

*“We will always be one step ahead”*

## General Principles of Biosecurity

The term “biosecurity” refers to a set of management and physical measures designed to reduce the risk of introduction, establishment and spread of animal diseases, infections or infestations to, from and within an animal population<sup>1</sup>. An overall set of biosecurity management practices uses a combination of physical barriers (things) and directed actions (people) in a specific way that should prevent the introduction of, or limit the spread of, infectious disease causing agents (bacteria & viruses) into a group of susceptible poultry. **High biosecurity risks are an industry-wide concern.**

Biosecurity encompasses 3 basic components:

- 1) **Isolation.** The principle of **isolation** refers to the confinement of animals within a controlled environment. A fence keeps your birds in, but it also keeps other animals out. Isolation also applies to the practice of separating birds by age group. In large poultry operations, all-in/all-out management styles allow simultaneous depopulation of facilities between flocks and allow time for periodic clean-up and disinfection to break the cycle of disease.
- 2) **Traffic Control.** This includes both the traffic onto your farm and the traffic patterns within the farm.
- 3) **Sanitation.** This addresses the disinfection of materials, people and equipment entering the farm and the cleanliness of the personnel on the farm.

## How to Use This Guide

This Guide allows the producer or farm manager the opportunity to assess their current level of on-farm biosecurity. Your answers will provide you with an idea of where there are areas of weakness that require attention or practices that fall below current industry standards. You should develop a plan to address those specific areas that need improvement. Remember that your entire biosecurity program is only as good as its weakest point.

Simply go down the list and determine the criteria that best fits your current biosecurity practices. Each response is rated as **Minimal Biosecurity Risk, Medium Biosecurity Risk, or High Biosecurity Risk**. Row items denoted with a ★ in the “Required for Permit Approval” column indicate that this criteria is also included as part of the permitting biosecurity checklist. Any “High Risk” assessment will trigger enhanced surveillance, and may limit permitting for movement unless mitigated.

## Terminology

**Risk-** refers to the likelihood of the occurrence and the likely magnitude of the biological and economic consequences of an adverse event or effect to animal or human health.<sup>1</sup>

**High Biosecurity Risk** - Based on current knowledge, this biosecurity practice (or lack thereof) puts your flock at an extremely high risk of disease introduction. Consultation with your poultry veterinarian is recommended to determine if your biosecurity protocols in these areas should be or can be changed to better protect your flock and the rest of the industry.

**Medium Biosecurity Risk-** Based on current knowledge, your farm has moderate biosecurity practices in place to prevent introduction of disease. However, there is room for improvement and you may consider consultation with your poultry veterinarian to review these practices and assess the value of making changes to further safeguard your flocks.

**Minimal Biosecurity Risk-** Based on current knowledge, these biosecurity practices are outstanding and you have reduced the risk of introducing infectious disease into your flock. Efforts should be directed toward improving the biosecurity practices that score in the previous categories to meet this level.

*The following self-assessment was inspired by the Poultry Industry Enhanced Biosecurity Initiative Producer Self-Assessment Guide.*

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<sup>1</sup> World Organization for Animal Health, OIE. Terrestrial Animal Health Code.

# Poultry Facility Biosecurity Risk Assessment Guide

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Disease risk cannot be completely eliminated from a poultry premises. Well before a disease outbreak event, premises management personnel, in consultation with a veterinarian, should conduct a biosecurity risk assessment of all facilities they manage and the biosecurity practices at each location. It is important to evaluate the level of risk, and then determine measures needed to address and improve the risk areas of concern, in advance of a possible avian disease outbreak.

## GENERAL INFORMATION

**Minimal  
Biosecurity  
Risk**

**Required for  
Permit Approval**

**Medium  
Biosecurity  
Risk**

**High  
Biosecurity  
Risk**

## Location

						Ref
1	Proximity of poultry to public road	Greater than 100 yards		50 -100 yards	Less than 50 yards	i
2	Proximity to nearest unrelated commercial poultry operation	Greater than 2 miles		1/2 mile to 2 mile	Less than 1/2 mile	i, ii
3	Number of commercial poultry farms within ½ mile	None		1	More than 1	vi
4	Proximity to nearest backyard poultry	Greater than 2 miles		1/2 mile to 2 mile	Less than 1/2 mile	ii
5	Number of known backyard poultry flocks within ½ mile	None		1	More than 1	i,ii
6	Proximity of nearest body of water (pond, stream, slough) to poultry houses	Greater than 100 yards		50 -100 yards	Less than 50 yards	i
7	Proximity to nearest waterfowl sanctuary or colony	Greater than 10 miles		1 mile to 10 miles	Less than 1 mile	ii
8	Proximity of nearest bird colony/nesting site (e.g. raptors)	Greater than 1 mile		400 yards to 1 mile	Less than 400 yards	ii
9	Proximity to nearest landfill	Greater than 10 miles		1 mile to 10 miles	Less than 1 mile	ii

