

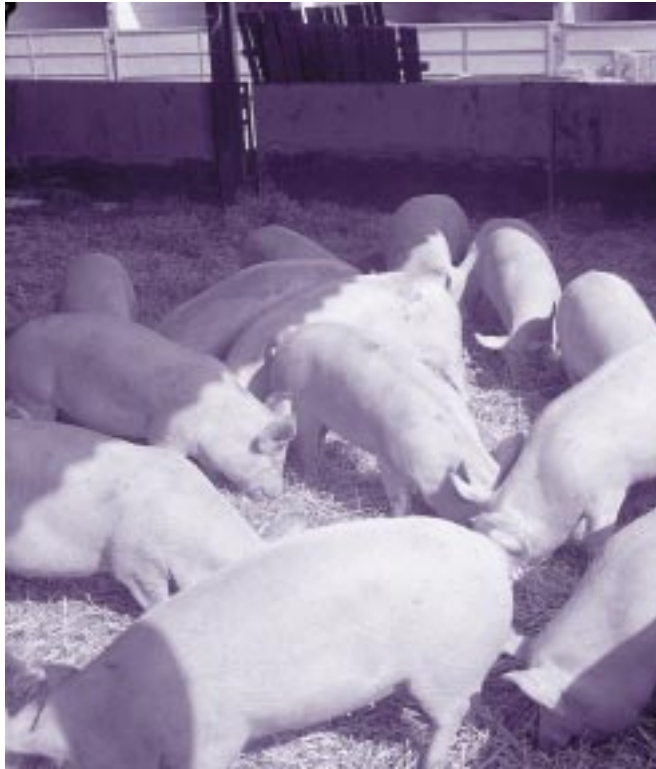
**ACTION**



**ON  
ANIMAL  
HEALTH  
AND  
WELFARE**

Code of Practice  
for the Prevention and Control of

# Salmonella on Pig Farms



Ministry of Agriculture,  
Fisheries and Food

Scottish Executive  
Rural Affairs Department

# Code of Practice for the Prevention and Control of Salmonella on Pig Farms

## Preface

This voluntary Code of Practice is issued by the Ministry of Agriculture, Fisheries and Food and the Scottish Executive Rural Affairs Department. It has been drawn up in consultation with the National Assembly of Wales, Food Standard Agency, National Pig Association, the Meat and Livestock Commission and the Pig Veterinary Society.

Further copies can be obtained from:  
MAFF Publications, London SE99 7TP



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# Background

Salmonella infection in farm animals may lead to animal disease, welfare, and economic problems as well as health problems for farm workers, visitors and consumers of farm produce.

There are a number of factors which are key to controlling salmonella. This Code aims to give you a guide to best practice to minimise the risk of salmonella entering your pig farm. It also gives guidance on controls to prevent further spread of infection within the herd and to other farms. Lastly, it provides guidance on the cleaning and disinfection of your farm as good hygiene is essential for disease control.

For all three areas (prevention, control and hygiene), a package of measures should be put in place and implemented thoroughly and effectively.

Although individual farms may vary, each with their own particular problems (e.g. outdoor units), the measures outlined in this Code should form the cornerstone of salmonella control and if rigorously applied they will substantially assist in controlling other pig diseases.

## Section A

### What is salmonella?

Salmonella organisms are bacteria that can be transmitted by all animals, including humans. Their complete elimination from the general environment is



unlikely. However, control on the farm is possible and can begin by following simple hygiene practices.

There are over 2,000 known serotypes of salmonella but currently only about 200 are associated with foodborne infections in humans in any one year in the UK. In pigs some types of salmonellas (for example *Salmonella typhimurium*) are more likely than others to cause disease and produce clinical signs such as diarrhoea, dehydration, septicaemia, abortion or even death.

## Why is salmonella control so important?

Consumers may suffer food poisoning or acquire infection with salmonellas some of which may be antibiotic resistant. It is important to reduce this hazard at all steps in the production and preparation of food.

