National Pig Salmonella Control Programme

The main aim of the revised programme is to reduce the risk to the consumer from pig meat and to reduce the level of salmonella in pigs sent to slaughter.

The control programme will focus on the entire food chain and therefore will comprise of pre-harvest (farm and transport) and post-harvest (lairage, slaughter and processing) components.

Finishing herds supplying less than 200 pigs to slaughter are exempt from the requirements of the Salmonella Control Programme.

The intended date for commencement of the revised Salmonella Control Programme is 01/01/2010.

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Section 1. Pre-Harvest

1.1 Primary Producer

1. IFA in conjunction with the National Pig Health Council will draw up a revised set of guidelines for salmonella control on farms. [See section 1.2]

2. The on-farm Salmonella Control Plans will involve cooperation between the farmer, the private veterinary practitioners (PVPs)/advisor, and the Department of Agriculture.

3. This control plan can incorporate Salmonella controls into revised hygiene and management procedures that should also help to control other diseases on the farm.

4. The producer is legally obliged to send an agreed Salmonella Control Plan to the National Co-ordination Group. This plan must reach the group within 6 months of commencement of the programme. Failure to submit the plan within this timeframe will thereafter exclude the primary producer from the Bord Bia scheme after a 12 month lead in period.

5. All primary producers must undertake a detailed review of their meat-juice ELISA results (taken in the slaughter plant) and their on-farm Salmonella Control Plan at least once per year and by December at the latest. Modifications to their existing control plan may be required to effect a reduction in the farm prevalence.

6. Following a twelve month lead in period, primary producers who have shown a prevalence of 50% or higher in the three most recent test results will be excluded from the Bord Bia quality assurance scheme. Producers who can demonstrate by on-farm bacteriological sampling that antibodies are unlikely to be due to Salmonella serovars of public health significance will not be excluded from the scheme.

7. Pigs from holdings with a prevalence of 50% or higher must be slaughtered at the end of a day’s production (this frequency will be subject to review). Failure to do so will also exclude subsequent pigs from the quality assurance scheme. Exclusion from the quality assurance scheme will come into effect after the lead in period.

8. DAFF will engage with the PVP or advisor on farms as appropriate and particularly with farms that have a Salmonella problem.
1.2. **Salmonella Control Plans**

The control plan must address, as a minimum, the following 3 areas:

1. Prevention
2. Control
3. Hygiene

Each plan should be individually tailored to a particular farm’s needs and focus on:

### 1.2.1 Bio security
- Staff, Machinery & Visitor access to the premises e.g.:
  - Training
  - Equipment
  - Standard operating procedures
- Purchased stock e.g.
  - Use reputable sources of known health status
  - On farm isolation
- Rodent/pest control/ wild birds and animals/pets e.g.
  - Keep unit clean and tidy
  - Use appropriate pest proof and leak proof storage for afterbirths and dead pigs/fallen stock
  - Use appropriate rodent/ pest controls
- Feed & Water e.g.
  - Source & treatment of feed and water, bacterial quality testing history
  - Storage & distribution
  - Cleaning and disinfection of equipment (including tanks/bins, pipes and end feeders and drinkers)
- Bedding (where applicable)
- Unit location – especially new houses/units

### 1.2.2 Managerial practices
- Work flow e.g. one way systems, work from clean areas (farrowing houses) to dirty (finishers)
- Pig Flow e.g. one way systems, “all in, all out” where possible
- Farm output/waste disposal e.g. slurry/ manure/ feed/ afterbirths /fallen stock
- Disinfection procedures
- Checks prior to restocking

### 1.3. Restocking - Breeding Pigs

To minimise the potential for introduction of salmonella into herds, to minimise recycling of infection between herds, and to reduce infection levels, the following must be applied.
All gilts and boars for breeding must be sourced from breeding herds (including nucleus, multiplier, and integrated herds) that:

1. Have a Salmonella Control plan in place with enhanced control measures for Salmonella serovars of public health significance.

2. Have established a sero-prevalence of 10% or less based on serology:
   - For integrated herds under the same identifier, the sero-prevalence can be based on results from fatteners tested at slaughter
   - For nucleus herds, not sending fatteners to slaughter, the sero-prevalence can be established by testing of sera collected from 24 pigs on three occasions at 4 monthly intervals per annum
   - In both of these cases, the herd sero-prevalence will be established by calculating a weighted average of the three most recent test results available as follows:
     | Test            | Weighting |
     |-----------------|-----------|
     | Most recent     | 0.6       |
     | Second most recent | 0.2     |
     | Third most recent | 0.2     |

3. In addition, all breeding herds (nucleus, multiplier, and integrated) must carry out on farm bacteriological sampling annually (as undertaken for the EU baseline study in breeding pigs) to establish the Salmonella serovars present on-farm.

