

Using an Interactive Workshop to Learn Stakeholder Attitudes on *Salmonella* Control in GB Pigs

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1. Introduction

Salmonellosis is a common food-borne zoonosis and pigs are thought to be one source of infection for people. Surveys have shown that about a quarter of UK slaughter pigs are infected with *Salmonella*.

In advance of the introduction of official controls, the British pig industry has worked pro-actively on reducing *Salmonella* infection in pigs. To help share knowledge on this issue, an AHVLA/BPEX national meeting on *Salmonella* control in pigs was held at Stoneleigh Park on 27th September 2011.

The purpose of this meeting was to set the scene for forthcoming legislative requirements to control *Salmonella* in pigs, disseminate the findings of AHVLA research as well as other available knowledge in regard to *Salmonella* in pigs and to provide a forum for the discussion of potential interventions and the impacts and difficulties associated with these.

2. Meeting Design

An ambitious agenda was planned for the day (Figure 1). During the first discussion session delegates were asked to ‘brainstorm’ potential interventions for controlling *Salmonella* in pigs.

Ten general interventions were compiled and during the afternoon discussions, delegates were asked to discuss these interventions and vote on the impact each would have at its point of implementation, and how difficult it would be to implement. Delegates were also asked to choose the top three interventions they felt would have the greatest impact on public health.

Agenda	
09:30	Registration
09:45	Salmonella quiz Facilitator: David Pirnie
Morning Session: Outputs From Project OZ0330	
10:00	Welcome and Introduction (including analysis of response to registration questions) Alex Cook, AHVLA Chair
10:15	UK and EU policy perspective Giles Paiba, Veterinary Advisor, AHVLA
10:30	The epidemiology of <i>Salmonella</i> in breeding pigs Lucy Brunton, AHVLA
10:50	Round table discussion
11:10	Coffee break
11:40	Modelling the effect of <i>Salmonella</i> interventions across the pig meat chain Andy Hill, AHVLA
12:00	An EU cost-benefit analysis of <i>Salmonella</i> control in breeding and slaughterhouse pigs Jonathan Rushton, RVC
12:20	Panel discussion and Q&A session
12:45	Lunch
Afternoon Session: Farm to Fork Perspectives	
14:00	BPEX - marketing and risk management Katrín Turvey, BPEX
14:15	The vets' perspective Mike Wijnberg, Smap Farms
14:30	The farmers' perspective Roger Meadows, A & A farms
14:45	The processors' perspective Bert Ullings, Vion
15:00	The retailers' perspective Karin Dalgaard, Mortons
15:15	Coffee break
15:30	Round table discussions - Top interventions and barriers to implementation
16:15	Summary and Q&A sessions to capture opinions on the value of the day to the participants
16:30	Close

Figure 1 – Agenda for the national meeting on *Salmonella* control in pigs

3. Delegates

Over 70 delegates attended the meeting. They were assigned to four categories – Government, agencies and non-departmental public bodies (NDPBs); the industry (producers and representative bodies); longer food chain (transport, processing, assurance, retail); and other services (veterinary, science, academic). Government, agencies and NDPBs were the most well represented group (35 % of delegates) while the longer food chain was least well represented (10 %). The pig industry and other related services each made up 27 % of the delegates.

4. Interactive Technology

An external company (LiveGroup¹) was recruited to provide technical services for the day including delegate messaging tablets and individual voting devices to enable delegate interaction. An external facilitator was recruited to manage the day and encourage all delegates to actively engage with the discussions.

¹ <https://www.livegroup.co.uk/default.aspx>



Figure 2 – Individual voting device and delegate messaging tablet, and in action on right.

5. Results

At registration, all delegates were asked to answer questions designed to obtain their opinion on *Salmonella* control in pigs. The answers indicated that there was great diversity of opinion of the importance of, and how to deal with, *Salmonella* in pigs, even within each category. More delegates believed that key interventions to maximise impact on *Salmonella* reduction in pork in the short-term should be focused on the abattoir compared with other stages (Figure 3), and that this was also the stage at which targets for *Salmonella* reduction should be set.

