



**An Roinn Talmhaíochta,
Bia agus Mara**
Department of Agriculture,
Food and the Marine

Keeping Animals Safe from Disease:

Biosecurity Code of Practice for Poultry





A Strategy
to shift the focus from
disease control and
treatment to disease
prevention



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Keeping Animals Safe from Disease: A National Farmed Animal Biosecurity Strategy



The good health status of our farmed animals is fundamental in underpinning the continued success of the Irish livestock sector.

This strategy builds on many of the key principles of the Department of Agriculture Food and the Marine's (DAFM) National Farmed Animal Health Strategy (NFAHS) (2017-2022), which emphasised the need to work in partnership, to acknowledge roles and responsibilities, to reflect costs and benefits, and to shift the focus from disease control and treatment to disease prevention. Keeping the animals in our national herds and flocks safe from disease – starting inside the farm gate - is an integral part of the 'One Health One Welfare' approach. An ambitious but achievable pathway is put forward in the **National Farmed Animal Biosecurity Strategy (NFABS) 2021-2024**, placing biosecurity front and centre in the plan for the success and sustainability of Irish livestock farming.

The good health status of our farmed animals is fundamental in underpinning the continued success of the Irish livestock sector. The ability to raise our defences in the face of a specific threat (such as Highly Pathogenic Avian Influenza) is important, but it is equally important that effective, routine farm biosecurity practices are put in place and are practised consistently every day of the year, whether a specific disease threat has been identified or not. When good biosecurity practices are in place on farm and when they are implemented routinely and effectively, they reduce the risk of introducing disease into, and of spreading it within, the farm. The level of risk reduction will be determined by how effectively and routinely good biosecurity measures are implemented and practised.

The NFABS outlines a vision of what an effective farmed animal biosecurity strategy in Ireland could look like. Six broad strategic actions, considered central to the successful implementation of this strategy, are outlined, grouped into 3 areas (Awareness, Knowledge and Policy).

Stakeholder input was of critical importance in the development of this strategy, and the outcome of the consultation strongly influenced the strategic actions. Working in partnership, it is intended that with continued stakeholder engagement, the outputs of this strategy will be co-designed and co-owned by all farming stakeholders.

Strategic Action 3 of NFABS proposes the development and publication of Codes of Practice for farm biosecurity and the use of risk assessment tools to measure how effectively they are applied. It asks that all stakeholders, including farm service providers, work together to develop sector specific codes of practice appropriate to the degree of risk. For farmers, the code of practice will include a requirement for the development, implementation and regular review of farm specific biosecurity plans in close collaboration with their attending veterinary practitioner. Following the principle of 'you can't manage what you don't measure', the strategy recommends that the effectiveness of farm biosecurity plans should be measured, using standardised and validated biosecurity risk assessments.



'you can't
manage what you
don't measure'

Aim

The overall aim of this manual is to create a minimum set of biosecurity standards that can be applicable to all poultry producers. The approach described will allow poultry producers to build on these guidelines and add further biosecurity measures depending on requirements. This code is organised into two sections:

- **Level 1** - routine biosecurity measures which should be applied and practiced daily on all poultry farms.
- **Level 2** - further enhanced biosecurity measures for high-risk situations. These are applied if there is an increased risk of introducing or in the event of an introduction of an exotic or serious endemic disease.

Scope of the code

The Biosecurity Code of Practice for Poultry applies to all Irish poultry units.

The scope of this Code of Practice covers the breeding and production of poultry including table egg layers from birth to maturity or sale; and acknowledges that some farms are part of larger integrated multi-site production systems with common health status and biosecurity practices.

It was developed to address the main pathogens causing disease in poultry and those related to food safety and human health.

It is intended that poultry operators will incorporate the Code of Practice into their farm specific biosecurity plan.

The farmer or producer will be known as operator from here on.

Target audience

This Code of Practice is a comprehensive voluntary document designed to provide guidance on biosecurity for poultry farms in Ireland. This code is intended for use by poultry establishments (owners, managers, and farm staff), veterinary staff and those visiting poultry units on a regular basis, including advisors and personnel from service providers such as feed supply/delivery and transport.

Implementation

The poultry industry is responsible for the implementation of these codes of practice and the objective is for each different sector in the poultry industry to adapt and implement these codes of practice to ensure the success of the biosecurity strategy. It is understood that each production system will have different standards and demands, and it is anticipated that these can be addressed within the remit of this manual.



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Biosecurity in the Poultry Sector

Biosecurity is a set of preventative practices designed to reduce the risk of introduction and transmission of infectious disease, the objective being that 'prevention is better than cure'. It is an essential part of a poultry production system. Implementing biosecurity measures involves adopting a set of attitudes and behaviours to reduce risk in all activities involving animal production and care. Biosecurity covers the actions necessary to prevent diseases entering a flock (bioexclusion) and to limit their spread (biocontainment) if infection is introduced.

It is vital to follow a good biosecurity programme to keep flocks safe. By practicing these biosecurity procedures every day, the risk of disease is minimised. A risk assessment should be carried out on each site to determine the level of risk that exists at each production stage and to identify and establish control measures relative to each risk involved. Each production area should have a written biosecurity plan/policy with consideration given to:

- Biosecurity risks with all activities undertaken on the farm
- Biosecurity protocols to aid the control of each risk
- Action taken if biosecurity breaches occur

When designing a biosecurity plan, it is important to consider the location and layout of the poultry houses and production area, species of bird housed, source of water, feed, presence of wildlife and other animals on farm, personnel, visitors and delivery contractors.

