



Chicken Farmers of Canada ON-FARM FOOD SAFETY PROGRAM MANUAL



2021 EDITION – WHAT’S NEW?



CFC has published a revised version of the On-Farm Food Safety Program manual. Included are changes to harmonize with current regulations, to clarify existing requirements, to provide greater flexibility for washing, disinfection and downtime and to reduce duplication.

Harmonization with Current Regulations

- » When mixing medicated feed on-farm, a feed mixing record must be maintained including the types of feed manufactured, the sequential order of feed manufactured, the medications used, and any flushing or physical cleaning performed.
- » If mixing medicated feed on-farm with a withdrawal period a mixer efficiency test is required a minimum of every 3 years and scale calibration tests are required at a minimum of every year.
- » Aligned medication use and veterinary oversight with Health Canada’s 2018 policy change as all Category I-III antibiotics require a veterinary prescription.
- » Feed and water additives (e.g. vitamins, probiotics, essential oils) must be approved for use by the CFIA or Health Canada.
- » Chemical products (e.g. cleaners, disinfectants, water acidifiers) must be approved for use or have directions for livestock production.
- » Chicks and hatching eggs are to be purchased from hatcheries with a CFIA license.

Clarification of Existing Requirements

- » Clarified the list of farm workers that need to sign the Standard Operating Procedure (SOP).
 - » The manure storage and parking location is to be included on the farm diagram.
 - » Visitor/emergency boots can be kept in a central location on the farm.
 - » New barns will require a concrete floor, or similar non-porous surface, on the first floor.
 - » The weekly water quality checks need to occur inside the barn and can be performed by looking at the end of the line with a cup or by looking at the riser tubes or water filters.
 - » New barns with a previously untested water source will be required to have a water test prior to the first placement.
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- » Mortality pails are to be washed with water and a detergent or disinfectant after each flock.
- » Equipment used during the clean-out section has been removed and replaced with a reference to bringing equipment into the Restricted Area (RA) in Chapter 2.
- » Containers/bulk tanks being used to administer chemical products via water will need to be labelled with the name and concentration of the product.
- » Expired products are to be stored separately and disposed of according to manufacturer recommendations.
- » Extra-label medication use can be identified by looking for the gFARAD reference number on the veterinary prescription.
- » Bedding materials cannot compromise food safety.

Increased Flexibility for Washing, Disinfection and Downtime

- » Three options have been provided for washing, use of detergent/disinfectant and for downtime.
 - Option 1 is similar to the current manual (pressure wash the barn and equipment annually), with increased flexibility in that a detergent or a disinfectant can be used.
 - Option 2 is a pressure wash of the barn and equipment annually, while a detergent or a disinfectant need only be used on the feeders, drinkers and equipment. This is to be followed by a 14-day downtime.
 - Option 3 involves a dry-clean of the barn and a 14-day downtime after every flock. No washing or detergent/disinfection is required with this option and less than 14 days can occur a maximum of two times in the previous 12 months due to scheduling issues.
 - These three options have been developed to provide farmers with more flexibility while still meeting the objectives of the washing and downtime process. The 14 days downtime is based on the CFIA National Avian On-Farm Biosecurity Standard that recommends a 14-day downtime when no other interventions are used.
- » New information on cleaning, drying, use of detergent/disinfectants and downtime have been provided for information. An example cleaning, washing, and downtime protocol has been added for information purposes.
- » In the case of a disease, a cleaning and detergent/disinfection is required based on the recommendation from a veterinarian.

Reduced Duplication

- » The “Highly Recommended” requirements of the OFFSP will no longer be included in the audit process.
- » Duplicate requirements from the Animal Care Program have been removed from the OFFSP, or reference has been made to refer to the Animal Care Program. Examples include content on euthanasia, shipping and generators.

Layout of the New Manual

- » Throughout the manual, additional information has been included. For example, information can be found on CFC’s antimicrobial use strategy, brooding and in-barn hatching.

- » Links to videos for medicator calibration, water line cleaning and water sampling techniques as well as web links to key information have been included.
- » Several chapters have been consolidated for better flow – for example, the information on Critical Control Points (CCPs) has been moved to Chapters 3 and 6 where the CCPs are presented. On the other hand, both feed and water have been split into their own chapters.

