

VETERINARY SURGEONS

Providing a complete poultry veterinary service



[www.stdavids-poultryteam.co.uk](http://www.stdavids-poultryteam.co.uk)

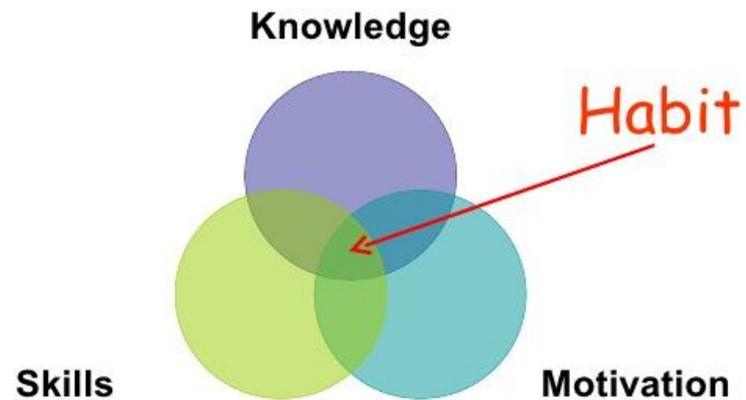
# Biosecurity

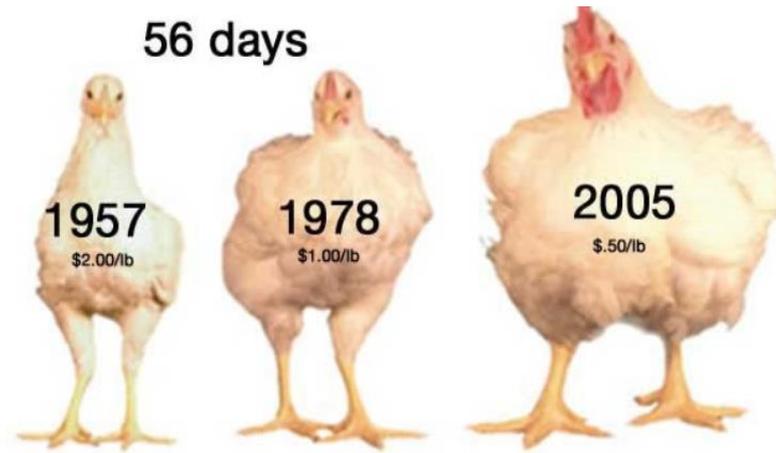
Skills:

How easy is it.

If not easy you need  
greater motivation to  
perform correctly.

Motivation is pivotal!

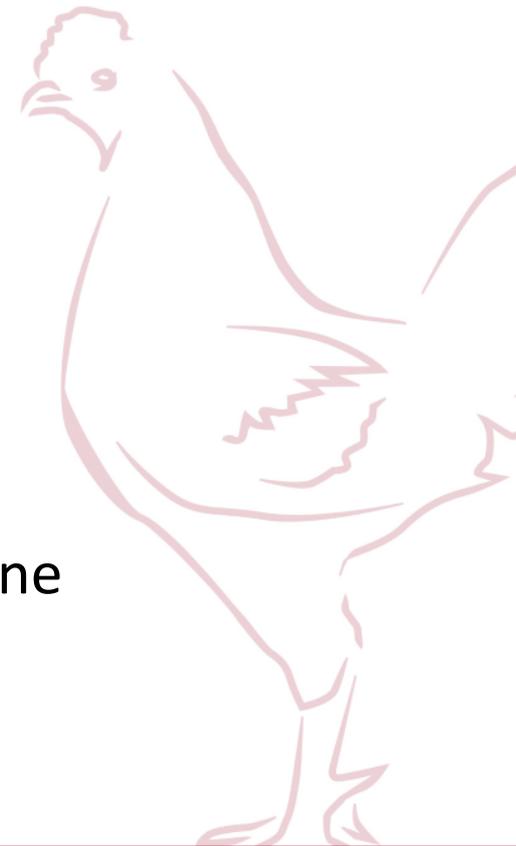




Transformation of the broiler chicken over the years

Genetics  
Nutrition  
Housing

Biosecurity  
Vaccination  
Water Hygiene

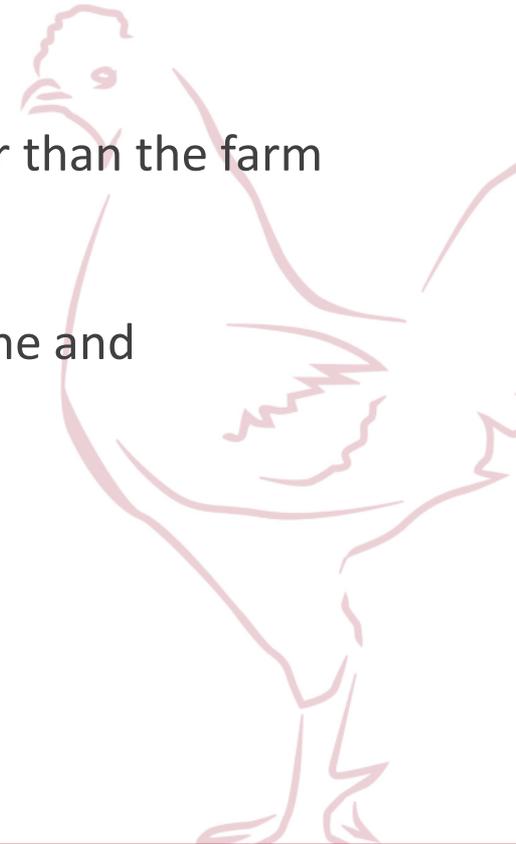


# What is Biosecurity?

A set of management practices which when followed correctly reduce the potential for the introduction and spread of disease causing organisms onto, and between sites.