The biosecurity guidelines contained within this manual are a general guidance, which are relevant to all sectors. For individual units which may want to further increase their biosecurity standards, these guidelines should be integrated along with any further recommendations.



Biosecurity should not be a reaction to a disease outbreak. Good hygiene and biosecurity practices should always be carried out to help reduce the risk of disease.



Objectives

- To prevent the introduction of infectious diseases to an establishment
- To prevent the spread of disease on the establishment
- To prevent the spread of disease from an establishment

Why have biosecurity procedures on your farm?

- To protect your birds, your business, the industry and the community
- To reduce disease challenge: Improve welfare, improve productivity, less downgrades, improve profit
- To reduce risk of exotic diseases: e.g. Avian Influenza, Newcastle disease
- To protect public health: Reduce Salmonella and risk of Campylobacter and other zoonotic diseases

There are certain biosecurity practices which are of benefit to poultry farms, in particular:

- Operate all in/all out system
- Contain a defined bio secure area
- Houses/structures that are relatively easy to clean
- Structure of industry

Glossary of terms

Biosecurity- means the sum of management and physical measures designed to reduce the risk of the introduction, development and spread of diseases to, from and within:

- (a) An animal population, or
- (b) An establishment, zone, compartment, means of transport or any other facilities, premises, or location.

Poultry- means fowl, turkeys, guinea fowl, ducks, geese, quails, pigeons, pheasants, partridges and ratites (Ratitae) reared or kept in captivity for breeding, the production of meat or eggs for consumption, or for re-stocking supplies of game.

Epidemiological unit- means a group of animals with the same likelihood of exposure to a disease agent;

Flock- all poultry of the same health status kept on the same premises or in the same enclosure and constituting a single epidemiological unit. In housed poultry this will include all birds sharing the same airspace.

Production area- includes the poultry houses and the immediate areas surrounding them, ranges if free-range or organic production, feed storage, pick-up areas, ancillary concrete aprons and any equipment held within the areas.

Establishment- any premises, structure or, in the case of open-air farming, any environment or place, where animals or germinal products are kept, on a temporary or permanent basis, except for:

- (a) Households where pet animals are kept;
- (b) Veterinary practices or clinics;

Operator- any natural or legal person having animals or products under his responsibility, including for a limited duration of time, but excluding pet keepers and veterinarians.

Personal Protective Equipment (PPE)- clothing and equipment worn or used to minimize exposure to hazardous substances or environments.



Routes for disease and pathogen transmission

Direct route of contamination refers to the transmission of pathogens between poultry by direct contact. Indirect route of contamination refers to the transmission of pathogens between infected and non-infected poultry through vectors and fomites (including people, equipment, vehicles, etc). It is important to avoid spread between houses as well as between sites.

Table 1 summarises the main sources and routes of transmission of disease indicating whether external or internal biosecurity measures or both are important in limiting transmission.

Table 1 – Main sources and routes of transmission of disease

Source Of Infection	Measures that Limit Transmission of Infection	
	External Biosecurity	Internal Biosecurity
Introduction of birds	X	
People	X	
Other Livestock	X	
Pets	X	
Wildlife	X	
Sick Poultry		X
Worker Hygiene		X
Environmental Hygiene		X
Disposal of dead birds	X	X
Pests	X	X
Fomites including vehicles, equipment	X	X
Animal feed	X	X
Food for workers	X	X
Manure	X	X
Aerosols/dust	X	X
Water	X	X
Scratch material/bedding	X	X



Level 1: Routine Biosecurity Procedures

Routine biosecurity procedures are those that are established and practiced daily on the farm. These procedures should be viewed as essential to provide the minimum level of biosecurity required. These procedures aim to promote best practice to ensure that pathogens are not carried into the farm and to reduce the risk of transmission between different areas of the farm (i.e. house to house; enterprise to enterprise)

Level 2: Enhanced Biosecurity Procedures for high-risk contingency situations

In the event of the introduction, or an elevated risk of introducing, an exotic, emergent or serious endemic disease (such as High Pathogenic Avian Influenza), higher risk biosecurity procedures should be implemented. Each owner/manager should have an action plan in place with clear guidelines documented should an alert be raised.

Species differences

The guidelines in this manual apply to all poultry operators and represent the minimum standard of biosecurity which should be in place. Some contents may not be applicable to a certain species or operator, in which case they can be omitted.

Free range and organic operators

The guidelines in this manual apply to housed, free-range, and organic poultry operators. The potential exposure to wild birds is higher in free range and organic operations so they are at an increased risk of potential exposure to pathogens and disease transmission. Measures should be taken and documented to minimise this risk.

Good quality perimeter fencing is required to exclude other animals from entering the range. Free range birds should always be fed indoors to prevent attracting wild birds and rodents. Compound feed and/or feed materials fed to birds must be purchased from operators that are registered as feed business operators.



Level 1: Routine Biosecurity Procedures

1. Training of Personnel

Aim:

To ensure that all staff entering any part of the production area receive training in biosecurity procedures

- 1.1 A copy of the National Farm Animal Biosecurity Strategy Manual should be held on each poultry unit so that it is readily accessible for staff.
- 1.2 All producers and staff should receive biosecurity training and such training (both formal and informal) should be recorded in a veterinary health plan.

2. Premises

Aim:

The layout of the premises should ensure that it is possible to limit the access of people, animals and vermin to the poultry production areas.