Implementation & Auditing

All of the new requirements of this edition are to be implemented on farm by January 1, 2022 and will be evaluated during your next audit. Continued certification will be dependent on the implementation of the requirements in this new edition.

Record Keeping

A set of SOPs and Flock-Specific Record Forms have been provided with this manual. Farmers can use these forms, or an alternative can be used that incorporates all of the same information.

Only the OFFSP SOPs need to be updated, as the requirements of the *CFC Raised by a Canadian Farmer* Animal Care Program have not changed.

If you require additional copies of the manual, please contact your provincial board office.

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INTRODUCTION



Not only do Canadian consumers want to know where their chicken comes from, but they trust Canadian farmers and have said that it's important that they buy chicken grown in Canada!

The *Raised by a Canadian Farmer* brand was first developed by Chicken Farmers of Canada (CFC) to clearly identify Canadian products.

Food safety is also a critical priority for Canadian consumers - and for Canadian chicken farmers.

With the *Raised by a Canadian Farmer* brand being used by an increasing number of products across the country, CFC has used this opportunity to build on our brand and include the On-Farm Food Safety Program (OFFSP) as a key component of the brand identity.

CFC has continued to be a leader in on-farm food safety as demonstrated by our comprehensive OFFSP. Communicating this fact to consumers is essential to build on the hard work that farmers put in every single day from coast to coast!

The OFFSP includes the most modern methods and techniques for on-farm food safety, emphasizing health, cleanliness and safety through every step of the production cycle.

First developed in 1998, CFC's OFFSP has received full government recognition, as led by the Canadian Food Inspection Agency (CFIA), for effective and consistent implementation that promotes the production of safe food at the farm.

The OFFSP manual adheres to Hazard Analysis Critical Control Point (HACCP) principles as defined by Codex Alimentarius while the management system that oversees the auditing, certification and training of the standard is based on ISO (International Organization for Standardization) standards.

Full government recognition allows CFC and all Canadian chicken farmers to demonstrate that we have identified, considered, controlled and/or prevented the chemical and biological food safety hazards present in growing chickens.

By following the good production practices outlined in the OFFSP manual, farmers can demonstrate their effort to meet the objectives of reducing foodborne illness, preventing animal health diseases and ensuring the sustainability of the Canadian chicken industry.

The OFFSP standards that farmers uphold every day help build credibility with consumers, and credibility of the *Raised by a Canadian Farmer* brand!

On-Farm Audit and Certification Process

There are two components to the OFFSP. The first component is the OFFSP farmer manual that has been granted technical recognition by CFIA for promoting the production of safe food at the farm level and adhering to HACCP principles.

The second component is the Management Manual that describes the maintenance of the program, the training requirements of auditors, and the guidelines and rules for farm certification. This manual is implemented at the national and provincial board levels.

A) OFFSP Manual

The OFFSP manual has been developed to cover issues regarding the entire farm.

In each section, production practices have been designated with either an MD or an HR. These designations have resulted from the scientific HACCP-based approach decision tree.

MD represents a “MUST DO” production practice. These are mandatory to protect your flock against food safety and animal health hazards throughout the production cycle. HR represents a “HIGHLY RECOMMENDED” production practice, which indicates its high importance in the OFFSP. HR production practices are not mandatory, but they are strongly recommended to ensure biosecurity, health and food safety of flocks.

B) Roles and Responsibilities

An overview of the roles and responsibilities for players involved in the audit and certification process are presented below:

(1) Chicken Farmers of Canada Responsibilities

- » The design and delivery of the OFFSP program on a national basis and the maintenance of the technical standard and farmer manual.
- » The development, maintenance and delivery of training programs for the OFFSP on-farm auditors.
- » The ongoing monitoring of an effective program and ensuring consistency in application and certification among all provinces.
- » The maintenance and future development of the OFFSP to ensure compliance with government recognition standards.

(2) Provincial Board Responsibilities

- » The delivery of the OFFSP program and certification services to farmers in the province.
- » The implementation of certification procedures, which include performing on-farm audits, reviewing audit reports and recommendations, and making certification decisions.
- » The management of the complaints and appeals procedures.
- » The implementation of an effective program and to follow the OFFSP Management Manual to ensure consistency.