 Minimal

 Medium

 High

## Premises Entry/Security

10	<b>Perimeter Fencing And Gates</b>	Complete Perimeter Fence present. Driveway is gated and always locked or guarded	★	Perimeter fencing and gate present, but not always locked or guarded. Or fence not complete	There is no perimeter fencing or gate	i
11	<b>Biosecurity Signage</b>	Multilingual signage readable from road is posted at all possible points of entry	★	Multilingual biosecurity signage not found at all possible points of entry	No biosecurity signage or signage only in English	i,ii
12	<b>Farm Signage</b>	Multilingual signage posted on and around farm	★	Biosecurity signage posted on and around farm in English only	No biosecurity signage	
13	<b>Vehicle Entry and Disinfection</b>	Freshly stocked vehicle disinfection station with high pressure sprayer at the gate for all vehicles	★	Inadequate vehicle disinfection station	No vehicle disinfection station or not used	ii
14	<b>Entry Driveway Materials</b>	Paved with no potholes		Gravel	Dirt	i
15	<b>Vehicle Parking</b>	Designated parking area is paved and clearly identified outside the perimeter fence		Parking area is paved and clearly identified inside the perimeter fence	There is not a designated parking area	i
16	<b>Vehicle Flow</b>	Designated one way traffic onto premises and off premises		Vehicles can cross paths going both directions but enter and exit through designated road	No designated traffic flow on or off the premises, through any possible road	i
17	<b>Clean and dirty areas at entry to premises</b>	Clearly defined, visible, and maintained clean/dirty line		Inadequate/intermittent use	No clean/dirty line	ii, vii

 Minimal

 Medium

 High

## People Entry/Personnel Biosecurity (Employees, vaccination crews, beak trimming crews, truck drivers, etc.)

Recording of ALL people entering the farm premises (All employees, delivery drivers, and visitors are required to sign premises logbook):						
Logbook information requirements are:						
<ul style="list-style-type: none"> <li>• Name</li> <li>• Company</li> <li>• Vehicle license plate</li> <li>• Record of C&amp;D of vehicle</li> <li>• Date and time of entry and departure</li> <li>• Statement confirming no contact w/bird premises or rendering activities during the preceding 2 days</li> <li>• Contact telephone number</li> </ul>						
18	Employees	Yes	★	N.A.	No	i, ii
19	Employee family members	Yes	★	N.A.	No	i, ii
20	Poultry haulers (live and dead poultry)	Yes	★	N.A.	No	i, ii
21	Egg truck drivers	Yes	★	N.A.	No	i, ii
22	Feed truck drivers	Yes	★	N.A.	No	i, ii
23	Veterinarians	Yes	★	N.A.	No	i, ii
24	Consultants and sales personnel	Yes	★	N.A.	No	i, ii
25	Inspectors	Yes	★	N.A.	No	i, ii
26	Vaccination/ beak trimming/insemination crews	Yes	★	N.A.	No	i, ii
27	Utility repairmen/meter readers	Yes	★	N.A.	No	i, ii
28	Mail courier (e.g. UPS, FedEx)	Yes	★	N.A.	No	i, ii
29	Garbage/waste collector	Yes	★	N.A.	No	i, ii
30	Pest control professional	Yes	★	N.A.	No	i, ii
31	Electricians/plumbers/carpenters	Yes	★	N.A.	No	i, ii
32	Other? (List here): _____ _____	Yes	★	N.A.	No	i, ii

 Minimal

 Medium

 High

33	<b>Unnecessary visitors (not there for farm operation)</b>	Unnecessary visitors are prohibited from entry onto the farm	★	Unnecessary visitors may visit but must wear dedicated or disposable clothing provided by the farm and must wash hands and eyeglasses	There is no restriction on who may enter the farm	ii
34	<b>Sharing of personnel</b>	Personnel are dedicated to work on this farm only and not shared with any other farm or off-site facility	★	Personnel are shared between this farm and other farms of this same company, but not with any off-site facility	Personnel are shared between this farm and a farm of another company, or shared with an off-site facility	ii, iii
35	<b>Personal Protection Policy</b>	Shower in policy with disposable or dedicated clothing and footwear before entry	★	Disposable or dedicated clothing and footwear and required washing/disinfecting of hands before entry (no shower-in policy)	Personnel lack disposable or dedicated clothing and footwear and/or do not practice washing/disinfecting of hands before entry	i
36	<b>Personal effects (e.g. cellphones, wallets, etc.)</b>	Personnel not allowed to bring personal items onto the farm	★	Personnel bring personal items onto the farm, but must leave them in a designated locker or break room where handwashing is required upon leaving	Personnel bring personal items onto the farm unrestricted	ii
37	<b>Spent Hen Removal Crews</b>	Prohibited from entering other chicken houses or egg processing areas	★	N/A	Not prohibited from entering other chicken houses or egg processing areas	
<b>Employee and visitor direct/indirect exposure to birds and bird products:</b>						
38	<b>At home</b>	No exposure to birds of any kind	★	Individuals may own birds, but must not have direct exposure to birds within 48 hours	No restrictions on bird contact	i, ii
39	<b>Feed stores/pet stores</b>	No contact with other birds within 72 hours prior to entry		No contact with other birds within 48 hours prior to entry	No restrictions on contact with other birds	i, ii
40	<b>Swap Meets</b>	No contact with other birds within 72 hours prior to entry		No contact with other birds within 48 hours prior to entry	No restrictions on contact with other birds	i, ii