Should be judged from the perspective of the bird rather than the farm

Should not be reaction to disease outbreak. Good hygiene and biosecurity practices should be carried out at all times.



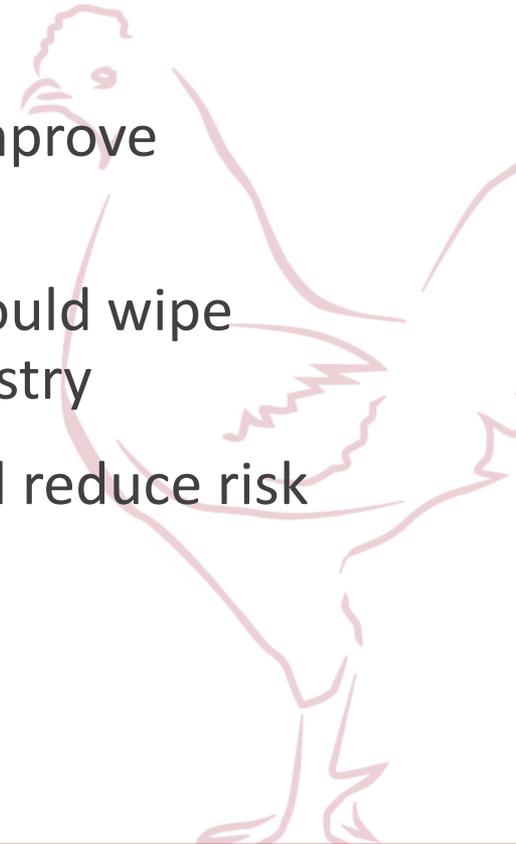
# Reasons for Biosecurity and Site Hygiene

Protects your birds, your business, the industry and the community

Reduce disease challenge: Improve Welfare, Improve Productivity, Less downgrades, Improve Profit

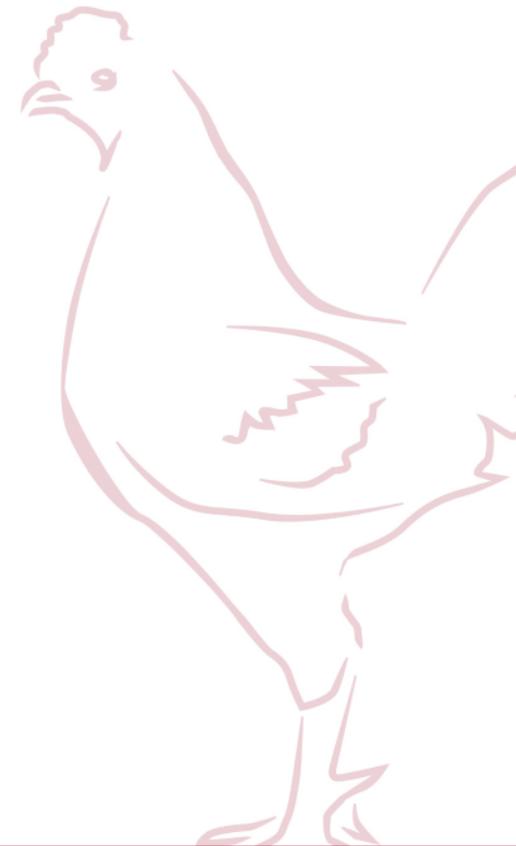
Reduces risk of exotics: eg. AI, Newcastles.... Could wipe out your business and threaten the entire industry

Protect public health: Eliminate salmonella and reduce risk of campylobacter and other zoonotic diseases



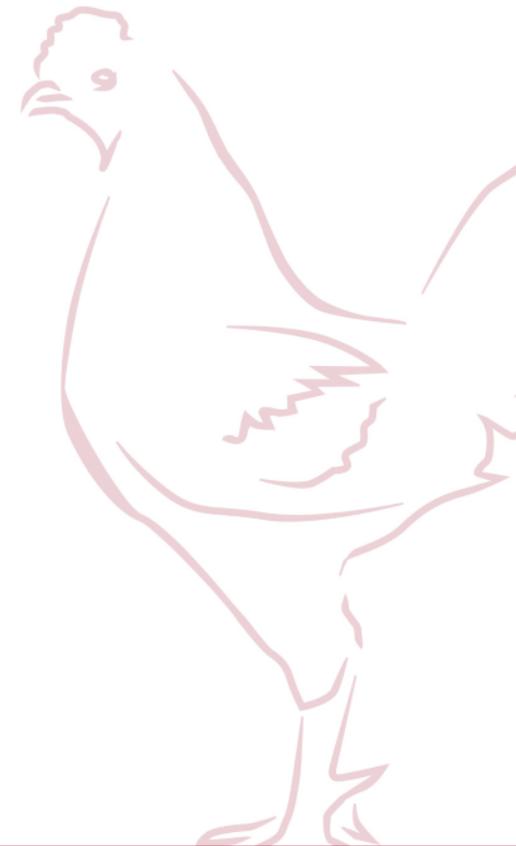
# Biosecurity advantages of Poultry sector

- All in/All out
- Defined biosecure area
- Relatively easy to clean
- Dread of exotic diseases
- Structure of industry