(3) Farmer's Responsibilities

- » Implementing and maintaining compliance with the OFFSP.
- » Keeping documents demonstrating conformance to the OFFSP. Farmers are required to retain at least one year's worth of records.
- » Continuing to implement the program, as well as to undergo on-going audits as per the scheduled frequency and for taking corrective actions to resolve any corrective actions identified in the audit report.
- » Informing the provincial board of any large management change on the farm (e.g. operating a new barn that has not been previously audited or changing ownership).

C) Audit Frequency

A combination of full audits (F) and record assessments (R) will be used to assess compliance to the program on an annual basis.

- » Full audit – An on-farm/on-site evaluation of records, statements of fact or other relevant information to determine the extent to which all the specified requirements – Good Production Practices (GPPs) and Critical Control Points (CCPs) – of the program are met.
- » Records assessment – Off-farm evaluation of a subset of records or other relevant information to determine the extent to which all or a subset of the specified requirements (GPPs and CCPs) of the program are met. This evaluation includes direct communication with the farm representative and can be performed on-farm.

The audit cycle is a 2-year cycle consisting of a full audit in year 1, and a records assessment audit in year 2. Prior to starting the audit cycle, all new farms will receive an initial full audit.

Your provincial board will decide where you fit in the audit cycle. In addition, a minimum 5% of those farms undergoing a records assessment in any given year will be subject to a full on-farm audit.

Triggered audits can also occur at any time. An on-farm audit can be triggered by laboratory reports, audit reports, by complaints of non-conformances by stakeholders, or by changes made by farmers.

D) Biosecurity during an Audit

During an on-farm audit, auditors will follow strict biosecurity guidelines to prevent contamination. Auditors must take preventive measures to ensure that they do not present a biosecurity risk to the farm by: parking in a designated area, preventing cross-contamination, wearing clean coveralls and boots, disposing of the worn coveralls and footwear in an acceptable location, and by following any additional biosecurity measures requested by the farmer.

E) Audit Process

Under normal circumstances, farmers will be informed when an audit will be occurring, and the date will be decided based on the auditors' and the farmer's availability; however, provincial board offices reserve the right to operate based on their rules and regulations.

Prior to undergoing an on-farm audit, each farmer should complete the Program Requirements Checklist to assess their preparedness for the audit. Once completed, farmers should have a fairly good idea if they are complying with the OFFSP requirements.

Prior to undergoing an initial audit, each farmer will be required to accumulate three flocks' worth of records.

On-Farm Audit Process:

- » A trained auditor will review the mandatory elements of the OFFSP program by interviewing the farmer, reviewing records and touring the barn and related production facilities to evaluate whether the GPPs and CCP's described in the manual are being implemented.
- » A standard audit checklist has been developed and will be used by the auditor during the audit. This checklist encompasses all of the "Must Do" requirements in each chapter. Each requirement will be rated as "Acceptable" (A), "Unacceptable" (U), "Needs Improvement" (NI) or "Non-Applicable" (NA).
- » Whenever a "Must Do" item is rated U or NI, the auditor will identify the deficiency through a "Corrective Action Request" (CAR). Should the auditor identify a CAR during the audit, this will be recorded on the audit report.
- » Prior to leaving the farm, the auditor will complete the audit report, which will be discussed with the farmer. The auditor will provide a copy of the report to the farmer.

- » If needed, a follow-up audit will be scheduled, where the auditor will assess the implementation and effectiveness of the corrective actions.
- » Once all CARs have been completed, the audit report will be sent to the Certification Agent so that the certification process can proceed. Prior to certification, each farmer must sign a declaration indicating that they will continue implementing the GPPs and CCPs of the program.
- » Only the items listed under the “mandatory” section (i.e. the Must Do’s) will be taken into consideration for certification purposes.
- » The auditor does not grant certification; rather, the auditor makes a recommendation and the audit reports will be sent to the Certification Agent.

F) Certification

Once the audit report is received, the Certification Agent will make a decision on granting certification.

Before granting certification, the Certification Agent must ensure that all mandatory items in the OFFSP manual have been successfully completed, that the farmer is a registered quota holder or licensed farmer, that the farmer has signed the Farmer declaration indicating that they will continue to implement the program requirements and undergo audits as per the prescribed frequency and that the farmer has successfully completed the audit (i.e. has completed any possible corrective actions).

