

Biosecurity in poultry farm

Biosecurity:

The word Biosecurity, which means safety of living things, is a programme designed to prevent the exposure of birds to disease causing organisms.

Biosecurity is the cheapest and at the same time most effective means of disease control Programme. Biosecurity reduces the risk of pathogens from forming, which prevents the spread of diseases from one flock to another.

What are Pathogens?

Pathogens may be characterized as:

Bacteria, Viruses, Fungi and Parasites

What are Diseases

Any abnormal condition that impairs bodily functions in an organism. Diseases can be characterized by specific symptoms and signs.

A disease may be caused by:

external factors (infectious disease)

internal dysfunctions (autoimmune disease)

Why Does the Industry Use Biosecurity?

Biosecurity's purpose in the industry is to :

Reduce the exposure of diseases and pathogens to birds within a particular flock.

Reduce transmission of diseases and pathogens to a neighboring farm.

Reduce the transmission of zoonotic diseases.

zoonotic diseases: Infectious diseases that can be transmitted from animals to humans or humans to animals.

How is Biosecurity Achieved?

Tire Baths

Reduces opportunity for incoming traffic, such as feed and delivery trucks, to bring in pathogens from outside the perimeter of the farm.

Outside Perimeter

High fences prevent intruders such as animals and people from entering the premises and possibly transmitting diseases to the flock.

Footbaths

Footbaths are placed outside the door of all facilities and contain disinfectants, reducing the risk of bringing pathogens inside the buildings.

Sanitation of Equipment and Supplies

The purpose of sanitizing equipment, surfaces, and supplies is to reduce pathogens. This is especially important in preventing the spread of diseases between neighboring flocks.

Good Hygiene

Prior to entering the facility, employees and visitors should demonstrate good hygiene by showering and wearing clean designated clothing such as boot covers, hairnets, and cover-alls.

Entrance Order

The order of entering facilities depends on the age of the birds.

For example, you want to enter the hatchery first (where the youngest birds are), before entering the grower house (where the older birds live.)

Older birds have stronger immune systems, making them more resilient to any pathogens that may be present.

Hostile Environment

Creating an environment that is non-desirable will reduce the risk of transferring

pathogens from infected wild life. Eliminating any trees, grass, and ponds from the property will deter wildlife from trying to enter.

Bait Stations

Reduces the risk of rodents, which are small enough to easily get into facilities and carry many pathogens, from infecting the flock.

No contact with outside birds

Since most avian diseases are transmitted through the air, it is highly important to have no contact with outside birds within 72 hours of entering a facility. This includes pets as well as birds from other flocks.

Source of infection and protective measures against them:

1- Human

Humans constitute one of the greatest potential causes of introduction of diseases because they become infected and shed the diseases agent, but rather because they track infectious disease use contaminated equipment, or manage their flocks in such way that spread the diseases.

2- Neighbors

A frequent source of infection is a disease outbreak at a neighboring farm, its best to worm neighbor not to visit when a diseases is in progress.

3- Contract work

Much of the poultry farm procedure requires sporadic use of several workers e.g blood testing, beak trimming, vaccinating,

4- Multiple age

Disease agent that result in chronic infections or recovered carrier are passed by various means including direct contact.

5- Mixed species of poultry

One species that is naturally very resistant to disease may act as a carrier of that disease for another species that is very susceptible.

6- Hospital pen

Sick birds from several pens collected in to one hospital pen or house and later returned to their flock but one or more diseases contracted while in the hospital area.

7- Cull pen

Cull birds in obviously poor health may or may not be free from an infectious disease, so should be destroy rather than hold them from slaughter.

8- Live birds markets

Buildings usually in the inner cities in which poultry at all types, ages and health status are assembled by small buyers to supply a demand of live fowl for those who wish to examine the fowl live prior to slaughter or before to kill and dress fowl at home.

9- Egg born diseases

Egg born diseases are transmitted from the infected dam to newly hatched offspring by means of fertile egg. Some diseases agent is carried inside the shell as a result of shedding in to the egg prior to addition of the shell or penetrates from the shell surface via natural pores after the egg is laid.

10- Equipments

Diseases and parasites can be carried on equipments, cleaning equipments and vehicles usually from litter and feces should be done.

11- Laboratory exposure

12- Rodents

Rodent contaminated food and litter with their excrement since they are frequently infected and can spread the disease on a farm.

13- House hold pets

Dogs and cats like rodents are capable of harboring enteric organisms that are infectious to poultry.

14- Wild birds and insects

15- Feed

Some ingredient may contain infectious agent from contamination source or storage area. Meat meal in the feed ingredient has role to introduce salmonella's ssp. This hazard can be avoided by using vegetable protein ingredients.