

Pig Health and Welfare Council

Biennial Report

2021–2022



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Foreword

The Chief Veterinary Officers (CVOs) of England, Wales, Scotland and Northern Ireland welcome the sixth biennial report of the Pig Health and Welfare Council (PHWC). We are pleased that AHDB is committed to supporting the PHWC and that they recognise and value how the PHWC brings together the industry from farm to fork and associated bodies (such as feed and buildings suppliers) and is able to speak with one voice for the industry.

The Council provides a unique and effective forum for collaboration across the pork production chain. Working together, the PHWC encourages the industry to learn from the experiences of others, to implement best practices and to develop new technologies. PHWC meetings provide the opportunity for open discussion and dialogue to unlock ways of tackling new challenges and those older challenges with no easy answers. The expertise of its members ensures that risks and opportunities are identified, and unintended consequences of any proposed changes are avoided.

One excellent example of collaboration in England is the participation of the pig industry in the Animal Health and Welfare Pathway (AHWP), working on its co-design with representatives from other species and in partnership with Defra. From the very beginning, PHWC has been instrumental in developing a scheme that will benefit the health and welfare of the English pig herd and effective ways to bring about the much-needed industry buy-in and cooperation to enable the AHWP to deliver its aims. The AHWP is now providing an opportunity for individual producers to benefit from veterinary visits and providing access to grants which will enable producers to improve health and welfare by reducing the impact of endemic disease and minimising the risk of exotic disease incursion to their premises.

It is important that the industry continues to work together to protect the UK pig herd from disease. The Council has members from all four countries working together to reduce antimicrobial resistance through responsible use of antibiotics. The progress already achieved to meet the RUMA Targets Task Force 2 targets for the pig sector demonstrates a concerted collaborative effort by vets and producers, but it will be important to monitor the impacts of changing antibiotic use. Antibiotics are an essential tool for controlling disease and safeguarding animal welfare but must be used responsibly – as little as possible but as much as necessary.

Welfare challenges can often be complex and difficult to solve, as altering processes may result in unintended consequences occurring at another stage of production. Collaboration is key to achieving improvement. We welcome the cross-industry work on the Welfare Subgroup milestones, such as producing pigs with intact tails, which will help to boost consumer confidence. The work of the Pig Meat Food Safety subgroup also contributes to consumer confidence through its work on reducing the risk of foodborne disease to help maintain high industry standards. The four subgroups link up with the work of colleagues in Northern Ireland, Scotland and Wales, sharing an understanding of the challenges facing the wider industry and the work being done to find solutions.

The sector continues to face a number of challenges and the current economic situation is making change and investment more difficult. However, the industry continues to demonstrate resilience. The shortage of labour on farm and in processing has added to these challenges, making retention and training of staff a high priority for the industry. The provision of online training such as the Pig Handling course has been well received and offers a practical addition to the suite of available training for stockpersons.

In summary, we would like to congratulate all those involved with the PHWC for their achievements and thank them for sharing their expertise and providing on-going collaboration, and for supporting improvements to the health and welfare of the pork industry at this challenging time for agriculture.



Christine Middlemiss
Chief Veterinary Officer (UK)



Sheila Voas
Chief Veterinary Officer (Scotland)

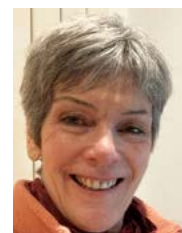


Richard Irvine
Chief Veterinary Officer (Wales)



Robert Huey
Chief Veterinary Officer (Northern Ireland)

Introduction



Welcome to the sixth report from the Pig Health and Welfare Council (PHWC), which provides a synopsis of the activities of the council and its constituent subgroups for 2021 and 2022.

Since the last report, the pig industry has been faced with serious challenges, but during this period, the council has been at the forefront of the co-design with Defra of the Animal Health and Welfare Pathway for England (AHW Pathway), ensuring the pig industry has access to government funding to enhance the vet/producer relationship and empower producers to identify, control, reduce or eliminate specific endemic diseases commencing with Porcine Reproductive and Respiratory Syndrome (PRRS). The council selected PRRS because of its impact on the health and welfare of animals infected with the virus and because it is known to have the greatest impact on the productivity of a pig unit and profitability. By controlling the disease, the industry will protect producers who have achieved a negative PRRS status, improve the welfare of our pigs and reduce the need for antibiotics.

The council's role in bringing members of the entire pork chain together has been critical in the decision-making process and contributed to The Pathway being successfully launched at the beginning of 2023. The council would specifically like to thank Stewart Houston, who has chaired the Pig Pathway working group to meet the considerable demands of the project. The council looks forward to continuing to influence the development of The Pathway from its initial steps.

The council has strived to achieve the ongoing objectives around supporting the pig industry to enhance the health of the pig herd to enable a reduction in the use of antibiotics, the assurance that pork products are safe to eat, and the welfare need of our pigs have been met. The council greatly appreciates the work and collaboration of those across the pork chain throughout Great Britain (GB). In addition, the council wishes to thank all those organisations that allow their expert staff to attend meetings and take work projects forward. This expertise and commitment to pig health and welfare are integral to the council's success. There have been significant achievements by the council and respective subgroups since the last report.

In regards to pig welfare, accomplishments include the collaboration involved in implementing the Welfare Code, the review of Red Tractor (RT) standards, and responses to the proposed changes to Welfare in Transport legislation.

The Food Safety subgroup continues to work closely with UK Health Security Agency (UKHSA), the FSA and APHA in recognising the challenges facing food safety. Achievements include joint working with the poultry industry to minimise the risk of disease transfer between species and exploring possible risks from *Clostridioides difficile*.

Achievements include the surveillance of key diseases by the Disease Surveillance group, the launch of the #MuckFreeTruck lorry wash campaign in 2019, and an updated contingency including ASF, which prompted a plan for Porcine Epidemic Diarrhoea virus (PEDv).

Finally, targets for RUMA's Targets Task Force, published in 2020, and proposals for the revision of Medicated Feed and Veterinary Medicines regulations, were achievements of the Antimicrobial Usage subgroup.

Jane Downes

Chair

The pig industry structure

Size and distribution of the industry

Size of the UK pig herd

The latest figures from Defra show that in June 2022, the UK pig herd was just under 5.2 million head, down slightly on the previous year. This was due to a 15% fall in the number of breeding pigs, though the survey also showed a 1% decline in the number of finishing pigs.

Figure 1. UK total pig population June/December*

Source: Defra

*No December census was carried out for pigs in 2021 and 2022 results have not yet been published

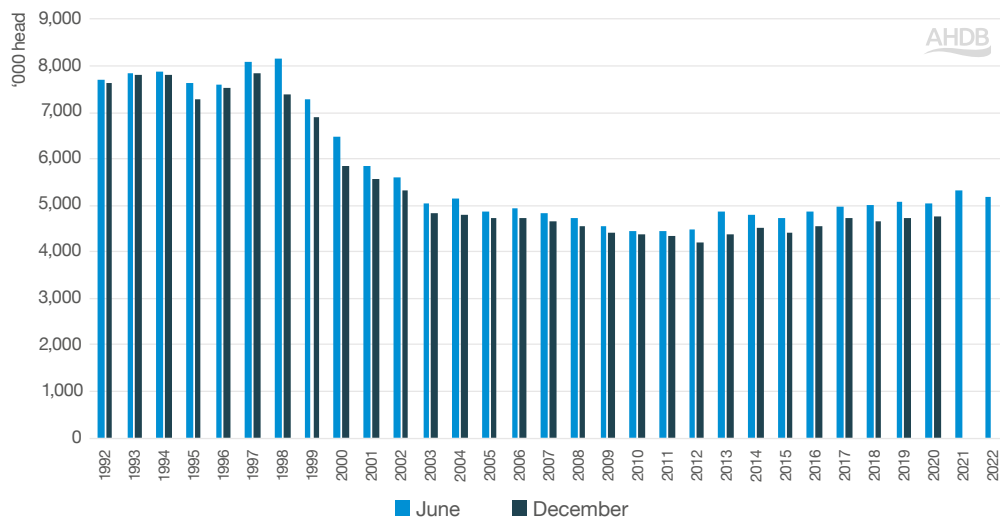


Figure 2. UK breeding female pig population June/December*

Source: Defra

*No December census was carried out for pigs in 2021 and 2022 results have not yet been published

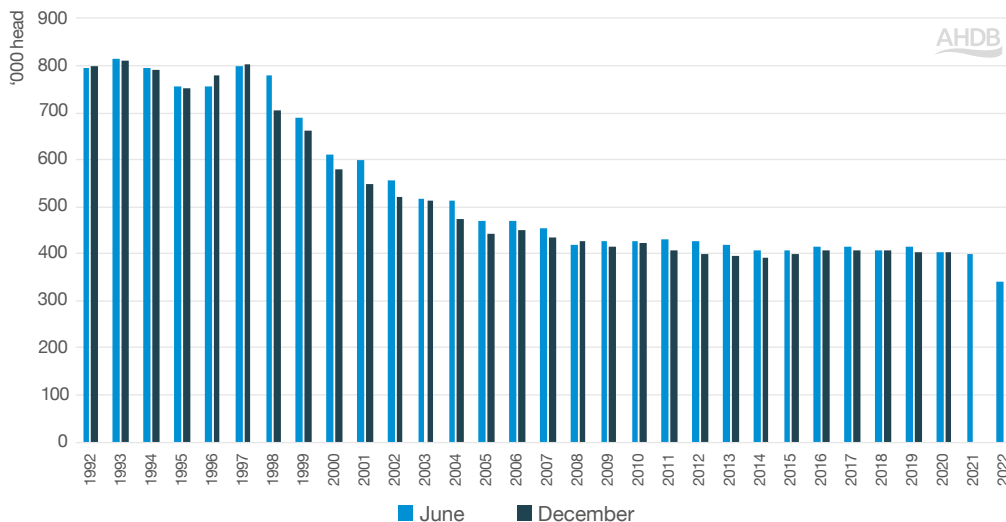


Table 1. Pigs on agricultural holdings in the UK, June 2018–22

Thousand head	2018	2019	2020	2021	2022
Total pigs	5,012	5,078	5,055	5,323	5,192
Breeding pigs	504	509	502	503	426
Female breeding herd	409	413	402	398	343
Sows in pig	289	295	295	282	249
Gilts in pig	58	57	57	54	42
Other sows (suckling or dry)	63	61	50	63	52
Other breeding pigs	94	96	99	104	83
Boars for service	13	12	11	12	11
Maiden gilts	81	84	88	92	73
Finishing pigs (incl. barren sows)	4,509	4,569	4,553	4,820	4,766

Source: Defra June survey of agriculture

Breeding herd decline was expected due to the financial challenges producers have been under, with sow and boar kill up 3% in 2022 on the 5-year average. We estimate that producers have been in a loss-making position since October 2020, with negative net margins increasing to -£58/head in Q1 2022, easing to -£17/head in Q4 2022. Although clean pig slaughter throughputs ended the year up 2%, this was due to processing the backlog of pigs that built up on farm during 2021 and early 2022.

Number and size distribution of commercial holdings

Defra figures from the 2021 June agricultural survey show a 3% decrease in the number of UK commercial agricultural holdings with pigs between June 2019 and June 2021 (data not available for June 2020), to a total of 10,300 holdings. Despite the number of holdings with over 1,000 pigs increasing by 110 (8%), this growth was outweighed by the decline in the number of holdings with less than 299 pigs which declined by 377 (4%). Holdings with 299 or fewer pigs contained only 3% of the total UK herd, with 89% of the herd being held on holdings with at least 1,000 pigs.

The number of farms with breeding pigs fell by 11% to 4,900 in June 2021 compared to June 2019. Again, the vast majority of the herd remains concentrated in a few units, with the holdings containing 100 or more sows accounting for 91% of the national breeding herd.

The number of holdings with fattening pigs was down 1% in 2021 vs 2019 at 8,500, with 88% of all fattening pigs kept on holdings containing over 1,000 pigs. It should be noted that the June agricultural survey focuses on commercial holdings, and therefore these statistics may not accurately reflect the number of smaller producers.

The numbers above include many holdings that keep pigs but are also engaged in other agricultural activities. UK-wide figures are not available. However, in England, there were 1,772 specialist pig farms in 2021, a decline of 8% compared to 2019.