Based on the certification process, farmers can register complaints or file appeals about the OFFSP with their provincial board. Farmers should check with their provincial board for specific procedures.

Certification with the CFC program indicates that the on-farm food safety system of a farmer meets the CFC OFFSP standards. Certification does not guarantee the product from these facilities, nor does it guarantee the safety of any products.

G) Certificate Withdrawal

The Certification Agent has the authority to suspend or terminate certification.

The reasons for suspension or terminating a previously granted certification include:

- » A farmer stops raising chickens for a period longer than one year.
- » A farmer declines an audit.
- » A farmer does not complete the required corrective actions.
- » A farmer no longer maintains the OFFSP program.
- » A farmer sells his/her quota or is no longer licensed.
- » A farmer is not cooperative or access to documentation, facilities and farm workers are not provided to auditors during audits.
- » A farmer uses the certificate, certification or other program materials in ways that conflict with stated guidelines.

Once suspended or terminated, the certificate or certified sign cannot be displayed or otherwise used to indicate that the farm is certified under the program. If a farmer intends to become certified after having had the certification suspended or terminated, they must participate in a full audit to become certified.

Federal-Provincial-Territorial Recognition Process of On-Farm Food Safety Programs

The federal, provincial and territorial governments (FPT) On-Farm Food Safety Recognition Program is a process to review, assess, recognize and monitor the technical soundness and administrative effectiveness of on-farm food safety systems developed and implemented by Canada's national farmer organizations.

The CFIA has been assigned the lead role by the FPT governments to assess and recognize commodity-specific OFFSPs. All agricultural commodities in Canada (e.g. turkey, dairy, swine, horticulture, beef, etc.) have developed on-farm food safety programs.

The FPT governments have developed a comprehensive set of requirements for on-farm food safety programs that guides commodities towards full recognition of their programs. CFC has been an industry leader in obtaining recognition from the government for its OFFSP.

The following phases are a representation of the FPT approach to recognition:

- Phase 1:** Commodities develop a HACCP-based farmer manual and government performs a Technical Review of the manual to determine conformance with the HACCP principles as defined by Codex Alimentarius.
 - » CFC was the first farm organization to receive Phase 1 technical recognition of the OFFSP farmer manual in July 2002.
- Phase 2:** Commodities develop an ISO-based management manual that includes the operation of the farm certification program, auditor training and program maintenance. Governments then perform a Technical Review of the management manual to determine conformance with government requirements.
 - » CFC was the second farm organization to receive Phase 2 technical recognition of the management system in July 2006.
- Phase 3:** Commodities fully implement the requirements of the farmer manual and the management manual.
- Phase 4:** CFC and the provincial boards underwent a 3rd party audit of the OFFSP.
- Phase 5:** Once full recognition is received, maintaining government recognition will involve on-going oversight and audits to ensure compliance with the FPT standards.
 - » CFC was the first commodity in Canada to receive full recognition for its OFFSP by the FPT governments in 2013. This achievement demonstrates the safe, quality production practices of Canadian chicken farmers.
 - » CFC continues regular reviews with the FPT governments led by the CFIA to ensure the OFFSP meets the standards and is being implemented effectively.

HACCP and CFC's OFFSP

HACCP is short for Hazard Analysis Critical Control Points. It is an internationally recognized approach to food safety. The Pillsbury Company created the concept for NASA in the late 1950's. Their goal was to be able to guarantee safe food to the space program.

HACCP is a systematic approach to make sure that food is safe by preventing initial food safety hazards instead of detecting problems in the finished product. This approach gives more control during manufacturing to make sure that each and every product is safe, wholesome and of high quality.

Using HACCP, all inputs and each step of the production environment are evaluated for biological, chemical and physical hazards. For chicken production, here are examples of each of these hazards.

Biological Hazards

The main biological hazards found in livestock operations are those that cause foodborne illness. These are: *E. coli*, *Campylobacter jejuni* and *Salmonella*. The sources of biological hazards are numerous, and include chicks, feed, water, rodents and pests, and contamination from people, equipment, and the environment.

