farmer	3		

Even if you have no pigs on the holding, please turn over and complete Section F.

(b)	**If you have recorded pigs in box 2 (i.e. pigs owned by you or your business), how many are:**			
	Breeding sows, farrowing sows and served gilts	4		The total of boxes 4, 5, 6, 7 and 8 should equal the figure entered in box 2 above
	Suckling piglets	5		
	Rearing pigs - i.e. weaned pigs up to store weight (approximately 35kg liveweight)	6		
	Finishing pigs	7		
	Others (incl. boars, barren sows for fattening, maiden gilts intended for breeding)	8		
(c)	**If you have recorded pigs in box 3 (i.e. you keep pigs that belong to someone else) how many are:**			
	Breeding sows, farrowing sows and served gilts	9		The total of boxes 9, 10, 11, 12 and 13 should equal the figure entered in box 3 above
	Suckling piglets	10		
	Rearing pigs - i.e. weaned pigs up to store weight (approximately 35kg liveweight)	11		
	Finishing pigs	12		
	Others (incl. boars, barren sows for fattening, maiden gilts intended for breeding)	13		

Section B: Breeding sows

Do you have breeding sows and served gilts? YES/NO. *If NO, go to Section D.*

			Please record Actual numbers	
If YES, (a)	How many **breeding sows/gilts** are in:			
	Indoor farrowing accommodation	14		
	Outdoor farrowing accommodation	15		
(b)	How many **dry sows/served gilts** are in:			
	Cubicles and free access stalls	16		The total of boxes 14 to 22 should equal the total of box 4 + box 9 above
	Electronic sow feeders	17		
	Individual feeders	18		
	Yards of kennels with short stall feeders (trickle, single drop/wet feeders)	19		
	Yards or kennels with group floor/trough feeders	20		
	Outdoors	21		
	Other (please specify)	22		

Section C: Rearing pigs

Are you rearing weaners at the moment? YES/NO. *If NO, go to Section E.*

If YES, How many **weaners** are in:

	Please record Actual numbers		
Houses with fully slatted floors/flat-decks	23		The total of boxes 23 to 28 the total of box 6 + box 11 overleaf
Houses with partly slatted floors	24		
Houses with solid lying area and solid dung passage	25		
Deep straw yards	26		
Outdoors (circle which) kennels/tents paddocks	27		
Other (please specify)	28		

Section D: Finishing pigs

Are you keeping finishing pigs at th S/NO.

If YES, How many **finishing pigs** are in:

	Please record Actual numbers		
Houses with fully slatted f	29		The total of boxes 29 to 34 should equal the total of box 7 + box 12 overleaf
Houses with partly slatted	30		
Houses with solid lying ar	31		
Deep straw yards	32		
Outdoors (circle which) kennels/tents paddocks	33		
Other (please specify)	34		

Section E: Pig Ongoers/Outgoers Schemes

Did you apply for any of the Ongoe mes? YES/NO

On what grounds did you decide to apply/not apply? ………………………………………………………………………………….

……

If you did apply, for which Scheme(s) did you apply? (circle as appropriate)

Outgoers 1 Outgoers 2

How many sows did you have at th

Was your application accepted? YES/NO

Section F: Your View of the Future

What are your GREATEST concer ture of your business? *Tick no more than three*

i.	Ever tighter welfare, hygiene a	
ii.	Increased feed cost because of ands	
iii.	Imported pigmeat from countries not subject to the same legislation	
iv.	Profit margins insufficient to invest with confidence for the future	
v.	Difficulty of finding and retain	
vi.	The power *within* the industry	
vii.	The power *over* the industry of supermarket groups	
viii.	The risk of a food scare relating to pigmeat	
ix.	Other (specify) ……..	

WOULD YOU LIKE TO RECEIVE A SUMMARY OF THE SURVEY FINDINGS? YES/NO

Do you have an e-mail address? YES/NO

If you would like to receive e-mail notification of when the summary of the survey findings is posted on our Website (www.ex.ac.uk/crr), please write your e-mail address here ………………………………………………………….

Thank you very much for your help.
Please return this form to the University of Exeter in the FREEPOST envelope provided (no stamp required).

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