Pig buildings and associated technology: industry survey report

Report on a pig industry survey to establish the condition of pig buildings in use in England and producers’ attitudes to investment in new buildings and associated technology.
Foreword

The European pig industry is highly competitive and, like any other manufacturers or producers, pig businesses have got to maximise efficiency and be lean, producing high-quality, affordable products for their customers.

There is a perception that, in England, investment in modern, more efficient pig production facilities has been at a lower rate than that of natural wastage of buildings.

BPEX commissioned this survey to establish pig producers’ views of investment in buildings and associated new technology used for pig production in England. The survey aimed to understand the drivers of and barriers to investment and the information gathered will be used to develop future BPEX activity, setting priorities and finding solutions to help address producers’ needs. We needed to assess the level of investment, where this has taken place and what the deciding factors are between refurbishment and replacement. For those wishing to develop new buildings, what other barriers exist – planning, regulatory, lack of access to finance or uncertainty about the future?

What is clear is that, while the structure of many buildings on pig farms may be old, they have been maintained so that they remain fit for purpose. But they may not be the most efficient in terms of resource and labour use.

This is the first comprehensive study of this type for many years and, while some of the findings confirm often-reported views, others provide a more detailed insight into the industry. The information gathered is helping BPEX respond to customers needs and assist them in taking their businesses forward.

I would like to thank all those who took the time to respond and provide information and comments for this survey. The enthusiasm and willingness to participate was far beyond expectation and reflects the desire of English pig producers to succeed. Thanks also to the National Pig Association (NPA) and its web master Digby Scott for hosting the questionnaire and marshalling the responses and, finally, to Gerry Brent, Independent Pig Industry Consultant, who took on this task with enthusiasm.
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1: Summary

1. Responses from the 60 pig farming businesses which took part in the survey showed that just over half (51%) of pig buildings are more than 20 years old.

2. 90% of farms sampled stated that their current facilities were not ideal and they wished to invest in new buildings.

3. There is a wide range in time since investment was last made in new facilities but many producers have made no substantive replacement or extension to their housing in the past ten years.

4. While lack of confidence in a profitable business was one of the main reasons stated for not investing in new facilities (building and associated technology), there was also strong concern about the cost of new buildings relative to anticipated returns. Other reasons for not investing were due to concerns about taxation treatment of capital expenditure by the Inland Revenue.

5. Many pig producers still see improvement in physical performance, hence reducing the cost of production, as the main reason for contemplating investment in both facilities and new technology. But better use of labour and the desire to improve animal welfare also featured strongly.

6. Legislation – although some respondents expressed reservations, a substantial majority stated that they would be more likely to invest in new buildings and, to a lesser degree, in new technology, if a points-based scheme (along the lines of the existing Environmental Stewardship Scheme) were available for the delivery of Animal Health and Welfare over and above the current legal minimum requirements. Such a scheme would also deliver other policy areas such as carbon and ammonia emissions reduction, food safety and reduction in resource use.

2: Introduction

Based on Assured Farm Standards (AFS) data, an overall picture shows that 97% of pigs are finished indoors. Of these:

- 39% are housed on fully slatted floors
- 31% are housed on solid floors with (mainly straw) bedding being used
- 30% are housed on partly slatted floors

However, the proportion of sows housed outdoors continues to increase. In 1998, 20% of breeding sows were housed outdoors. This had increased to 40% by 2012.

While this, in part, reflects the success that those who farm outdoors have achieved in gaining profitable levels of output, it also emphasises the general lack of investment in new pig housing (in particular for sows and weaners) and the associated technology.

No other European or worldwide industry has demonstrated such a shift in production into outdoor systems. The outdoor sector must be given credit for delivering a niche product for which there is a strong demand. We have a proportion of the industry using lightweight field shelters to house sows and piglets but retain a need for efficient buildings to house grower and finisher pigs. The majority of sows and piglets are housed indoors with high welfare standards being applied. Other developed pig industries worldwide have concentrated on indoor production and invested in state-of-the-art buildings and technology to house their breeding and finishing pigs.
The substantial decline in pig numbers shown in Figure 1 is attributed to low returns for pig meat, which has led to a lack of money for investment. As the sow herd has declined, so has the number of places for keeping pigs (growing and finishing), by an estimated 315,000 places. As a consequence of this reduction, a proportion of the pig places will have been permanently lost through decommissioning of buildings.