Preventive measures to control these hazards include implementing strong programs for biosecurity to limit access to the barn, pest control, cleaning and disinfecting, testing and treatment of water sources, and working with the supply chain to reduce the risk of inputs.

Chemical Hazards

Chemical hazards in chicken production could come from a number of sources including residues from medications, pesticides, cleaning products or contamination by mould.

Preventive measures including adhering to withdrawal times, following label instructions, working with veterinarians, and separating chemical storage areas will help to control these hazards.

Physical Hazards

Physical hazards are more often found in food processing plants where foreign materials such as metal, plastic or glass can get into the finished products.

Although there may be some physical hazards in livestock operations, physical hazards are unlikely to occur when producing live chickens.

Critical Control Points on Your Farm

HACCP principles require that methods be identified to minimize or eliminate each identified hazard. In addition to GPPs, a CCP is a step in the production cycle at which control can be applied and is essential to prevent or eliminate a food safety hazard to reduce it to an acceptable level.

For chicken farming, the HACCP decision tree was used to identify 3 CCPs – all related to the avoidance of chemical residues. These are:

- CPP 1: Receiving contaminated feed where there is the risk that it will be fed to the chickens;
- CPP 2: Mixing medicated feed on-farm where improper mixing can lead to cross-contamination of non-medicated feed; and,
- CPP 3: Use of medications, through feed or water, where improper control may lead to violative residues.

For each of these CCPs, CFC has identified appropriate control measures and corrective actions. These are highlighted in each section of the OFFSP manual.

List of Definitions

Antibiotic: A substance produced by a microorganism and/or by chemical synthesis that possesses the following characteristics: (1) It has the capacity, in dilute solutions, to inhibit the growth of or to kill the microorganisms that harm another organism (e.g. an animal) but has no toxic effect on the latter; (2) It is used with the purpose of selectively eliminating the microorganisms in close contact with the harmed organism (this process is named “antibiosis”).

Antimicrobial agent: A substance that kills or suppresses the multiplication of any kind of microscopic organism (i.e. bacteria, virus, fungi, protozoan, mange, etc.). As there is no specification of harmlessness for the host, this term includes all antibiotics, ionophores and arsenicals, disinfectants and antiseptic agents. This term is used preferably with respect to resistance genes, some of which may act on different classes of substances.

Approved Medications: All approved medications are issued a Drug Identification Number (DIN). Approved medications are veterinary drugs which have been evaluated by the Veterinary Drugs Directorate (VDD) of Health Canada prior to approval of a label indicating the conditions of use including: (1) Species (e.g. chicken); (2) Indications for use (e.g. to prevent coccidiosis); (3) Route of administration (e.g. water, feed or injection); (4) Maximum dosage and frequency or length of treatment; (5) Precautions which may include a withdrawal time. Medications include antibiotics and chemical coccidiostats.

Controlled Access Zone (CAZ): An area designated by the farmer around the outside of the barn to limit what comes into contact with your flock. It is highly recommended that the zone be at least 15 metres around each barn.

Corrective Action Request (CAR): A formal request to the farmer for actions to be taken to correct non-conformities, in order to achieve or maintain certification, that have been identified through the audit process.

Critical Control Point (CCP): A step in the production cycle at which control can be applied and is essential to prevent or eliminate a food safety hazard to reduce it to an acceptable level.

Downtime: The period of time between flocks which allows for the reduction in numbers of disease causing micro-organisms within the barn. Downtime is the time from when the previous flock is shipped through to the placement of the subsequent flock. Cleaning of the barn is to occur as soon as possible for the longest possible downtime between the flock being shipped and the placement of chicks.

Dry Cleaning: This is the minimum cleaning that must be performed after each flock. This includes the removal of manure from inside the barn and removal of all organic matter, through blowing or brushing, from all of the floors, walls, ceilings, fans and equipment. All rooms within the barn (electrical/office) must be cleaned as thoroughly as possible.

Extra Label Drug Use (ELDU): The use of a drug product in a manner that is not consistent with what is indicated on the label, package insert or product monograph of any drug product approved by Health Canada. For example, ELDU can include use with an alternate species (e.g. chickens versus cattle) or using an increased dosage. A veterinary prescription must be obtained for any ELDU.

Farm workers: This term includes all personnel working on the farm, paid or unpaid, quota holders and includes family members. This term does not include service personnel.