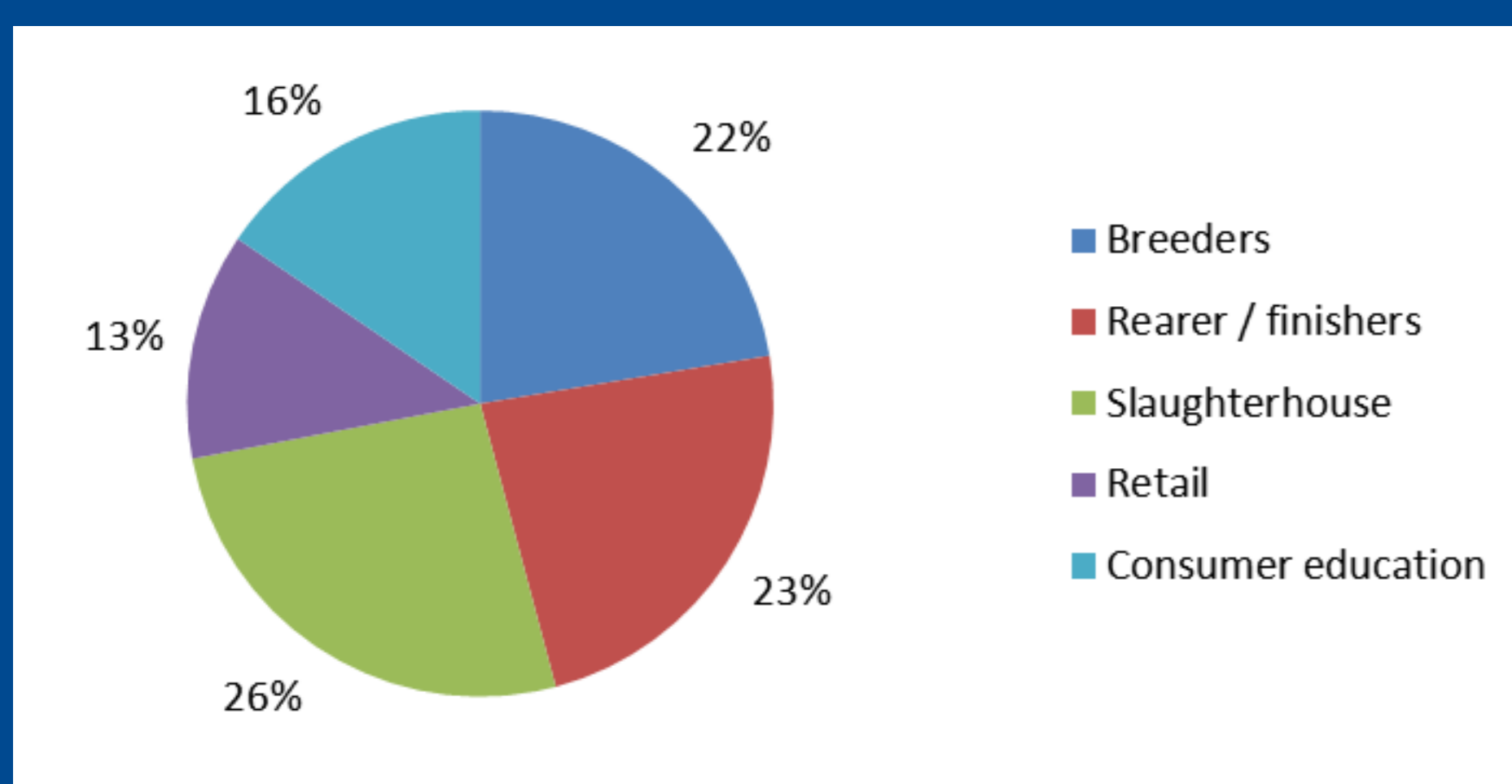


Figure 3 – Delegate responses to registration question 1: At what point in the food chain should the UK focus key interventions to maximise impact on *Salmonella* reduction in pork in the short-term? The stages were ranked 1 (min impact) to 5 (max impact) by each participant. The sum of the rankings for each stage was calculated and is expressed here as a percentage of the total sum of all stages.



Figure 4 – Delegates discussing *Salmonella* interventions during one of the group discussion sessions.

During the discussion sessions, the abattoir / processing interventions of preventing carcass contamination, preventing cross-contamination and carcass decontamination were given the highest impact ratings and some of the lowest difficulty ratings suggesting that these would be the most appropriate interventions to consider for implementation (Figure 5 – bubble position).