Minimal

Medium

High

41	<b>Live Bird Markets</b>	No contact with other birds within 72 hours prior to entry		No contact with other birds within 48 hours prior to entry	No restrictions on contact with other birds	i, ii
42	<b>Fairs (bird exhibit areas)</b>	No contact with other birds within 72 hours prior to entry		No contact with other birds within 48 hours prior to entry	No restrictions on contact with other birds	i, ii
43	<b>Zoos (bird exhibit areas)</b>	No contact with other birds within 72 hours prior to entry		No contact with other birds within 48 hours prior to entry	No restrictions on contact with other birds	i, ii
44	<b>Vet clinics</b>	No contact with other birds within 72 hours prior to entry		No contact with other birds within 48 hours prior to entry	No restrictions on contact with other birds	i, ii
45	<b>Neighbors and friends backyard birds</b>	No contact with other birds within 72 hours prior to entry		No contact with other birds within 48 hours prior to entry	No restrictions on contact with other birds	i, ii
46	<b>Cockfights</b>	No contact with other birds within 72 hours prior to entry		No contact with other birds within 48 hours prior to entry	No restrictions on contact with other birds	i, ii
47	<b>Bird hunting or fishing</b>	No contact with other birds within 72 hours prior to entry; hunting clothes and gear not permitted on farm premises		No contact with other birds within 48 hours prior to entry	No restrictions on contact with other birds	i, ii
48	<b>Utility repairmen and meter readers</b>	Are not allowed to visit another poultry facility within 72 hours, and may only enter poultry areas with dedicated clothing and footwear and clean equipment		Are not allowed to visit another poultry facility within 48 hours, and may only enter poultry areas with dedicated clothing and footwear and clean equipment	No restrictions	ii
49	<b>Policy for service crews and Veterinarians</b>	Clean clothing and footwear dedicated only for this ranch and have required downtime of 72 hours between visits to different poultry ranches		Clean clothing and footwear dedicated only for this ranch and have required downtime of 48 hours between visits to different poultry ranches	No restrictions	ii
50	<b>Drivers of hauling or delivery trucks</b>	Do not leave the truck cab while farm employees load or offload deliveries, away from poultry houses whenever possible	★	Leave the truck cab, but must put on disposable outerwear and footwear (or booties), wash hands and eyeglasses	Help load and unload while wearing street clothes, sometimes near poultry houses	ii

 Minimal

 Medium

 High

				before helping load or unload, away from poultry houses when possible		
51	<b>Housing of employees, their families, and others</b>	No housing onsite (within fence perimeter or adjacent to poultry facility) of employees or others		Onsite housing of employees only		Onsite housing of employees and their families (including children), or other people ii
52	<b>Other businesses on the premises</b>	No other businesses on the premises		No other businesses on the premises within the security perimeter fence		Another business on the premises allowing for traffic of people on and off ii
53	<b>Rendering Plants Policy</b>	Farm policy requires personnel who have visited a rendering plant to shower and change clothes before entering the farm or any of its buildings	★	N/A		No farm policy for personnel who have visited a rendering plant prior to entering farm



## Poultry Houses

54	<b>Distance Between Houses</b>	At least 30 yards between poultry houses		15-30 yards between poultry houses	Less than 15 yards between poultry houses	ii
55	<b>Barn Vent and Fan Exhaust Maintenance</b>	Done periodically to eliminate nesting birds and other vermin when observed		Done once a year	Maintained only during downtime (between flocks)	ii
56	<b>Clean and dirty areas in poultry house entry</b>	Clearly defined, visible, and maintained		Inadequate/intermittent use	Not defined	ii, ix
57	<b>House entrance surface</b>	Each house entry/exit has a cement pad/metal grate		Each house entry/exit has a wooden pallet or other similar hard surface, or gravel	Each house entry/exit is dirt	ii
58	<b>Entry and Exit Footbath Disinfectant Refreshing Frequency</b>	Footwear is scrubbed clean and then spray disinfected (disinfectant is always kept stocked)		Footbaths are used (changed daily or when visibly soiled)	Footbaths not used or seldom changed	ii
59	<b>Clothing and Footwear Requirements</b>	Each house has its own designated outerwear and dedicated footwear (Disposable or freshly laundered)		Designated outerwear is only available in one area on the premises	Designated outerwear is not available	ii
60	<b>Watering system</b>	Drinkers and watering system are protected from wild bird and vermin access	★	N.A.	Drinkers and watering system are not protected from wild bird and vermin access	iv
61	<b>Poultry Access to Outdoors</b>	No access to outdoors		N.A.	Full access to outdoors or some loose or stray poultry seen inside the poultry houses	ii
62	<b>Housing Type/Construction</b>	Closed house	★	Modified open sided with curtains	Open-sided	ii, iii

