Practical Biosecurity Check List

International Egg Commission
Avian Influenza
Global Expert Group

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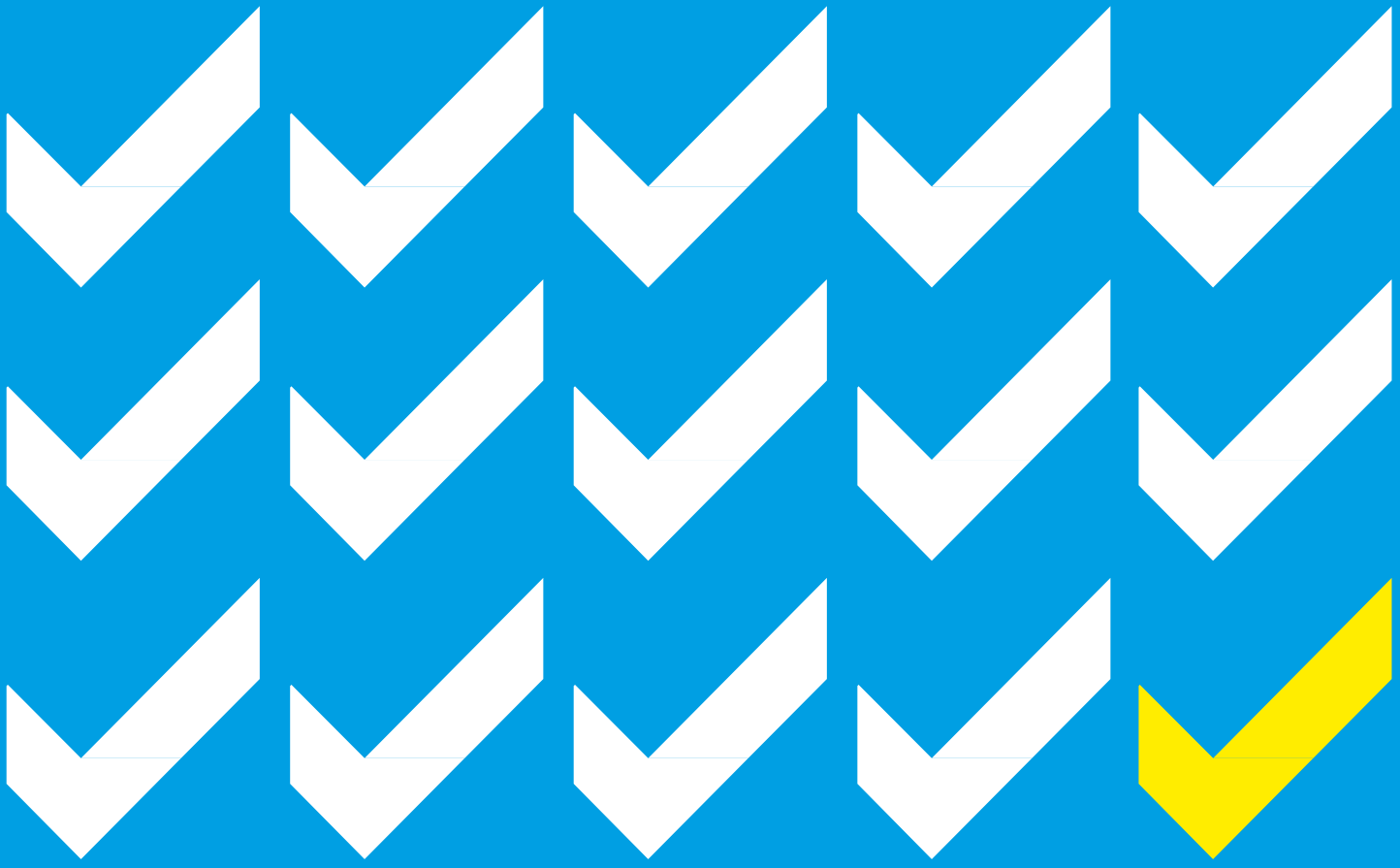

Purpose of the IEC Biosecurity Check List

This IEC Biosecurity Check List is designed to help egg businesses develop and improve their overall level of biosecurity. Excellent biosecurity is proven to be the most critical tool in helping prevent a wide range of avian disease problems, and can even help egg businesses avoid infection during severe avian influenza outbreaks.