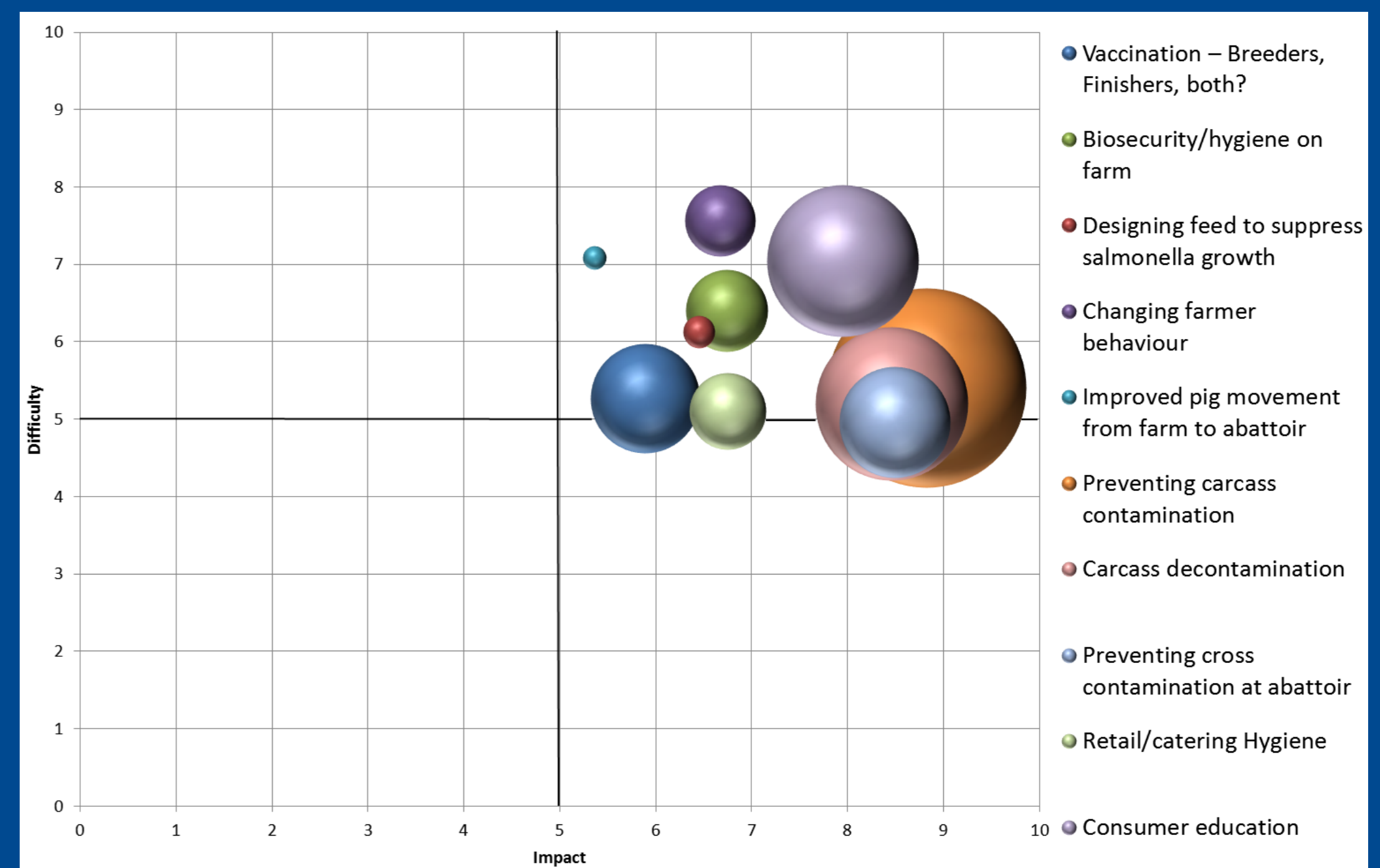


Figure 5 – A bubble plot to show the impact and difficulty ratings assigned to 10 interventions for controlling *Salmonella* in pigs by delegate voting. A rating of 1 indicates low impact or difficulty, a rating of 10 indicates high impact or difficulty. Ratings were weighted by the number of contributing votes and this is indicated by the position of the bubbles on the plot. Bubble areas indicate the rating of impact on public health assigned to each intervention as a percentage. Delegates selected their top three interventions in relation to public health and scores were weighted accordingly with those selected first scoring 10, those selected second scoring 6 and those selected third scoring 3.

Preventing carcass contamination was likely to have the highest impact on public health, followed by carcass decontamination and consumer education (Figure 5 – bubble area).

6. Feedback

A delegate feedback session was held at the end of the day using the voting technology. This enabled instantaneous feedback to be collected and negated the need for post-event feedback collection.

The afternoon farm to fork session was considered of most interest to delegates.

93 % of delegates stated that the day had met or exceeded their expectations, and 60 % stated that their participation in the event had highlighted at least one issue that might affect their thinking or actions about *Salmonella* in pigs.



Figure 6 – Q&A session with the speakers from the morning session. From left: Alasdair Cook, Andrew Hill, Lucy Brunton (AHVLA), Jonathan Rushton (RVC), Giles Paiba and Rob Davies (AHVLA).

7. Conclusions

A great deal of valuable data was obtained providing an insight in to the opinions of experts across the pig meat supply chain on the control of *Salmonella* in pigs. The large number of interventions suggested during the discussion sessions highlights the complexity of *Salmonella* infections in pigs and the diversity of opinions across the industry on the best methods for controlling *Salmonella*.

The responses from delegates at the meeting indicated that the abattoir and processing should be a focus for interventions. However, comments collected on the day such as:

“there is no silver bullet; we need several interventions”

and “we need a multitude of interventions at various parts of the chain”

illustrated the general feeling that a holistic approach to *Salmonella* control involving the entire production chain is required.

This work was funded by the UK Government (under project OZ0330) with additional funding supplied by BPEX

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