# Three Key Levels of Biosecurity

- Conceptual Biosecurity
- Structural Biosecurity
- Operational Biosecurity



# Conceptual Biosecurity

Involves Site planning

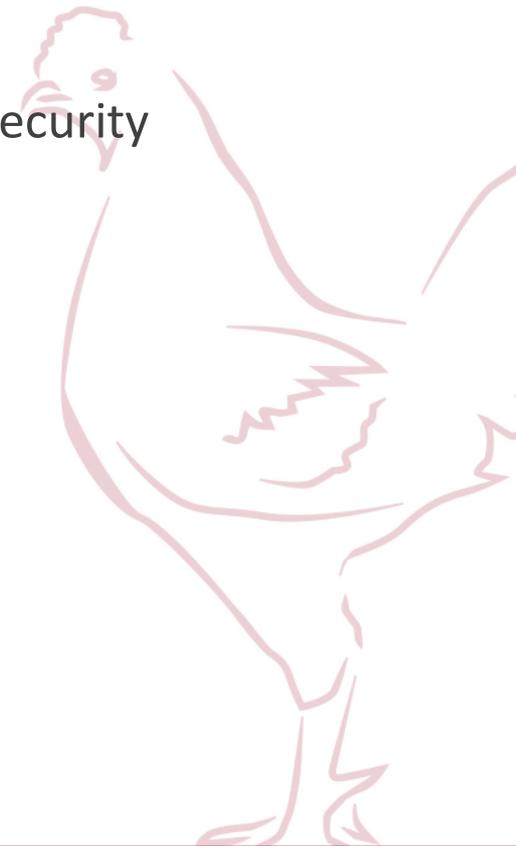
Almost impossible to change once committed without very high cost.

- Distance from nearest farm. Poultry or other species.
- Prevailing winds
- Proximity of waterways
- Presence of migratory birds esp waterfowl
- Range should be free draining
- Distance from major roadway
- Amount of movement of poultry/products



# Structural Biosecurity

- Concerns the design of the farm and the buildings
- Includes house design (easy to clean), site layout and security
- Expensive to change once built
- Older sites with some upgrades can still have good biosecurity



# Operational Biosecurity

Concerns the day to day running of the site

Can be modified at low cost according to requirements

Includes routine disinfection, site entry rules, water hygiene etc.

Each site should have a **Written Biosecurity Plan/Policy** with consideration given to:

- Biosecurity risks with all activities undertaken on the farm
- Biosecurity protocols for to control each risk
- The action taken if biosecurity breaches are recorded

There should be no shared staff and equipment between farms without acknowledgement in biosecurity plan and procedures enacted to avoid transfer of disease.



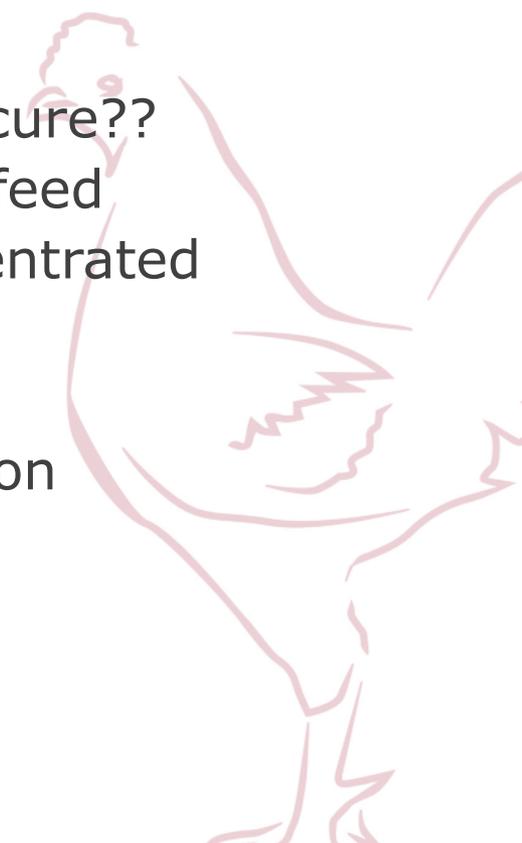
# Influence of Bird Type on Biosecurity

## GRANDPARENTS AND BREEDERS, LAYERS

- Very high security
- Few visitors with defined lack of contact periods
- Long life/High value
- Full vaccination programme
- Remote location..ideally

## BROILERS

- Farms less secure??
- More visitors/feed
- Densely concentrated
- Thinned
- Short life
- Less vaccination
- Free Range