Biosecurity Plan

In addition to this Biosecurity Check List, each egg production business should have a well-established and agreed upon biosecurity plan, which should include the principal elements of this Practical Biosecurity Check List designed with special emphasis on avian influenza (AI).

The written Biosecurity Plan, must identify Standard Operating Procedures (SOPs) and lines of responsibilities.

The plan should be backed up by frequent internal audits.

IEC Practical Biosecurity Check List

Critical considerations:

Biosecurity programs are not "one size fits all", and must be site and structure specific

All-in/all-out farm design and planning is ideal, but can achieve biosecurity with operational considerations or structural investment on multi-age complexes:

- *Apply all-in/all-out principles to each barn*
- *Operational and/or structural separation between barns*

Must establish and control a well-defined clean/dirty line

- *At farm gate AND chicken house door*
- *Consider ALL farm inputs dirty/contaminated until cleaning and disinfection*

All farm personnel/visitors/vendors/contract crews must follow all farm biosecurity Standard Operating Procedures at all times

Track all inputs and outputs on a farm (site specific risk analysis):

- *People (contract crews, vendors, maintenance, pest management, visitors)*
- *Vehicles (service/employee/visitor vehicles, equipment/mail/feed/manure trucks)*
- *Equipment (vaccination equipment, pullet carts, maintenance, skid loaders and other large farm equipment)*
- *Pullets/layers (monitoring section below)*

Consider how certain Standard Operating Procedures will be completed in winter vs. summer weather

Short cuts = potential infection

Veterinarian oversight (or consultation) of biosecurity program and flock monitoring programs recommended

Trucking/Transportation – risk of transporting positive flock or high risk of contaminating flocks in route:

Bird movement (pullets and end of lay hens) between farms, to slaughter, or disposal all risk factors for disease introduction or transmission

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Other poultry moving through poultry-dense areas

- *Communication between other poultry companies regarding routes and status*

All equipment and supplies used to move product on/off farms – direct pick-ups from companies

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Movement of hatching/commercial eggs: intrastate, interstate, international

Manure Management – highly infectious material for many diseases including AI:

Large volumes of manure – how will it be handled if a site breaks with avian flu?

- *Consider the latent period before clinical signs or polymerase chain reaction (PCR) positive discovered – can be days or weeks!*

Manure spreading on land near farms/production sites

- *"Local land application" of manure can mean 60+ mile radius from farm site*
- *Virus could be on farm 10 days before clinical signs appear (e.g. mortality) – infected manure hauled and spread in that time period*
- *Importance of passive surveillance testing program to ensure AI negative status*

Must have separation for companies handling manure between companies/poultry sectors

- *Co-operatives, multiple complexes must treat each site as separate or complete cleaning & disinfection (C&D) between barns for all handling equipment*

Personnel & Equipment – number one risk factor in disease control including AI:

Biosecurity Standard Operating Procedures (SOPs) to address all farm inputs/outputs

- *Veterinary consultation or vet on staff to address site specific risks*

Trained personnel to audit biosecurity Standard Operating Procedures (SOPs) to determine efficacy and compliance

- *Cannot be one-size fits all between farms*
- *Site risk analysis for each farm*

Follow-up on biosecurity protocols with regularly scheduled staff meetings

- *Example: weekly/monthly staff meetings*
- *Input from on-farm staff for ideas/feedback*

One example: Separate clothing and footwear for outside work versus inside barn work

- *Color coding is a simple and effective way to identify dedicated indoor/outdoor clothing*
- *Comfortable and seasonally appropriate clothing for ease of staff compliance*

Consider what certain biosecurity measures will require in terms of general maintenance to keep in working order

- *Example: showers must be maintained/well-stocked or employees may not use (warm water, clean towels, quality shampoo, etc.)*
- *Management cannot by-pass rules such as showers, or staff will lose focus on importance*

Separate external cleaning & disinfection (C&D) station for all supplies entering a farm with several options for disinfection

- *Large complexes have many daily/weekly deliveries*
- *Critical control method such as fumigation, heat treatment, or UV light*

Maintain clean footbaths, change daily (or more as needed)

