

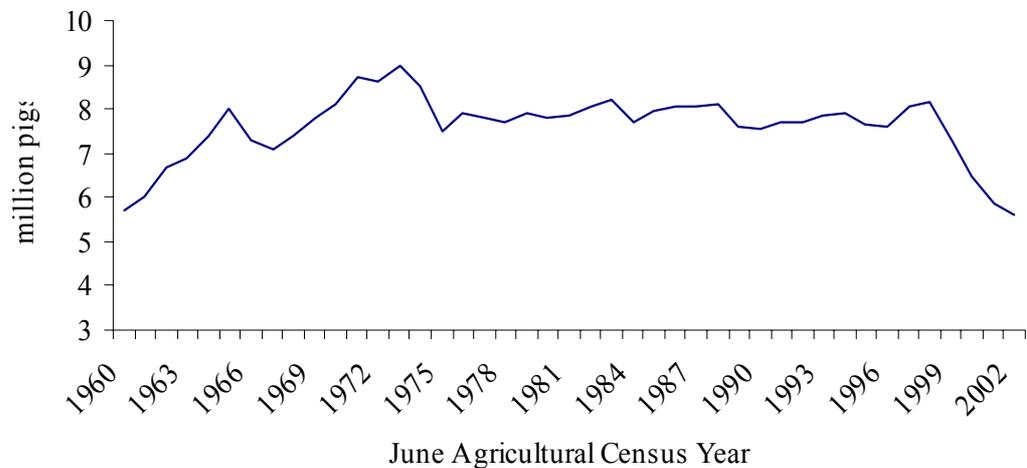
Structural change in the pig industry

Andrew Sheppard

The major downsizing of the UK pig herd since 1998 appears to be more than just a response to low levels of profitability. A purely economic analysis suggests that an end to the decline in pig numbers and some reversal of the trend of decrease is already overdue. But there is as yet no sign of that and it is becoming necessary to look for sociological factors that might explain a disinclination among British farmers to keep pigs or of young people and others to undertake pig keeping work.

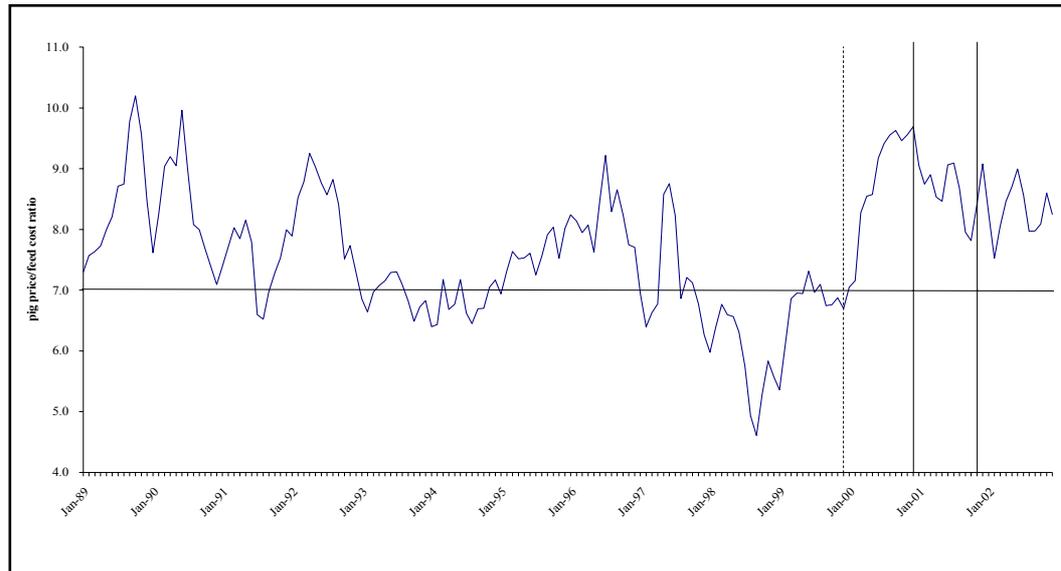
The most recently published June Agricultural Census figures tell us that in June 2002 the UK pig herd numbered 5.6 million pigs. That is 4 per cent less than one year earlier and 31 per cent less than in 1998 (38 per cent less than the 1973 post war peak of 9.0 million). The decline in the pig population was not so great between June 2001 and June 2002 as for three years previously, but the trend remained downwards and, perhaps most significantly, the total figure was below that of June 1960, or of any time since.