Feed Transfer: This process occurs when feed in a feed bin is moved to another location – either to another feed bin on the same farm or off the farm.

Full Audit: An on-farm/on-site evaluation of records, statements of fact or other relevant information to determine the extent to which all the specified requirements (GPPs and CCPs) of the program are met.

Hazard Analysis Critical Control Points (HACCP): A method of using sound, well-known principles of science and technology to identify initial food safety hazards during production so they can be prevented instead of detecting problems in the finished product.

Off-Label Use: Use of an unapproved drug product (a drug product which does not have a DIN). Use of a drug which was never approved for use by a Canadian regulatory authority. A veterinary prescription must be obtained for any off-label use.

Preventative Use (prophylaxis): The use of an antimicrobial to prevent the occurrence of an infectious disease in healthy flocks.

Records Assessment: An off-farm evaluation of a subset of records or other relevant information to determine the extent to which all or a subset of the specified requirements (GPPs and CCPs) of the program are met. This evaluation includes direct communication with the farm representative and can be performed on-farm.

Restricted Area (RA): This is the area inside the barn where the birds are housed along with any other part of the barn that the farmer has included in the RA. This zone is established to restrict access and thus reduce the chance that any potential carrier of infectious agents will come into contact with your flock. Biosecurity measures should be at their highest when entering the RA.

Therapeutic Use: The use of an antimicrobial to treat a clinical or subclinical infectious disease in birds, including the mass medication of flocks in which a subset of the population is identified with a clinical or subclinical infectious disease (metaphylaxis).

Triggered Audit: An audit in response to a pre-defined incident as the result of a concern or complaint.

Veterinary–Client–Patient Relationship (VCPR): A VCPR exists when all of the following conditions have been met: (1) The veterinarian has assumed the responsibility for making clinical judgments regarding the health of the animal(s) and the need for medical treatment, and the client has agreed to follow the veterinarian's instructions; (2) The veterinarian has sufficient knowledge of the animal(s) to initiate at least a general or preliminary diagnosis of the medical condition of the animal(s). This means that the veterinarian has recently seen and is personally acquainted with the keeping and care of the animal(s) by virtue of an examination of the animal(s) or by medically appropriate and timely visits to the premises where the animal(s) are kept; (3) The veterinarian is readily available for follow-up evaluation, or has arranged for emergency coverage, in the event of adverse reactions or failure of the treatment regimen.

1

TRAINING



1.1 Hiring and Training Farm Workers

Good animal husbandry and good management practices go hand in hand with good results. Start with your farm workers.

Hire and promote farm workers who know and care about good animal husbandry practices, cleanliness and disease prevention.

Train and retrain every farm worker. Farm workers who understand the purpose of biosecurity and food safety measures are more likely to adopt these practices as part of their daily routine and ensure that any visitors coming onto the premises abide by these measures as well.

The best way to ensure that farm workers are clear on how to complete their assigned tasks is to have written Standard Operating Procedures (SOPs).

The list of SOPs is to include:

- » Farm workers biosecurity protocols
- » Supplier/visitor biosecurity protocols
- » Access procedures for the CAZ and RA
- » Pest control program
- » Barn cleaning and disinfection procedures
- » Manure management
- » Mortality management
- » Farm emergency/quarantine procedures

MD

All farm workers must be trained and have an understanding of the OFFSP manual, its objectives and the SOPs that relate to their role on the farm.

A training record must be kept for each farm worker to indicate that they are knowledgeable of the program and understand their role.

This training record can be maintained in the SOPs that have been provided – either by signing the training log or by signing the front page indicating that they were the ones that developed and reviewed the SOPs.

Farm workers include all personnel working on the farm, paid or unpaid, quota holders and includes family members. If family members are minors, then a legal guardian can sign on their behalf. Service personnel and individuals who are being directly observed while in the barn are not required to sign the SOPs.

All farm workers are to be informed whenever SOPs are updated, and an SOP review should be conducted with all farm workers on an annual basis. In cases where temporary workers are used, the SOPs for the job they are performing should be communicated and they should be supervised by a trained farm worker.

1.2 Food Safety Hazards

The OFFSP manual has been developed using a HACCP-based process and the requirements have been developed based on regular production practices used on chicken farms in Canada.