Salmonella sometimes causes disease and deaths in pigs, mainly after weaning, but the disease is usually short lived. Infection with salmonella does not always result in disease, but many infected animals become symptomless carriers for a period. It is the animals which appear clinically normal but which may be excreting or carrying salmonella at slaughter that can be responsible for contamination of pigmeat.

Studies in various countries have shown that a significant proportion of pigs are carrying salmonella in their intestine or on their skin at slaughter. The high standards of hygiene at slaughter help to minimise the



risk of transferring the salmonella bacteria to the carcass. However, it is not possible to eliminate completely contamination during the slaughter process so inevitably some pigmeat can become contaminated, especially where a high proportion of pigs in a batch are carriers.

Salmonella can multiply outside the body. Even small numbers of organisms on meat can multiply during periods when it is not refrigerated or frozen resulting in a threat to public health.

## Section B

### Keeping salmonella out of pig farms

Salmonella may be introduced onto farms in a number of ways but the major route is by the movement of clinically healthy carrier animals (i.e. those animals which are infected but show no sign of disease). Feedingstuffs and bedding contaminated with dung from infected animals are other ways by which infection may be introduced. Infection may also be brought on to a farm by domestic pets, rodents, wild birds and animals, contaminated vehicles, farm personnel, visitors or equipment.

It is important that an assessment of the potential hazards is made so that appropriate controls/checks can be implemented to reduce the risk of infection entering your farm. A monitoring programme to check the



salmonella status of your stock is advisable. Both should be done in consultation with your veterinary surgeon.

The following key measures should be considered during the assessment (although there may well be other measures depending on the particular circumstances on your farm, which is why it is important to consult your veterinary surgeon):

### Siting of units:

When a new unit is being set up it should be as far away as possible from other farms, especially other pig farms. Similarly, whenever possible units should be sited away from landfill sites, abattoirs and sewage treatment plants. This is especially important for breeding and outdoor units.

### Access to the site:

The perimeter of the pig unit should be clearly identified and all visitors directed to specific entry points where there should be a bell or other means to attract attention along with a notice asking visitors to wait to be admitted by farm staff. Whilst there will be a need for people to enter the unit (managers, workmen, veterinary surgeons, scheme auditors), visits should be carefully controlled. Entry to livestock pens should be restricted to those with essential duties.

There should be a hard standing for parking which should be kept clean and disinfected so as to ensure that it is maintained in a hygienically acceptable condition. On-farm roadways should ideally be metalled and be kept clean from faecal soiling to prevent vehicles becoming contaminated.



## Staff:

Staff should be trained in the principles of hygiene and disease security. A written hygiene operating procedure should be displayed in a prominent place and adhered to by anyone entering the premises. Tell staff why the control measures are being used and how they work.

Waterproof boots and protective overalls should be supplied and used only on the site. These should be regularly disinfected and/or laundered on the farm premises, with washing machines being dedicated to this use only. Where this is not possible, specialist contracted laundry services should be used.

When entering and on leaving a pig unit or outdoor site, staff should immediately clean and disinfect boots and wash hands using warm water and soap, preferably an antibacterial soap.

## Visitors:

When essential visits are required make sure these visitors have taken precautions not to transfer infection from other pig farms. When possible visitors should not have been on another pig unit in the recent past (ideally not in the previous 48 hours). Similar clothing to that provided for staff should also be provided for visitors and laundered after use.

Facilities for spray disinfection of visiting workers' equipment (e.g. toolboxes, stepladders) should be available, particularly where pigs may have direct contact with the equipment. Where spraying would not be safe because of the nature of the equipment a





clean cloth dipped in disinfectant should be used to wipe the equipment.

A visitors' book should be maintained (see Annex 1 for suggested headings).

### Purchased stock:

Ideally, replacement breeding stock should be obtained from reputable breeding sources with a salmonella monitoring system in place. Your veterinary surgeon or that of the breeding source will be able to advise on the health of the stock purchased.

Be aware that “carrier” animals are more likely to excrete salmonella when they are stressed (e.g. after transport or mixing). Replacement stock should therefore be held and assessed in isolation pens for at least four weeks after purchase if possible.