- 2.1 Commercial poultry units should ensure that they have a good perimeter fence/wall around the production area. A physical barrier, e.g., fence/wall should separate the poultry establishment from other livestock establishments, and this should be a minimum of 10m from the production area.
- 2.2 There should be a dedicated entrance with a lockable, and ideally automated gate. Appropriate signage should be displayed on the gate at all times advising 'No Entry Unless Authorised' or similar wording.

2.3 A specific production site map should be available which includes details of production area, sheds, ranges, bait points, disinfection points, access roads and gates. This needs to be kept up to date.

2.4 Keep the surrounds of the poultry houses free from debris and vegetation as this can harbour rodents and other vermin. Disinfect the surrounds regularly with a DAFM registered disinfectant licenced for use against avian disease and used in accordance with the manufacturer's instructions.

2.5 A concrete apron should be present at the front of the house (minimum 18m length if possible) and at the back of the house if there are doors present. The sides should also be concreted if a back door is in use. Concrete should be clean, free of cracks and pooled water. Drainage should be adequate to prevent the build-up of standing water.

2.6 Only allow essential vehicles on site and minimise the number of deliveries coming onto the site. Staff and service vehicles should be parked outside the perimeter unless necessary to enter. Where vehicles must enter the site, a dedicated car parking area away from the site is recommended.

2.7 Separate footwear and PPE should be provided for the production area, solely to be used in this area. See figure 1 and 2 for the required disposable and house specific PPE for a poultry site. This PPE and footwear should be house specific.

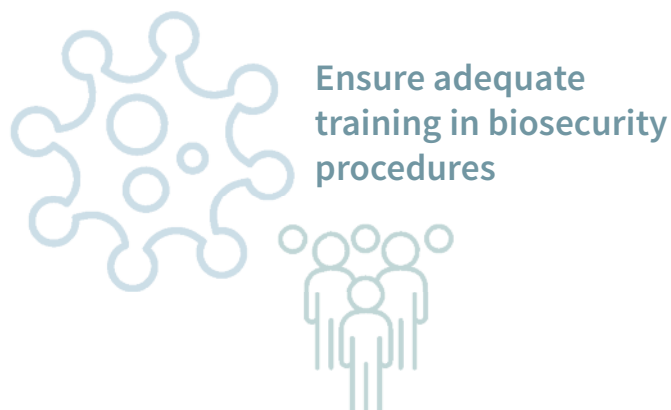




Figure 1- House Specific PPE



Figure 2- Disposable PPE

2.8 Footbaths containing DAFM registered disinfectants should be provided outside each poultry house. Ensure that the disinfectant is used as per manufacturer’s instructions and that the footbath is kept clean and covered. There should be boot-washing /scraper facilities provided to ensure that boots are free from organic matter prior to using footbaths. Handwashing facilities should be provided at entry to each house.

2.9 The production area should have adequate drainage to prevent accumulation of water.

2.10 A pest control programme should be established and implemented. Rodent baits should be placed around the immediate house perimeter and should be numbered and monitored at a minimum on a weekly basis. It is recommended that they are placed in the feed bin shed and stores also. The bait stations should be mapped to ensure that all personnel know where they are located. The bait stations should be designed to minimize the risk for other mammals and birds to access the bait. Any rodent activity observed should be recorded.

2.11 All poultry houses should be wild bird and rodent-proof and the doors should be kept closed. Bird proof netting should have apertures no larger than 25mm. Fly screens, if used, should not impede on the ventilation of the building and should be routinely inspected and cleaned.

2.12 A water meter should be in place and the source of water supplies to the house sampled at regular intervals. All drinkers should be free from debris and organic material. Do not allow free standing water to collect.

2.13 Pet animals (e.g. dogs) should not have access to the production area.



- 2.14 If more than one commercial poultry species is kept in the same production area, suitable biosecurity procedures for each species should be followed and the species should be housed and managed separately. Equipment should not be shared.
- 2.15 Other livestock (eg. cattle) are a potential source of pathogens and should not be grazed in fields that are immediately adjacent to the poultry houses.
- 2.16 Feed poses a risk for pathogens. Poultry should always receive a diet that has been heat treated to a minimum of 75°C at the core for one minute. All feed should be kept in enclosed silos to prevent attracting rodents and other vermin. Keep the area around the feed bins clean and free from spillage. Feed bins should be cleaned completely in between batches of feed.
- 2.17 Entry/exit points into the house should always remain closed, draft-free and sealed. Doors should be washable and dust-free. Any damage or misalignments should be fixed immediately.
- 2.18 Always store bedding in a bird and rodent-proof location. The bedding should come from a reliable source and be contamination-free. In addition, where extra bags of bedding are brought into the house and stored inside for later use, it is vital that the bags are clean, stored in an appropriate manner and not subject to possible contamination. Additional bedding should be stored in a clean and dry shed.
- 2.19 The temperature of the house should be kept at the recommended levels to allow for optimal growth/production. Good ventilation is essential, not only to help control the temperature and humidity, but to ensure a free flow of air and keep microorganism and dust levels at a minimum. Poor ventilation negatively impacts bird health and welfare and makes them more susceptible to disease.
- 2.20 Equipment should not be shared and should be house specific. If it needs to be used on another site/enterprise, it should be thoroughly cleaned and disinfected prior to returning to the original site/enterprise.
- 2.21 Dead birds should be stored in secure lidded containers. These containers should be clearly labelled 'Category 2, Not for animal consumption' and kept clean and disinfected. Dispose of carcasses regularly in a safe manner to an approved rendering plant. If carcasses are due to go for rendering, leave the container at the perimeter of the site for collection. Spray frequently to reduce fly contamination, especially in hot weather as this will help prevent disease spread. Cold storage is also possible for certain farms which will reduce visits between collections.
- 2.22 Organic manure/slurries should not be spread within 50 metres of the site.