Location of pig producers

Pig producers are highly geographically concentrated. Of the 5.2 million pigs in the UK in June 2022, 79% were in England, 14% in Northern Ireland, 7% in Scotland, and the number in Wales was less than 1%. In 2021, 38% of England's pigs were concentrated in Yorkshire and the Humber and 30% in Eastern England, with the remaining numbers spread across the rest of the country.

Abattoirs slaughtering pigs

The number of abattoirs slaughtering pigs has declined considerably over time as many small plants have stopped trading and have been replaced by fewer, larger ones. In 2021 there were 87 English abattoirs killing pigs, almost 100 fewer abattoirs than at the start of the millennium. Only 11 of these specialised in pigs (specialist pig abattoirs are defined as plants where 95% of slaughterings are pigs), with the remainder also handling other species. The decline in abattoir numbers has led to a high degree of concentration. The 11 specialist pig abattoirs accounted for around 77% of all pigs slaughtered in England in 2021. The largest 8 abattoirs (those killing over 500,000 pigs a year, not all of these are specialist abattoirs) maintained an 83% share of the English kill.

Workforce on pig farms

Detailed figures are only available for England's specialist pig farms in 2021. A total of 6,500 workers were employed, an average of 4 per holding. Almost 54% of workers on specialist pig farms were 'farmers, partners, directors and spouses', working either full-time or part-time. Around 34% were regular full-time workers or managers (including part-time managers), with the remaining 12% being made up of part-time and casual workers. The number of people working on non-specialist pig farms is unknown.

Key facts

1. Since the peak of production in 1997/98, the total number of pigs on UK agricultural holdings has fallen from 8.1 million to 5.2 million in 2022, a decline of 36%.
2. The number of female breeding pigs has fallen from 800,000 to 343,000 over the same period, a decline of 57%.
3. In 2021, there were 10,300 commercial agricultural holdings with pigs in the UK: 4,900 had female breeding pigs, and 8,500 had fattening pigs, with numbers concentrated on larger farms.
4. Of the 5.2 million pigs in the UK, 79% are in England, 14% in N. Ireland, 7% in Scotland and less than 1% in Wales. Nearly 70% of the pigs in England are located in the Yorkshire and Humber and eastern England regions.
5. The number of abattoirs slaughtering pigs in England has dropped by nearly 100 plants since 2000, standing at 87 premises in 2021. The 11 specialist abattoirs that only handle pigs account for 77% of the English pigs killed.
6. Approximately 6,500 people work on England's specialist pig farms, alongside others working with pigs on non-specialist farms, although the number of these is uncertain.

About PHWC

The PHWC is a cross-industry alliance representing every stage of pig production along the chain. It aims to promote a coordinated and integrated approach to improving pig health and welfare by providing advice on areas of strategic policy and setting strategies. The PHWC was formed in 2004 to drive the implementation of the Pig Health and Welfare Strategy, launched previously in December 2003. Following the review of progress, a new strategy for pig health and welfare in England was developed with the input and support of a broad range of industry organisations, coordinated by AHDB Pork (formerly BPEX) – the division with responsibility for the levy collected on pigs by the Agriculture and Horticulture Development Board (AHDB).

The PHWC recognises that its ongoing enterprises must be openly discussed with all interested parties in the pig sector and that results are communicated at all levels from the farmer to government and Chief Veterinary Officer (CVO), when necessary. The main responsibility of the PHWC is to enhance the health and welfare of pigs in England.

Key areas of focus are surveillance and disease risk assessment, promotion of welfare and prudent antimicrobial usage through improved disease management. A longer-term priority of the PHWC is to review the methods for integration of existing and future data sources considered to be of surveillance value to provide a comprehensive surveillance system for pig health and welfare.

The PHWC subgroups now cover the following areas:

- Antimicrobial Usage subgroup – reducing antimicrobial use in pig production
- Pig Health subgroup – enhancing surveillance of pig health
- Pig Meat Food Safety subgroup – enhancing pig meat food safety
- Welfare subgroup – enhancing pig welfare

PHWC membership organisations

Agricultural Industries Confederation (AIC) is the agrisupply industry's leading trade association. Formed in October 2003 by a merger of three trade associations, AIC has over 230 members in the agrisupply trade and represents £8bn turnover at farmgate.

The Animal Health and Welfare Board for England (AHWBE) is responsible for strategic animal health and welfare policy and oversight of implementation in relation to England, taking account of public health considerations.

Animal and Plant Health Agency (APHA) works to help safeguard animal and plant health, protect the economy and enhance food security through research, surveillance and inspection for the benefit of people, the environment and the economy. APHA is an executive agency sponsored by the Department for Environment, Food & Rural Affairs, the Welsh Government and the Scottish Government.

Agriculture and Horticulture Development Board (AHDB) is a statutory levy board funded by farmers and others in the supply chain. Our purpose is to be a critical enabler, to positively influence outcomes, allowing farmers and others in the supply chain to be competitive, successful and share good practice. We equip levy payers with easy-to-use products, tools and services to help them make informed decisions and improve business performance. Established in 2008 and classified as a Non-Departmental Public Body, AHDB supports the following industries: meat and livestock (beef, lamb and pork) in England; dairy in GB; and cereals and oilseeds in the UK. For further information, visit ahdb.org.uk

British Meat Processors Association (BMPA) represents the majority of companies working in the British meat industry and owns the standards for BQAP (British Quality Assured Pork), and uses the RT logo. Its members are responsible for supplying fresh meat and meat products to retailers, restaurants and foodservice companies throughout the UK and exports to the European Union (EU) and around the world.

British Pig Association (BPA) supports all pedigree pig breeders and small-scale producers. The association can provide information on many aspects of pig keeping either directly within the office or through the different breed representatives who are pig keepers and are, therefore, in a good position to answer any questions. The BPA is a friendly organisation with a focus on conserving our native pig breeds and small-scale sustainable pork production.

Department for Environment, Food and Rural Affairs (Defra) is the UK government department responsible for safeguarding our natural environment, supporting our world-leading food and farming industry, and sustaining a thriving rural economy. Our broad remit means we play a major role in people's day-to-day life, from the food we eat and the air we breathe to the water we drink.

The National Pig Association (NPA) is the representative trade association for British commercial pig producers. NPA is allied to the NFU and represents the pig interests of NFU members.

Northern Ireland Pork and Bacon Forum (NIPBF) was established to promote the local pig meat supply chain in Northern Ireland. The forum, which comprises processors, producers, the grain trade, government and scientists all supporting Northern Ireland interests, actively participates in market research, promotion and technical investment for the industry.

Pig Veterinary Society (PVS) was founded in 1963. It is a specialist division of the British Veterinary Association. The PVS exists to assist its members in caring for pigs through the dissemination of knowledge about health, disease, the pig's welfare and its management.

Quality Meat Scotland (QMS) is the public body responsible for helping the Scottish red meat sector improve its efficiency and profitability and maximise its contribution to Scotland's economy.

Red Tractor (RT) is the flagship logo of British food; their comprehensive standards underpin farming, consumer safety, food production, processing, and packing along the whole chain. Thousands of British farmers work to their standards, which form the basis of buying and sourcing specifications for many major supermarkets, household brands and restaurant chains, which ultimately makes life simpler for everyone. They are the UK's largest food and farm standards scheme and the only one to cover all areas of food production from animal welfare and food safety to traceability and environmental protection – simply put, from farm to pack. Only food that is grown or born and reared in the UK can bear the RT logo.

Responsible Use of Medicines in Agriculture Alliance (RUMA) was established in November 1997 to promote the highest standards of food safety, animal health and animal welfare in the British livestock industry. It is a unique, independent non-profit group involving organisations that represent all stages of the food chain from 'farm to fork'. This reflects the importance of traceability, transparency and accountability at all stages in the chain: from primary food production through processing, manufacturing and retailing to the final consumer. Its membership includes organisations operating in agriculture, aquaculture, veterinary practice, animal medicines, farm assurance, training, retail and animal welfare.

Royal Society for the Prevention of Cruelty to Animals (RSPCA) is the world's oldest and largest animal welfare charity, primarily focusing on rescuing, rehabilitating, and rehoming or releasing animals across England and Wales.

Trading Standards protect consumers and safeguard businesses through cross-boundary intelligence-led enforcement projects in England and Wales. It acts as a safety net for consumers by ensuring that products entering the UK and the food chain are safe. They fund national teams that are hosted by local authorities. These include the eCrime, Feed, Regional Investigations, Estate Agency, Intelligence and Scams teams.

In addition to the formal organisations, there are producer members on all the council subgroups to represent the diverse production systems within the UK. Observers invited to attend PHWC meetings include the Food Standards Agency (FSA) and the CVOs for England (Christine Middlemiss), Wales (Richard Irvine) and Scotland (Sheila Voas).

The council meets twice per annum and is chaired by Dr Jane Downes BVSc MRCVS. The agenda is split between subgroup delivery updates and strategic policy debate.

The work of the PHWC would not be possible without the valued support of the secretariats. The secretariat for the PHWC and Pig Meat Safety, Pig Health and Welfare subgroups is provided by AHDB. The secretariat for the Antimicrobial Usage subgroup is provided by the VMD.

The PHWC is coordinated and funded by AHDB. AHDB financially supports the PHWC by paying the Chair and sub-group chairs an honorarium and for the costs associated with meetings. It is also acknowledged that many organisations fund members attending the meetings. This support is essential for the continuation of this productive and efficient collaboration of the industry.

Welfare subgroup

The Welfare subgroup aims to develop strategies and initiatives to address welfare issues applicable to the diverse production methods within the UK pig industry. The subgroup aims to bring a consensus on the key pig welfare issues by working closely with those in the pig industry, allied industries, vets and paraprofessionals, welfare scientists, consumer organisations and government.

The subgroup meets twice per annum, chaired by Dr Annie Davis BVMS MRCVS. The agendas focus on knowledge exchange and coordination of activity and policy influence regarding pig welfare.

The members of the group are:

- Academia
- AHDB Pork and AHDB Pork Council
- Animal and Plant Health Agency (APHA)
- Assured Food Standards (AFS)/Red Tractor
- Buildings Forum
- National Pig Association (NPA)
- NI Pork & Bacon Forum
- Pig Veterinary Society (PVS)
- Producer members
- Quality Meat Scotland (QMS)
- RSPCA

Pig Meat Food Safety subgroup

The Pig Meat Food Safety subgroup aims to be the authoritative group for zoonotic hazards in pig meat production. This encompasses policy, surveillance, research, management and control, and therefore, collaboration with government, pig keepers, producers, vets, processors, retailers and allied industries is critical.

The role of the Food Safety subgroup is to assist the industry in reducing the risk to the consumer from pork meat and products. The subgroup aims to develop a roadmap to improve pig meat safety. This involves investigation and evaluation of current knowledge on reducing zoonotic-related food risks and commitment from the whole industry to ensure 'whole chain' ownership of the roadmap.

The subgroup meets quarterly with additional calls when required, chaired by Dr Jane Downes BVSc MRCVS. The agendas focus on knowledge exchange, coordination of activity and policy influence regarding food safety, and technical input to industry with regard to media coverage or food safety topics.

The members of the group are:

- Academia
- Agricultural Industries Confederation (AIC)
- AHDB Pork and AHDB Pork Council
- Animal and Plant Health Agency (APHA)
- Assured Food Standards (AFS)/Red Tractor
- British Meat Processors Association (BMPA)
- British Pig Association (BPA)
- British Retail Consortium (BRC)
- Food Standards Agency (FSA)
- National Pig Association (NPA)
- NI Pork & Bacon Forum
- Pig Veterinary Society (PVS)
- Processor
- UK Health Security Agency (UKHSA)
- Quality Meat Scotland (QMS)

Pig Health subgroup

In June 2021, the Disease Surveillance subgroup was renamed the Pig Health subgroup to better represent the work of the subgroup. This also reflected the PHWC vision for 2020/2030 with three objectives of relevance to the Pig Health subgroup, including:

- Maintain and extend our disease surveillance system
- Reduce, control or eliminate endemic and zoonotic diseases
- Encourage the use of data and new technologies

The Pig Health subgroup advises PHWC on proposals for effective surveillance of pig health in England. In addition, the subgroup continues to focus on disease control and prevention procedures as well as surveillance. This involves continuing to identify and evaluate disease threats through various approaches to surveillance and monitoring. This information is used to formulate strategies of benefit to the UK pig industry and recommend appropriate courses of action for the prevention, reduction or eradication of significant diseases.