Disinfectant footbaths should be used before entering and after leaving isolation pens.

Remember that all movements of pigs must comply with The Pigs (Records, Identification and Movement) Order 1995. You are also required to keep on farm records detailing the date of movement, the number of pigs moved, the identification mark and the premises moved from and to.

### Rodent/Pest Control:

Keep the site clean and tidy. Make the site less attractive to possible carriers of salmonella such as wild birds, rodents, cats and insect pests by cleaning up feed



spills and controlling weeds and other vegetation. Staff should look out for evidence of pests during their daily routine.

There should be a well-planned baiting and trapping policy with frequent baiting for rodents. An inspection visit should be made after dark every two weeks to check for live rodents.

Foxes may also carry salmonella. Prompt and careful disposal of afterbirths and dead pigs (see Section C “Disposal of Waste” for details on disposal) will avoid encouraging foxes and other scavengers on to outdoor pig units.

### Feed:

Purchased feed should be supplied from a feed mill which operates in accordance with the relevant MAFF and UKASTA codes of practice and using ingredients which have been obtained from sources with a consistently satisfactory bacteriological record.

If feed is supplied by a mill operating to other codes then your veterinary or technical adviser should be able to confirm with the manufacturer that the processes being used are effective in the control of salmonella.

It is equally important that home mixers follow advice given in the relevant codes. Farmers who feed their pigs catering waste (“swill”), as defined by the Animal By-Products Order 1999 or equivalent legislation, must be approved by MAFF and adhere to the conditions of the approval.



Birds, domestic and wild animals should be kept out of feed stores. Avoid dry feed becoming wet as any contaminating salmonella may multiply rapidly in damp conditions.

All feed bins and delivery pipes for dry feed should regularly be thoroughly dry cleaned. Cleaning and disinfection of wet feed delivery systems should form part of a regular routine.

### Water:

The water supply should be from a mains or other chlorinated source. Water from a borehole is acceptable, provided tests for bacteriological quality give satisfactory results. There should be an enclosed delivery system for water into livestock buildings which protects it from contamination.

Water tanks, pipes and drinkers should be cleaned, flushed and disinfected as part of a regular routine. Open water troughs should be completely emptied, cleaned (including behind ball valve compartment flaps) and disinfected before restocking pens or outdoor pig unit paddocks.

### Bedding:

Bedding materials should be from reliable sources. They should be as free as possible from faeces of wildlife or rodents as these may be a source of salmonella. It is best to use straw from specialist arable farms rather than mixed enterprises in order to minimise possible contamination with salmonella in faeces from livestock and wildlife, which is more likely to occur when straw comes from mixed enterprises.



Store bedding materials in a dry place as far away as practicable from the pig buildings. Bedding which is wet, mouldy or contaminated with soil should not be used. When bedding up, look for signs of faecal contamination by birds, cats, rodents or other animals and for the presence of live or dead rodents.

If there is evidence of contamination take suitable action, such as reviewing the baiting and trapping policy for rodents, to limit or prevent it.

### Vehicles and equipment:

Dirty transport vehicles pose a high risk of introducing infection. Under The Transport of Animals (Cleansing and Disinfection) (England) (No 2) Order (and equivalent legislation in Scotland, Wales and Northern Ireland), vehicles must have been cleaned and disinfected as soon as possible after animals have been transported, but in any case before they are used again to transport livestock. If after cleaning and disinfection they have become dirty, they must by law be cleaned and disinfected **again** before they are used.

A MAFF approved disinfectant must be used in accordance with the label instructions at MAFF General Orders dilution rates (or TB rates if disinfection is particularly difficult) and the necessary COSHH (Control of Substances Hazardous to Health) assessment.

Vehicles and other equipment should not be shared with other farms. If sharing is unavoidable, equipment should be thoroughly cleaned and disinfected immediately after use on one holding and again before use on another.