 Minimal

 Medium

 High

## Pests, Wildlife, and Domestic Animals

63	<b>Wild bird presence (especially wild ducks, geese, swans, egrets, herons, crows, pheasants, quail, chukars, wild turkeys)</b>	Wild birds have not been seen landing on or feeding on the premises	★	N.A.	Wild birds have been seen landing on, defecating on, or feeding by the poultry houses	ii, iv, x
64	<b>Wild Bird Access</b>	Building design restricts wild bird access and no evidence of wild birds	★	Occasional sightings of wild birds flying through poultry houses, but are immediately removed and bird entryways are fixed/patched	Building design allows open access to wild birds and these are often found nesting inside poultry houses or along perches on immediate exterior of houses	i, iii, iv, v
65	<b>Spilled Feed</b>	Feed storage containers covered and feed spills are cleaned up immediately, and not fed to poultry	★	Feed storage containers and delivery systems covered but spills not immediately cleaned up, but not fed to poultry	Feed storage containers and delivery systems not covered and spills not cleaned up; or spilled feed fed to poultry	i
66	<b>Standing Water, Ponds, or other water bodies on Farm</b>	Water not allowed to pool or stand for more than 48 hours		Water not allowed to pool or stand for more than 72 hours	Allow standing water and/or ponds on the farm	iv
67	<b>Wild Bird Deterrents (e.g. scare devices)</b>	Often utilized, maintained and moved around		Occasional use	Never used	iv
68	<b>Other poultry kept on premises aside from the primary production species (e.g. Domestic ducks, geese, gamebirds, fancy chickens, or game fowl, etc.)</b>	Other poultry types are not kept on the premises		N.A.	Other poultry types are kept on the premises	ii
69	<b>Other birds (non-poultry) kept on premises (e.g. finches, parrots, budgies, etc.)</b>	Other birds (non-poultry) are not kept on the premises		N.A.	Other birds are kept on the premises	ii
70	<b>Rodent Control Program</b>	Routine weekly rodent control and monitoring in poultry houses and feed storage areas		Rodent control used, but no monitoring	No rodent control or monitoring	i
71	<b>Vegetation/Harborage Areas</b>	Frequent trimming/removal of vegetation areas from		Infrequent trimming/removal of vegetation areas	No trimming/removal of vegetation	i, v

Minimal

Medium

High

		the within 3 yards of the barns		within 3 yards of the barns	areas within 3 yards of the barns	
72	<b>Fly Control Program</b>	Routine weekly fly control and monitoring and no evidence of flies		Flies are controlled, but no monitoring and evidence of flies	no fly control or monitoring	i
73	<b>Other Animal Access (e.g. dogs, cats, livestock, or wildlife)</b>	Other animals are restricted from this premises	★	Other animals are restricted from poultry houses, feed storage areas, and dead bird storage	Other animals are seen in poultry houses	ii

 Minimal

 Medium

 High

## Truck Traffic ( Feed, Poultry Haulers, Dead Bird Haulers, Garbage pick-up)

74	<b>Driver's</b>	If multiple stops drivers should not leave cab of truck or have proper PPE & must not enter poultry houses	★	N/A	Drivers leave cab of truck, lack proper PPE & enter poultry houses	
75	<b>Gate Entry Protocol</b>	All trucks are inspected at the gate and all work is observed to enforce biosecurity		All trucks are inspected at the gate, no biosecurity follow-up	Trucks are not met or inspected at the gate	i
76	<b>Cleaning and Disinfection Protocols</b>	All truck wheels, wheel wells, and undercarriage are washed, sanitized and inspected for cleanliness before entering and exiting the premises.		Only trucks belonging to other companies have wheels and wheel wells are washed, sanitized and inspected for cleanliness before entering and exiting the premises.	No cleaning or disinfecting	i, ii
77	<b>Shared Trucks</b>	No sharing of trucks with other farms		Sharing of trucks only with farms of the same company	Sharing of trucks with farms of a different company	ii
78	<b>Feed Delivery Site</b>	Feed truck delivers feed from outside the perimeter		Feed truck goes on-farm to deliver feed	Feed truck goes on-farm to deliver feed and must access the poultry house(s)	i, ii
79	<b>Dead Haul Truck Access</b>	Dead haul trucks never enter the premises, but collect from bins outside perimeter fence		Dead haul trucks collect from bins inside perimeter fence	Dead haul trucks collect from bins near poultry houses	iv
80	<b>Garbage Truck Access</b>	Garbage pick-up is outside the perimeter fence		Garbage pick-up is inside the perimeter near the gate and tires and wheel wells cleaned and disinfected	Garbage pick-up is inside the perimeter near the poultry areas	ii
81	<b>Pullet hauling trucks</b>	Pullet trucks are cleaned and disinfected before allowed onto farm and pullets are offloaded only by this farm's personnel while the driver remains inside the cab		Pullet trucks are cleaned and disinfected before allowed onto farm and pullets are offloaded with the help of the driver (wearing disposable coveralls and boots,	Pullet trucks are not cleaned and disinfected before allowed onto farm; pullets offloaded by hauler and/or other nonemployees of this farm	ii

Minimal

Medium

High

				discarded in bin at the exit)		
82	<b>Manure Trucks</b>	Never go from one poultry farm to another on the same day	★	N/A		Visit multiple farms on the same day
83	<b>Manure, egg shells, and animal material from other premises</b>	These materials are not allowed onto the premises		These materials are allowed only after heat treated or composted to kill any virus/bacteria		These materials are allowed onto the premises untreated