Figure 1 UK pig population, June 1960 to June 2002



As seen in Figure 1, following a sharp adjustment subsequent to the UK's accession to the EU, UK pig numbers ended the long post-war expansion and from 1975 to 1998 settled on a relative plateau, fluctuating between 7.5 and 8.2 million pigs (a 4.5 per cent fluctuation around the mean). Seen in the context of Figure 1, the expansion between 1996 and 1998 was somewhat optimistic, and could have been expected to be followed by readjustment, but there is no precedent for the sharp drop in pig numbers that has actually taken place and an explanation that goes well beyond cyclical readjustment is clearly required.

Figure 2 Pig price/feed cost ratio, monthly December 1991 to December 2002



It has always been an over-simplification to suggest that numbers of pigs fluctuate purely as a result of changes in prices, or even of profitability. The profitability or otherwise of alternative enterprises, the capital cost of entering the industry, the write-off costs of leaving, and caution borne of previous experience all have a stabilising influence. Over time, pig movement restrictions, the demise of the auction market as a place to buy and sell pigs and the increasing difficulty of marketing pigs speculatively (outside a pre-arranged contract and outside an approved welfare and management scheme such as Farm Assured British Pigs) have also raised barriers to casual and small scale entry to the industry. Nevertheless, pigs remain one of the lowest capital routes into farming and their relatively short breeding cycle means that numbers can be rapidly increased. Pig numbers have therefore tended to follow profitability trends, such as those seen in Figure 2.

The reduction in pig numbers between June 1998 and June 1999 brought the industry back from its 1998 peak to a size that was already below its longer term average. In view of the effect that the larger pig population of 1997-98 had on pig prices and profitability, it could be argued that initial reduction represented a desirable trimming of surplus capacity. However, the continued (and apparently continuing) decline in pig numbers clearly reflects a more fundamental restructuring of the industry, especially when considered against the degree of recovery of pig profitability seen in Figure 2.

Over the period illustrated by Figure 1, the efficiency of pig production has greatly improved and the average weight of slaughter pigs has become significantly heavier. One might expect that the volumes of pigmeat produced would have increased, even from a stable or slightly reduced pig population. Until 1998, that was the case, but the situation now, as we

advance into the 21st century, is that 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. Provisional figures for calendar year 2002 indicate that the United Kingdom was 63 per cent self-sufficient in pigmeat, compared with 91 per cent in 1998 and an average of 82 per cent in the years 1990-92. Total home production was 0.99m tonnes in 1990-92, 1.14m tonnes in 1988 and 0.81m tonnes in 2002. The provisional 2002 figures, if confirmed, will represent a slight improvement on 2001, when total home production was marginally less and self-sufficiency only 62 per cent, but it should be remembered that in 2001 both production and consumption were much affected by Foot and Mouth Disease.

In addition to Foot and Mouth Disease, pig production has been affected by the implementation of a ban on the use of stalls and tethers as accommodation for non-lactating sows (from 1st January 1998), and an outbreak of Swine Fever in Eastern England (16 cases, August to December 2000). More recently, (from about 1998 and still ongoing) a new wasting disease, Post Weaning Multi-systemic Wasting Syndrome, and the associated Porcine Dermatitis Nephropathy Syndrome have affected many pig herds. The latter two diseases have a seriously depressing effect on volume of pig output and the efficiency of production and, in common and in tandem with the disease and other factors above, have accelerated the exit from the industry of significant numbers of producers.