A loading bay well away from the pig houses is recommended and there should be appropriate measures to ensure that vehicles collecting fallen stock do not contaminate the premises. Ensure that loading bays and passageways are cleaned and disinfected after use.

## Section C

# Controlling the spread of salmonella on pig farms

Many of the measures discussed in Section B on preventing introduction of infection equally apply to controlling the spread of salmonella infection if it does get onto the farm. Some **additional** measures are, however, necessary and they are covered in this section **which should be read in conjunction with Section B.**

Remember that salmonella infection may be present for some time before disease becomes apparent or there may never be signs of clinical disease. For this reason it is recommended that as many as possible of the control measures and procedures outlined be adopted as part of the normal routine on the farm.

## Principles of salmonella control in an infected herd:

Salmonella infection is easily spread between pigs that are in close contact with each other. The introduction of an infected pig into a group can result in the whole group becoming infected and the infection of any further pigs added to the group. Once introduced,



salmonella infection can become established and recycle through groups of pigs passing through the unit.

When a farm initially becomes infected with salmonella the organism usually spreads to all parts of the herd. At this stage the infection rate of individual pigs is highest. Through time some herd immunity develops in breeding stock reducing the level of salmonella transmitted to piglets. Some sows and gilts may continue to carry salmonella. However, the rate of transfer to un-weaned piglets is low. If this infection rate can be kept low then only a small number of pigs will be carrying salmonella at slaughter. This can be achieved by operating farrowing rooms, weaner accommodation and where possible grower and finishing houses on an All in/All out basis so that infection is not spread from batch to batch.

### General managements:

A high standard of cleaning, disinfection and rodent control at each stage is important so that pigs do not pick up salmonella from the environment. Additionally, batch sizes should be kept as small as possible with minimal mixing so that any infection in individual weaned pigs cannot spread widely. Pigs should be kept as clean as practicable and faecal contamination of the skin kept to a minimum.

### All in/All out units:

Using All in/All out systems can break the cycle of reinfection. In All in/All out systems all pens in a room or house are emptied and then cleaned and disinfected properly before being filled again with pigs. If the



disinfection is done properly then the housing will not act as a source of infection for the pigs.

It is therefore advisable that farrowing rooms are operated on an All in/All out basis. Similarly, pigs should be weaned to separate accommodation on an All in/All out basis. It is important to make use of the natural break at weaning by ensuring that pigs are moved and transported through clean systems, as will avoiding the use of weaner pools. Farrowing pens and weaner housing should be properly cleaned and disinfected before being filled again with pigs.

On specialist rearing or finishing units pigs of the same age should also be managed on an All in/All out system. (See also “purchased stock” in Section B on measures to control infection from new stock).

When operating an All in/All out system in outdoor breeding herds, weaners should be moved to a new clean site at weaning and this nursery site should be operated as a batch system. Thorough cleaning and disinfection of transport vehicles and weaner pens should be carried out between batches. When outdoor breeding herds are moved to new ground this should be as far away as possible from the original site and water troughs and feeding equipment should be thoroughly cleaned and disinfected.

### Flow of pigs:

There should be a consistent one-way flow of pigs. Do not hold small or weak pigs back to mix with younger pigs. These pigs can carry infection back to the younger



pigs and keep the chain of salmonella infection intact. The mixing of a large number of litters should be minimised. Stream weak pigs and keep them in separate accommodation. When carrying out routine duties attend to healthy pigs before pigs held in sick pens.

Control of salmonella is particularly difficult in continuous flow systems and partial depopulation (for example one complete side of a scrape-through house) may be required to permit thorough cleaning and disinfection. Passages and equipment used in the movement of pigs should be clean.

### Transfer of infection by staff and equipment:

The measures detailed under “staff” in Section B equally apply here. Additionally, boots should be cleaned and then dipped in suitable fresh disinfectant solution on entering and leaving separate buildings within the unit. Hands should be washed after handling livestock, dead pigs or equipment contaminated by faeces.

When working with pigs of different ages, try to arrange to work from the youngest to the oldest. Separate equipment should be used for different ages of pigs on farm. For example do not use a brush in the finishing buildings and then in the farrowing house.