## Tools and Equipment

84	<b>Tools and Equipment Entering/Exiting Farm</b>	Tools and equipment are cleaned and disinfected before entering/exiting the farm	★	Tools and equipment are cleaned and disinfected before use but not when entering.	Tools and equipment are not cleaned or disinfected upon entry/exit	i
85	<b>Sharing of equipment (e.g.composting/cleaning equipment, manure machines, etc.)</b>	Equipment is not shared with other farms		Equipment is shared only with farms of this same company	Equipment is shared with farm(s) belonging to different companies	ii
86	<b>Tools and Equipment Use on Farm</b>	All tools and equipment are cleaned and disinfected when moved between farm buildings		All tools and equipment are cleaned, but not disinfected when moved between farm buildings	Tools and equipment are not cleaned or disinfected when moved between farm buildings	i
87	<b>Tool and Equipment Maintenance</b>	Farm maintains and repairs its equipment onsite		Repairmen coming onto the farm to repair equipment wear dedicated or disposable clothing and boots/boot covers and wash their hands prior to entry	Farm sends equipment off-site for maintenance or repairmen not wear dedicated or disposable clothing	i
88	<b>Tools and Equipment C&amp;D</b>	After C&D are protected to prevent exposure to wild birds		Are C&D but not protected to prevent exposure to wild birds	Are not C&D or protected to prevent exposure to wild birds	
89	<b>Transport cages (pullets, spent hens, etc.)</b>	Always cleaned and disinfected on/off the farm		Always cleaned, but not disinfected on/off the farm	Not cleaned or disinfected on/off the farm	ii
90	<b>Chicken Transport Equipment after depop</b>	Equipment is C&D at a non-bird containing premises	★	N/A	Equipment is C&D at poultry premises	

 Minimal

 Medium

 High

## Cleaning and Disinfecting

91	<b>Cleaning Protocols</b>	Soap and hot water are used to remove visible organic material before disinfectant is applied		N.A.	Organic material is not removed prior to applying disinfectant	i
92	<b>Disinfectant Selection</b>	Disinfectants are selected based on label claims and minimally affected by organic matter		N.A.	Disinfectants are not selected based on label claims that are effective against HPAI and highly affected by organic matter	i
93	<b>Disinfectant use</b>	Disinfectants are replaced after expiration date and used according to label with appropriate concentration and changed before it loses potency.		Use of expired disinfectant or improperly mixed disinfectant	Not using disinfectant	ii
94	<b>Footwear Disinfection Stations</b>	Footwear disinfection is set-up entering/exiting and around farm in various locations other than just chicken houses		N/A	Footwear disinfection is not set-up for use	
95	<b>Water Source for “wet cleaning”</b>	Deep well treated or municipal		Deep well untreated	Surface water	iv
96	<b>High pressure sprayer</b>	Always use a high pressure disinfectant sprayer		Use a high pressure disinfectant sprayer some of the time	Don't have a high pressure sprayer	ii

## Carcass/Manure/Garbage Storage

97	<b>Disposal method of dead birds</b>	Onsite composting, burial, or cremation (if permitted)		N.A.	Rendering truck hauls dead birds	ii
98	<b>Dead Bird Storage Site</b>	Secure covered bins stored greater than 100 yards from poultry houses and located outside the perimeter fence		Secure covered bins located inside the perimeter fence near the front gate	No bins or uncovered bins accessible to scavengers stored near poultry houses	i
99	<b>Manure/Litter Handling</b>	Treated before leaving the farm		N.A.	Not treated before leaving the farm	i



## Flock Health

100	<b>Surveillance</b>	Routine use of State laboratory (CAHFS) and/or an approved company laboratory for monitoring flock health by serology and dead bird submissions		Dead bird submission to laboratory only in case of increased mortality	Visual surveillance with no laboratory use	ii
101	<b>Bird Observation</b>	Birds are monitored daily		Birds monitored sporadically	Birds not observed	i, ii
102	<b>Record keeping</b>	Poultry production, feed consumption, and mortality records are maintained reviewed daily	★	Poultry production, feed consumption, and mortality records are kept, but not reviewed daily	Poultry production, feed consumption, and mortality records are not kept	i, ii
103	<b>Vaccine/ Medication Storage</b>	Vaccines/ Medications are recorded, stored and handled according to label Expiration dates reviewed periodically		N.A.	Vaccines/ Medications not recorded, not stored and handled according to label Expiration dates not reviewed periodically	i
104	<b>Sequence of bird inspections/vaccinations</b>	Birds are visited in the following order: youngest to oldest and healthy to sick birds		N.A.	No sequence control of handling birds	ii, v
105	<b>Flock Movement &amp;/or Management</b>	All-in and all-out for whole farm management is strictly practiced		Multi-age farm but individual houses are all-in and all-out	Multi-age houses	i
106	<b>Primary Drinking Water Source</b>	Deep well treated or municipal		Deep well untreated	Surface water	iv
107	<b>Water Consumption</b>	Daily water consumption is recorded	★	N.A.	Daily water consumption is not monitored or recorded	ii
108	<b>Source of Birds</b>	Birds are acquired from NPIP certified primary or multiplier breeders and hatcheries	★	N.A.	Birds are acquired from non-NPIP certified breeders and hatcheries	i
109	<b>Dead Bird removal</b>	Dead birds are removed from the houses daily and placed in secure covered containers away from poultry houses	★	Dead birds are removed from the houses daily but not placed in secure covered containers away	Dead birds not removed from houses daily	ii