To achieve this, it is important to have a close working relationship with the APHA Pig Expert Group, which regularly reviews current and emerging disease threats. The Pig Expert Group meets regularly and produces quarterly reports on disease surveillance and emerging threats. These reports review disease trends and threats to the pig industry from either diseases present or emerging in GB or those with the potential to enter GB from elsewhere.

The remit of the Pig Health subgroup covers England, with observers invited from Scotland, Wales and Northern Ireland in recognition that the UK is one unit. Members of the Pig Health subgroup have participated in a number of other committees and working groups, especially the various groups developing the pig health components of the AHW Pathway. The group has successfully delivered on its 2021/22 milestones, as shown in the Milestones section of this report. The subgroup meets twice per annum with additional calls when required, chaired by Professor Jim Scudamore.

The agendas focus on knowledge exchange and coordination of activity and policy influence regarding pig disease control and surveillance.

The members of the group are:

- Academia
- Agricultural Industries Confederation (AIC)
- AHDB Pork and AHDB Pork Council
- Animal and Plant Health Agency (APHA)
- Animal Health and Welfare Board for England (AHWB)
- Assured Food Standards (AFS)/Red Tractor
- British Pig Association (BPA)
- Department for Environment, Food and Rural Affairs (Defra)
- Food Standards Agency (FSA)
- National Pig Association (NPA)
- NI Pork & Bacon Forum
- Pig Veterinary Society (PVS)
- Producer members
- Quality Meat Scotland (QMS)
- RSPCA
- Rural Payments Agency (RPA)

Antimicrobial Usage subgroup

The Antimicrobial Usage subgroup aims to elicit change in the pig industry with regard to the responsible use and stewardship of antimicrobials. This subgroup considers information on all aspects of antimicrobial usage by the pig industry and identifies crucial gaps in knowledge, such as optimising efficacy in antimicrobial administration and investigating alternatives to antimicrobials.

The subgroup meets five times per annum, chaired by Dr Grace Webster BVMS MRCVS. The agendas focus on developing and coordinating the delivery of the pig industry roadmap to reduce the usage of antimicrobials in pigs, knowledge exchange, and coordination of activity and policy influence regarding antimicrobial use in pigs.

The members of the group are:

- Academia
- Agricultural Industries Confederation (AIC)
- AHDB Pork and AHDB Pork Council
- Allied Industry Group (AIG)
- Animal and Plant Health Agency (APHA)
- Assured Food Standards (AFS)/Red Tractor
- Controlling Antimicrobial Resistance in Scotland (CARS)

- Forfarmers UK
- National Office of Animal Health (NOAH)
- National Pig Association (NPA)
- NI Pork & Bacon Forum
- Pig Veterinary Society (PVS)
- Producer members
- Quality Meat Scotland (QMS)
- RUMA
- VMD



Pig Health and Welfare Council

The PHWC aims to be a resource for the pig industry by advising on areas of strategic policy and setting strategies. Key areas of focus are surveillance and disease risk assessment, promotion of welfare, and prudent antimicrobial usage through improved disease management. This can only be achieved by a close working relationship with pig keepers, the veterinary profession, government and allied industries. The PHWC recognises that its ongoing enterprises must be openly discussed with all interested parties in the pig sector and that results are communicated at all levels, from the farmer to government and CVO when necessary. The main responsibility of the PHWC is to enhance the health and welfare of pigs in England.



Pig Health subgroup

The Pig Health subgroup mainly aims to advise the PHWC on proposals for effective surveillance of pig health and welfare in England. This is achieved through integrative work across the industry in the same manner as the main PHWC. This group's primary focus is to provide horizon scanning on new pathogens and emerging diseases of importance to the pig industry and on changes in levels of endemic disease within the UK. The subgroup then uses this information to formulate strategies of benefit to the UK pig industry and to recommend a course of action in the prevention, reduction or eradication of significant diseases. The provision of a robust, reliable and integrated disease surveillance system forms one of the ongoing long-term strategic aims for this group.



Antimicrobial Usage subgroup

The Antimicrobial Usage subgroup has been charged with reviewing and eliciting change in the pig industry with regard to the responsible use and stewardship of antimicrobials. The group will actively seek out information on all aspects of antimicrobial usage by the pig industry and identify crucial gaps in knowledge. The group recognises the need to safeguard antimicrobials for future generations and reduce the risk of resistance developing. This can only be achieved through an informed approach to antimicrobial usage, based upon evidence in optimising efficacy in antimicrobial administration and investigating alternatives to antimicrobials wherever possible. In addition, it is vital that the whole of the pig industry supports and adopts these measures in good practice. The Antimicrobial Usage subgroup aims to ensure open and informed communications on its findings to the public and stakeholders.



Pig Meat Food Safety subgroup

The Pig Meat Food Safety subgroup aims to be the authoritative group for advice on strategic policy, surveillance, research and management and control of zoonotic hazards in pig meat production. This will be manifested by the development of a roadmap to achieve improvements in pig meat safety. This work requires extensive investigation and evaluation of current knowledge on reducing zoonotic-related food risks and collaboration with government, pig keepers, producers, veterinarians, processors, retailers and allied industries. The inclusion of all these groups is required to ensure that there is a 'whole chain' ownership of the roadmap and shared commitment to its outcomes.



Welfare subgroup

The Welfare subgroup focuses on all aspects of pig welfare applicable to the UK pig industry. Pig welfare within the British Isles needs to reflect the diverse production methods within the industry, which often presents unique challenges when compared with our European counterparts. The subgroup aims to bring a consensus on the key pig welfare issues to be investigated and the ultimate aims for each issue. This work requires considerable amounts of facilitation between the pig industry (including pig keepers, slaughterhouses and processors), allied industries, vets and paraprofessionals, welfare scientists, consumer organisations and government. The aim is to develop workable strategies and initiatives to address the key issues identified. The subgroup may engage in research in areas where it determines there is a gap in knowledge and utilise this to inform PHWC of any resulting recommendations.

Review of the 20:20 vision for Pig Health and Welfare

The vision in 20:20 Pig Health and Welfare for 2020 was established in 2012 to be ‘an English pig herd where health and welfare are continually improving, which results in better pig performance, the production of a safe and quality product, reduced environmental impact and increased sustainability of an industry that contributes fully to national food security.’ This vision has continued under the new structure of the PHWC, but with a more streamlined and targeted approach to try to achieve the same objectives but with a clearer direction on key topics that have been identified as potential issues for the industry. Following the restructuring of the PHWC in 2014, the approach taken to continue the delivery of the 20:20 vision was to restructure the PHWC around strategic themes. It was decided that the thematic subgroup approach already established for welfare and surveillance would be adopted for the two remaining themes regarding food safety and antimicrobial drugs.

20:20 Pig Health and Welfare for 2020 objectives

1. Support pig producers in delivering their objectives for continual improvements in pig health and pig welfare.
2. Eliminate or control significant enzootic pig diseases locally, regionally and nationally.
3. Eliminate or control significant infections of food safety and public health concern (e.g. Salmonella).
4. Develop and promote new knowledge on the assessment of welfare outcomes.
5. Promote the open exchange of information on the disease status for herds and regions.
6. Promote and encourage responsible and appropriate use of antimicrobials.
7. Maintain freedom from notifiable exotic and emerging diseases of pigs.
8. Deliver an integrated approach to improving pig health and welfare with all stakeholders, allied support industries, retailers, foodservice and government.

Pig Health and Welfare for 2030 objectives

Eight years after the launch of the 20:20 Pig Health and Welfare for 2020, the industry has made significant progress, and the eight themes included in the objectives remain relevant for the pig industry today. The PHWC has built on those objectives and has agreed on a new overall objective with six main areas of focus to take the industry forward from 2021.

The overall objective is to support the pig industry in achieving an integrated approach to enhance the health and welfare of the pig herd and enable assurance that pork products are safe to eat and produced from pigs whose health and welfare needs have been met.

Objective 1 – Partnership working

1. Lead an alliance of all stakeholders in the pork chain, producers, processors, allied support industries, retailers, foodservice and government, to provide quality animals and products.
2. Design health and welfare strategies with consideration for the impact on the environment and in line with evidence-based best practice to meet consumer demands.
3. Draw up a roadmap to success, enabling target projects to be supported and funded.
4. Work with those responsible for delivering skills strategies to ensure that industry needs are met.

5. Support producers and vets in their delivery of integrated farm and/or area-specific programmes to improve pig herd health.
6. Support the industry in becoming self-regulating and take appropriate action to ensure standards are always maintained.

Objective 2 – Maintain and extend our disease surveillance system

1. Assist with the further development of a syndromic surveillance system.
2. Encourage all to invest in data systems that are fully coordinated to enable better use of all information being collected.
3. Support the maintenance and further development of an accurate pig register, linked to a detailed mapping system and the electronic medicines book, to assist disease control programmes and monitor antibiotic usage.
4. Encourage membership of the Disease Charter to include 92% of pigs for purposes of information sharing, disease alerts and disease controls. Increase the range of diseases included in the Charter.
5. Encourage the introduction of routine surveillance of wild animal populations of importance to the pig industry, particularly feral pigs, to mitigate disease risk.

Objective 3 – Reduce, control, or eliminate endemic and zoonotic diseases, including those with food safety implications

1. Keep an updated register of pig diseases and their impact on health and profitability.
2. Promote programmes to reduce each key disease.
3. Encourage identified behavioural change that impacts disease prevalence.
4. Identify barriers and gaps in knowledge that prevent the successful implementation of disease reduction programmes. Make proposals for the removal of those barriers, including research requirements.
5. Promote the use of improved biosecurity systems at each critical point in the animal/food chain.
6. Promote the further development of individual farm health plans to include food safety challenges.
7. Evidence the need for responsible use of veterinary medicines to maintain the health and welfare of pigs and food safety.

Objective 4 – Provide robust evidence that all production systems provide physical and mental wellbeing

1. Assist with the collection of data to demonstrate high welfare standards are being achieved across the whole industry.
2. Provide pig owners with advice and guidance to help achieve compliance with changing welfare expectations and welfare codes.
3. Identify and communicate welfare issues that may arise from changes in production methods.
4. Encourage and support the rearing of pigs with intact tails.
5. Identify and promote environments that protect piglet and sow physical and mental wellbeing.

Objective 5 – Encourage the use of data and new technologies

- 1.** Support the development of affordable farm early warning technologies such as measures for feed consumption, water consumption and stressors.
- 2.** Encourage the development of tests for rapid and accurate diagnosis, enabling correct use of veterinary medicines, reducing antimicrobial usage.
- 3.** Disseminate information and technologies that contribute to early warning of health and welfare issues.
- 4.** Identify and assess new technologies, such as gene editing, for compliance with PHWC aims.
- 5.** Proactively support the introduction of novel technologies such as precision livestock farming, which contribute to food security, reduce environmental impacts, improve productivity, and consequently reduce disease and the subsequent use of veterinary medicines.

Activity 2021–2022

Pig health

Disease surveillance

GB pig disease surveillance reports and dashboards

The APHA quarterly reports entitled ‘disease surveillance and emerging threats’ review disease threats and trends for each quarter.

The GB pig disease surveillance dashboard is an online resource developed to share the surveillance information from 2012 onwards derived from submissions to the GB veterinary diagnostic network. The dashboard is updated monthly.

Separate interactive disease dashboards for GB have also been developed by APHA. The dashboard for *Brachyspira hyodysenteriae* (the cause of swine dysentery) uses the outputs from whole genome sequencing analysis and provides veterinarians and others with information to assist epidemiological investigations and treatment choices. The dashboard for Porcine Reproductive Respiratory Syndrome (PRRS) uses surveillance data extracted from the Veterinary Investigation Diagnosis Analysis Database (VIDA) from 2012 and gives veterinarians and others an insight into the clinical signs, pig ages affected, concurrent diagnoses, seasonality and geographic information for cases of PRRS diagnosed each year. The dashboards can be interrogated using a number of filters and are of value, although it must be recognised that the level of disease in specific regions cannot be inferred or compared as the data is biased in various ways and the disease status of non-submitting herds is not known.

