

Control Plan for *Salmonella* in Pigeat

EXECUTIVE SUMMARY

1. At its last meeting, the Board asked to see details of the industry led scheme to control *Salmonella* in pigs. This paper sets out the details of the Zoonosis National Control Plan for *Salmonella* in pig meat (ZNCPIg), which was introduced on 1 April 2008 and which replaces an earlier scheme, the Zoonoses Action Plan, which was active from 2002 to 2008.
2. Under Regulation (EC) No 2160/2003, the Zoonoses Regulation, all Member States are required to have Commission approval of a Zoonoses National Control Plan to achieve a reduction in prevalence of *Salmonella* in finishing pigs from 2008. The ZNCPIg scheme is being proposed as the basis for the UK National Control Plan.
3. The ZNCPIg scheme involves a whole chain approach to reducing the exposure of consumers to *Salmonella* through the consumption of pig meat. This involves controls in abattoirs, in all herds, in breeding herds and in finisher herds. Control plans for each of these stages are outlined in the paper.
4. The risk to consumers will be measured by monitoring the prevalence of *Salmonella* organisms on pig carcasses tested in abattoirs.

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Information paper on the Industry led scheme to control Salmonella in pigs**Zoonoses National Control Plan for Salmonella in Pigeat****Background**

1. The Zoonoses Action Plan (ZAP) Salmonella Programme was in operation from June 2002 until April 2008 as a jointly funded venture by the Food Standards Agency and Industry bodies in the United Kingdom. The scheme was based on measuring the Salmonella prevalence of antibodies to Salmonella in finisher pigs as determined by a Salmonella-mix meat-juice ELISA test and identifying farms on which pigs had high levels of antibodies so that action could be taken to reduce the prevalence of Salmonella in pigs presented at abattoirs.
2. Farm Assurance schemes for pig farms integrated the ZAP salmonella programme into their requirements and reviewed ZAP status during farm visits. Farms were allocated into 3 categories known as ZAP levels and it was a requirement that farms were not continually in ZAP levels 2 and 3 (highest prevalence of Salmonella meat juice positive result). On farm action was targeted at herds in categories 2 and 3 with Defra, SEERAD and DARDNI providing on farm veterinary support including microbiological testing.
3. Disappointingly each year up to April 2008 the scheme has not delivered any significant reduction in the national prevalence average due in part to not enough farms being targeted. The scheme was reviewed in 2006 and during 2007 work has been underway to enable a radical change in approach to risk reduction for consumers from Salmonella in pigmeat products based on a whole chain approach. The new scheme that replaces the ZAP Salmonella scheme is known as the Zoonosis National Control Plan for salmonella in pig meat (ZNCPig) and has been introduced from 1 April 2008.
4. Under Regulation (EC) No 2160/2003 all Member States have to have Commission approval of a Zoonoses National Control Plan to achieve a reduction in prevalence of Salmonella in finishing pigs from 2008. This requirement has been delayed by the need to undertake a cost-benefit analysis before setting targets for Salmonella reduction. The ZNCPig scheme is proposed to be the basis of the UK National Control Plan.
5. Delivery of the ZAP Salmonella scheme was through a partnership approach between the Food Standards Agency, Defra, SEERAD, DARDNI and industry bodies. This collaborative approach has been maintained in the new refocused ZNCP scheme however FSA support has been directed towards initiatives to secure improvement and is no longer in support of Salmonella antibody testing which is now fully funded by the industry.

Zoonoses National Control Plan for Salmonella in Pigmear (ZNCPIg)

6. The primary objective of the National Control Programme for Salmonella in pigs is risk reduction for consumers from Salmonella in pork and pork products. This will be achieved through a whole chain approach with the focus on processors and producers working together to reduce Salmonella within supply chains assisted by a facility enabling producers to draw on support for initiatives.
7. The risk to consumers will be measured by monitoring the prevalence of Salmonella organisms (not antibodies) on pig carcasses tested in abattoirs. The aim of the scheme is to reduce this prevalence over time. Pig carcasses will also be tested for Salmonella antibodies to enable trends at the farm level to be monitored and recognition of best practice to be made.
8. A reduction in prevalence of Salmonella organisms will be achieved through taking action on all finisher farms and at all abattoirs. All farms will be required to follow the Code of Practice for the Control of Salmonella on Pig Farms building on the FSA “Serious About Salmonella” initiative (launched in March 2007). Abattoirs will be encouraged to assess their processes using the recently developed FSA tool for hygiene assessment.
9. A support package is to be made available to abattoir operators and finishers and eventually breeding units to ensure the most appropriate and up to date knowledge on Salmonella risk reduction is available in an accessible and useable form.
10. Abattoirs and their supplying producers are being encouraged to work together to address and reduce the risk to consumers.
11. The ZNCP is managed by a steering group that will meet three times a year and is chaired by Mr Robert Howe on behalf of the British Meat Processors Association (BMPA).