A further reduction in pig places has occurred as buildings have been modified and adapted to provide pigs, especially sows, with more space to deliver better pig welfare. The drive for increased productivity and improved pig health needed for the industry to be competitive means more accommodation will be required for the extra pigs reared per sow.

Data from BPEX below shows a gradual downward trend in production that has existed since the previous major industry crisis in 1999.
3: Methodology

BPEX commissioned independent pig industry consultant Gerry Brent to conduct a survey of pig farming businesses. A list of questions was developed in conjunction with BPEX. Two methods were used to gather producers’ responses.

Initially, telephone calls to producers were made by Gerry Brent to invite them to complete a prepared survey document by email. This achieved a 95% response rate from producers, with only two declining to take part.

Secondly, with the kind co-operation of the National Pig Association, its web-based survey system was used, which brought in further replies and reactions.

In total, 60 responses were received. Many of the leading pig producers took part, varying from large integrated businesses and breeding groups to smaller family run enterprises from across England.

4: Current state of pig housing and investment in associated new technology

4.1 Age of new buildings in use

The average age of buildings in use is between 21-22 years with just over half (51%) being over 20 years old. Almost 29% of those responding had constructed no new buildings in the past 10 years with less than half having erected more than one in that time (48%).
4.2 Money spent on buildings in the past 10 years

Spending on facilities in the last 10 years varied widely among those who took part in the survey. It varied between producers where there was no major spending on buildings, equipment or maintenance through to one who had spent £4 million. The average amount spent was £241,851 over the past 10 years. The table, right, highlights both this range and the relative lack of investment overall.

It is clear that, given the average age of buildings shown above, there has been only modest investment made as a percentage of the investment cost of a similar building today. It has been assumed that much of this investment has been made on the refurbishment of existing structures rather than on new buildings and associated equipment. The amount spent is related to the average age of the facilities that exist. Yet 90% of those surveyed stated that they needed new buildings.

4.3 Types of buildings used in pig production

This survey also highlights the type of pig accommodation in current use. Some 39% of pigs are housed in specialist pig buildings – of very mixed age – but 20% are kept in adapted accommodation and a further 41% in a mixture of the two. The fact that barely half the pigs are housed in specialist accommodation is at odds with most other countries where specialist buildings are used for the majority of pigs.
5: Why are producers reluctant to invest in new buildings?

Reasons for lack of investment include:

- **Lack of confidence and uncertainty in the market**
  Even allowing for concerns about the sharp rise in feed costs, this survey made it clear that producers have serious misgivings about the uncertainty of the pig market. 70% of producers stated this as a reason for not investing in modern systems. Lack of confidence was also expressed in enterprise profitability: 58% of those respondents said they doubted their business was profitable enough to support the level of investment needed to make it more so.

- **Poor return on investment**
  In response to a question about the profitability of capital investment, 48% expressed doubt that new investment would yield sufficient benefit to justify the outlay.

- **Treatment of capital investment by HMRC**
  The way in which the HMRC treats capital expenditure for taxation purposes is also acting as a deterrent. 39% stated this as a reason for their reluctance to invest.

- **Too expensive**
  36% believe that new buildings and equipment are too expensive given the state of their pig business and the limited financial returns to be gained.
• **Money invested elsewhere**
Similarly, 36% stated that they believe they can receive better value for their investment by spending it elsewhere in their business rather than investing in new pig facilities.

• **Environmental permitting – IPPC**
22% stated that the IPPC threshold acts as a barrier. This might mean that some who might want to invest are reluctant to do so, because it would take them above an existing threshold. Or, it might mean that any investment would then create the need to invest further still in waste management systems.

• **Planning**
12% of respondents hold planning permission to construct new buildings but have not yet built them; some have held such permission for considerable periods of time – 12 and 14 years in two reported instances. The reasons given for not making use of planning permission approval mirrored those given for not investing.

Planning problems have deterred 15.2% from investing, either because of the particular local difficulties involved or the requirements of the planning application process.

In some countries, government-funded advisors work closely with the farming community to help them plan their development and prepare their financial case for investment. They support the farmer in making representation for funding to banks. This close liaison means that producers are made aware of the latest technology and are encouraged to incorporate this into their new developments and, with advisors supporting them, are more likely to obtain the necessary financial backing. Denmark is a case in point.