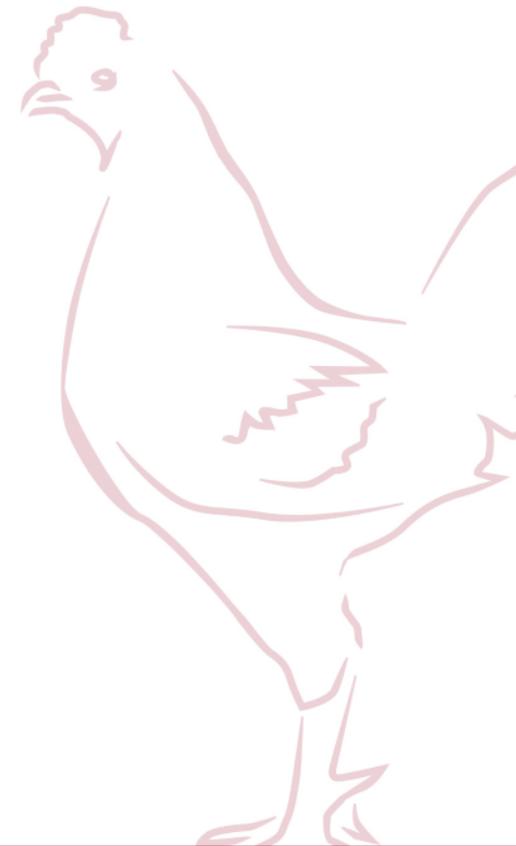






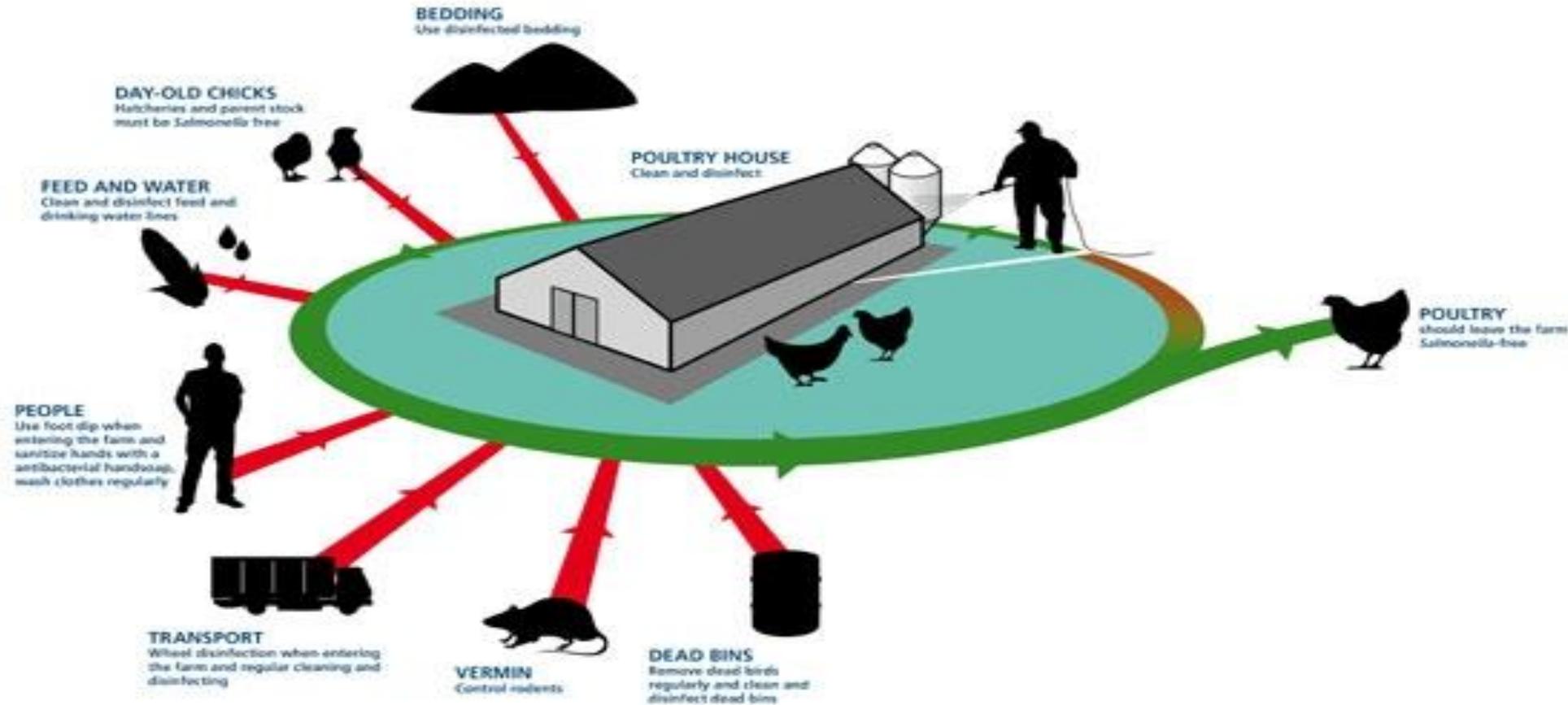






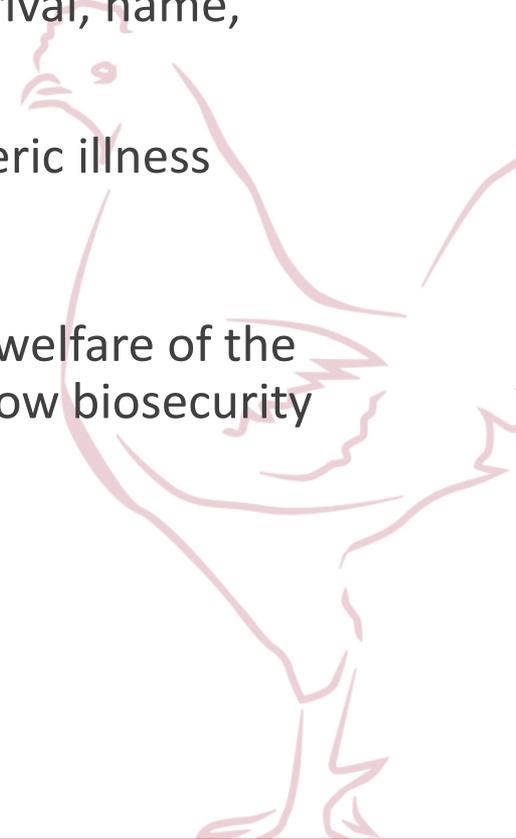
Shower facility in store. Must go through shower to get to other side.

# How does Disease Spread



# Visitor Records

- Must be filled in by all visitors to farm
- Only essential visitors should be permitted. E.g. feed deliveries.
- Record should include date, vehicle number, time of arrival, name, organisation, contact number
- Visitors certify that they are not suffering from any enteric illness
- Visitors declare any recent visits to poultry farms
- Entry should be refused to any visitor if the health and welfare of the birds is likely to be compromised or if visitor fails to follow biosecurity protocols.