**Separate livestock
from poultry to avoid
cross-contamination**





3. Personnel standards and procedures

Aim:

Reduce the risk of introducing or transmitting a pathogen or disease through the movement of people, including:

- Personnel
- Contractors and suppliers
- Visitors

Movement of people should be recorded to allow tracing if necessary

3.1 Production area personnel

Aim:

To reduce the risk of introducing a pathogen or disease by production personnel

- 3.1.1 All staff should have excellent personal hygiene and be free from any sickness or infectious disease.
- 3.1.2 Production area personnel should not have contact with any other poultry, wild birds, cage birds or pigs for at least 72 hours prior to entering the poultry house. If this is not feasible, showering (if facility available) followed by changing into new boots and clothing is required.
- 3.1.3 Production area personnel should wear clean clothing and footwear. Changing footwear and PPE on entry to the poultry house to footwear and PPE that are dedicated to use inside the house is necessary. If this is not available, the use of disposable boot-covers and coveralls is required. It is critical that this footwear and PPE stays inside the house and are not worn or taken outside.

- 3.1.4 Hand washing facilities should be provided, and these should be used by all personnel on entry and exit from the poultry houses.

3.2 Contractors and service personnel

Aim:

To reduce the risk of introducing a pathogen or disease by service personnel or contractors

- 3.2.1 Non-essential visitors, including family members or neighbours, should not enter the poultry house. In cases of emergency, they may enter provided they have showered and changed into clean clothes and boots.
- 3.2.2 All visitors to the production area should sign the visitor's logbook and confirm that they are free from any infectious sickness or disease.
- 3.2.3 Hand washing facilities should be provided, and these should be used by visitors on entry and exit from the poultry houses.
- 3.2.4 Service personnel can make multiple visits to different poultry establishments daily and are, therefore, considered high risk visitors. Clean single use PPE, as approved by the production area manager, is required to be worn at all times in the production area. This should be disposed of on site.
- 3.2.5 Visits should always have a risk assessed approach in term of which house is visited first i.e. potentially begin in 'clean' areas i.e. younger, healthy animals. If there is an emergency, visits can be made to lower standard houses following a shower if available and complete change of clothes.



- 3.2.6 Repair or maintenance workers who have been in contact with other poultry or birds that day should not enter the poultry houses unless:
 - (a) It is an emergency.
 - (b) They have showered (if facility available) and changed into new PPE including hair covering.
- 3.2.7 Maintenance of poultry houses should be performed between batches of poultry where possible, prior to final disinfection.
- 3.2.8 Any tools required by the service personnel which need to be brought into the production area should be cleaned prior to entry to the houses. Ensure no dust or organic matter are on the tools.
- 3.2.9 A record of all visitors should be maintained with details of date, time in and out, name, what company they work for (if applicable) and contact details. A visitor's book should be provided for all to sign on arrival. This needs to stay on the dirty side of the entry room.
- 3.2.10 All visitors should park their vehicles outside of production area unless it is essential to bring the vehicle in (in the case of some contractors). If not possible, a designated parking area should be made available.



A record of all visitors should be maintained.

A visitor's book should be provided for all to sign on arrival. This needs to stay on the dirty side of the entry room.



3.3 Requirements for pick-up/delivery personnel

Aim:

To reduce the risk of introducing a pathogen or disease by pick-up/delivery personnel

- 3.3.1 For vehicles required to enter the site, wheels should be washed, sprayed with DAFM registered disinfectant used in accordance with the manufacturer's instructions and adhering to contact times. Aside from day old deliveries, feed and collection lorry/catchers, all other vehicles should park off site.
- 3.3.2 For personnel that are required to enter the production area, house specific clothing/shoes are required.
- 3.3.3 Poultry catchers should abide by the processing operator's biosecurity procedures and use single use disposable PPE
- 3.3.4 Delivery of day olds- trucks and trailers should be thoroughly cleaned and disinfected between establishments. Drivers should sanitise their hands and ensure that boots are cleaned at each delivery. The driver should not enter the house
- 3.3.5 Manure collection trucks should be cleaned and disinfected between production areas.
- 3.3.6 General deliveries (e.g. feed)- drivers should not enter poultry houses. It is necessary to have a secure waterproof storage box for delivery documents or samples.



- 3.3.7 Movement of delivery personnel should be recorded to enable tracing if required.
- 3.3.8 Ideally, if drivers are making multiple stops at more than one individual farm in any given day, they should be prohibited from entering poultry houses or egg lobby areas.

3.4 Procedure for entering poultry houses

Aim:

To reduce the risk of introducing a pathogen or disease into the poultry houses through the movement of people

- 3.4.1 An anteroom should be provided which creates a primary biosecurity barrier before entry into the poultry house. This needs to meet all requirements for entry and exit of the poultry house. The store door should be kept locked at all times.
- 3.4.2 There should be a distinct clean step over barrier, with a minimum height of 50cm, which delineates the clean and dirty areas. Upon entering the store house, personnel should either remove and replace clothing or cover clothing with protective overalls then sit on the barrier, swing feet over and before touching the ground cover existing shoes with protective covers or replace with indoor poultry house shoes. Barriers that are fitted flush to the floor are most effective.
- 3.4.3 A hand sanitizer should be placed at the entrance door into the poultry house.
- 3.4.4 Any person entering the poultry houses should sanitise their hands and use footbaths before entering the house. House specific footwear should be provided.