4. If sero-prevalence is over 10% or S. typhimurium is identified from bacteriological sampling, herdowners must review their on-farm Salmonella Control Plan with their PVP immediately and apply enhanced control measures. The revised control plan must be submitted to the national coordinator.

1.4. Transport

1. Any group of pigs containing animals from herds with a prevalence of 50% or higher must be transported to the slaughterhouse separately.

2. All pig transport vehicles must be thoroughly washed and disinfected after each delivery of pigs to the slaughter plants. An inspection and documentation system must be in place to demonstrate that all such vehicles were properly cleaned and sanitised prior to leaving the slaughter plant.
Section 2. Post Harvest

2.1. Lairage

1. Any group of pigs containing animals from herds with a prevalence of 50% or higher must be kept separately while in the lairage.

2. All lairage pens must be washed and disinfected after handling pigs from herds with a herd prevalence of 50% or higher.

2.2. Source

Where pigs are sourced from herds with a prevalence of 50% or higher, plant management must ensure that pigs from such herds are slaughtered at the end of a day’s production (this frequency will be subject to review).

2.3. Establishing Herd Prevalence

To establish the salmonella exposure of all herds providing fattening pigs for slaughter and to assist in the identification of high-risk herds, serological sampling of all farms will continue at the slaughter plant on the following basis:

1. 6 meat samples must be taken per month from each holding supplying pigs for slaughter up to a maximum of 72 samples per year. This will not apply to herds supplying less than 200 pigs in the previous 12 month period. The programme will be reviewed after 6 months sampling at plant level or when all herds have an established prevalence.

2. Samples must be taken from the first consignment of pigs sent for slaughter from a particular holding each month. In the event of a producer batch finishing, the latest three test results will be used to calculate herd prevalence.

3. Sampling records must be maintained by the slaughterhouse FBO to ensure all herds are tested in accordance with the above schedule.

4. Samples with appropriate documentation must be sent by the FBO to a designated/approved laboratory within 3 days of sampling.

5. The sampling programme will be reviewed by the stakeholders on an ongoing basis.
6. Current serological data will be used to set herd-prevalence for all herds that have a category based on serology under the present salmonella control scheme.

7. A minimum of 3 sets of samples will be required to establish herd prevalence for all those herds that do not have a valid certificate under the current scheme.

8. A weighted average placing 3 times greater emphasis (M1 0.6: M2 0.2: M3 0.2) on the results of the most recent test will be used.

Herds supplying 200 or more fatteners to slaughter must have a herd prevalence based on serological testing conducted either:
- On meat samples collected in slaughterhouses in this jurisdiction, or
- On meat samples collected in slaughterhouses in other jurisdictions acceptable to DAFF, or
- On blood samples collected on farm (consisting of 24 samples taken at 4 month intervals per annum).

Based on risk assessment, herds supplying less than 200 fatteners to slaughter in the previous 12 month period are exempt from the Salmonella Control Programme and therefore do not have to establish a herd prevalence level.

After 3 months of the new programme all herds regularly supplying 200 or more pigs to slaughter should have a herd prevalence. For the 3 month period at the start of the programme, the herd prevalence/categorisation from the old programme will apply.

2.4. Laboratory

1. All samples must be subjected to a recognised serological test as agreed with DAFF.

2. The laboratory must maintain a database with the results of all tests with the following information: holding, slaughter plant, date of sampling, date of sample receipt and test result. (Note: The list may have to be amended.)

3. On completion of the serology analysis the laboratory must input test results into a database. Until such time as this functionality is added to the database, the laboratory will forward test results to the national coordinator by the 28th of each month.

4. The CVRL is to continue to analyse samples for a two-year period.

5. Industry has agreed to part-fund 60% of the cost of the programme.
2.5. Database

DAFF will provide a database which is web-based and records data in real-time. Initially plants will enter consignments prior to slaughter and the database will indicate which herds require sampling and how many samples are required.

Access to the database is assigned to individuals. Plants must nominate individuals to DAFF in order to be assigned AGR numbers and pin numbers allowing access to the system.