# Cleaning and Disinfection

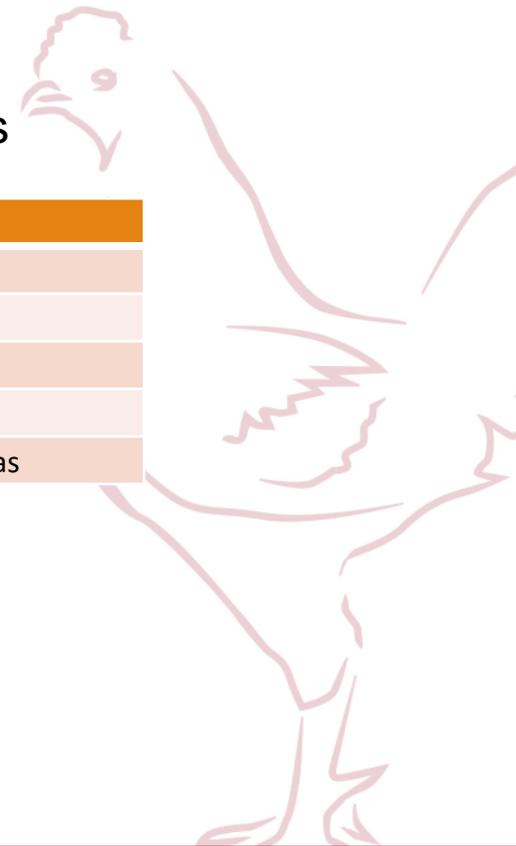
Cleaning is more important than disinfection. Disinfectants do not work in the presence of dirt.

**The solution to pollution is dilution.**

Choosing a Disinfectant.

The following table shows the main types of disinfectants

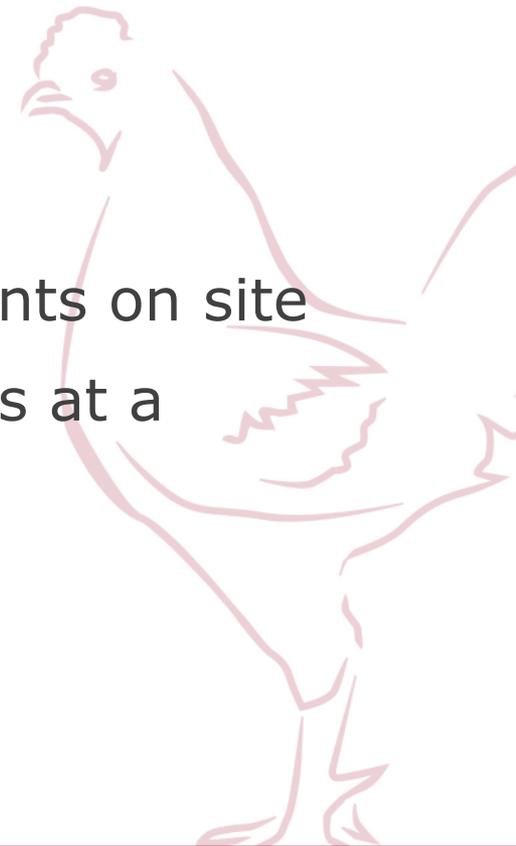
Chemical Group	Active Ingredients
Halogens	Chlorine, Iodophores
Quaternary Ammoniums (Quats)	Quaternary ammonium
Phenolics	Phenol, Cresylic acid
Aldehydes	Formaldehyde, Glutaraldehyde
Gases	Ethylene oxide, Formaldehyde Gas