### Disposal of waste:

Faeces can spread infection from one pen to another. Therefore, pig pens, dung removal systems and drainage should be designed to minimise the flow of faeces between pens. When salmonella is present on a unit, scrape-through systems represent a potential





route for the transfer of infection between groups of pigs.

Solid manure should be stacked and composted before spreading on arable land (if used on pasture a minimum withholding period of three weeks should be observed). Slurry should be stored for as long as possible, and for at least four weeks, so that the majority of salmonella organisms die. Not adding to the waste during the storage period will also help reduce the number of salmonella organisms present.

Dead pigs and afterbirths must be collected promptly and placed in waterproof, leak-proof containers and must be disposed of without undue delay via incineration, rendering or removal to a knacker's yard. Burial or burning of dead pigs and afterbirths should be carried out in accordance with "The Water Code" and the Animal By-Products Order 1999.

### Feeding:

Veterinary advice should be sought on whether changes in feeding practice would assist in the control of salmonella. Changing from pellets to meal or liquid feeding may assist in control.

A change in the ingredient composition of the grower/finisher feed may also assist in the overall control of salmonella. Inclusion of organic acids in the feed or water supply may assist in salmonella control.

This is an area in which a control programme needs to be tailored to the individual farm and should be based



on the most recent research information and advice from your nutritional advisor and veterinary surgeon.

### Sending pigs to the abattoir:

When dispatched from the farm, pigs should be as clean as possible. Where possible reduce the feeding of pigs in the 12 hours prior to slaughter. Stress may increase the shedding of Salmonella and should be minimised where possible.

## Section D

### Disinfection of pig units

Effective cleaning and disinfection includes not only livestock pens but also

- Passages,
- Store rooms,
- Feed areas,
- Cleaning and weighing equipment,
- Staff rest rooms,
- Ground outside entrances to buildings.

Although this Code is directed towards the control of salmonella, the regime needed will also assist in controlling other infections.

### Preparation:

Prepare a plan to ensure the methodical completion of the task when the unit is depopulated. Make sure in advance that adequate supplies of equipment, MAFF approved disinfectant and trained staff are available. List items for repair and maintenance and order replacement



parts if necessary. Check that the normal rodent control is effective. In cases where total depopulation of a unit is not possible, consider the measures needed to ensure that those animals remaining will not be contaminated by spray. Arrange for the feeding systems to be as empty as possible.

### Depopulation:

Total depopulation is ideal for breaking the cycle of infection, as long as the next pigs to be placed are not also carrying salmonella. Where this is not possible, treat each house or room that has its own separate air space as an All in/All out unit. Applying insecticidal treatments for the control of flies, mites, etc. immediately after depopulation will help reduce such pests before they disperse. Repeat insecticidal treatment of dry surfaces after cleaning and disinfection is also recommended. Where evidence of rodents still exists remove all feed and carry out intensive baiting in livestock areas before washing.

### Cleaning and washing:

Disinfection will be more effective on clean surfaces. Organic material in manure and dirt inactivates chemical disinfectants and provides protection for disease causing organisms; disinfectant may be unable to penetrate and reach them.

After depopulation all manure, bedding and waste should be removed and stored as far away as possible from the buildings, other livestock and watercourses (to avoid run-off) to await disposal. Any portable equipment should be removed from the building for cleaning and should be



kept clean before disinfecting. Disconnect electrical equipment as necessary. Remove feed residues from troughs, bowls and hoppers. Drain water bowls and troughs and remove any scum or sediment by flushing. Clean ball-valve chambers. Bins used for dead stock and boot dips should be emptied and thoroughly cleaned.

Where salmonella infection is known to be a problem a more thorough approach is recommended: fans and ducting (inside and out), air inlets and outlets, drains and slurry pits should be cleaned.

After initial cleaning, washing should take place, preferably using a detergent sanitiser. Baiting points should be moved outside of the housing and replaced as soon as the application of disinfectant is completed.