Abattoir surveillance

Until 31 December 2022, there were two methods for the collection of information from abattoirs: The AHDB Pig Health Scheme (PHS) data and the Food Standard Agency’s Food Chain Information (FCI) and Collection and Communication of Inspection Results (CCIR). Following an industry review to evaluate AHDB priorities, it was reluctantly decided that funding for PHS could no longer continue, and the scheme ceased to operate at the end of 2022.

CCIR ante-mortem inspections are carried out by the abattoir’s Official Veterinarian (OV), and post-mortem inspections are carried out by specially trained Meat Hygiene Inspectors (MHIs). The ante and post-mortem data for lesions observed during meat inspection at the abattoir are recorded in the CCIR system. These data are gathered at different points on the line, with each MHI assessing different parts of the carcass and offal. CCIR inspections are required for every animal intended for human consumption, which means they happen daily in every abattoir. CCIR looks at a larger number of ante- and post-mortem conditions than the PHS but does not grade their severity. FSA data are not currently used systematically to monitor trends of specific conditions, to detect changes in disease syndromes or to be used for benchmarking as occurred with the PHS. Unless there is a comprehensive feedback system to the producers, the maximum benefits will not be achieved.

When the electronic Animal Movement Licencing system (eAML2) was launched, it included a service to match CCIR data from the FSA to movements and email CCIR reports to each producer. This service ceased due to flooding of the FSA computer in York. AHDB has continued to work with the FSA and their IT supplier to restore the flow of CCIR data to producers. The intention is that producers will be able to access their data through their PigHub account. There have been issues with accuracy, and this must be improved as a priority to provide confidence in the data. Test data has begun to flow from some abattoirs, but the system is not fully operational, and further testing is currently underway, but there is currently no date set for when this system will go live.

Archive of serum and tonsil samples

Seven hundred blood and tonsil samples were collected from slaughter pigs between March and July 2019 to create an archive. The archive can be tested as required to provide national prevalence data for endemic or emerging disease threats. APHA will store the archive for future testing over a 5-year period. Testing the archive to provide national PRRSV-1 and Porcine circovirus 3 prevalence for the slaughter pig population has been undertaken to provide baseline data and inform possible future initiatives or control through the AHW Pathway.

Ten top questions

There are several basic features of pig units which, if recorded systematically for all units/holdings, would benefit the pig industry and the Government and its agencies. The ten top questions were initially developed as a proposed method of collecting information once per year for research and management to avoid continual requests to producers or others for information. Details of the ten top questions were passed to the Livestock Information System (LIS) team to consider their inclusion in the new LIS database, but if they were unable to include them, other options would need to be explored.

A Pig Health subgroup (PHSG) working group was established in September 2021 to re-consider the ten top questions in the light of new developments and included which of the questions required legislation, which could be collected from elsewhere and who would have access to the information. The ten top questions were requested as part of the development of the pig component of the AHW Pathway (Pig Pathway). These were finalised and provided to the Pig Pathway team in early 2022, but whether the information would be collected specifically for the Pig Pathway with a separate database or whether it would be collected via LIS was unclear. Discussions are underway between LIS and The Pathway Group to determine where best to incorporate the ten top questions and where the data should be stored.

There were a number of areas where data was already collected or reviewed, which would need to be mapped to ensure the most effective method of collection, which minimised the need for entries of the same data into a number of different databases. It could be envisaged that a core database with the basic details of premises, to which the Pig Pathway and other databases could be linked in similar way to the current operation of the Pig Hub with linked databases. If that is the case, detail would be needed on who would collect which information, where it would be stored, and who would have access. Funding would be needed to develop and run such an arrangement.

Syndromic surveillance

One of the recommendations from the Pig Syndromic Surveillance roundtable was to develop an app to be used by vets to report disease incidents on pig farms. The development of the app was in abeyance for a period in 2019 and early 2020 for various reasons. During 2020, there were several new situations/initiatives which affected the pig industry. These included the impact of Brexit, the development of the Livestock Information Programme, and the proposed AHW Pathway for England. As a result, APHA considered it timely to revisit whether a pig syndromic app should be separate standalone database or sit within the other data collection systems used by pig farmers and vets.

One option was to link the syndromic surveillance data to the Pig Hub held by AHDB, which currently links several different databases into which producers or their vets input information. Pig Hub has been developed by AHDB as a single pig industry access point for all producers and others, including vets. It was concluded that the approach to the development of pig syndromic surveillance needed to be adjusted so that it would integrate with AHDB PigHub and become another linked database rather than a stand-alone system. This would also avoid duplication of effort and be likely to assist in clear data management and ownership, which should encourage data entry. This work will continue in 2023/2024, along with further developments of the Pig components of the AHW Pathway (Pig Pathway) and the Livestock Information Service (LIS).

Priority diseases

The pig industry has long recognised the relevance of endemic disease, both to the productivity and economic bottom line and to the welfare of the animals in their care. In the past, the Surveillance subgroup proposed a priority list of endemic diseases which have economic and welfare implications and for which there is a need to reduce the prevalence or, where appropriate, eliminate them. The list agreed upon by the Pig Health subgroup and The Pathway included PRRS, Swine influenza, *Streptococcus suis*, swine dysentery and Salmonella, with the initial focus on the PRRS virus. Further discussion would be needed to develop an industry consultation process for adding and removing diseases in the future.

Horizon scanning

Horizon scanning identifies new and emerging diseases as well as those present in other countries which pose a potential risk to the UK. Some will pose a high risk of introduction and a potentially major impact on the industry. Diseases such as PEDv and PRRS -2 fall into this category.

Information on diseases and the threats they pose to the GB pig industry are obtained from a number of sources. [The APHA International Disease Monitoring team](#) monitors and carries out risk assessments on the progress of exotic diseases around the world in order to evaluate the potential risks of those diseases entering the UK. Mitigating actions and issues are considered to reduce the risk of introduction. This activity is also informed via representation on the APHA pig expert group, the APHA quarterly reports and personal contacts between PHSG members and their international contacts.

Disease control

PED contingency plan

A new version of the contingency plan with a revised layout was prepared in 2019, taking into account recommendations from Exercise Trent and lessons from the Porcine Epidemic Diarrhoea (PED) suspect in 2018. The revised plan was subject to a wide range of consultations and amendments, but owing to Covid and the pressure of work in relation to avian influenza, it was not finally agreed upon until 2022. The current contingency plan was finalised and published on the AHDB website in August 2022. Desk instructions were also prepared for AHDB, which would coordinate the action against PED in the event of an outbreak. [Details are available on the AHDB website.](#)

The contingency plan is a 'living document' allowing for amendments based on the latest in scientific understanding and methodology for control. It is intended to carry out annual reviews of the contingency plan, which in 2023 will take into account the relevant recommendations from Exercise Avon and issues identified from the suspect case in May 2022. The contingency plan is supported by a range of Standard Operating Procedures (SOPs), which are available on the AHDB Pork website.

Although the contingency plan and the AHDB desk instructions relate specifically to PED, it establishes a model from which the basic principles could be applied to other diseases, such as the incursion of a foreign disease, should the need arise. The close working relationship between all parts of the industry and government is likely to set a precedent for contingency planning for other diseases of significance to the industry in future.

Exercise Avon

A second simulation exercise (Exercise Avon) took place in October 2021 and was organised through the Pig Health subgroup and facilitated by AHDB alongside APHA and a volunteer producer. The main exercise took place over two separate days to allow for testing of actions on suspicion and actions on confirmation. The event was desk-based, with communications taking place via email or Microsoft Teams. No samples were taken, and there were no veterinary visits. Exercise Avon was a very useful simulation to test the PED contingency plan and communications between the stakeholders involved. Ten recommendations were made to refine the procedures and suggest areas where further work was needed to enhance the response to an outbreak.

Suspect PED case in May 2022

In May 2022, a suspect case of PED on a small pig premises in England was reported by a private vet who could not rule out PED. Clinically 50% of a group of six weeks old pigs had diarrhoea and poor growth, with one dead piglet. The high morbidity had caused concern about PED, prompting the suspect case to be reported to APHA. Faecal samples were sent to APHA Weybridge for rapid PEDv PCR testing at no charge to the submitting vet or pig keeper. No PED virus was detected, and PED was ruled out. The dead piglet was submitted for post-mortem examination with a final diagnosis of iron deficiency anaemia. A number of lessons were learned, which have been included in the AHDB desk instructions and will be considered in the next version of the PED contingency plan.

Epidemiology training

As part of PED preparedness, an epidemiology training course was held by APHA and AHDB in July 2019 for five practising vets who were trained as field epidemiologists to carry out epidemiological investigations in the event of a PED outbreak. They were on a retainer to be called upon in the event of a PED outbreak. AHDB, with support from APHA, is proposing to run another training session in 2023 to recruit more vets and provide an update to existing vets. While this programme has been developed in the context of PED, epidemiological expertise would be available for investigating new and emerging diseases if that became necessary.

Haulage vehicles and lorry washing

The #MuckFreeTruck lorry wash campaign was originally launched by the NPA and AHDB Pork, endorsed by the four CVOs in 2019. This promoted the need for pig producers, processors and hauliers to ensure livestock lorries were properly cleaned. A survey of hauliers was carried out in 2019 by AHDB to identify potential problems.

The results indicated that British Quality Assured Pork assured that abattoirs generally had the facilities required and that drivers felt they were fit for purpose. Many of the challenges reported were from smaller non-assured sites and mixed species abattoirs. There was also some feedback from hauliers that they were not always given any specific training on vehicle washing. Covid related delays meant that in abattoirs, work to create training videos was delayed; however, this is a priority for 2023 as part of the ongoing focus on biosecurity and disease prevention. There may also be some merit in considering a further survey to identify progress and areas for further work.

Significant Diseases Charter

One of the constraints to sharing information quickly in the event of a disease outbreak relates to the confidentiality and legality of releasing information about the suspect or infected premises. This problem of confidentiality issues is partially overcome by the Significant Diseases Charter (Charter), which is an important component of the contingency plans. It is an email alert system to provide producers and their vets with timely email alerts in the event of an outbreak of swine dysentery or PED. Producers who have signed up to the Charter give consent for their vet to report suspected cases of PED and confirmed cases of swine dysentery to AHDB. Other Charter members are then alerted by email, which enables them to take precautions to minimise the spread of infection. Details are not notified to non-Charter members.

If a producer is not a member of the Charter, permission must be obtained before notification can be sent to Charter members or other producers.

AHDB have been promoting the Charter since June 2018, but unless more producers signed up to the Charter, there would be a limitation on the ability to pass on information more widely. The importance of timely sharing of information about disease outbreaks was recognised, and that increasing Charter membership was an important priority for recording, communicating and controlling specific diseases. Following a consultation by RT, revised standards came into force on 1 November 2021, which required that “all units must be a member of the AHDB Significant Diseases Charter and report in line with the Terms and Conditions”.

Currently, the Charter only covers swine dysentery and PED, but there is a provision to extend the scope to include other diseases following consultation with the industry. The Pig Health subgroup has a role to play in this by reviewing the priority diseases and making recommendations for the addition or removal of diseases, and ensuring appropriate advice is available to mitigate the impact of disease.

Exclusion testing for notifiable disease

Exclusion testing involves samples being sent for testing where a disease such as ASF is a possibility but not suspected, avoiding the premises going under formal disease restrictions. Following a successful pilot, it was agreed to offer testing for the exclusion of notifiable avian disease to poultry keepers. The CVOs commissioned a review of the avian exclusion testing scheme and wished to complete and analyse this before considering establishing a scheme for swine fevers in pigs.

The Avian Exclusion Testing review was published in the Vet Record in 2021, along with a letter concluding that exclusion testing was a valuable resource, although it would not replace statutory reporting requirements. As the review into the exclusion testing in poultry had been published, it was considered important to develop exclusion testing for the swine fevers, but this was delayed as Defra were focusing on regionalisation as part of the need to revise the ASF legislation. The Pig Health subgroup continues to support the concept of testing for exclusion, in particular, for swine fevers. Ref: Vet Record 11/18 September 2021, Vol 189 No 5 193–195 entitled “Testing for exclusion of avian notifiable disease: six-year review”.