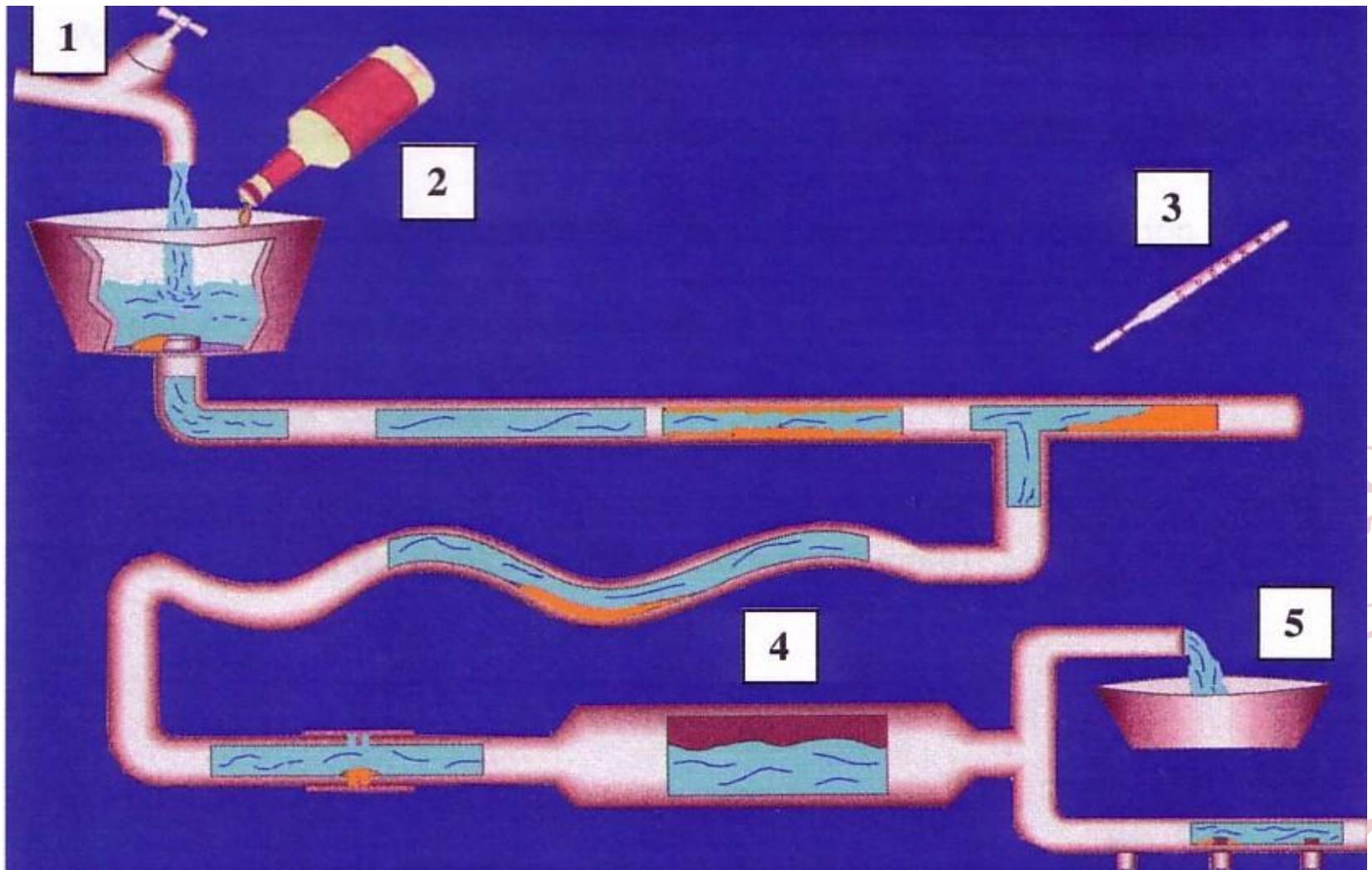
# Water

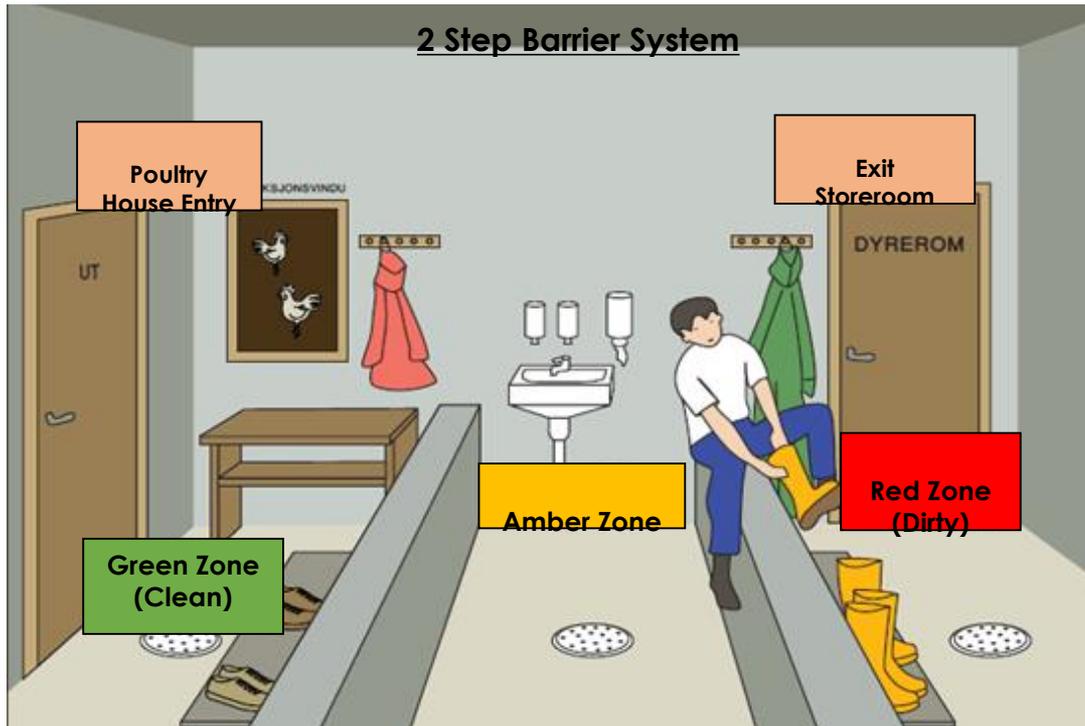
- Water is only as **clean** as the **containers** or **system** that it is in.
- **Mains, Bore Hole**
  - Header tanks
  - Water lines/Pipes
  - Drinker systems
- **Testing** of water supply and various points on site

If you do not know how clean the water is at a certain point - test it.