Wash using a pressure washer, although take care not to cause spray contamination of the remaining populated areas in the building when an All in/All out system is not possible.

Check that the cleaning and washing has been effective before disinfection. Surfaces should be free of pig manure and other organic matter as these can inactivate disinfectants.

All repairs and maintenance should be carried out after washing but before disinfection. If manure or dust is dislodged from inaccessible areas during repairs spot cleaning should be carried out. Clean boots, clothing and equipment should be used when carrying out repairs.



## Disinfection (indoors):

Once washed it is preferable, if weather conditions permit, to allow everything (including reassembled equipment) to dry completely before disinfecting. A MAFF-approved disinfectant should be used in accordance with label instructions at MAFF General Orders dilution rates (or TB rates if disinfection is particularly difficult or surfaces are still wet) and the necessary COSHH assessment.

The commonly used disinfectants require several hours to penetrate greasy films of organic matter over surfaces and in cracks and so should be left to dry rather than rinsed away. Cold temperatures reduce the effectiveness of most disinfectants.

## Disinfection (outdoors):

Effective disinfection of outdoor pig units is more difficult. Salmonella may survive for long periods in soil and wallows. Water troughs and feeders are a particular source of contamination and should ideally be cleaned and disinfected between batches of pigs. All moveable equipment should be cleaned and disinfected before moving the herd to a new site. Kennels should be cleaned, disinfected and moved to clean ground between batches on outdoor nursery and finishing units.

The same principles for disinfecting indoors apply outdoors: surfaces and equipment should be thoroughly clean and where possible dry before the application of disinfectant, and attention paid to ensuring that the disinfected area is not recontaminated. Where cleaning is difficult disinfectant should be applied at the highest



concentration recommended by the manufacturer. Application of 2% formalin solution has been shown to be highly effective in situations where cleaning is difficult but suitable procedures and equipment to apply this safely must be used. Pollution of water courses and drains must be avoided.

As it is often the case that only a small proportion of weaned piglets are infected with salmonella, it is important that transport vehicles, when used for on farm movements, should be cleaned and disinfected after each day's use, or critically before moving weaners, as they may have become contaminated with salmonella excreted by carrier pigs.

Where transport vehicles are used off farm they must be cleaned and disinfected to at least the standard set out in The Transport of Animals (Cleansing and Disinfection) (England) (No 2) Order 2000 (and equivalent legislation of Scotland, Wales and Northern Ireland).

### Before restocking:

Do a final check to ensure that no area or piece of equipment has been overlooked. Check that all passageways used by staff and pigs and loading areas have not been overlooked. Check that clean surfaces have not been contaminated by rodent droppings. Check that the drains are running freely and are rodent proof. Baiting points should be set up to continue rodent control. Ensure that the route of entry for the new stock has been cleaned and disinfected.



All vehicles used for delivering animals should, where possible, be dedicated to that purpose and should have been cleaned and disinfected in accordance with the appropriate legislation.

## Annex 1: Visitors' book

The following headings are recommended:

Date

Name of visitor

Company name/address

Purpose of visit

Date of last contact with pigs

Address of last contact with pigs

Time of arrival

Time of departure



## Annex 2: Salmonella control – a summary

Control point	Keeping salmonella out	Controlling the spread
Unit	For new units – locate well away from other farms, in particular pig farms and landfill sites. Keep clean and tidy. Perimeter fence/ information signs. Parking for vehicles. Provide washing/ disinfection facilities/ footbaths. Clean and disinfect regularly.	Keep clean and tidy. Provide washing/ disinfection facilities/ footbaths. Clean and disinfect regularly.
Stock	Introduce a salmonella monitoring programme. Operate All in/All out system. Purchase stock from reliable source. Isolate/quarantine purchased stock.	Operate All in/ All out system. Keep pigs clean. Segregate groups. Isolate sick pigs/ infected groups.
Staff	Train and inform. Keep ‘work clothes’ on site and clean and disinfect regularly.	Keep ‘work clothes’ on site and clean and disinfect regularly.
Pest Control	Effective control programme.	Check controls effective.