Livestock movement records

Currently, eAML2 is part of a suite of web tools offered by AHDB Pork providing both statutory and value-added reporting. There is no central database for all the information as these websites are linked through the Pig Hub single sign-on. This is made possible by Application Programming Interfaces (API), which is purely a mechanism to extract and share data across organisations involved, such as AHDB, APHA, and RT, etc. The software programme itself allows two or more possibly quite different applications to talk to each other. This allows overnight data feeds from RPA and the RT certification bodies and completed movements to be uploaded.

In the event of a disease outbreak, APHA tracing team require access to eAML2 for a number of reasons. These include tracing movements of pigs off affected premises to prevent the spread of disease and tracing movements onto farms to identify potential origins of disease. In the event of a disease outbreak, AHDB have added value through the ability to identify premises within 3 km and 10 km zones around the affected premises. AHDB needs access to the data in a similar manner to APHA as it has the responsibility for controlling notifiable diseases such as PED. Other diseases may become notifiable or reportable with the development of the Pig Pathway when the responsibility for control may lie with the industry through AHDB.

There was a need to offer quicker and more convenient recording of animal movements as well as support innovative solutions that could improve trade, productivity, animal health and welfare. Work to create a unified livestock information service (LIS) began in 2019 by a jointly owned subsidiary of AHDB and Defra with the goal of replacing three existing systems: Animal Reporting and Movement Service (ARAMS) for sheep, goats and deer; British Cattle Movement system (BCMS) for cattle; and eAML2 for pigs. By collecting data on these species in one place, it would make disease prevention and management faster and more effective.

The first stage was launched in March 2022 with the transition of sheep, goat and deer movement reporting in England into LIS. The transition of cattle records was the next priority, but the transition from BCMS was not likely to occur until late 2023 at the earliest. There are no timelines for replacing eAML2 with LIS for pigs, but it is not expected that this will happen before the transition from BCMS. While the functionality of eAML2 will be replaced by the LIS, it is currently unclear how this will interface with Pig Hub and the other AHDB Pork tools. Future action will be important as eAML2 is a legacy system which needs to be updated and improved if LIS is not implemented for pigs.

Contingency planning to protect exports

One outbreak of ASF in a previously ASF-free country, whether in domestic pigs, feral pigs or wild boars, can result in a ban on all exports of live pigs and their products. It remains a priority to develop contingency plans to ensure exports can continue in the event of a serious disease outbreak. There are two options for developing such contingency arrangements: zoning/regionalisation or compartmentalisation.

Compartments are defined by the World Organisation for Animal Health (WOAH) as 'one or more establishments under a common biosecurity management system containing an animal subpopulation with a distinct health status'. In practice, a compartment is defined primarily by management and husbandry practices relating to biosecurity. Full details of the requirements are provided in Chapter 4.4 of the OIE Terrestrial Code. Setting up compartments which were acceptable to importers, exporters and the industry would be difficult, and while compartments remain an option, buy-in would be needed from the whole industry.

The EU Commission Implementing Decision (2021/605) set out new special control measures for ASF for EU countries wishing to continue trading with other EU countries and exporting pigs and/or pig products to third countries outside of the EU. Following a consultation in February 2022, Defra concluded that the proposed amendments to the ASF Control Measures in England should go ahead to bring England in line with the EU Decision. These new measures would re-align England with EU legislation and allow trade to continue from unaffected areas in England with the EU and third countries in the event of an ASF outbreak. The aim was to improve early detection of disease, facilitate disease control, and reduce the risk of the spread of ASF from infected premises to the rest of the UK. This would enable an effective and swift response to controlling and containing the disease and allowing effective regionalisation and facilitating trade to continue from unaffected areas. Although these measures were expected to come into effect in 2022, they had been delayed.

Border controls

The Pig Health subgroup was concerned that the controls to prevent the introduction of the ASF virus via porcine products were very limited. This was unlike many other countries free of ASF, where strict border controls, biosecurity, publicity and enforcement were in place. The risk of entry of ASF virus in porcine products imported from restricted zones in EU-affected countries, including from illegal imports, remained a major risk. The importation of pork or pork products from Asia and other non-EU countries into GB remains illegal for travellers, but there remain major concerns about the illegal importation of these products by travellers coming from Asia.

Although the UK left the EU, there had been no change to the rules for passengers travelling into GB from the EU from January 2021. There was potentially a higher risk of personal imports of pork products from Eastern Europe but with little or no publicity or enforcement at the entry points into the UK. New safeguards for the control of personal imports came in on 1 September 2022, with additional staff being recruited to help develop facilities to deal with seizures.

The new rules made it illegal to bring pork or pork products weighing over 2 kg into the country from an EU or EFTA country unless they were produced to the EU's commercial standards. However, the legislation does not currently apply to non-commercial imports of pork products weighing less than 2 kg from the EU, but all travellers are strongly advised to avoid bringing, buying, ordering on the internet, or requesting any pork products – for example, fresh or frozen meat, dried or cured meats, sausages, salamis, or pâté – back to the UK from affected parts of Europe.

Concerns have been raised following several substantial seizures which have been reported since the new rules have been enforced. There are also ongoing concerns around infected pork products originating from EU and non-EU affected countries being smuggled in passenger luggage through ports and airports into GB. This, taken with movements through other ports and airports, suggested that considerable quantities of illegal pork and pork products are entering GB each day from regions affected by ASF.

Based on the recent checks at ports and airports, Defra considers the risk of ASF entering GB from the human-mediated pathway and moving porcine products of animal origin to be high (occurs very often). However, there is considerable uncertainty around this until data is fully collated and analysed. [More information available here.](#)

APHA organised a number of government and stakeholder communications meetings to consider the range of messages that need to be sent out concerning the ASF risks and precautions that should be taken. These measures are to target ASF specifically. Posters have been sent out to ports and airports, with some translated into other languages. There was positive feedback on posters seen at airports, although in some cases, no posters were visible. Defra are monitoring where the information appears and where it does not. They have also focused a pilot campaign on some of the riskiest pathways into the UK with travellers, and it is hoped this will be continued and resourced more heavily. There has been significant press coverage to raise awareness amongst travellers and the general public. It is an ongoing priority to raise awareness of ASF outside of the pig-keeping community in order to prevent a disease incursion.

In addition to the messaging and actions at the border, the Pig Health subgroup and APHA have continued a campaign to raise awareness among small-scale pig producers of the importance of maintaining the swill ban as our second line of defence against exotic diseases such as ASF. These campaigns have succeeded in reducing the percentage of keepers feeding kitchen waste by 60%. This campaign faces ongoing challenges from those advocating the lifting of the swill ban for environmental reasons. The subgroup will continue to oppose any rollback of the ban on feeding kitchen or catering waste to pigs.

Industry responsibilities for control of animal diseases

There have been industry concerns that there is currently no mechanism to deal with exotic imported pathogens or their variants that are not controlled by government. If the incursion into GB of a new exotic disease such as PED or PRRS-2 occurs, there is a short window of opportunity for the industry to act to eliminate the risk before the disease can take hold and spread within the pig population. To take advantage of that short window, there needs to be a mechanism in place that is ready to go, requiring only a swift and case-specific approval.

A paper entitled 'Response to the Risk of Entry to Great Britain of Exotic Diseases of pigs which are not controlled by government' was prepared by AHDB and described a mechanism in detail by which industry could deal with a new exotic disease incursion into the UK whereby and the principle that it should be self-funding. The paper proposed that legislation was required to enable industry to raise funds in order to implement control procedures in the event of a disease outbreak and to develop procedures by which producers could receive money for culling pigs. A similar mechanism would be needed in the event of an ASF outbreak where culling for welfare reasons might be required and where government has previously indicated that it would not support such a scheme.

The Pig Health subgroup continues to support the proposal to enable the industry to raise funds.

Disease situation

African swine fever (ASF)

[Defra continues to publish qualitative risk assessments](#) concerning the risks to the UK from ASF on the European continent, in China and in the Far East.

ASF continues to spread worldwide and has reached multiple countries across Asia, the Caribbean, Europe, and the Pacific, affecting both domestic and wild pigs. ASF genotype II appeared in the Dominican Republic after an absence of almost 40 years and later in Haiti. The hypothesised routes of introduction were improperly treated ship garbage or the illegal introduction of swine products by tourists. Four countries reported the first occurrence of ASF in their territory, mainland Italy, Nepal, Thailand and North

Macedonia in 2022. ASF continues to circulate in wild boar across much of Eastern Europe, and cases also continue sporadically in domestic pigs in several countries in Eastern Europe.

Long geographical ‘jumps’ of ASF continued to occur in Europe and elsewhere, often being detected first in wild boar. The short-distance transmission of ASF appears to depend largely on the wild boar population density and their interaction with low-biosecurity pig production systems. Long-distance transmission of the virus is likely to be caused by human movement of infected pork produce, vehicles or equipment.

Feral wild boar

The Feral Wild Boar Working Group continues to meet quarterly and provides a platform for local landowners, industry bodies and government to collaborate. The group was established with a focus on the largest known population of feral wild boar in the Forest of Dean, with a view to extending this approach and applying any lessons to other emerging populations in England. The group includes representatives from Defra and the devolved nations so that activities in each region can help inform management and policy decisions across GB.

The Forest of Dean has just completed a 5-year population control programme to reduce the number of boar to 400 animals and review the impact that this has on boar movements, incidents of boar causing road traffic collisions, damage to local community areas and sightings on local farmland. A thermal imaging survey was also undertaken to monitor boar movements and determine if it was feasible to maintain a managed population within the Forest of Dean or if it would cause dispersion. Population data, thermal imaging surveys and feedback from local landowners are currently being analysed to determine if this approach is successful. The aim is then to assess how to maintain a population of 400 and analyse if this is a sustainable population. In addition to this, as part of ongoing disease surveillance, APHA continues to provide training to rangers in the Forest of Dean to sample any boars found dead and test for CSF and ASF.

Porcine Epidemic Diarrhoea (PED)

PED remains notifiable in England and Scotland, and suspicion of disease, or confirmation of infection, must be reported. The last diagnosis of PED recorded in VIDA was in 2002 on a farm in England. There have only been two suspect cases of PED, both in England, since the disease was made notifiable in 2015. The last case was reported in May 2022 on a small pig premises in England, where PED was ruled out. The last recorded case of Transmissible Gastroenteritis (TGE) was identified in GB in 1999.

Enhanced surveillance for PED virus (PEDv) continues, and diagnostic submissions from non-suspect cases of diarrhoea in pigs submitted to APHA are routinely tested by PCR for PEDv and TGE virus (TGEV) on a weekly basis. Neither PEDv nor TGEV has been detected in over 1,500 diagnostic submissions tested between June 2013 and September 2022. A small number were from Wales, with the remainder from England. Samples taken in Scotland are sent to SRUC for testing.

Swine dysentery

In 2022 there were 27 diagnoses of swine dysentery in GB compared to 11 in 2021 recorded through VIDA. It should be noted that VIDA records capture diagnoses of swine dysentery, not detections of *B. hyodysenteriae* made from submissions monitoring herd status without associated clinical signs. These incidents are not a measure of the number of herds already infected with swine dysentery as they tend to reflect the spread of disease to new herds or the upsurge of disease in a herd that is already infected. Some cases have involved relatively mild diarrhoea, and typical signs of swine dysentery (muco-haemorrhagic diarrhoea) are not always seen. Pig producers are encouraged to sign up for the AHDB Pork Significant Diseases Charter, which helps producers by sharing information about new swine dysentery outbreaks.

There remains diversity in the strains that are being detected. When *B. hyodysenteriae* isolates are provided from either diagnostic or monitoring submissions, antimicrobial sensitivity testing and whole genome sequencing are carried out. Whole genome sequencing identified six multi-locus sequence types (MLST) in 23 of the 27 isolates in 2022, two of which had not been identified in isolates that have been sequenced previously within APHA. The number of *B. hyodysenteriae* strains keeps being extended, and it is increasingly important to define what is and what is not a case of SD. It is proposed to hold a workshop in 2023 on defining swine dysentery.