Minimal

Medium

High

				from poultry houses		
110	<b>Investigation of Sick Birds or Increased Mortality</b>	Excess mortality and unexplained clinical signs are investigated within 24 hours and birds submitted to lab		Excess mortality and unexplained clinical signs are investigated within 72 hours and birds submitted to lab		Excess mortality and unexplained clinical signs are not investigated

## Biosecurity Assessments

111	<b>Written Biosecurity Plan</b>	Biosecurity plan is written and implemented	★	Biosecurity plan is written	No Biosecurity plan is written	
112	<b>Written SOP's</b>	Yes	★	N/A	No	
113	<b>Facility Map</b>	Yes	★	N/A	No	
114	<b>Biosecurity Training</b>	Biosecurity training is given and updated logbook is in manager's office and readily available	★	Biosecurity training is given and no records are kept	Biosecurity training is not given	
115	<b>Employees receive biosecurity training upon hiring</b>	Yes - Immediately	★	Yes – Next available training	No	
116	<b>Employees sign written statement when hired and during annual training sessions stating that they avoid contact with other birds not owned by the farm</b>	Employees sign statement	★	N/A	Employees don't sign statement	
117	<b>Frequency of employee biosecurity training</b>	Three times per year or more often		Once or twice a year	No biosecurity training program	ii
118	<b>Frequency of on-site biosecurity assessments</b>	Three times per year or more often		Once or twice a year	No biosecurity assessments performed	ii
119	<b>Experience level of personnel performing assessment</b>	Highly experienced		Intermediate	Novice	ii

 Minimal

 Medium

 High

## EGG-LAYER BIOSECURITY

120	<b>Records of daily egg production</b>	Daily egg production is recorded	★	N.A.	Daily egg production is not monitored or recorded	
121	<b>Location of egg processing plant</b>	On-site and only used by the farm		Off-site and used by all farms within the company	Share processing plant with other companies	ii
122	<b>Type and location of Egg Processing</b>	In-line egg processing on same premises, not shared by other farms		Off-line egg processing at another site used by only this company's farms	Off-line egg processing shared by other companies' farms (at this site or another site)	ii, iii
123	<b>Sales of eggs from the farm premises</b>	No sales of eggs directly from the farm		Sales of eggs from the farm are outside of the perimeter fence	General public walks or parks inside the perimeter fence to buy eggs	ii
124	<b>Personnel movement between egg processing facilities and layer facilities</b>	No contact with an egg processing facility within 72 hours prior to entry of layer facility		No contact with an egg processing facility within 48 hours prior to entry of layer facility	No restrictions on movement between egg facilities	ii
125	<b>Trucks to transport eggs</b>	On-site processing, not using trucks		Off-site processing	Off-site processing, using shared trucks	ii
126	<b>Type of egg flats used</b>	Disposable paper egg flats used only once		Plastic egg flats properly identified, cleaned and disinfected, and always returned to flock of origin	Re-using disposable paper egg flats or using plastic egg flats without complete cleaning and disinfection and not always returned to flock of origin	ii, viii
127	<b>Identification and disinfection of Egg racks/pallets/cases</b>	Egg racks/pallets/cases properly identified and cleaned and disinfected before returning to flock of origin		Egg racks/pallets/cases not properly identified but properly cleaned and disinfected before returning to farm	Egg racks/pallets/cases not identified nor always returned to flock of origin; not always properly cleaned and disinfected	ii

Minimal

Medium

High

128	<b>Egg flat washer</b>	Egg flat washer monitored for adequate washing time, temperature, pressure, appropriate disinfectant and concentration		Egg flat washer not monitored	No egg flat washer	ii
129	<b>Eggs brought from other farms</b>	Eggs from other farms are never brought onto this farm		Eggs from other farms of the same company are brought onto this farm	Eggs from other farms of different companies are brought onto this farm for repackaging	ii
130	<b>Sales of spent hens to the public from the farm premises</b>	No sales of spent hens directly to the public from the farm		Sales of spent hens on premises, but public is not allowed to touch poultry prior to purchase	General public walks or parks inside the perimeter fence and walks into the poultry areas to select or touch and buy spent hens	ii
131	<b>Spent hen haulers</b>	Spent hens are not hauled from the site (disposed of on site)		Cleaned and disinfected hauling trucks are loaded with spent hens by farm employees	Hauling truck is not completely cleaned and disinfected before allowed on farm and/or non-employees of this farm help to load the spent hens	ii
132	<b>Spent hens hauled directly to live bird markets</b>	Spent hens are not hauled to live bird markets		Spent hens are hauled from this farm to live bird markets; truck and cages are cleaned and disinfected before returning	Spent hens are hauled from this farm to live bird markets; truck and cages not cleaned and disinfected before returning	ii
133	<b>Spent hens brought onto farm</b>	Spent hens from other farms are never brought onto this farm		N.A.	Spent hens from other farms are brought onto this farm	ii