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, has also had some effect on the size and structure of the industry. The objective of the PIRS was to facilitate the longer-term development of an efficient and sustainable pig sector within the UK agricultural industry. Its component parts were the

Pig Outgoers 1 and 2 and Pig Ongoers schemes. The Outgoers schemes sought to reduce production capacity through the removal of less efficient producers, thereby improving core efficiency within the industry. Outgoers had to clear their holdings of breeding pigs by the end of August 2001 and remain out of pig production for a period of not less than ten years. The Ongoers Scheme was intended to assist producers wishing to continue in production to overcome any competitive disadvantages. Larger holdings taking advantage of the scheme were required to decommission, or render unusable for pig breeding, 16 per cent of their June 1998 sow capacity until July 2003.

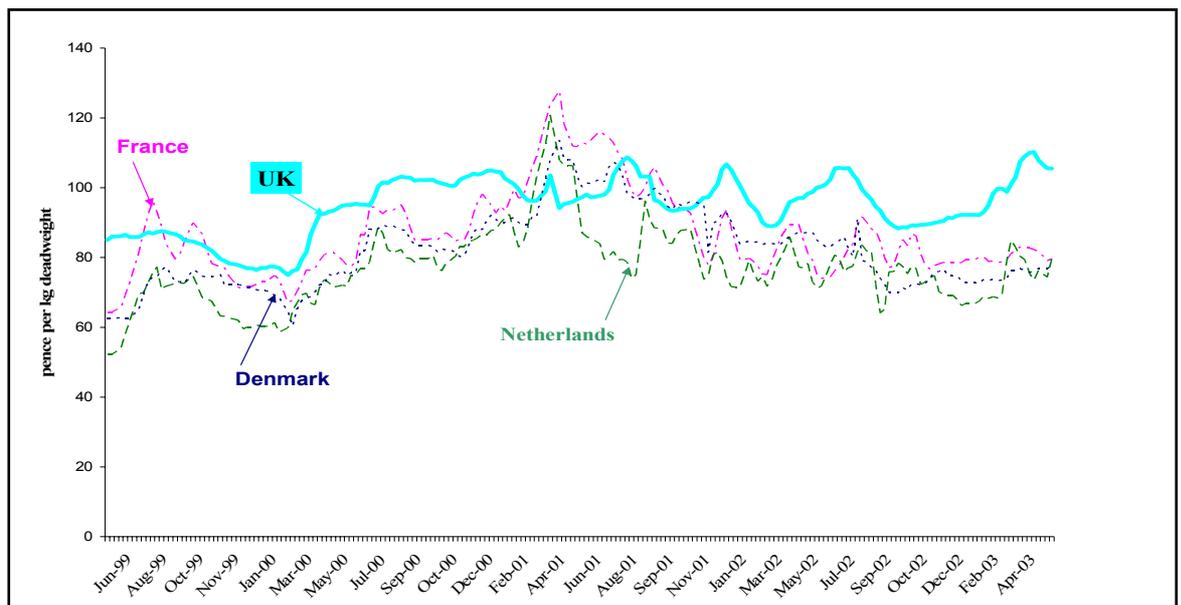
To what extent the downsizing of the national pig breeding herd and reduction in the number of holdings on which it is located during the seventeen months between March 2000 and August 2001 was attributable to the PIRS, and to what extent it would have happened anyway, as a result of other factors, is a matter for debate and further research. Whether or not the PIRS has resulted in a more efficient industry also requires objective investigation, though identifying the effects of the

Scheme separately from those of other factors, in an ongoing dynamic situation, is clearly not easy. Similarly, it will be difficult, even over the longer term, to determine if the pig population, prices and profitability have been stabilised by the Scheme.

Whilst the quantity of pigmeat produced in the UK decreased by 30 per cent between 1998 and 2002, the quantity consumed remained much the same. The shortfall was made up by increased imports of both pork and bacon, almost exclusively from other European Union countries.

Many pig producers would unhesitatingly blame the strength of the pound Sterling, relative to the currencies of our major competitors in the pigmeat market, for the very large increase in the share of the UK market held by imported pigmeat. Figure 3 appears to lend some weight to that analysis, the UK farm gate sale price of pigs, expressed in pence per deadweight kg, being consistently above that in our major competitor countries for most of the time between April 1999 and the present. Pigmeat was therefore available to UK processors and retailers more cheaply in countries such as Denmark and the Netherlands.