Porcine Reproductive Respiratory Syndrome (PRRS)

PRRS remains a significant diagnosis throughout the year, with clinical issues sometimes confirmed in vaccinated herds as well as unvaccinated ones. The 2021 data were uploaded into the PRRS dashboard with a total of 120 diagnoses in 2021. The diagnostic rate for PRRS in GB submissions decreased with a downward trend in 2021. PRRS diagnoses made outside the surveillance network are not recorded, which means that the data and maps in the dashboard cannot be used to draw conclusions about the levels of PRRS in the country.

The presence of diverse and, sometimes, more pathogenic PRRSV-1 in parts of Europe, alongside PRRSV-2, emphasises the importance of preventing strains exotic to the UK from entering. There have not been any diagnoses involving PRRSV genotype 2 in GB pigs, and none of the PRRSV sequenced at APHA have suggested the introduction of exotic PRRSV-1 strains. New disease reporting requirements were introduced by Defra on 21 April 2021, with a monthly reporting requirement for laboratories which identify PRRS-1. An exception to the monthly reporting is that any detection of PRRSV-2 should be reported as soon as possible to local APHA Veterinary Investigation Centres (VIC) in England and Wales.

The primary goal of the AHW Pathway is to improve farm animal health and welfare in English national herds and flocks. Within the pig sector, there was a co-design design of The Pathway with government, industry, vets, non-government organisations and welfare scientists to determine the priorities for the sector. Members of the Pig Health subgroup were involved in various aspects of The Pathway development by participating in a number of workstreams. Members were also updated on problems and progress on a regular basis.

Two of the priorities for the pig sector are to tackle PRRS, which was classified as a priority disease for control during the development of The Pathway and to improve biosecurity to control endemic pig diseases and help prevent the introduction of exotic disease threats. The Pathway review will offer farmers funding for an annual visit from a vet of their choice to consider the health and welfare of their animals. This will include carrying out diagnostic testing for PRRS, reviewing biosecurity and the use of medicines, and providing bespoke advice on actions and available support to improve the health and welfare of their animals.

Detection of vesicular disease due to Seneca Valley Virus (SVV)

Vesicular disease due to Seneca Valley Virus (SVV) was confirmed on five commercial pig breeding premises in one geographical area of England between June and September 2022. The disease was first reported as a suspected notifiable vesicular disease, but official investigations with testing ruled out notifiable diseases, namely foot-and-mouth disease (FMD), swine vesicular disease and vesicular stomatitis. Samples from vesicular lesions collected from affected pigs tested positive for SVV, confirming the presence of this virus for the first time in pigs in England. SVV is not notifiable or reportable in the UK and is not a disease listed by the World Organisation of Animal Health (WOAH).

The detection of these SVV cases reinforces the value of passive surveillance for notifiable vesicular disease, with pig keepers or vets detecting and reporting suspect lesions promptly. It remains unclear how the virus enters the pig population in new countries and naïve herds. Therefore, stringent application of well-established

biosecurity practices is recommended and will also help reduce the risk of introducing other exotic diseases, such as ASF, and endemic diseases, such as PRRS. For more information [click here](#).

Tuberculosis (TB)

During 2021 there was a significant increase in the number of suspect TB lesions being detected at abattoirs resulting in movement restrictions being applied on the farm. With culture taking 6–8 weeks, there were significant problems for producers. A number of tests had to be repeated as initial results were inconclusive, meaning producers were under restrictions for long periods.

APHA developed a PCR test for *Mycobacterium bovis* on tissue samples and have been using this for samples collected at post-mortem since 30 March 2022. The results from the PCR would be available within three weeks, and if negative, the movement restrictions could be lifted. For a small proportion of samples, PCR might not provide a valid test result, and for those with PCR positives, restrictions remained in place until culture provided a final result. By June 2022, it was noted that the turnaround time for PCR testing of lesions was good, with results being reported in nine days and that out of 21 submissions, only one was positive. Herds with positive test results remain under movement restriction for potentially long periods before they are tested free of TB.

Welfare

AHW Pathway

The past season has been unprecedented in the challenges we have seen in the industry. Major challenges have been seen in both the supply chain and the cost of production. This has had dire effects on profitability and a significant impact on investment at farm level.

In a positive move, the AHW Pathway for England, under development for some time, is open for applications for small grant projects which provide a demonstrable improvement to health and or welfare on farm. Members of the group have also been working with Defra and APHA in a payment-by-results project with the aim of creating a trial structure under which producers can be helped and supported to raise more pigs with intact tails. This collaboration has involved a number of stakeholders and, importantly, producers who already have experience in raising undocked pigs, with the process highlighting how important it is to take a collaborative approach. The project is scheduled to start at the end of 2023.

Euthanasia of piglets

Following the implementation of the new welfare codes and a subsequent licensing of the non-penetrative captive bolt as a legal means of killing piglets and other neonates. This is a multi-species issue but has particular areas of concern for the pig industry if it is the sole method of emergency euthanasia. Alternative methods, such as blunt force trauma, still have a place and must remain available until the effectiveness of non-penetrating captive bolt guns on very small pigs has been fully assessed and a suitable and effective secondary measure is agreed upon should the device fail. The group supports and will encourage and facilitate industry engagement and collaboration with Defra and APHA to find a robust, practical and acceptable solution that does not adversely affect welfare.

Freedom around farrowing and lactation

This has been and remains a key area of focus for the group, especially the members from the Buildings Forum, who have had input into this area for some time. There has been a hiatus in investment in this area, partly due to the economic pressures the industry has been facing. While building suppliers may be encouraging alternatives to traditional crates, we need firm evidence on the size of pens, etc., before buildings are designed or re-fits considered. This is also an issue for our European colleagues; EFSA have provided information to the Commission, and their proposals are expected in mid-2023.

Industry training

Real progress has been made in training staff on pig units, with the provision of an online course. The Pig Handling Training, compulsory for all who work with pigs on our units, was initially available at no cost. It now carries a small charge. Feedback from those who have completed the course has been largely positive, feedback and suggestions have been heard, and it is hoped that there will be other courses available should funding allow.

Real Welfare

The AHDB Real Welfare scheme has come to an end after over a decade of finisher pig assessments. The Real Welfare scheme provided a positive impact, particularly in providing support to decrease lameness and severe body marks and improve hospital pen management. It was noted that the scheme has been valuable for the industry as a whole, and over the time assessments were performed, the numbers recorded in each of the main parameters decreased over time. Discussions are ongoing as to if and how the scheme could be relaunched to include additional measures providing information relevant to producers on an individual basis as well as a national level.

The group continues to provide input into various consultations, including the current review of Welfare in Transport, the RT scheme. Other areas of focus for the year ahead include a review of and investigation into the levels of lameness seen in all ages of pigs on farm, continued input into farm assurance schemes and close working with the RT and RSPCA.

Welfare in Transport

Group members responded extensively on proposed changes to the Welfare in Transport legislation. The increasing distances both finished pigs and cull animals are having to travel, and the impact of breakdowns, COVID-19, and unforeseen interruptions on the supply chain have become more concerning, as all these situations have arisen in the last 18 months.

Antimicrobial usage

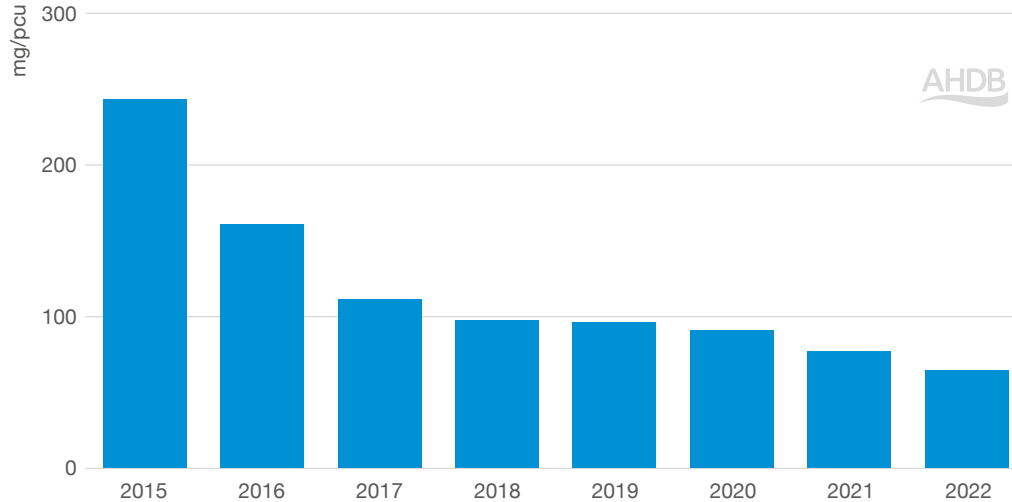
eMB Pigs

The Antimicrobial Usage subgroup continues to review and analyse the data gathered from 95% of the pigs produced in the UK. The majority of these data are collected in a timely fashion, with 87% of submissions received within six weeks of the period end. Antibiotic usage continues to reduce, with a 17% reduction in 2021 and a further 20% in 2022 to 70 mg/PCU. This reduction means that the pig sector has achieved its TTF2 target of a 30% reduction in use by 2024, two years ahead of expectation. This reflects a remarkable progression in antibiotic stewardship, given the pressure that pig farmers were under over this period with supply chain issues, rising input costs and low pig prices.

Figure 3. Antibiotic use in mg/PCU

Source: eMB, AHDB

Note: 2022 dataset undergoing pre-publication checks and cleansing



There is now a data set covering eight years of production, and trends in use are regularly analysed. All but one category of antibiotic are reducing, and the category that has risen, the aminoglycosides, remain at very low levels of use.

Data sharing is often discussed within the group as requests for access to the data are often submitted by research groups, retailers and devolved regions. However, the data are owned by the producers, so apart from anonymised data, e.g. the national usage figure, only producers have the authority to share farm-level information.

Persistently High User (PHU)

As described in the last biennial report, one of the pig sector's TTF2 targets was to support the top 5% of users in each holding category (PHU's), as calculated over a rolling 12-month period, to make changes to the management of their farms through the development of an antibiotic reduction plan (ARP) in conjunction with their vet. This proposal was supported by RT in the revised standards, which were implemented on 1 November 2021. Since their introduction, there has been a steady reduction in the thresholds that trigger PHU status in all categories of holding.

Withdrawal of marketing authorisations for zinc oxide products

A working group drawn from the AMU subgroup held a number of meetings with the Veterinary Medicines Directorate (VMD), the International Zinc Association (IZA) and the MA holders to discuss our concerns about the loss of zinc oxide to control Post-weaning diarrhoea (PWD). This will consider the risk that a ban on zinc oxide use would have on the progress made in reducing antibiotic use, particularly in the HP-CIA's such as Fluoroquinolones and Colistin. The EU legislation had been taken into UK law before Brexit.

The MA's were due to be relinquished in late June 2022 following a five-year lead-in period following a decision by the European Commission. This decision was based on a flawed environmental model that had a number of significant weaknesses, including a failure to consider the bioavailability of zinc. The VMD recognised the deficiencies and commissioned work to develop a refined model. This model found that the regions with light sandy soils would still breach the no-effect concentrations for zinc, and the VMD were, therefore, minded to retain the legislation.

We have since been involved in a validation project for the VMD's modelling, which sampled sites in Scotland and England, as we considered that the assumptions made around loading were unrealistic and that slurry dilution had not been included and await the results of this study.

Further discussion with the VMD around mitigation to avoid increases in antibiotic use resulted in an extension to the use of zinc until the product that had been manufactured and QP released by the implementation date in June 2022 met its expiry date. It has also been stated that the VMD would be prepared to license any new Zinc product that could demonstrate that it would not breach the no-effect concentrations for zinc in the environment.

The group has supported a Rapid Evidence Assessment for alternatives to zinc sponsored by AHDB. In this, independent scientists have reviewed the literature available and assessed the data on alternatives for robustness, looked at what is available and produced a guide that evaluates its effectiveness and cost-effectiveness. This work was carried out in 2022, and the following review will be published in 2023.

RUMA Targets Task Force 2 (TTF2) progress

Significant progress has been made with the TTF2 targets for the pig sector. The headline target was to achieve a 30% reduction in antibiotic use by 2024, and while the final data for 2022 will not be available until May/June 2023, the early indications are that the sector is well on track to achieve this.

Amongst the non-numerical targets, the PHU support, as discussed above, was launched in November 2021, and the thresholds are noted to have decreased steadily through this period indicating good progress.