With time the functionality of the database will be expanded allowing the laboratory to input test results directly and calculate herd prevalence levels. The herdowner and his nominated PVP will be able to access his/her prevalence online.

2.6. Process Hygiene Control Threshold

Results of routine carcase swabbing under Regulation 2073/2005 must remain below a control threshold of 10%. This threshold will be subject to downward revision.

Given the variable nature of results from carcase swabbing and the discrepancy between the recent DAFF monitoring programme and the plants own sampling, DAFF will keep carcase swabbing under review.

2.7. Actions

Where the control threshold is exceeded plant management must immediately carry out the following actions to the satisfaction of the VI in charge:

2.7.1 HACCP Review

Plant management must:

1. Conduct an in depth audit of all work practices (including instructions) on the slaughter line must be carried out in order to identify and eliminate the cause of the deviation. In the event that a deficiency is found, measures to prevent recurrence must be established and agreed with DAFF.

2. Carry out a review of their HACCP plan and in particular their CCP monitoring and verification procedures.

3. Establish corrective actions in consultation with the plant VI.
4. Document the review of their HACCP plan.

5. Retrain relevant staff immediately under the supervision of the plant VI.

### 2.7.2 Increased Sampling

Plant management must:

1. Increase the frequency of sampling sessions from once to twice a week (5 carcase swabs in a sampling session). Sampling to be conducted in accordance with Regulation 2073/2005.

2. Demonstrate four consecutive weeks of satisfactory results before reverting back to 1 sampling session per week.

3. Maintain testing results to demonstrate compliance with the stated frequency and time outlined above.

4. Discontinue composite sampling where a positive is found during the increased sampling frequency period.

5. Commence to sample each carcase site individually to establish the source of the contamination (problem identified to a particular site on the carcass - identifying probable processing step).

6. Carry out appropriate corrective action at the identified processing step.

7. Carry out sampling of plant equipment and personnel at particular workstations along the processing line as required.

8. Increase the level of salmonella testing on product entering the boning hall.

### 2.7.3 Sanitation

Plant management must introduce the following intervention measures:

- As an effective measure to control the prevalence of Salmonella at the post-harvest stage (lairage, slaughter, processing), pigs from herds with a high prevalence of Salmonella (50% or higher) will continue to be separated in the lairage and slaughtered at the end of a day’s production (frequency subject to review).

- This will be supported at plant level by process hygiene evaluation, trend analysis and corrective action plans, which will be reviewed and agreed with the plant VI.

- To control the level of residential flora on slaughter equipment and reduce the risk of cross contamination of carcases, the following
procedures will be carried out after the processing of pigs from herds with a high prevalence of Salmonella:

1. A thorough clean and sanitation of loading ramps, holding pens, cutting equipment etc will be carried out.
2. All personnel processing equipment: knives, gloves, aprons will be thoroughly cleaned and sanitised.

- Plant management will also apply additional sanitation measures to work stations identified in 2.7.2.7.above.
- If these interventions fail to bring the process under control, plant management should then increase manning levels on the part of the line where contamination is occurring and/or slow down the slaughter line to ensure hygienic slaughter, until the operation is back in control.
- Carry out a review of the source herds (prevalence of 50% or higher) and of the biosecurity measures in the farms of origin.
- A detailed sanitation SOP will be documented and implemented in agreement with the plant VI. In addition, all plant personnel will be fully trained against this SOP and monitored on the additional hygiene steps required when processing pigs from these herds to ensure full compliance.

2.7.4 Additional Measures

Should plants persistently remain out of control the Minister may implement further controls, such as the heat treatment of certain body parts, in the interests of public health.

2.8. Document Procedures

Plant management must incorporate all the requirements of the revised Salmonella Control Programme in the plant’s Food Safety Management System and update all existing relevant SOPs where necessary to the satisfaction of the V.I. in charge.
Section 3. National Co-ordination Group

Three co-ordinators will be appointed representing DAFF, processors and primary producers for a period of two years, at which point their position and role will be reviewed.

The role of the National Co-ordination Group will be to ensure the smooth implementation of the scheme. To this end, it will meet on a regular basis (e.g. once a month) to assess developments and to highlight any deficiencies. The co-ordinators acting as a group shall report to DAFF, which in turn will meet on at least a quarterly basis with the processors’ and producers’ representative bodies to monitor overall progress under the scheme.

Each plant will have a nominated contact person for the co-ordinators should the need arise.