 Minimal

 Medium

 High

## MEAT-TYPE BIRDS

### Hatchery Specifics

134	<b>Shower in and out and laundry room</b>	Present in Breeder hatcheries, available in broiler hatcheries for emergencies		Not present but available, dedicated clothes and shoes used	Not present, no PPE used	xi, xii
135	<b>Hatchery flow</b>	From dirty (egg room) to clean (chick processing room) limiting cross contamination / reverse flow		From dirty to clean but products have to pass clean rooms to be shipped or disposed	No clear flow	xi, xii
136	<b>Positive pressure from clean to dirty rooms and sealed doors</b>	Present		Sealed doors only	None	xi, xii
137	<b>Hatchery mortality and associated material (i.e. egg shells, fluff)</b>	Stored and processed in an environmentally approved system and then disposed in landfill or rendering facility		Not processed, picked up by rendering or disposed in landfill	Disposed with regular trash	xi, xii
138	<b>Water for washing and machines</b>	Deep well treated or municipal		Deep well untreated	Surface water	xi, xii
139	<b>Egg and chick truck disinfection</b>	Automatic disinfection Arc for entrance, internal disinfection, full wash after delivering chicks or picking up eggs		Manual wash after collecting eggs and chick deliveries	Not used	xi, xii
140	<b>Are you part of the NPIP program?</b>	Yes		N.A.	No	xi, xii
141	<b>NPIP Testing</b>	Flocks on premises are tested as required (US H5/H7 Avian Influenza Monitored CFR 146.23)			Flocks are not tested as required (US H5/N7 Avian Influenza Monitored CFR 146.23)	
142	<b>Presence of health assessment and vaccination program created and assessed by a veterinarian</b>	Yes		N.A.	No	xi, xii

 Minimal

 Medium

 High

143	<b>Egg flats and egg baskets</b>	Only new flats, baskets washed and disinfected in every use		Washed and disinfected flats are used to collect and incubate eggs, baskets washed and disinfected in every use	Disposable flats are reused	xi, xii
144	<b>Flats and box storage</b>	They are stored in a vermin proof, dry room inside the hatchery, room is checked periodically for contamination		Kept inside the hatchery without much control other than rodent control	Stored outside in a shed without vermin control	xi, xii
145	<b>Cleaning and disinfection written protocol</b>	Protocol is present and re-evaluated; Rooms and machines are microbiologically tested after C&D periodically		Protocol is present, not re-evaluated and no testing after procedures	Protocol is not present	xi, xii
146	<b>Re-evaluation of a biosecurity protocol exclusive for hatchery</b>	Present and evaluated every year		Present, not evaluated	Not present	xi, xii

 Minimal

 Medium

 High

## Breeder Specifics

147	<b>Shower in and out, laundry room, log books</b>	Present and used at all times		Not present but available, dedicated clothes and shoes used	Not present, no protective equipment used	xii, xiii
148	<b>Barn floor substrate</b>	Concrete flooring		Other (non-concrete) flooring	No flooring/substrate	xii, xiii
149	<b>Do you follow NPIP guidelines?</b>	Yes		N.A.	No	xii, xiii
150	<b>How often do you utilize the 3 week “down time” period in breeder flocks?</b>	Very often		Sometimes	Never	xii, xiii
151	<b>How often do you monitor cleaning and disinfection by laboratory testing and swabbing?</b>	Very often		Sometimes	Never	xii, xiii
152	<b>Do you have a vaccination plan?</b>	Yes, with serological checks reviewed by a veterinarian		Yes, but no serological checks	No vaccination plan	xii, xiii
153	<b>Are your breeder flocks all in all out?</b>	Yes		Yes, but we spike our males	No	xii, xiii
154	<b>Vaccination/moving crews</b>	Internal, comply with biosecurity protocols		External, comply with biosecurity protocols	External, not sure if they comply	xii, xiii
155	<b>Management (egg collection, sanitation, cooler, nest management)</b>	Protocols exist and are reinforced at all times		Protocols exist but not checked	No protocols	xii, xiii

 Minimal

 Medium

 High



## Breeder and Commercial Turkey Specifics

Breeder and Artificial Insemination (AI):							
156	Do you feed males prior to semen collection?	No		N.A.		Yes	xiv , xv, xvi
157	Is visual inspection of semen for fecal contamination performed?	Yes		N.A.		No	xiv , xv, xvi
158	Are breeders, including males, tested for transmissible diseases?	Yes		N.A.		No	xiv , xv, xvi
159	Do AI crews follow a strict written biosecurity protocol? Is it enforced?	Yes		Yes, but no enforcement		No	xiv , xv, xvi
160	Does the AI crew shower between farms?	Yes		Just change clothing and shoes		No	xiv , xv, xvi
161	Is the AI equipment dedicated for each farm?	Yes		N.A.		No	xiv , xv, xvi
162	Do you have Stud farms with strict biosecurity rules? (shower in/out, age separation, Mycoplasma and AI periodical testing, etc.?)	Yes		N.A.		No	xiv , xv, xvi
163	Do you have an egg disinfection protocol on breeding farms?	Yes		N.A.		No	xiv , xv, xvi
Commercial Turkeys:							
164	Do you have brooding farms and finishing barns? Are those separate biosecurity units?	Yes		Same farm, but separated by increased distance		No	xiv , xv, xvi
165	Do you grow turkeys with access to outside?	No		N.A.		Yes	xiv , xv, xvi
166	Do you have a written protocol for moving birds?	Yes		N.A.		No	xiv , xv, xvi