- 3.4.5 Cleaning and disinfecting facilities should be available at each house to ensure that equipment can be cleaned prior to entry. Equipment that is used daily should be specific to each poultry house.
- 3.4.6 On exiting the poultry house, a brush or bootscraper should be used to remove any dirty material from inside the bird area of the poultry house.
- 3.4.7 Handwashing facilities should be provided and should be used by all personnel on exiting the poultry house.



**Sanitation
Disinfection
Cleaning**

to avoid disease or introducing a pathogen



4. Operational standards

4.1 Water Supply

Aim:

Water used in poultry houses for cooling, cleaning and drinking is of a suitable standard for poultry.

To achieve good biosecurity, it is recommended that water is of satisfactory microbiological standard i.e. absence of *Escherichia coli* (*E.coli*) and Enterococci. The water system (water source, storage, delivery and treatment system) can be a source of pathogens. Sources of water that are susceptible to pathogen contamination include surface water (e.g., reservoirs, ponds, lakes and rivers), ground water aquifers and rainwater collection systems. Surface water systems pose a significantly higher risk for the introduction of infectious organisms and undesirable substances and should not be used without a functioning treatment system.

- 4.1.1 Use a water treatment system, if needed, and ensure it is in good repair. Treatment systems should be validated prior to use and require a maintenance and monitoring programme to ensure it's working effectively as per manufacturers recommendations.
- 4.1.2 Have appropriate drainage in place to prevent contamination by water used for cleaning activities.
- 4.1.3 Regularly (at least once a year) test and record the water quality (at the source and at the drinking point for the birds) and treat water, if necessary and record results. Well water should be tested in summer and winter, preferably after a period of heavy rain. If *E.coli* is detected, corrective actions need to be taken and recorded. A further test should then be carried out to verify the effectiveness of corrective actions implemented.

4.1.4 Cleaning of the water pipes is recommended after every crop to avoid formation of biofilms (where pathogens proliferate).

4.1.5 All drinkers should be free from debris and organic material. Do not allow free standing water to collect.

4.1.6 If the drinking system allows, header tanks should be avoided. If they are in use, they should be lidded and low lying to allow for inspection. Cleaning and disinfecting should be performed in between crops. If possible, storage tanks with pumps should be utilised.

4.2 Pest Control, including rodents (see also 2.13)

Aim:

To reduce the risk of introducing pathogens or disease through the presence of pests, including rodents, in the production area

4.2.1 It is recommended to employ a licenced pest control company and a field biology visit should be carried out.

4.2.2 Bait stations should be checked weekly at a minimum and fresh bait laid out as required.

4.2.3 Bait station inspections should be recorded, and any pest activity noted (Appendix 4). If any activity is noted, consult the pest control company or the field biologist.

4.2.4 All toxic bait needs to be licensed for use.



4.3 Cleaning and maintenance of premises

Aim:

To reduce the introduction of pathogens into poultry houses; to reduce the interest of rodents and birds to production area

- 4.3.1 Always clean up feed spills immediately after they have occurred to prevent attracting wild birds and rodents. This should be disposed of along with the litter at the end of flock.
- 4.3.2 The hopper bins should be clean and free from any residual feed, dust, feathers etc. No caked feed or dirt should be attached to the side of spout prior to refilling with a new batch of feed. Closed in feeders prevent feed spillages.
- 4.3.3 Keep house surrounds free of vegetation and debris as this attracts rodents. Disinfect the surroundings regularly using a DAFM registered disinfectant effective against avian diseases in accordance with manufacturer's instructions.
- 4.3.4 The production area should have adequate drainage to prevent any accumulation of water.
- 4.3.5 Ensure footbaths are examined daily and that the approved disinfectant is at an adequate concentration as recommended by the manufacturer. They should be closed over to avoid dilution from rain. If there is visible organic matter, the disinfectant should be changed.
- 4.3.6 Walls/Vents/Inlets- should be clean and free from cracks. Dust, cobwebs and other organic matter should be removed and there should be no obstruction of vents and inlets.

4.3.7 Floors- should be clean, dry and free from organic matter, pooled water and foreign bodies. Floors should be free from cracks and any loose debris.

4.3.8 All beams and posts, particularly those made of timber, should be clean, dry and free from dust, splinters, organic matter residue and litter caking.

4.4 Record Keeping

Aim:

To identify animal health issues in the event of a biosecurity breach

- 4.4.1 A record should be kept of all bird movement in and out of the house to assist in tracing should there be an animal health concern or a food safety issue.
- 4.4.2 Each flock should be inspected daily by the operator and dead birds immediately removed and details recorded. This close monitoring and reporting of any suspected health issues will assist in the early detection of any animal health issues. This includes reporting significant decreases in production rates with an undetermined cause e.g., failure to gain weight, egg drop etc.



4.5 Poultry

Aim:

Reduce the risk of introducing a pathogen or disease by poultry management operations

- 4.5.1 Each flock should be inspected regularly by the grower and dead birds immediately removed. Two buckets should be in use for the removal of dead birds to ensure that no bucket used in the clean room is removed.
- 4.5.2 Operate an all-in/all-out policy when stocking houses and only buy replacement birds from reputable sources
- 4.5.3 Thinning before depopulation is widespread and is an integral part of the management of factory and market weights. It is known to increase the susceptibility of the birds to harmful bacteria. Every effort should be made to ensure that thinning is carried out using the highest standards of hygiene and biosecurity and to minimise stress for the birds.

