BIOSECURITY: PROTECTING YOUR CHICKEN INVESTMENT

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For Quantum Food's clients and poultry farmers

What is biosecurity?

Biosecurity is the term used to describe actions taken in livestock operations and production systems to decrease the likelihood of disease introduction and minimize the spread of disease.

Why is biosecurity important?

Disease can cause mortality and loss of production in animals but can also cause erosive loss of production that is not necessarily clinically noticeable. Biosecurity, together with good management practices allows for optimal production, in the lowest challenge conditions possible.

Where do chickens get diseases?

Some disease-causing agents are commonly found in the environment, and some are brought into contact with our animals by irresponsible actions on our part. Chickens can get diseases from other animals, rodents, insects, birds (wild birds and domestic poultry), people, a contaminated environment and contaminated equipment or tools.

Anything (alive, dead, or inanimate) that enters or leaves a chicken farm have the potential to introduce or spread disease. With this mindset, let's explore some common control mechanisms:

1 Location, construction, and choice of production system:

If you are considering setting up a poultry operation, it is highly recommended to site your facility as far as possible from other poultry operations. Try and avoid areas that have dense poultry populations already. This reduces the chances of chickens encountering pathogen.

Chicken houses should exclude wild birds and rodents from entering the houses. This means, mesh to cover access routes and holes where birds and rodents can gain access to houses. All sources of water and feed should be covered, have well-fitting lids, and always closed well. Different types and ages of chickens have varying susceptibility and disease profiles.

To ensure that chickens get the lowest exposure to disease and to reduce the cross contamination between flocks, a single age, single type, and all-in-all-out system of production is preferred. Ideally, this means that a single type of chicken production system is practiced on a site, that at the end of a production period all the chickens are removed, the house/s washed well, disinfected, left open for a period, and only then restocked.

Any disease that was there (clinically or sub clinically), will be removed or the level of exposure significantly reduced for the next flock.

2 Active Immunity:

Ubiquitous and diseases that spread easily, are often controlled by a robust vaccination program. Buying chicks or pullets that have been well vaccinated will reduce the losses from commonly found pathogens. The responsibility of the farmer does not stop there however, as additional vaccinations may be required, depending on the disease prevalence in the area and the associated risk of the flock. Consult your chick supplier and veterinarian, to the vaccinations, vaccines and correct method of application required to keep a well-protected chicken.

Always source vaccines from reputable suppliers, transport, and store vaccines according to the manufacturer guidelines and apply correctly to ensure that maximal immunity develops. The success of on-farm vaccination and the development of immunity, depends on the dedication of the farmer in protecting his investment. Hatchery vaccination is not sufficient protection against all chicken diseases.

3 Avoiding direct and indirect contact:

Since people can be carriers of pathogens, it is important to restrict and avoid contact between our chickens and unnecessary visitors, especially those that keep their own chickens. Access to chicken facilities should be controlled, with only essential people allowed to have access and contact with chickens. Practically, this means having dedicated staff for chickens, a sturdy fence around the property, doors to chicken houses that are kept closed, locked when no one is around and avoiding unnecessary, unannounced visitors.

Direct contact between chickens and other animals should be avoided. Domestic livestock, pets and wild animals should be kept off the premises and never be allowed to gain access to chicken houses.

As part of sound biosecurity measures, good rodent and pest control measures will minimise contact between difficult to control pests, insects, and chickens. Where biological control methods for rodents (cats and owls) are used, they should not be allowed inside chicken houses. Pests can be carriers of diseases between flocks.

Tools and equipment can function as carriers of pathogens. Sites and houses should preferably have dedicated tools and equipment, that are not shared with other poultry sites, operations, or farms. Where equipment, tools and vehicles must enter the production facility, they should be thoroughly disinfected, to eliminate any pathogen that might be carried on the surface.

4 Hygiene and housekeeping:

Wild birds and rodents are attracted to chicken operations because they provide easy access to food, water, and shelter. Any attractants and shelter to wild birds, rodents, and pests, like open feed, spilled feed, leaking water, stagnant water, rubbish, equipment standing around, burrows and vegetation should be removed and cleared to discourage entry and residence.

Ablution facilities for the poultry man, with functioning toilets and hand washing facilities will assist in safeguarding chickens from some pathogens. It is ideal for staff to shower in and put-on, site-specific clothing, and footwear, before entering the facility and having access to chickens. A minimum of a change into site specific clothing and footwear, is recommended.

The chicken facility and surroundings should always be kept clean, tidy, and hygienic.
All equipment and tools should be handled and stored hygienically.

Each production system is different with different risk factors based on the inputs and outputs. Critically evaluate the risk factors unique to your production system and operation and implement control mechanisms to reduce the risk they pose. The aim is to minimise risk to an acceptable level, not necessarily eliminate all risk. Consult your technical advisor and/or veterinarian for assistance in evaluating your biosecurity risk and developing effective practical control measures.