Monitoring the impact of reducing antibiotic use on pig health has been carried out through the use of the PHS abattoir monitoring. This was paused during the Covid pandemic, but a phased return to these inspections started in May 2021. Unfortunately, in light of reduced levy income and following the Shape the Future survey of levy payers, it was announced that the PHS would end at the end of December 2022. Use of other data sources such as Agrosoft national benchmarking will continue to be used, in particular looking at mortality, daily liveweight gain and food conversion rate as a proxy for health.

Weaner management remains an active area of the targets for the group as we transition away from using zinc oxide. Members of the group have helped with articles in Pig World on this topic and have been involved in a session at a PVS meeting on alternative approaches. This will continue to be an important topic throughout 2023 as zinc becomes unavailable.

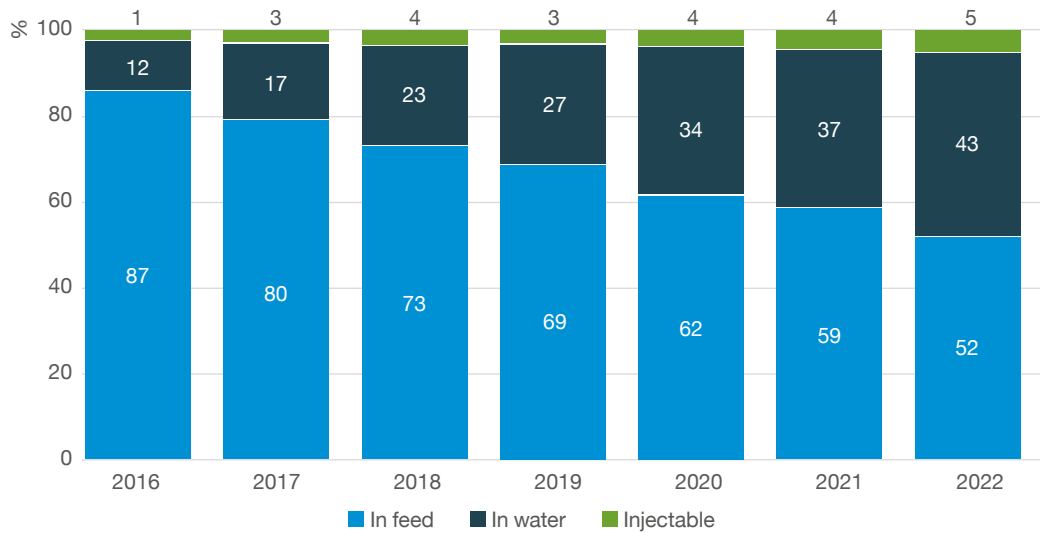
Another non-numerical target focused on encouraging the use of targeted water medication rather than antibiotics in feed. The use of antibiotics in feed has notably reduced from 87% in 2016 to 52% in 2022, with a concurrent increase in water-soluble antibiotics from 12% to 43%.

Figure 4. KG of active ingredient by method of administration

Source: eMB, AHDB

Note: 2022 dataset undergoing pre-publication checks and cleansing

Note that 2016 data covers 60% of English pigs, but 2017–2019 and 2020–2022 cover approximately 92% and 95% of UK pigs respectively



There are small grants available through the Animal Health & Welfare Pathway in 2023 that will encourage producers to improve water quality and infrastructure on farms to allow these more targeted treatments to be used more often in preference to in-feed medicines.

The next target is to continue to monitor antimicrobial resistance across the sector via the Veterinary Antimicrobial Resistance and Sales Surveillance (VARSS) report. Current information is relayed to the group via the VMD’s AMR lead, and the subgroup now has the opportunity to add context to the VARSS report that may contribute to the understanding of the findings. Information regarding the mechanisms and horizon scanning for possible areas of concern, including possible sources for the pig sector, has come from Dr Chris Teale, Head of AMR at APHA. Communication of this data via the PVS ensures that vets have the tools to make informed, responsible choices in their prescribing.

The last target is to encourage training in responsible antibiotic use and understanding of AMR in the pig sector. This was introduced as a new standard for RT in November 2021 and requires that at least one person responsible for overseeing use of medicines on the unit should have undertaken training in the responsible use of medicines.

Revision of the Medicated Feed and Veterinary Medicines Regulations

In the last Biennial report, we highlighted the concerns of the group regarding the EU legislation that will form the basis for the new regulations. These included the ban on prophylaxis and group medication in feed and limiting the duration of a prescription to five days. These regulations would have implications that could lead to delayed treatments and curtail disease elimination programmes that are commonly used to improve health and remove the need for ongoing antibiotic use to treat endemic diseases within herds. It was expected that a consultation would take place in the Autumn of 2021, but it was delayed to February 2023.

Representatives of the AMU subgroup met with the legislation and AMR teams at the VMD on a series of occasions before the consultation to discuss these concerns in detail. At the outset, the VMD have acknowledged the progress achieved on a voluntary basis by the pig sector and recognises that the UK is the only country to achieve this

without resorting to legislation. However, it is clear that the VMD would like to stop the predictable nature of prophylaxis where no other management interventions are carried out that might reduce or remove the need for antibiotics given in a habitual manner. PHWC shares this ambition but have expressed our view that animal health and welfare must not be sacrificed and have outlined many examples of where this might occur if there is no flexibility in the legislation. The clinical judgement of our vets can be relied on, and exceptional circumstances within the legislation are now likely.

Exploring new technologies

We continue to look at new technologies that could help to reduce the risk of AMR developing in our medicines and also technologies that might allow robust, rapid pen-side testing so that prescribing is as focused as possible.

This included a project from the University of Strathclyde, which is developing Microplate Dx, which is focused on point-of-care rapid Antimicrobial Susceptibility Testing (AST) technology. There are widespread benefits in multiple settings, including human health, the defence sector, drug development and veterinary diagnostics. It would enable clinicians to rapidly select the best choice of antibiotics in under an hour. The technology is already available for testing UTIs in human medicine. The reduced timeframe and the removal of a centralised facility from the process would enable clinicians to rapidly select the best choice of antibiotics in under an hour. It is hoped that this rapid diagnostic could facilitate further reductions in antibiotic usage within the pig sector. The process involves electrodes which can be modified with gels containing antibiotics. The growth patterns across the array of sensors reveal the drug susceptibility of the pathogen, and particular growth patterns could be used to determine the antibiotic which would be optimal for treatment.

We also welcomed Professor Chris Thomas from the University of Birmingham, who described Plasmid Elimination Strategies. It is hoped that this technology (pCURE) could be used to remove stable antibiotic plasmids from an environment such as wastewater effluents or gastrointestinal tracts without disrupting the normal ecology.

Plasmids in the gut bacteria often carry genes for antibiotic resistance and virulence. These plasmids can then spread between bacteria. Studies have shown that plasmids in pig gut act as a reservoir for antibiotic resistance genes, even in healthy animals. Once in the pig gut, these resistance genes may travel via the bloodstream to the lungs or urinary tract and result in resistant infections. The more resistance genes in the gut, the greater the disease risk. The concept is a probiotic *E. coli* strain + a conjugative plasmid that can spread through the gut and displace resistance plasmids. This is a very targeted approach and is specific to individual plasmids. Tests have been very successful, demonstrating a 100% loss of the target plasmid. The next step is using Rob La Ragione's pig gut model with the newly designed pCURE to see how they spread through a pig gut before carrying out trials on live pig gut.

Lastly, Professor Paul Langford from Imperial College London has updated us on the progress of the BBSRC-funded PERP-ID project, an on-farm diagnostic tool for Porcine Respiratory Disease Complex (PRDC). This uses LAMP technology which is a method detecting the protons released in a PCR and uses five primers to give exponential amplification resulting in a rapid result.

The project aims to develop a chip diagnostic tool for eight PRDC pathogens which would be cheap, rapid and reliable in less than 30 minutes and suitable for use on farm. The platform for the tool will connect to a phone to report the results. There are currently two platforms with the ability to take the project forward, the Lacewing and the Dragonfly. The Dragonfly uses swabs and colorimetric detection, can incubate up to four samples simultaneously and gives results in thirty minutes. The platform has been used by Team GB to test athletes at the 2022 Winter Olympics for Covid-19. Testing has taken place on farm using the Dragonfly platform with rope washings and nasal swabs. The swabs, process, and platform seemed to work successfully.

Food safety

The Food Safety subgroup receives regular reports from UK Health Security Agency (UKHSA) in respect of zoonotic diseases from pigs. Over the two-year period 2020–2021, there have been no major outbreaks of food poisoning incidents linked to pork products. The Food Safety subgroup also works closely with the FSA, with the aim of providing actions on farm that will reduce the risk to the consumer from any pork product. Data published by the FSA is monitored by the subgroup for trends, for example, [pig condition data](#).

Salmonella

There have been no major outbreaks of human salmonellosis associated with pigs, pork or pork products during this reporting period. The latest surveillance data gathered in 2021 showed a prevalence level in pig farms of circa 34%, which remains similar to the levels reported previously. The FSG recommended that the salmonella control plan, required by RT Assurance should be actively monitored to assist with reducing prevalence levels. To assist producers in developing effective control plans, FSG has worked with APHA to secure funding to monitor the effects of operational changes on farm and to be able to demonstrate which changes can be easily introduced and will be cost-effective.

The hygiene controls in abattoirs are such that contamination on the carcass remains low. Salmonella remains the highest causal risk of food poisoning related to pig meat.

Salmonella, like other bacteria, has many different serotypes, some of which have less public health significance than others. Concerns have been raised about new and exotic salmonella serotypes or exotics or those with new or concerning resistances. FSG explored whether these could be introduced as a result of changing feed sources with the shortages arising from the war in Ukraine and the associated increase in the price of some ingredients. The feed industry has robust controls in place to avoid this situation. Another identified risk to livestock is through dogs being fed raw pet food which is more likely to excrete salmonella and AMR bearing *E. coli*. Producers were advised to avoid this food source.

Monitoring the effects of salmonella vaccination in pigs is ongoing, but it has been shown that vaccination is only an additional control measure that must be supported with good hygiene and biosecurity.

There have been no further incidents reported of pigs being the likely cause of salmonella-positive poultry flocks. While the pig industry has responded by identifying at-risk premises and taking action to minimise possible spread, the poultry industry has had to house birds due to avian influenza, which may have contributed to this reduction.

The UK was a partner through APHA in the EU Biopig project, which is looking at biosecurity measures in slaughterhouses to control salmonella and Hepatitis E. Much information has been generated, and the final report will help to set out our targets for the next period.

QMS has continued to use a meat juice ELISA test to monitor the prevalence of salmonella in pigs at the abattoir and has a programme to identify those with the highest prevalence and provide advice and support in changing operations to reduce salmonella levels at these premises. FGS is monitoring this programme and assessing its effectiveness.

Hepatitis E

The core Hep E group has continued to meet during this period. The lack of knowledge on the prevalence and effective control measures continues to be a reputational risk to the industry. As trade deals are developed, the UK may be in a position where we are asked to demonstrate that we hold current data on prevalence of Hep E in our herd. The last surveillance data was gathered in 2013.

However, the FSA do not consider Hep E in humans from pork meat and products a significant risk and will not be funding further research. Further research to underpin the reputation of the industry would need to be funded by alternative means. An average of 1,000 cases are reported annually, and these cannot be attributed directly to pork or pork products. The research projects funded by FSA on the thermal inactivation of the virus are not likely to produce any meaningful results on the parameters necessary to ensure the killing of the virus in meat. With no further research work planned, we are unlikely to have new information to provide to producers, processors and consumers, which would contribute to reducing the small risk to the consumer from Hep E in pork and pork products.

The cross-government working group on Hep E met in June and is concerned about the lack of current data available from the UK pig herd. The UK is known to export high-health live pigs, but the agreements on sampling and testing are not shared with the authorities.

LA-MRSA

First identified in pigs in 2014, LA-MRSA was also identified through routine APHA surveillance in 2017, 2020 and 2022. The bacteria rarely causes disease in the pig, but the pig acts as a carrier, and the bacteria can be passed to people working closely with pigs. These people, in turn, act as a carrier of the bacteria and may infect those with a predisposition to infections.