4.6 End of batch procedures

Aim:

Reduce the risk of introducing a pathogen or disease by delivery and catcher personnel

This section more specifically applies to batch operations, such as broiler farms.

- 4.6.1 Once the flock has been moved to the factory, the house should be cleaned out following stringent hygiene practices. Dirty litter should be removed and taken off the site as quickly as possible. (See Annex 1 on cleaning and disinfecting procedure). Ensure that no carcasses remain in the litter.
- 4.6.2 Manure should not be spread within 50m of the site boundary. It should be stored appropriately off site. Broiler and turkey manure must be ploughed into the soil.

5. Additional Biosecurity Security Measures

Aim:

Any further additional species-specific biosecurity measures can be placed here to build on the routine procedures listed in Level 1 in this manual



Implement strict management controls on maintaining bio-security





Level 2: Enhanced Biosecurity Procedures for high-risk contingency situations

Aim:

To minimise the movement of people and poultry on and off the poultry premises so as to protect the farm in the event of an increased threat of disease introduction in a suspected outbreak

1. Gates kept locked at all times.
2. Houses kept locked unless access required.
3. Equipment should be house specific and not shared.
4. No visitors unless necessary.
5. No routine visits of service personnel.
6. Non-essential maintenance not performed on site.
7. For essential visits, if showering facilities in place, they should be utilised. Otherwise, a complete change of clothes, footwear, masks, hair coverings should be utilised.
8. All vehicles that need to enter site should be washed and disinfected both on arrival and departure. Leave outside premises if safe to do so.
9. No birds, eggs or litter to be moved off the site.
10. If risk increases, further biosecurity procedures may be introduced by the Department of Food, Agriculture and Marine.



APPENDIX 1: DISINFECTION PROGRAMME FOR POULTRY FARMS POST DEPOPULATION

The Terminal Hygiene Policy sets out to ensure that all houses are cleaned out sufficiently to minimise harm to subsequent day-old birds of the next flock. It is recommended to follow this order:

1. Dry Clean Out
2. Wet Clean/Wash
3. Disinfection
4. Drying out
5. Disinfest

3.1 House repair and maintenance

1. Inspect all parts of the house for damage. Any cracks or damage to wall, flooring or roof should be flagged for repair prior to repopulating the house.
2. Carry out repairs to ensure that the house is wild bird & vermin-proof, and surfaces are intact and easily cleaned.
3. Small openings around cables or pipes should be sealed to prevent pests entering.
4. Bird-proof netting should have a maximum mesh size of 25mm.
5. Ensure that seals on doors are adequate to prevent pests entering.

3.2 Dry Clean Out Introduction

1. Remove any residual feed from the hopper bin and feed equipment. Floor of hopper bin is to be cleaned.
2. Take out any removable equipment.
3. Remove any dead bird carcasses from the litter, and dispose of with other carcasses.
4. Remove all litter from the house.
5. Load litter to ensure that all outside areas such as concrete pads at doors are cleared of old litter.
6. Ensure loads are covered before transported from the site.

3.3 Dry Cleaning Procedure

1. Work from the top of the house and work down.
2. Blow down all surface dust from ceilings, water pipes, fan boxes and inlets.
3. Blow or brush loose debris from walls.
4. Scrape floor using mechanised scrapers.
5. Blow or wash down bulk feed bins.
6. Sweep the floor thoroughly to ensure all remaining debris removed.

3.4 Water sanitization

Drainable systems

1. Drain the header tank and check that it is free from debris. Clean as required.
2. Fill the tank with the volume of water required to fill the entire drinking system and add sanitizer at recommended dilution.
3. Allow sanitizer solution to fill the drinking system. Leave for 24hours.
4. Drain the system and fill with fresh water.

3.5 Wet Clean/Wash

It is important to use a detergent to ensure that all organic matter is removed pre-disinfection. Contents like fat and grease are not removed without detergent. QUAT (Quaternary ammonium compounds) type detergents must be used. A list of approved detergents can be found on gov.ie - [Disinfectants](#).

1. Include any stores in this cleaning procedure.
2. Wash all surfaces with a pressure washer with the detergent sanitizer solution.
3. Externally, spray air inlets, deposits from around fan boxes and the loading area.
4. Internally include air inlets, fan boxes, partitions, feeders and drinkers and all other equipment. removed from the house, ensuring that everything is visibly clean.



5. Use a soak tank if available for removable equipment.
6. Soak all surfaces for 20-30 minutes, and then rinse all surfaces with water at high pressure.
7. Also ensure that all dirty areas such as concrete aprons around houses and bulk bin pads are washed clean.
8. If organic matter is present after these steps, the process needs to be repeated.

3.6 Disinfection of the buildings and equipment

1. Ensure that disinfectants have been properly stored, are in date, and are used in accordance with manufacturer's instructions.
2. Ensure that the building is allowed to dry prior to disinfection.
3. Use a knapsack sprayer or pressure washer at a low-pressure setting (300 psi) to apply.
4. Disinfect all removable equipment and store in a clean area under cover, or replace in cleaned house.
5. Disinfect the cleaned house once dry, applying disinfectant solution evenly to all washed surfaces to achieve through wetting.
6. Pay particular attention to corners, cracks, seams and porous surfaces. Ensure that all sides of supporting posts are covered.
7. Spray into the apex of the roof and work down the walls to the floors.
8. On completion of disinfection, close all doors and place foot dips at entrances. The house needs to be treated as if there were birds present in it.
9. Disinfect the feed silo if possible.
10. All equipment should be frequently washed down and then cleaned with an approved disinfectant. It is important to use a disinfectant on a clean surface so ensure that there is no organic matter visible on equipment before applying.