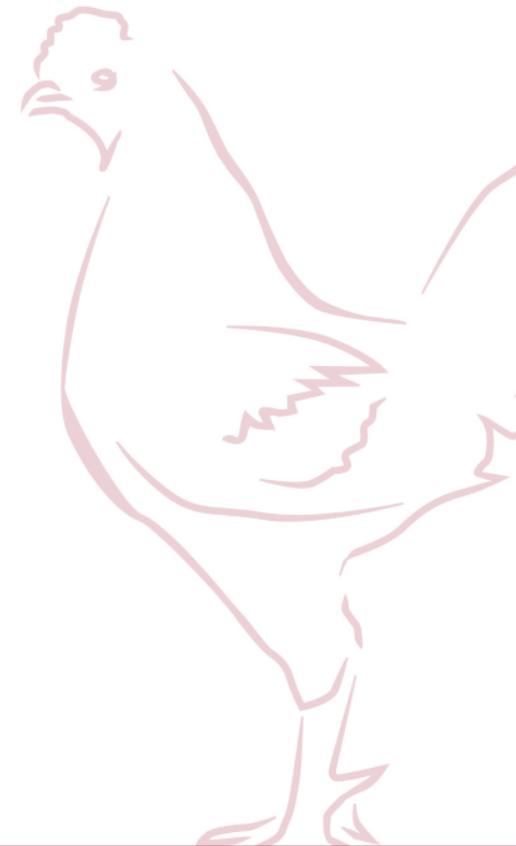
# Biofilm





Put on house boots/disposable shoe covers as you enter the green/clean zone

Overalls are not to protect the wearer. Birds are priority





# Personal Hygiene

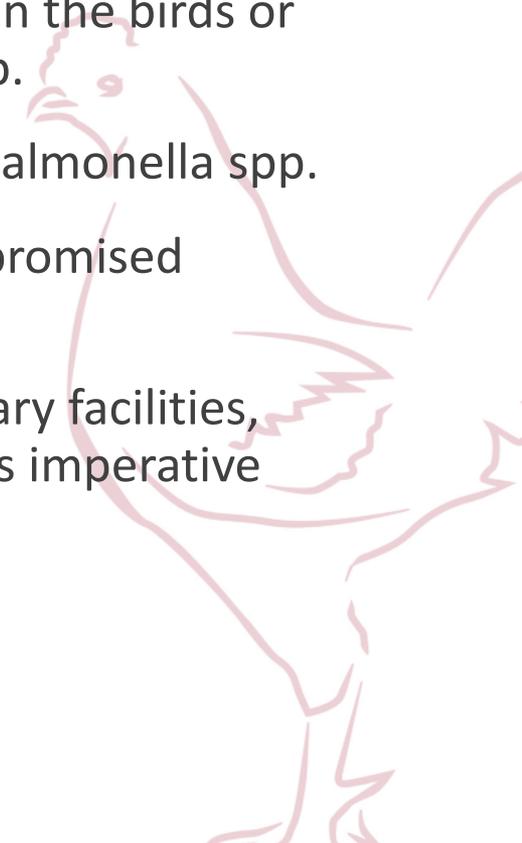
Important for protection of the birds, yourself, co-workers, family and society

You can carry a harmful bacterium to the birds, between the birds or from the birds. E.g. Salmonella spp., campylobacter spp.

Important to screen yourself and staff for presence of salmonella spp.

You may transfer harmful organism to an immunocompromised individual

Handwashing between each task, and after using sanitary facilities, and showering before and after contact with chickens is imperative



# Personal Protective Equipment

**Protects the birds as well as you.**

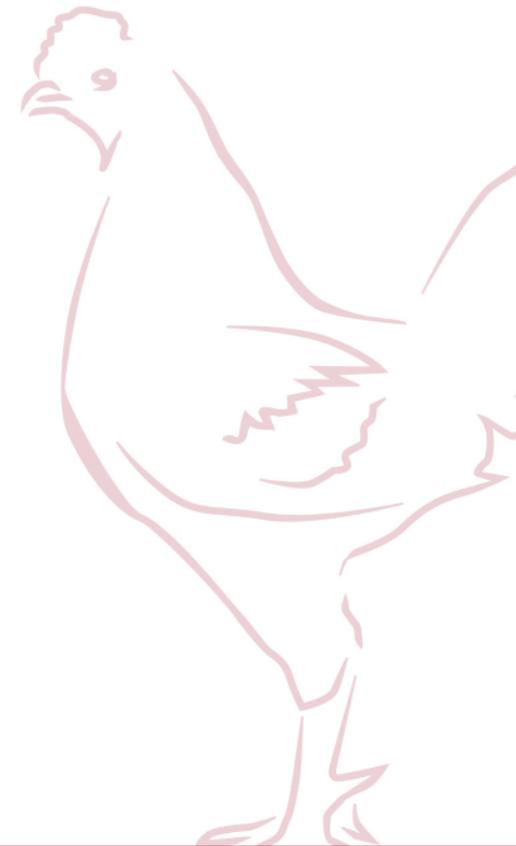
## **Types of PPE**

Respirators (Face Masks)

Gloves

Protective clothing and footwear

Eye protection



# Legislation, Codes of Practice and Assurance schemes

**Legislation: If you suspect a notifiable disease you must report it**

Codes of Practice can be found at:

<https://www.gov.uk/guidance/disease-prevention-for-livestock-farmers>

<https://www.agriculture.gov.ie/media/migration/animalhealthwelfare/biosecurity/Bio%20Security%20for%20Registered%20Flock%20Owners%20280410.pdf>

Assurance schemes covering broiler industry include Red Tractor in UK and Bord Bia in ROI. Other auditors: Integra...

<https://assurance.redtractor.org.uk/contentfiles/Farmers-5616.pdf>

<https://www.bordbia.ie/industry/farmers/quality/pages/poultryproductsqualityassurancescheme.aspx>

Access scheme requirements for more Biosecurity advice

# Specific Measures to control Salmonella

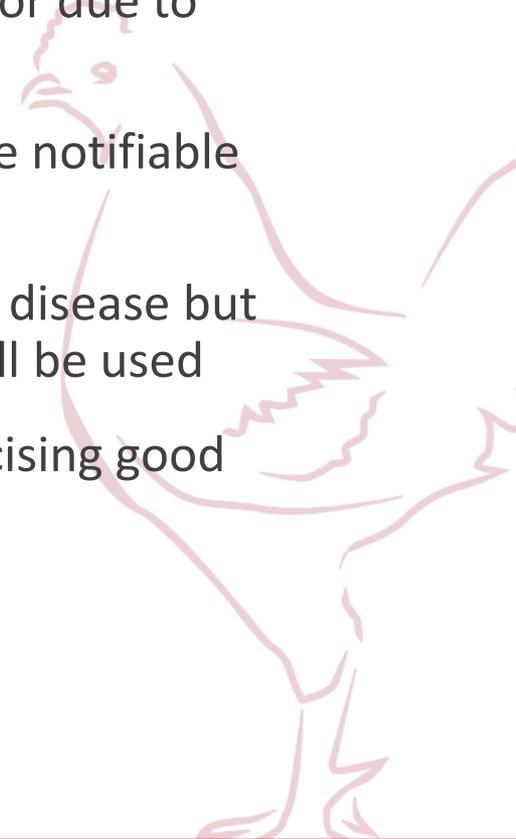
Normal biosecurity procedures will keep out Salmonella

Salmonella control measures are present in broiler sector due to zoonotic potential of some salmonella spp.

Some strains such as *S. Enteritidis* or *S. typhimurium* are notifiable and will usually lead to destruction of flock.