Minimal

Medium

High

## Broiler Specifics

167	Do you grow broilers all-in all-out?	Yes		N.A.	No	Xii i, xvi i
168	“Downtime” period	14 days or more		Between 10 and 14 days	Less than 10 days	Xii i, xvi i
169	How often are your flocks inspected by an experienced supervisor?	Daily		Weekly	More than weekly intervals	Xii i, xvi i
170	Do you check antibody titers in pre-processed flocks?	Yes, regularly		Yes, without a fixed schedule	No	Xii i, xvi i
171	Are moving and service crews subject to stringent biosecurity measures?	Yes, it is written in a protocol		Yes, but it is not written in a protocol	No	Xii i, xvi i
172	Do you take the “cake” off the litter on each flock?	Yes		Every other flock	No	Xii i, xvi i
173	How many times do you reuse your litter for your flocks?	5		10	More than 10	Xii i, xvi i
174	Frequency of unauthorized visitors	Never		Sometimes	Often	Xii i, xvi i
175	Litter removal	Composted		Sometimes stockpiled	Removed and piled outside of the barns	Xii i, xvi i
176	If contracted, does the contractor associate with different companies?	No		N.A.	Yes	Xii i, xvi i
177	Do you hire external crews for cleaning between flocks?	No, own people do it		Sometimes	Always	Xii i, xvi i
178	Is equipment, feed pans, medication buckets, feed room and work room cleaned and disinfected between flocks?	Yes		Only when litter are replaced	No	Xii i, xvi i
179	How often is the house washed and disinfected?	Between flocks		Only when litter is removed	Never	Xii i, xvi i
180	Do you use seasonal labor?	No		Occasionally	Yes	Xii i, xvi i

 Minimal

 Medium

 High

181	<b>Do you provide boots and dedicated clothes for laborers?</b>	Yes		N.A	No	Xii i, xvi i
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## END OF RISK ASSESSMENT GUIDE

 Minimal

 Medium

 High

## Literature Cited

- <sup>i</sup> Bowes, Victoria, DVM, MSc, ACPV. B.C. 2004. Poultry Industry Enhanced Biosecurity Initiative Producer Self-Assessment Guide. Animal Health Centre, BCMAL. Abbotsford, British Columbia.
- <sup>ii</sup> CDFA Avian Influenza Biosecurity Task Force (2002-2003 Exotic Newcastle Disease Veterans).
- <sup>iii</sup> USDA APHIS VS. 2015. Epidemiologic and Other Analyses of HPAI-Affected Poultry Flocks: July 15, 2015 Report.
- <sup>iv</sup> USDA APHIS VS. July 2015. "Prevent Avian Influenza at Your Farm: Improve Your Biosecurity with Simple Wildlife Management Practices."
- <sup>v</sup> CDFA. 2015. Industry Biosecurity Plan Example.
- <sup>vi</sup> Select Agent Program Checklist for HPAI
- <sup>vii</sup> USDA APHIS VS. November 2013 (Draft). "Highly Pathogenic Avian Influenza Standard Operating Procedure: 9. Biosecurity". SOP Number 0009.
- <sup>viii</sup> USDA APHIS VS. Highly Pathogenic Avian Influenza Secure Egg Supply Plan – *Summary of Products and Permitting Requirements*. FAD PReP Foreign Animal Disease Preparedness & Response Plan. Secure Food Supply Plan.
- <sup>ix</sup> BC Poultry Association Biosecurity Committee and Dr. Bill Cox (editor). 2006. BC Poultry Biosecurity Reference Guide.
- <sup>x</sup> National Flyway Council. June 2015. Surveillance Plan for Highly Pathogenic Avian Influenza in Waterfowl in the United States.
- <sup>xi</sup> Hill, D. Biosecurity in hatcheries. In: Biosecurity in the Poultry Industry. S. Shane, ed. American Association of Avian Pathologists, Keneth square, PA. pp 75-78. 1995.
- <sup>xii</sup> Rosales, G.A., and E. Jensen Special considerations for primary breeders. In: A Practical Guide for Managing Risk in Poultry Production. R.L. Owen, ed. American Association of Avian Pathologists Jacksonville, FL. pp 225-248. 2011.
- <sup>xiii</sup> Hofacre, C.L., and G.A. Rosales Prevention and control of disease in primary and multiplier broiler breeder operations. In: Biosecurity in the poultry industry. S. Shane, ed. American Association of Avian Pathologists, Keneth Square, PA. pp 79-84. 1995.
- <sup>xiv</sup> Ghazikhanian, G.Y. Prevention and control of diseases in primary and multiplier turkey breeder operations. In: Biosecurity in the poultry industry. S. Shane, ed. American Association of Avian Pathologists, Keneth Square, PA. pp 95-100. 1995.
- <sup>xv</sup> Wojcinski, H. Special considerations for turkeys. In: A Practical Guide for Managing Risk in Poultry Production R.L. Owen, ed. American Association of Avian Pathologists, Jacksonville, FL. pp 249-256. 2011.
- <sup>xvi</sup> P., W.D. Principles of disease prevention in commercial turkeys. In: Biosecurity in poultry premises S. Shane, ed. American Association of Avian Pathologists, Keneth Square PA. pp 101-103. 1995.
- <sup>xvii</sup> Dekich, M.A. Principles of disease prevention in integrated broiler operations In: Biosecurity in the poultry industry. S. Shane, ed. American Association of Avian Pathologists, Keneth Square, PA. pp 85-94. 1995.