The LA-MRSA core group works closely with others who have an interest in the identification and management of this bacteria. The group receives and assesses the results of research and planned activities, which would assist the industry in understanding and controlling risks associated with this bacteria, including risks such as those to trade which are not associated with human disease.

Research has been undertaken into human carriers of LA-MRSA from pig farms, both indoor and outdoor, by taking samples from those in contact with pigs. 40–50% of individuals tested were positive. The carriage was shown to be transient, and individuals became negative when removed from the pig environment. However, in some cases, the carrier state could be long enough to enable carriage into the community. PHWC continues to monitor the situation and advise those who work closely with pigs and are at risk of carrying the bacteria as to how to protect themselves and those with whom they come into contact.

Cases of LA-MRSA in humans have increased slightly in the last two years. Cases cannot be linked to the pig industry as they can be through hospital transmission or community-acquired, although activities with livestock are a known risk factor.

The VMD are undertaking a literature review to assist in understanding and controlling the risks associated with LA-MRSA. They will also carry out a prevalence survey compatible with the EU survey. This will provide a greater understanding of the position in England.

APHA have completed an abattoir survey in which swabs were obtained from the nose and skin before the scalding tank. One abattoir had no positive samples, and PHWC requested investigations as to the pre-abattoir practices on farms supplying these premises to help with the identification of practical controls. Eradication of LA-MRSA is not a proposal at the current time but it has been achieved by Norway through a cull and compensation scheme.

PHWC, NPA and PVS have reviewed and updated the information note, which is available to PHWC members when responding to press enquiries. The information notes developed by PHWC support the industry in speaking with one voice and with accurate information in a format for the layperson.

***Clostridioides difficile* (C. difficile)**

In humans, this bacteria infects the bowel, causing diarrhoea. It is usually acquired after taking broad-spectrum antibiotics and in a hospital or care situation.

C. difficile can be a cause of diarrhoea in pigs, but there is little known about the link between animal and human infections. The PHWC is supporting the University of Hertford in the design and undertaking of a research project which will help in expanding our knowledge and understanding of this bacteria in pigs and pig meat.

Trichinella

There have been no positive samples for *Trichinella* in England.

Milestones for 2023–2024

As well as general milestones for the PHWC, each of the subgroups set out milestones for the upcoming year. These milestones illustrate strategic goals and specific objectives, which are in line with the horizon scanning performed by each group. The approach of the overarching PHWC is to ensure that these milestones are on target to achieve their objectives and that progress is continuing to be made.

In addition to the milestones outlined below, the longer-term priority of the PHWC is set out in the objectives listed in the Review of the 20:20 vision for Pig Health and Welfare section.

PHWC

1. Maintain a council that attracts representation from across the pig and pork meat chain, associated industries and relevant government departments and devolved administrations and openly discuss pig health and welfare issues and agree on advice to industry.
2. Represent the industry in the ongoing development of the AHW Pathway and support those on The Pathway.
3. Encourage industry to adopt changes that will improve pig health and productivity and animal welfare and reduce environmental impact.
4. Seek out opportunities to cooperate with research groups to influence research to align with the needs of industry to improve pig health and welfare.

Pig Health subgroup

1. Develop, update and maintain disease-control measures to minimise the risk of introducing exotic pathogens or pathogen strains into the country and to ensure that the pig industry is in a position to take appropriate action against new, emerging, exotic notifiable and endemic diseases.
2. Provide support and coordination to the activities to improve and develop a comprehensive and inclusive surveillance system for the pig industry which is fit for purpose and uses existing and new data sources. The surveillance system should be capable of detecting current and emerging threats to pig health and welfare as well as providing baseline information against which progress could be monitored.
3. Continue to act as an advisory body to the AHW Pathway in relation to the pig industry components, monitor the outcomes being achieved by the PRRS control project and implement the mapping and biosecurity programme.
4. Encourage measures to prevent the introduction/enable the early detection of pig-notifiable diseases. Assist in developing enhanced surveillance and/or testing for the exclusion of swine fevers.

Welfare subgroup

Interruptions in the supply chain and methods to ameliorate their impact on the welfare of pigs on farm is likely to be an increasing problem. Ensuring prompt action and how this is facilitated by all areas of the industry will be a challenge. Constantly reviewing areas of concern, including those detailed in the milestones, will continue, as will support of schemes aimed at maintaining and improving welfare standards.

Health and welfare are inextricably linked, and so implications for improved welfare associated with addressing endemic disease as well as identifying new threats will be in full association with the Pig Health subgroup and The Pathway.

Collaboration with Farm Assurance, APHA and Defra will be maintained and strengthened where possible so that on-farm welfare remains at the forefront of ongoing discussions, especially in the areas around compliance and implementation of the code, farrowing systems, euthanasia and tail damage.

1. Work across the industry to reduce tail damage on farm and collaborate with APHA to produce a tail action plan for each unit.
2. Review the research around welfare as pigs are finished at heavier weights, including a focus on welfare proximate to, before and during slaughter.
3. Review current practice with respect to pig medicine teaching and euthanasia training at UK vet schools for newly graduated vets and mixed-practice vets with little pig experience. Ensure the latest information on best practice is provided to producers, including non-assured farms and smallholders.
4. Support the collection of evidence relevant to the various systems available and evaluate the welfare of the sow and piglet and the safety of those working in the farrowing area.

Pig Meat Food Safety subgroup

1. Seek out advancements in control and reduction strategies which can be applied on farm and at abattoirs to reduce the risk to the industry of a foodborne disease outbreak related to micro-organisms from pigs, pork meat and pork products.
2. Support and encourage the monitoring of salmonella, Hep E and LA-MRSA to enable the industry to have the knowledge of the prevalence of these organisms and assess the risks associated with those levels and assess the impact of any reduction strategies applied.
3. Maintain an agreed shared source of information to enable the pork chain to respond accurately and quickly to queries and challenges related to Salmonella, Hep E and LA-MRSA.

Antimicrobial subgroup

1. Support initiatives and guide knowledge transfer for vets and producers aiming for continued responsible use and reduction in antimicrobial use in pigs. This will include engaging with producers that are consistently using the highest levels of antibiotics through diagnostics and advice. Incentivising vets and farmers to reduce antimicrobial usage in pigs while maintaining high health and welfare in the national herd. Identifying best practice examples of reducing antimicrobial use in commercial pig herds. There will be a focus on hygiene measures to reduce the spread of pathogens and a focus on internal and external biosecurity.
2. Support RUMA in increasing awareness of the importance of ensuring the responsible use of antimicrobials in pigs. This will also include advising the new RUMA Targets Task Force as they develop targets for the period from 2020 to 2025. The PHWC will work closely with and support the RUMA Targets Task Force as they develop targets for further antibiotic usage reduction in pigs and ongoing refinement of the use of these medicines. The group will continue to monitor progress against these targets, facilitate the implementation of responsible use of antibiotics across the industry, encourage the development and use of rapid pen-side testing and develop an understanding of the environmental impact on AMR.
3. Assess the impact of the rapid reduction in antibiotic use on the health and welfare of the UK pig herd. The impact of a rapid reduction of antibiotic usage on the health, welfare and productivity of the national pig herd should be assessed using a range of data sources, including CCIR, Agrosoft, eMB Pigs and VIDA to ensure that health and welfare are not being negatively affected.

4. To explore systems that encourage a response to antimicrobial resistance surveillance in the UK pig herd. We will explore the development of systems that collate the knowledge gained from surveillance of antimicrobial resistance and use this knowledge to effect behavioural change in antibiotic usage.

For milestones 3 and 4, the impact of a rapid reduction of antibiotic usage on the health and productivity of the national pig herd should be established using a range of data sources, including CCIR, Agrosoft, eMB Pigs and VIDA, to ensure that health and welfare are not being negatively affected.

Conclusions

The collaborative working of all members of the PHWC has been crucial in assisting those working in the pig and pork industry to overcome the challenges that arose in the last two years and to prepare for the continual change which is a part of normal business. The challenges to the health of our pigs are not diminishing, and the further development of surveillance strategies and utilising new technologies is vital in the early identification of disease occurrence or incursion. Under the endemic disease control programmes in the Animal Health and Welfare Pathway, the industry will have government-funded assistance to focus on disease control strategies for PRRS, enabling progression towards freedom from PRRS in the longer term. The industry has been proactive and successful in reducing the use of antimicrobials, but the One Health initiatives will continue to demand further reductions in usage to reduce antimicrobial resistance in humans. The aim is to reduce disease challenges so that antimicrobials are not required. Treatment should always be available to protect the welfare of animals that are challenged by disease or injury.

The industry has always cared for the animals reared. However, as with people, there is greater concern now for the mental as well as the physical wellbeing of animals, and this requires a different approach to rearing to be adopted. All these improvements require a level of investment, and the industry can take advantage of the Animal Health and Welfare Pathway and access grants to assist in making those changes. PHWC look forward to continuing to work in partnership with the Defra Animal Health and Welfare team to further develop The Pathway for pig produce. In a world where farming is subject to exposure on social media, societal demands are changing. There are rapid technological advances such as precision farming and the as-yet-unknown impact of artificial intelligence. The industry needs a forum to explore the opportunities and risks for the health and welfare of our pigs. The PHWC will continue to provide that forum to develop consensus on future plans and policies and to speak with one voice on behalf of the industry enabling all pigs in England to lead a healthy life and to be cared for properly by an industry that is sustainable and respected.

Glossary of abbreviations

Abbreviations of organisations or institutions

AIC	Agricultural Industries Confederation
AFS	Assured Food Standards (See also Red Tractor)
AHWBE	Animal Health and Welfare Board for England
APHA	Animal and Plant Health Agency (Formerly AHVLA)
AHDB	Agriculture and Horticulture Development Board
BMPA	British Meat Processors Association
BRC	British Retail Consortium
BPA	British Pig Association
BPEX	British Pig Executive (See also AHDB)
CARS	Control of Antimicrobial Resistance Scotland
Defra	Department for the Environment, Food and Rural Affairs
EFSA	European Food Safety Authority
EU	European Union
FSA	Food Standards Agency
IZA	International Zinc Association
LIS	Livestock Information System
NIPBF	Northern Ireland Pork and Bacon Forum
NPA	National Pig Association
PHWC	Pig Health and Welfare Council
PVS	Pig Veterinary Society
RDPE	Rural Development Programme for England
RT	Red Tractor (see also Assured Food Standards)
RSPCA	Royal Society for the Prevention of Cruelty to Animals
RUMA	Responsible Use of Medicines in Agriculture Alliance
SRUC	Scottish Rural University College
UKHSA	UK Health Security Agency
QMS	Quality Meat Scotland
VMD	Veterinary Medicines Directorate
WOAH	World Organisation of Animal Health

Abbreviations of terms

AMR	Antimicrobial Resistance
ASF	African swine fever
CCIR	Collection and Communication of Inspection Results
CSF	Classical Swine Fever
CVO	Chief Veterinary Officer
eAML2	electronic Animal Movement Licence
ELISA	Enzyme-linked immunosorbent assay
FCI	Food Chain Information
FMD	foot-and-mouth disease
HEV	Hepatitis E virus
HP-CIA	Highest Priority Critically Important Antibiotics
LA-MRSA	Livestock Associated-Methicillin Resistant Staphylococcus aureus
MHI	Meat Hygiene Inspectors
OV	Official Veterinarian
PCR	Polymerase Chain Reaction
PCU	Population Corrected Unit
PED	Porcine Epidemic Diarrhoea
PEDv	Porcine Epidemic Diarrhoea virus
PHS	Pig Health Scheme
PHU	Persistently High User
PRRS	Porcine Reproductive and Respiratory Syndrome
PWD	Post-weaning diarrhoea
SD	Swine Dysentery
SOP	Standard Operating Procedure
SVV	Seneca Valley Virus
TGE	Transmissible Gastroenteritis
TTF2	Targets Task Force 2
VARSS	Veterinary Antibiotic Resistance and Sales Surveillance
VIC	Veterinary Investigation Centres
VIDA	Veterinary Investigation Analysis Database

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Pig Health and Welfare Council
c/o AHDB Pork
Siskin Parkway East
Middlemarch Business Park
Coventry
CV3 4PE

T 024 7669 2051
E comms@ahdb.org.uk
W ahdb.org.uk