In some other countries, a similar system applies through a widespread membership of cooperatives. These agencies provide technical and business support to producers, helping them to prepare both buildings and business plans. France (and to some extent Spain) frequently demonstrate this approach.

While in other countries or regions, much of the development over recent years has been through large integrated businesses (Spain, again, but also the Ukraine and western Russia) which use their overall business strength to obtain funding in new technology. This often triggers opportunities for state assistance in the treatment of such expenditure for both taxation and direct grant aid purposes.

Some of those taking part in the survey stated that they would find such support and assistance helpful to their businesses.

Reasons for not applying for, or using, planning permission included particular local difficulties or the procedural requirements of making applications.

More specific reasons for not investing included consumer perceptions of production systems, together with possible changes in legislation and processor or customer demands. Others asked for help and technical support to assist applicants with environmental permits and planning permissions. Succession and dissatisfaction with standards of workmanship from builders were also cited.
6: What are the drivers for investment in pig buildings?

- **Improved physical performance.** Almost 90% stated this would be the primary reason for investing in new facilities but there is an expectation that the resulting improvements in labour use, reduced cost of production and higher welfare are also critical factors in making investment decisions.

Improvements in production efficiency, as part of the industry’s initiative to achieve the Two-Tonne Sow (2TS) target, also help to reduce in environmental impact. Go to: [www.bpex.org.uk/2TS](http://www.bpex.org.uk/2TS)

- **Better use of labour** followed closely with 75% stating it as a reason for investment.

- **Reduced cost of production.** This was also a key motivation with 73% rating this as an important.

- **Improved welfare.** This was also a major consideration with 71% of respondents stating this as a reason why they wish to invest in new buildings. Improved labour utilisation may result in greater opportunity for improved pig care.

- **Reducing environmental impact.** Less than half (46%) of those who responded stated that they were motivated by this.

7: Reasons for adopting new technology in pig buildings

There is some willingness to invest in newer technology for the following reasons.

- **Improved pig performance and welfare.**
  Asked whether they had installed any technology to improve animal welfare, 61% said that they had done so and a further 58% had adopted methods to improve labour use which also provides the opportunity for enhanced welfare.

- **Reduced cost of production.** 68% had adopted newer technologies in order to improve productivity and 46% had done so to attempt to reduce the cost per pig produced.
• **Reducing environmental impact.** 41% and 36% to reduce their environmental impact on the environment.

• **Accommodating changing genotypes.** 12% had invested in order to capitalise on the benefits of genetic improvement.

Many of the barriers to uptake of new technology associated with new buildings are similar to the barriers for investing in new buildings. These are, again, overwhelmingly due to a lack of confidence in the future of the pig industry (73%) rather than concerns about the effectiveness of the technology itself (10%) or in understanding the technology (9%).

• **Legislation.** 14% of respondents specified that planning approvals were an obstacle. The IPPC threshold also acts as a barrier in 20% of cases. Possible changes to legislation, including the possibility of environmental permitting, was one reason for a cautious approach to reinvestment; it was felt that any gains in revenue from increased productivity could be eliminated by permit fees, administration or necessary infrastructure investments required for legislative compliance.

• **Other.** Availability of new technology appears a barrier in the experience of only 9% of those responding but 34% considered it too expensive. There was evidence that some had invested in new technology either to replace aging equipment or to exploit specific marketing contracts which were necessary for the viability of the business.

The way units have developed over many years has lead to a mix of buildings and technologies which make it difficult to apply some new technologies. There was a view that it would be better to completely redevelop a unit from scratch in a more structured way to improve functionality and allow technology to be incorporated.

However, it was felt that suitable long-term contracts are needed to facilitate this and overcome the lack of confidence barrier. A number of respondents said they have invested in new technologies as an aside to their pig business where the returns on capital were more tangible and secured with contracts, eg renewable energies.

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**Figure 6: What are the drivers for investment in buildings**

- Improved physical performance
- Better use of labour
- Reduce cost of production
- Improved welfare
- Reduce environmental impact
- Other

**Figure 7: Reason for adopting new technology in building**

- Improved physical performance
- Improved welfare
- Better use of labour
- Reduce cost of production
- Reduce environmental impact
- To provide housed environment
- To accommodate changing genotypes
- Other

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Percentage of respondents
8: Influence of government policy and incentives on investment in new buildings and technology

Respondents put forward the view that there is little fiscal encouragement to invest in new buildings and equipment. However, while some claim that this is a direct deterrent against investment, there is little appetite for direct government grants or support. The pig industry remains unsupported by the Common Agricultural Policy (CAP) and competes in the world meat and pig products market and requires production sites which enable this.