3.7 Fogging

1. Cold/thermal fogging or fumigation should be carried out.

3.8 Drying Out

1. The longer a house can be rested after depopulation the better, as some infectious organisms can remain in the environment for months.
2. A minimum period of one week after depopulation should be allowed before the house is re-stocked.

3.9 Rodent, Insect and Parasite Control

1. Implement parasite and insect control programmes if necessary.
2. Replenish rodent bait points.
3. Rodent control visits from pest-control company are necessary.



Implement strict maintenance of all farm buildings and surroundings



APPENDIX 2: STAFF LOGBOOK

Date	Name	Contact with other poultry within the last 48 hours Y/N?	Signs of illness? Y/N?	Time of Arrival	Signature	Time of Departure	Signature

APPENDIX 3- VISITOR'S LOG BOOK

This log book must be signed by all visitors entering the poultry houses.

Date	Name	Company Contact with Poultry within 48 hours of visit Y/N?	Reason for visit	Any sign of illness? Y/N?	Possession of recording equipment - Y/N?	Car registration number	Time of Arrival	Signature	Time of Departure	Signature

APPENDIX 4 RODENT CONTROL RECORDS

Please note 'Y' if rodent activity detected, 'N' if no rodent activity detected

Date	Time	Bait Station (No.)	Activity detected	Any additional findings	Name

APPENDIX 5: POULTRY LEGISLATION

Poultry Registration

No. 114 of 2014 – Control of places where poultry are kept Regulations 2014

No. 22 of 2020 - European Union (Food and Feed Hygiene) Regulations 2020

No. 42 of 2008 – Diseases of Animal Act 1966 (Registration of Poultry Premises) Order 2008

Animal Health Law

Regulation (EU) 2016/429

Salmonella Regulation

Regulation (EC) No 2160/2003 of the European Parliament and of the Council of 17 November 2003 on the control of *Salmonella* and other specified food-borne zoonotic agents

Salmonella Enteritidis/Salmonella Typhimurium Regulations

Table egg layers - Commission Regulation (EU) No 517/2011

Broilers- Commission Regulation (EU) 200/2012

Broiler Breeders- Commission Regulation (EU) 200/2010

Turkeys- Commission Regulation (EU) 1190/2012

Campylobacter in broiler carcasses

Commission Regulated (EU) 2017/1495

Rules for establishments keeping terrestrial animals and hatcheries- For producers that want to export to other member states

Commission Delegated Regulation (EU) 2019/2035

APPENDIX 6: HOW TO REGISTER POULTRY PREMISES

Anyone who keeps poultry in Ireland must register their premises with the Department of Agriculture, Food and the Marine (DAFM), from large commercial poultry holdings to backyard poultry flocks with one or two birds. Registration is required so that DAFM can contact you if required with information on poultry health or welfare or in the event of a disease threat such as Avian Influenza.

There are three ways to register your poultry premises:

1. Register online, by completing an electronic form and submitting it directly to the Department.
2. Post a completed Poultry Registration Application Form (PR1 form) to your local Regional Veterinary Office.
3. Telephone your Local Regional Veterinary Office and they will post a PR1 form out which can be filled in and returned.

If the information on the PR1 form indicates that this holding will be a commercial enterprise, a PR2 form is automatically generated. A PR2 form is used in poultry registration when applying to be a commercial poultry enterprise.

A notification form with a unique poultry holding number will be sent to you once registered. It is important that poultry owners keep their registration details up to date, including letting DAFM know if they no longer have poultry. Details can be updated by using any of the methods listed above.

APPENDIX 7- WATER TREATMENT

All water supplies that are used in the production area should be sampled and tested. Untreated drinking water should not be used for poultry and the water should be of potable standard. The reason that water is treated is to reduce the presence of pathogens (bacteria, viruses, parasites) as well as algae in the water. *Escherichia coli* (*E.coli*) and Enterococci are used as indicator organisms to assess the microbiological quality of a water supply and to verify the efficacy of any water treatment used.

Public water supplies should be tested at least once annually between May 1st and September 30th. If a private well is used, water should be tested at least twice annually- during the summer and winter periods. Results from this sampling should be recorded.

If *E.coli* or Enterococci are detected, corrective action must be taken by means of a treatment process and retested within 7 days.

Guidelines for water quality standards-

Microbiological Parameters	
Parameter	Parametric value (number/100 ml)
<i>E.coli</i> (faecal coliforms)	0
Enterococci	0

Biosecurity is important for catching and tipping teams to be aware of due to movement between houses on farms and between establishments. This movement can spread disease and a protocol needs to be in place to minimise this risk. Training is necessary to ensure that workers have the skills required to minimise stress on birds. As well as increasing the risk of disease, this has an impact on animal welfare and the quality of the meat of transported animals.