- *Footbaths are not effective if they contain debris or organic material (faeces, feathers, etc.)*

Contract crews are one of the major risks to biosecurity – if possible, hire internal dedicated crews

- *Or apply Hazard Analysis and Critical Control Point (HACCP) principles to use of contract crews for entry to facility*

People and equipment must be considered dirty upon arrival to farm gate

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Pay particular attention to the immediate environment around the farm especially if attractive to waterfowl or other water birds

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Employees should not be allowed to own any birds at home

Farm personnel should be trained to avoid bird hunting, bird shows (exhibitions), zoos, or take proper downtime (defined amount of time away from farm, including taking a shower and changing clothing and footwear) before returning to work at the farm

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Must inspect cleaning & disinfection (C&D) of outside equipment prior to use on any farm site

- *May take at least 24-48 hours to allow time to "re-clean" if necessary*

Personal Protective Equipment (PPE)

Only use impermeable footwear

- *Do not allow employees to wear tennis shoes/crocs/etc. as they are difficult to clean and sanitize*
- *Regularly cleaning & disinfection (C&D) footwear*

Provide clean, dedicated coveralls or chicken house clothing

- *Regularly wash and inspect for wear*

Provide all personnel (including external crews, vendors, visitors, maintenance workers, etc.) with clothing/footwear options for optimal comfort

- *Compliance increases with happy workers*

If using disposable coveralls, recommend impermeable brand (e.g. Tyvek) with attached booties and hoods – do not use the thin paper-based disposable versions

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For disposable boot covers, the rubber booties have good traction but only cover the shoe; whereas, the tall plastic/rubber boot covers have better foot/leg coverage but can be slippery in wet, cold weather

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Many options available for durable and comfortable rubber boots for barn work

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Recommend buying multiple brands/types of work boots for employees to try out – one style of boot does not fit all

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Rubber overshoes are a good option for outside work since they can be worn over an employee's regular ("inside") boots

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Recommend boots that have low tread on the bottom which are much easier to clean/disinfect

Rodents, Wild Birds and Other Pests Prevention

Adoption of a rodent and pest prevention and control program with a system for continuous program assessment

- *Wild birds, small mammals can spread many diseases including AI, they must be excluded from poultry houses*
- *Wild birds must not have access to poultry houses. Layer barns must have secure wired sides or be fully enclosed*
- *Prevention programs can be via contract service or under farm staff control*
- *Index rodents and pests (wild bird sightings, flies) to track efficacy*

Feed and Water

Surface water poses a major risk of pathogen contamination

- *Treat surface water with appropriate chemical or UV light if used for washing*
- *Not recommended to use surface water as drinking source for poultry*

Feed is a major attractant for pests and can be contaminated with pathogens

- *Organic acid or chemical treatment may be necessary to reduce pathogens*
- *Controlling pests and wild birds at feed mills to reduce threat of contamination*
- *Vehicles and drivers delivering feed may visit several sites in one day*

Birds with Outdoor Access

In high risk periods it is advised to temporarily restrict outdoor access in a region to protect flocks from infection with AI

- *Special considerations must be made for certifying groups or regulatory enforcement of restricting outdoor access*

- *Educating regulatory bodies and certification groups on importance of biosecurity to protect animal well-being*

Avian Influenza Testing/Monitoring

Veterinary oversight or consultation to achieve effective surveillance while balancing economic impact of testing flocks

Review AI testing program – timing and efficacy of the program?

- *National or regional surveillance program considerations?*

AI PCR testing can be increased for passive surveillance and even more during an outbreak for flocks with epidemiological ties

- *For AI polymerase chain reaction (PCR) surveillance testing, focus on testing daily mortality first, instead of live birds*

Implement testing criteria for production staff key indicators of potential infection:

- *Unexplained mortality event*
- *Drop in feed and/or water intake (e.g. higher than 20%)*
- *Drop in egg production (e.g. higher than 5% for more than two days)*

More vigilance may be required for pullets – consider AI polymerase chain reaction (PCR) testing all mortality for up to 14 days prior to moving a pullet flock

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A key long term aim of the IEC Avian Influenza Global Expert Group is to reduce the threat of Avian Influenza to commercial businesses through the implementation of excellent biosecurity and surveillance