Figure 3 Pig prices, April 1999 to February 2003, in the UK and three other major EU pig producing countries



Nevertheless, if the wholesale price for pigmeat has remained generally higher in the UK than in several relatively close, pigmeat exporting countries, clearly there has been a firm demand for the UK product and processors have been willing to pay a premium for it. The average 15.2 pence per kg premium commanded by UK pigmeat over the average of Denmark, the Netherlands and France during the calendar year 2000, for instance, would have been more than sufficient to cover the transport, currency exchange and other costs of the imported product. Yet UK production continued its sharp decline.

Was the cost of production in the UK so much greater that keeping pigs was not profitable even at the prices available? Figure 2 suggests that, on the crude measure of the relationship of pig price to feed cost, profitability moved from negative to positive in the early part of 2000, was strongly positive for a year or so, and then declined to fluctuate around a new mean that was nevertheless comfortably positive.

Table 1 Summary of financial performance in 2000 (pence per kg deadweight)

	Denmark	Netherlands	France	UK
Return per kg	80.07	84.79	76.96	95.78
Feed	40.18	38.32	41.67	49.69
Other variable costs	6.01	6.54	9.07	9.30
Total variable costs	46.19	44.87	50.73	58.99
Gross Margin	33.88	39.92	26.23	36.79
Labour	11.51	10.89	9.69	10.49
Building, finance & miscellaneous	21.75	25.76	22.82	21.48
Total fixed costs	33.26	36.65	32.51	31.97
Total costs	79.46	81.52	83.25	90.97
Net Margin	0.61	3.27	-6.29	4.81
% change in size of pig herd	+6.1	-2.4	-0.4	-15.5

Sources: Cost data - BPEX, Meat and Livestock Commission
Change in size of pig herd – Eurostat

Placing cost figures collated by the British Pig Executive (BPEX) against those seen in Figure 3 similarly indicates that UK production in 2000 was likely to have produced an average profit, a better profit at the Net Margin level than in either Denmark, the Netherlands or France (Table 1). At the Gross Margin level, the UK margin was second only to that achieved in the Netherlands, and more than 40 per cent better than in France. That despite the UK having very much the highest feed and other variable costs.

Yet the change in size of pig herd in each of the four countries during the year 2000 bore no apparent relationship to actual or relative Gross and Net Margins. The UK, with the best Net Margin and second best Gross Margin showed a very large reduction in the pig herd, whilst France – with the most slender Gross Margin and a substantial loss at Net Margin level – cut its national pig herd only slightly. The Netherlands – best Gross Margin, second best Net Margin – cut its national herd by more than France but much less than the UK, but Denmark – a modest Gross and slender Net Margin – expanded its pig herd by more than six per cent.

Taking into account all of the above, it seems that the major restructuring of the UK pig herd since 1998 is more than just a response to low levels of

profitability. It is possible that the scale of losses sustained in 1998 and 1999 determined some producers to exit the industry regardless of any subsequent return to profitability, and indeed that some incurred borrowings and indebtedness that sank their businesses even after operating margins recovered. The Pig Industry Restructuring Scheme will have exerted some influence, particularly in ensuring that some who have taken payments to exit the industry or cut production have not been able to return in the short term. Livestock disease has also influenced the situation.

On a purely economic analysis, there would seem to be every reason now to expect an end to the decline in pig numbers and some reversal of the trend of the past four years. If that does not occur (and monthly numbers slaughtered suggest no sign of it yet), it may be necessary to look for sociological factors such as a disinclination among British farmers to keep pigs (which could itself be related to recent economic and disease experiences) and a negative perception of pig farming among young people and others who might otherwise undertake pig keeping work.

The Centre for Rural Research is currently engaged in national co-ordination of a new survey of the economics of pig production (year ending 30th September 2003). As well as establishing the latest situation with respect to production efficiency and financial performance, we expect that study to help explain some of the other changes within the industry.