Control point	Keeping salmonella out	Controlling the spread
Visitors	Restrict entry. Visitors book. Provide clean protective clothing.	Provide clean protective clothing.
Feed	Reliable source/ salmonella tested. Secure, clean storage away from pigs. Mixing/milling away from pigs.	Check for signs of contamination. Check storage secure.
Bedding	Clean source, not contaminated.	As for 'Feed'.
Water	Mains or tested source.	Check for signs of contamination. Enclosed water system.
Animal waste	Careful disposal away from site.	Store slurry for at least 4 weeks. Cover and compost manure. Spread on arable land but away from near-harvest crops.
Equipment	Do not share equipment. Clean and disinfect regularly.	Clean between sections of the farm. Clean and disinfect regularly.



## Annex 3: Check list for preparation of a detailed plan for cleaning and disinfection of pig units

### Preparation

Check ✓

- Note depopulation date and prepare a plan
- Consult COSHH assessments
- Ensure rodent controls are effective
- List items for repair and maintenance and order replacements
- Ensure cleaning equipment, disinfectant (MAFF approved) available
- Ensure competent staff available
- Ensure other animals will not be contaminated
- Run down feed supply

### At depopulation

- Remove all livestock from the building
- Check rodent control effective/intensify as necessary
- Apply insect control measures as necessary

### Cleaning and washing

- Clean out manure, bedding, dust, waste, etc.
- Take all moveable equipment outside, clean and wash
- DANGER – disconnect electrical equipment as necessary
- Drain, flush, clean water system, dismantle as necessary
- Clean feed troughs thoroughly, feed areas, bins, hoppers, etc.



- Clean ancillary rooms, fans, storage areas, and rest rooms
- Clean bins used for waste material, boot dips
- Pressure wash the building, pens, other areas to remove remaining dirt
- Dispose of all waste safely
- Ensure that all cleaning equipment is cleaned and disinfected
- Carry out repairs and maintenance

### Applying disinfectant

- Ensure the building is dry
- Follow label instructions and COSHH
- Apply MAFF approved disinfectants at approved rates to
  - the building (including the water system)
  - moveable equipment and reassemble
  - all ancillary and common areas
  - feed storage areas, bins, hoppers

### Before restocking

- Replace rodent bait
- Check no areas overlooked and equipment is functioning
- Ensure route of entry for new stock has been cleaned and disinfected.



## Annex 4: Other sources of useful information:

MAFF Codes of practice for the control of salmonella in the production of final feed for livestock  
(MAFF publications PB 2200 and PB 2201) \*

MAFF Codes of practice for the control of salmonella during the storage, handling and transport of raw materials intended for incorporation into, or direct use as, animal feedingstuffs (MAFF publication PB 2202) \*

Code of Practice for the prevention of rodent infestation in poultry flocks (MAFF publication PB 2630) \*

Code of Good Agricultural Practice: The Air Code  
(MAFF publication PB 0618) \*

Code of Good Agricultural Practice: The Water Code  
(MAFF publication PB 0587) \*

General Control of Substances Hazardous to Health (COSHH) Approved Code of Practice  
(ISBN 0717616703) †

Code of Recommendations for the Welfare of Pigs  
(MAFF publication PB 0075) \*

The Transport of Animals (Cleansing and Disinfection)  
(England) (No 2) Order 2000 (SI 2000/1618) †



Guidance note to The Transport of Animals (Cleansing and Disinfection) (England) (No 2) Order 2000 (SI 2000/1618) available from MAFF @

The Animal By-Products Order 1999 (SI 1999/646) †

The Pigs (Records, Identification and Movement) Order 1995 (SI 1995/11) †

List of MAFF approved disinfectants (available from MAFF) @

**Available from:**

- \* MAFF Publications, London SE99 7TP
- † Stationery Office, Publications Carre, PO Box 276, London SW8 5DT
- @ Animal Disease Control Division, 1A Page Street, London SW1P 4PQ





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