Other strains (exotics) are important and can still cause disease but are not notifiable and products from these birds can still be used

Zoonotic potential of salmonella is one reason for exercising good personal hygiene around poultry and use of PPE



# Specific Measures to control Campylobacter

Excellent biosecurity is required to prevent campylobacter

Some companies ban thinning to reduce campylobacter

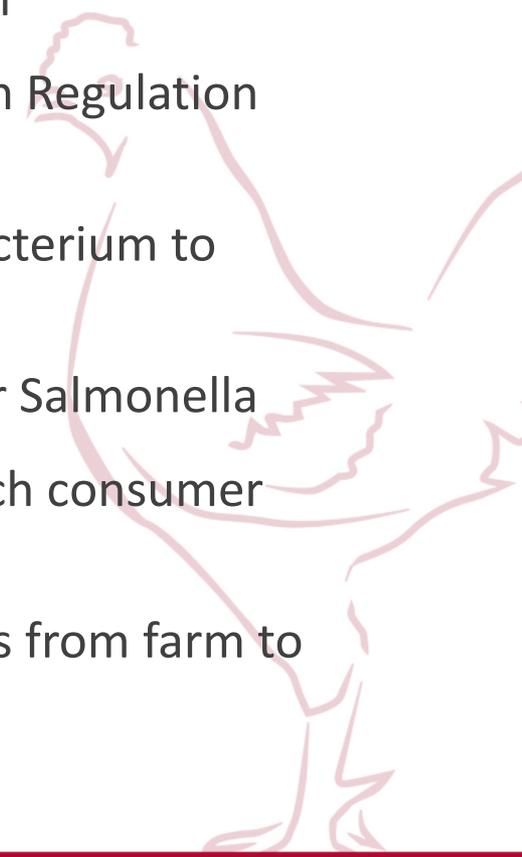
Control programmes with National Legislation based on Regulation No 2073/2005

Monitoring at farm level unsuccessful. Very difficult bacterium to sample, transport and culture.

Monitored at processing using neck flap samples as per Salmonella

Results of sampling take a few days so product will reach consumer prior to results.

Cooking chicken completely and good hygiene practices from farm to fork are best ways of controlling Campylobacter.



# Avian Influenza

Viral disease of wild birds that can spread to poultry

Can be highly pathogenic or low pathogenic

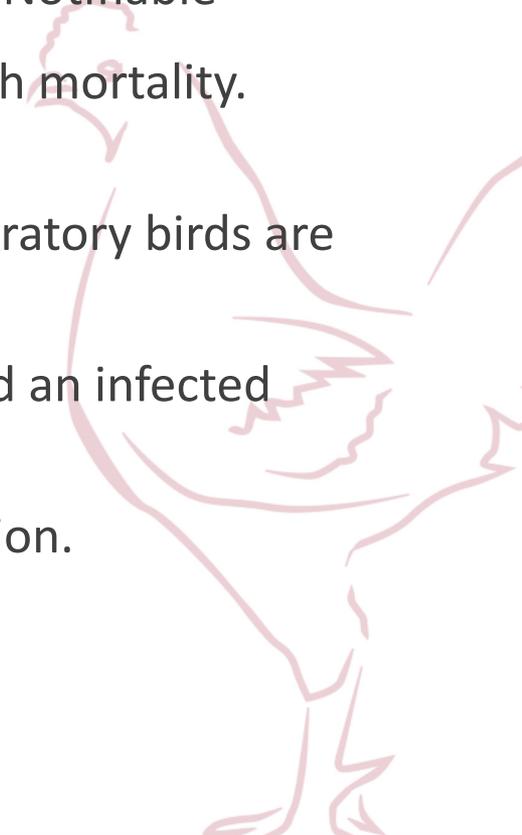
Highly pathogenic strains(H5 or H7) are Scheduled and Notifiable

Highly pathogenic strains most easily recognised by high mortality.  
Cyanosis or respiratory signs possible

Tends to be more topical/prevalent in winter when migratory birds are more common

Surveillance and Protection zones will be placed around an infected premises

Birds may be slaughtered prior to laboratory confirmation.  
Compensation based on value at time of depopulation



# TASAH

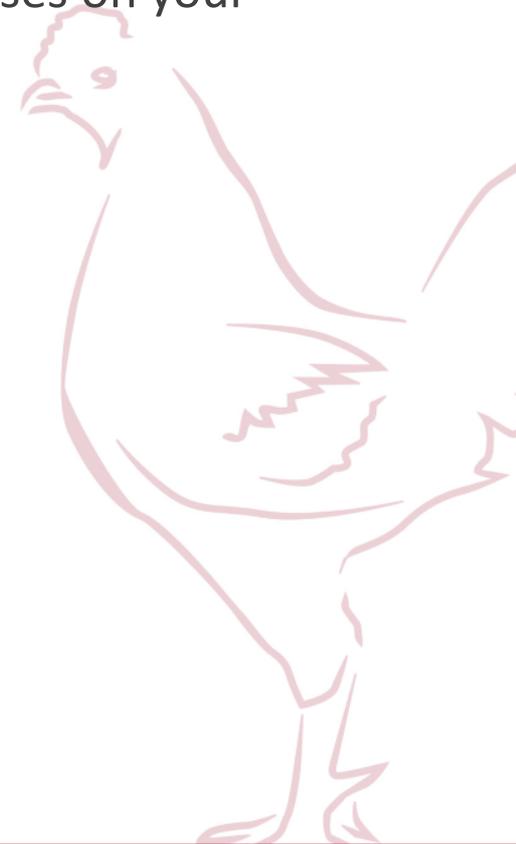
A funded Biosecurity audit which all poultry practices provide

Standard questionnaire to identify biosecurity weaknesses on your site and give you a validated score

Site specific advice

Not checked to ensure compliance-

Targeted Advisory Service Animal Health



# TASA