APPENDIX 8: CATCHING/TIPPING PROTOCOL

Catching and tipping teams should adhere to the methods below:

- Domestic poultry should not be kept at home. During high-risk periods, areas where wild birds may gather should be avoided e.g. parks, ponds, lakes.
- Any outbreaks locally should be reported to management immediately.
- Clean clothes should be worn to work; all jewellery, apart from a plain metal wedding band, is not permitted to be worn.
- High level of personal hygiene is required.
- A nominated member of the catching teams should sign the visitor's book on arrival to the farm. The following details should be recorded:
 - Date
 - Time of arrival
 - Name of each team member
 - All team members must declare they're free of infectious diseases.
- Only essential vehicles should enter the production area e.g. poultry transport lorry, catching team transport should be cleaned and disinfected prior to arriving on farm. Vehicle wheels should be sprayed with disinfectant on arrival.
- PPE is required for catching and tipping team. This is extremely important at partial depopulation.
- Boots must be cleaned and disinfected, using a DAFM registered disinfectant at the manufacturer's recommended amount, between houses.
- Hands must be washed and disinfected on entry and exit of houses.
- Catching and tipping team should only have access to the house they're working in.
- The loading area provided should be used solely for loading birds.
- A catching docket should be left on site.
- For breaks, the team can use the facilities provided by the farm, or the clean company van which has been disinfected on entry to the farm.
- After catching/tipping, the used PPE should be disposed of in an appropriate manner on farm. Boots and hands should be washed and disinfected. The site should be left tidy and litter free.

**In the event of a disease outbreak on the farm, further measures will be taken.
You will be informed of these at the time.**

APPENDIX 9: ANTEROOM LAYOUT

ONE STEP BARRIER



Figure 3- Example of One Step Barrier

TWO STEP BARRIER

1. The foot dip must be used before entering to the store
2. Outdoor footwear should be removed in the red zone while sitting on the barrier
3. Crossing the barrier without the stocking feet touching the red zone floor. A pair of slip-on shoes or stocking feet will be used in the amber zone
4. Hands should be washed and sanitised
5. The second barrier should be crossed removing the slip-on shoes in the amber zone and entering the green zone
6. House specific clothing and footwear will be put on in the green zone before entering the bird area
7. To leave the poultry unit, the reverse is done going from the green to the amber to red zone

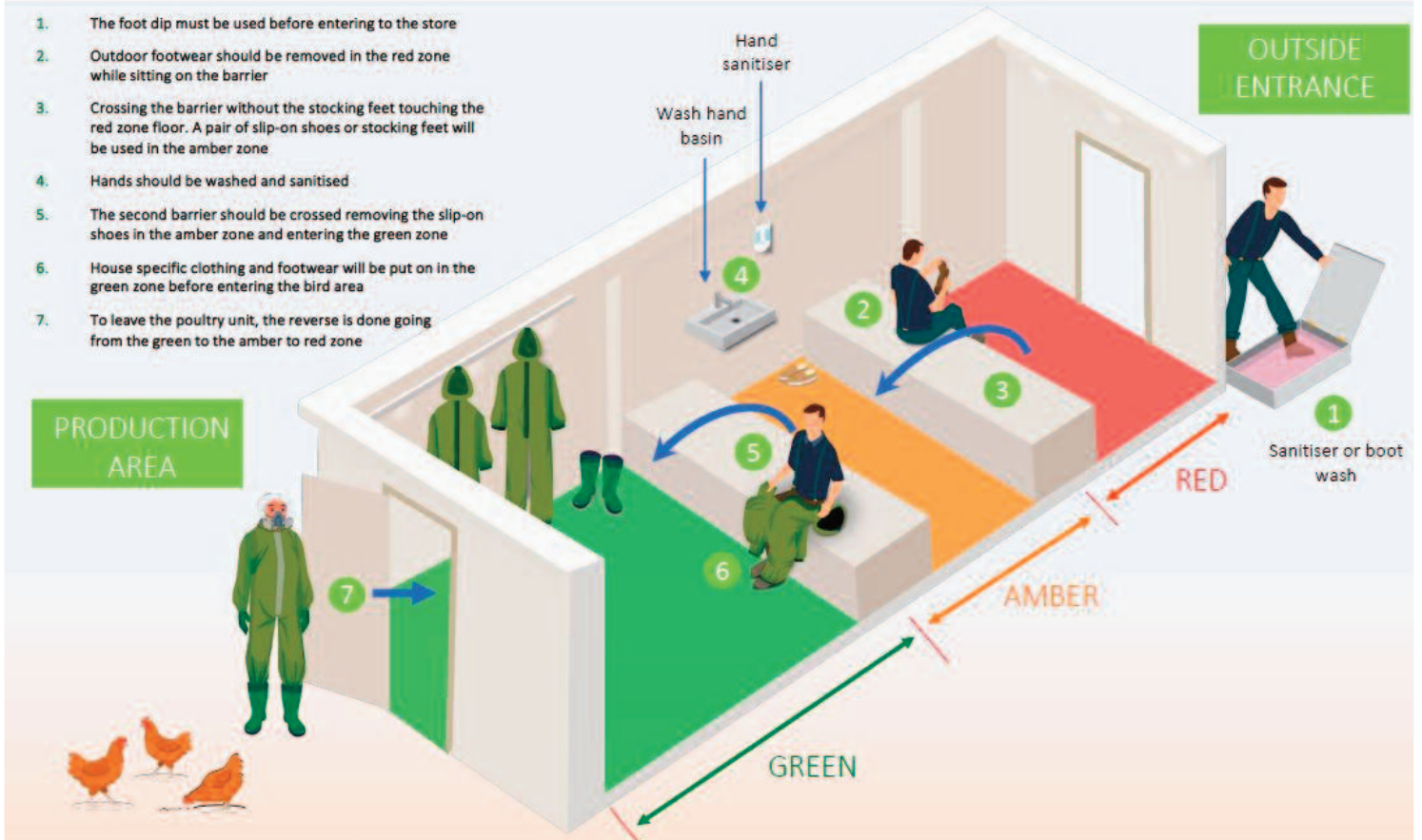


Figure 4- Example of Two Step Barrier



An Roinn Talmhaíochta,
Bia agus Mara
Department of Agriculture,
Food and the Marine