Zoonoses National Control Plan for Salmonella in Abattoirs

12. The BMPA Technical sub-group have agreed in principle with proposals that a target be set for the prevalence of salmonella organisms on pig carcasses.
 - A target for 2008 will be proposed following analysis of the recent UK EU baseline survey data and industry monitoring data produced when testing against the microbiological criteria(EU 2073/2005).
 - Following this analysis a proposal for the target to reduce per year in future years will be developed and agreed.
 - All processors have been asked to submit the results of their carcass swab testing to the existing FSA database at www.ukmeat.org. (Currently 50 percent voluntarily submit data)

- An industry/FSA/Defra working group has been established to develop an appropriate monitoring scheme for salmonella on carcasses based on the EU survey and industry monitoring methods.
- Best practise information for abattoirs based on recently completed FSA funded research will be developed and communicated to abattoirs. All abattoirs will be encouraged to assess their processes using the recently developed FSA tool for measuring hygiene. (Separate plans for this will be agreed in October 08)

Zoonoses National Control Plan for Salmonella in Finisher herds

13. The new approach for assured finisher herds in England and Wales, Scotland and Northern Ireland started in April 2008 and was launched at the 2008 Pig and Poultry Fair.

- From April 2008 4 meat juice samples per month are being tested for Salmonella antibodies from assured sites supplying finisher pigs in GB and from all herds in Northern Ireland.
- Sites will receive reports 3 times per year – January to April; May to August; September to December giving their results for those 4 months and the rolling 12 months. Producers will have continuous access to results through the ZNCP website already in existence.
- All sites are required to have a Salmonella Control Plan and to regularly review their management with respect to Salmonella. Farms that have a Salmonella prevalence consistently above the regional average will additionally be required to develop a Salmonella Action Plan detailing additional specific action that will be taken to reduce salmonella. British Assured Pigs will inform their members of this requirement in their September 08 newsletter and information will be distributed with the ZNCPig August reports in September .
- A ZNCPig introduction pack, with information flyers on ZNCPig, a self-assessment Salmonella risk form, suggested control plan template and FSA Serious about Salmonella booklet was issued to each assured unit and vet practice with their first ZNCPig reports in May 2008. .
- All sites are required to have a detailed review of their meat-juice ELISA results and their Salmonella Control Plan at least once per year.
- Vets will confirm the implementation of Salmonella Control Plans at the quarterly inspections, and they will be audited by the Farm Assurance Assessor at the time of the annual inspection. The technical Advisory Committee of the assurance schemes has established a working group to investigate auditing control plans.
- From 2009 sites which have a trend of increasing prevalence of positives over the year may be required by their Farm Assurance Scheme to have their vet provide a written report on their existing management protocols and define how they may be improved over the coming year. Where the proposed action at a

farm level is considered inadequate, an improved Salmonella Control Plan would be required of these farms in order that they retain their assured status.

- There is a requirement to supply Salmonella antibody rolling mean prevalence as Food Chain Information which is the focus for interaction between processor and producer.
- In the case of rented or sub-contracted grow-on / finishing units, Salmonella antibody test results will be made available to both the site owner and the owner of the pigs, subject to data protection or with the agreement of the owner of the membership status.
- Instead of categorisation those sites where less than 10% of samples tested are positives or suspects in a calendar year will be given a "Salmonella best practice" recognition known as the Platinum pig award. The first awards were made at the Pig and Poultry fair in May 2008.