A points-based scheme to encourage improved countryside management exists for arable farmers. They qualify for stewardship payments where they demonstrate application of a range of measures, which suit the particular farm circumstances.

It might be possible to devise such a scheme for health and welfare of farmed livestock and to reduce the emissions of ammonia and greenhouse gases, so pig producers were asked if a scheme which encouraged them to enhance certain aspects of their enterprise beyond the minimum legislative requirements would encourage them to invest in buildings and new technology. The items specifically mentioned under this heading were:

- Biosecurity
- Animal welfare
- Labour usage – and, by so doing, welfare
- Emissions

An overwhelming 81% stated that they would be more likely to invest if such a scheme existed.

59% of those said that they would then be more likely to adopt newer technology if some form of government incentive to do so existed.

A number of respondents said they would like pricing systems that reflected the type of production and the additional costs of delivering above-the-minimum standards of animal welfare. They would like to see meaningful and binding contracts from processors for implementation of these systems and measures.

Grants were not popular and were viewed as distorting the market and causing inflated prices for those items being aided. The use of grants to support government policy and aspirations was not favoured by all. Others found that recent grant schemes were too selective and limited and it was not deemed to be cost-effective to apply for them. There were also concerns that applying could delay their plans.

Overall, the view was that stable profits were necessary in order to progress.
9: How can BPEX assist its customers to make new investments in pig facilities?

Producers were asked if there was anything that BPEX could do to assist in making investment decisions about buildings and their management.

Some thought there was little more BPEX could do to help the situation, while others indicated a number of areas where better service provision could be made and would be of value. These tended to follow two themes: business management and technical performance.

**Help with business and financial management**

From the survey it is clear that BPEX levy payers would like to see more information on the financial aspects of investment to help their decision-making processes, such as prioritising where to invest and also to demonstrate to financiers what level of return can be expected. This would need to include examples and case studies. Weakness in business management skills leading to misdirected or poor investment in the past was also mentioned and indentified as a ‘gap’ which BPEX could address.

**Demonstration farms**

Secondly, they would like to see more technical information relating to buildings and how they perform backed up by demonstration facilities or case studies. This would help build confidence in the industry. Help was requested in the form of demonstration farms such as those previously run by the Royal Agricultural Society of England (RASE) and the Meat and livestock Commission (MLC). If this was not possible then overseas visits would be an alternative.

Mention was made of independent equipment testing regimes to help with decision making, similar to those in place in Germany. This provides potential users with detailed information about what they can expect and suppliers with evidence to support their claims.
10: Conclusions

A large proportion of English pig buildings are ‘old’ or in need of investment. This is considered to be a major contributing factor to our lower national productivity levels which have failed to keep pace with other developed industries where newer facilities are more commonly employed. It must be stated though that ‘old’ does not mean that the welfare of pigs and stock workers is of unacceptable standards as, in many cases, it is considerably better than minimum standards require.

There is not a complete lack of investment. Some producers have made considerable investment and around 12% of respondents have spent over £0.5 million on their buildings in the last 10 years. What causes greater concern is that the majority of this investment has mainly been in refurbishment and repair rather than replacement.

There is a commitment by pig producers to adopt housing and management systems which deliver high standards of animal welfare, and comply with legislation such as that to protect the environment. Prices that do not reflect the additional costs to deliver these were often mentioned as a barrier to investment. Supply contracts which gave a degree of stability against volatile markets could be sufficient to stimulate investment, which would help secure supply for processors.

Another recurring theme was taxation relief, which fails to differentiate between specialist pig buildings and general buildings which can have a long-term multipurpose-use value. It was felt that changes to the taxation regime as applied to pig buildings could yield better long-term revenue returns because businesses which use allowances to invest become more profitable. This would also benefit the wider economy including suppliers, processors and retailers.

Technology itself was not seen as a threat or barrier; examples were provided where producers had invested in renewable energy, with long-term index-linked contracts, in preference to their pig facilities.

BPEX can help facilitate investment by providing information and advice on buildings and related technologies and by supporting development of business management skills.