14. During 2008 analysis will be undertaken to look at the effectiveness of taking 4 samples per month on the accuracy of identifying whether a herd has a true prevalence of Salmonella below 10% and also on how accurately the 12 month rolling mean reflects the underlying trend in Salmonella prevalence on a farm. The Veterinary Laboratories Agency have been requested to tender for this work following their previous investigation of sample numbers and frequency and its effect on allocation of ZAP score. This looked at sampling in relation to antibody levels and concluded there would have been little impact of changing the number of samples from 5 to 4 per month on the accuracy of antibody levels

The Zoonoses National Control Plan for Salmonella and Industry support

15. Support for vets and producers on practical Salmonella control measures through a demonstration grants scheme will be available UK wide. Producers and their vets will be encouraged to develop proposals and submit for funding approval. Preference will be given to applications from producers and processors acting as integrated supply chains to deliver risk reduction from Salmonella in pigs.
16. An on-farm intervention programme started in 2007. The final reports for nine completed interventions are due Sept 2008. Eight interventions are on going and a further ten have been accepted and will start shortly. Table 1 lists the interventions completed and ongoing interventions as of July 08.
17. Invitations to apply for the 2008 ZNCPig demonstration trials have been circulated to the VLA and veterinary schools, to provide support for the demonstration of strategies for the control of Salmonella both on-farm and in the abattoir.
18. Technical and knowledge transfer support for abattoirs will be the responsibility of the BPEX Pork Chain Unit in GB who will provide advice on best practice, available equipment and carcass decontamination and administer a demonstration grants scheme on behalf of BPEX and FSA. Separate arrangements are in place for NI.

19. BPEX will explore a recommendation from Farm Assurance bodies to set up an Expert Panel to review Salmonella Control Plans which may be considered inadequate and to provide expert guidance on the control of Salmonella on pig farms in England.
20. In Northern Ireland advisory support will continue to be provided by the Department of Agriculture and Rural Development (DARD) and disseminated to the industry in conjunction with the College of Agriculture, Food and Rural Enterprise (CAFRE) pig technologists.

Zoonoses National Control Plan for Salmonella in all herds

21. For farms which regularly take in replacement breeding stock, or finishing units which buy in weaners from third parties, the most significant risk factor in terms of bringing Salmonella onto a farm is the Salmonella status of the incoming pigs. Frequently, the level of risk is unknown and farm assurance should aim to encourage farms to ask the necessary “awkward questions” of their suppliers.
22. The Joint Pig Industry Technical Advisory Committee have recommended that a standard to this effect be drafted for inclusion in the next version of the Farm Assurance Scheme Standards.

Zoonoses National Control Plan for Salmonella in breeding herds

23. From April 2009 all herds will be required to have a Salmonella Control Plan. Guidance will be provided through a new Defra/FSA code of practice updating the current Defra Code of Practice for the Prevention and Control of Salmonella on Pig Farms and incorporating the information in the FSA Serious About Salmonella booklet and DVD .

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Table 1 Summary of on Farm interventions		
Nine Completed interventions – Final reports in preparation		
Number	Type of Intervention	Production Site Location
Site x 1	Organic acid, Formi being added to the diet at 6.3Kg /Tonne	East Yorkshire
Site x 2	Changing to meal feed	Norfolk
Site x 1	Sow vaccination in conjunction with the VLA Weighbridge	Bedfordshire
Site x 1	Depopulation and re-population with Salmonella free pigs	Bedfordshire
Site x 3	Probiotic (Biotal SB finisher compounder) added to feed from 40Kg to Slaughter	East Yorkshire, North Yorkshire and East Riding
Site x 1	Dietary acidification	Cheshire
Eight On-going Interventions		
Number	Type of Intervention	Production Site Location
Site x 1	Organic Acid Lupromix NC added to water using Dosatron	Berkshire
Site x 1	Organic acid	Bedfordshire
Site x 2	Organic acid, Formi being added to the diet for 3 wks on entry to finishing unit at 6.3Kg /Tonne	North Yorkshire
Site x 2	The water supply will be acidified via a dosatron with 'Selco pH' for 3wks post weaning and again for 3wks when pigs enter the finishing shed	North Yorkshire
Site x 2	Vaccination with Avipro Salmonella vac T and administered through (clean drinking water with the chlorine removed)	North Yorkshire and Dorset