MD

If there are additional hazards on your farm that present a food safety or animal health risk, these hazards need to be addressed and minimized, even if they are not mentioned in this manual.

1.3 Provincial and Federal Government Regulations

CFC's OFFSP manual outlines the minimum mandatory requirements necessary for certification on the program.

Legislation and regulations exist at both the provincial and federal government levels that also impact the production of chicken. For example, there are provincial regulations on mortality management, biosecurity, manure management and medication usage.

OFFSP does not supersede these requirements – they also need to be adhered to but only the stipulated requirements in this manual impact OFFSP certification.

2

CONTROLLING ACCESS TO THE FARM



Infectious agents (viruses, bacteria, fungi and parasites) can attack your chickens. People, pets, birds, rodents, and other animals can all be carriers. They can reduce your returns and they can threaten consumer confidence in your product.

Controlling biosecurity on the farm and limiting what comes into contact with your flock is the first line of defense in reducing the risk of pathogens and impacting food safety.

MD

You must create two zones of protection on your farm:

- » A Controlled Access Zone (CAZ) around the outside of the barn(s).
- » A Restricted Area (RA) that includes the inside of the barn where the birds are actually located along with any other part of the barn that the farmer has included as part of the RA.

This doubles the safety of your flock: once the zones are in place, make sure people respect them. Insist that they follow your rules to the letter.

MD

Each farm must design/draw a diagram to indicate the location of the CAZ and the RA. This diagram needs to include the barn and entry room, the layout of the property including roadways, feed bins, manure storage, visitor parking area, and a clear distinction of where the two control zones are located. This diagram will help to educate workers and visitors about the different zones on the farm.

2.1 Creating a Controlled Access Zone (CAZ)

A Controlled Access Zone (CAZ) will help you break the cycle of contact between the outside environment and your birds. This reduces the risk of bacterial and disease transfer to your flock.

Limit access to the facilities inside this zone. You should only let people enter who are essential for an effective operation. Discourage visitors and keep them to a minimum. No livestock should be permitted inside the CAZ.

MD

The perimeter of the CAZ must include the barn and feed tanks as well as any utilities (e.g. propane, fuel, hydro meters) that are in close proximity to the barn. Manure storage areas must be outside the CAZ.

While there may be a larger area on the farm surrounding the barns where people and vehicle access is limited, the CAZ is the designated area around the barn that must be kept maintained (e.g. grass cut, etc.) and free of rodent attractants (e.g. firewood piles).

HR

The layout of your farm site and the location of your barns will have a big influence on how you design your CAZ. Within the limits your site sets, it is highly recommended that the zone be at least 15 meters (15 m) around each barn (manure storage areas must be outside of the zone).

MD

On the farm, you must clearly identify the access/entry points (i.e. roadways) to the CAZ by a visible sign or physical barrier so that people entering the farm know where they are not allowed to have access.

If possible, put up a physical barrier such as a fence or gate. When using a sign, it should read “Biosecurity in Effect”, “Visitors report to house”, a phone number to call, or wording to that effect to warn people that only necessary entry is permitted.

Visitors who are going to visit the domestic residence and have no connection with chicken production on the farm still represent a risk, however limited. It would be ideal to design the CAZ so that they could reach the domestic residence without the need to pass through the CAZ.

A) People Accessing the CAZ

Everyone who enters the CAZ (farm workers and any necessary visitors) should all follow the same rules.

MD

Suppliers (e.g. feed truck drivers) must not enter the barn or barn workroom unless access is absolutely necessary. If it is necessary, the strictest biosecurity measures must be followed to ensure the cycle of disease is broken.

To reduce the need for suppliers to enter the barn, farmers can use a mailbox placed outside of the barn entrance for suppliers to leave product samples or paperwork.

B) Vehicles Accessing the CAZ

Only allow essential vehicles to enter the CAZ. All unnecessary traffic into the CAZ should be restricted. Clearly, vehicles delivering essential supplies such as fuel, litter, feed, chicks or other materials have to enter the CAZ. Similarly, those transporting birds or manure from the barn(s) may enter. You should not allow any other vehicles inside the CAZ.

HR

To help with this restriction, a visitor's parking area for non-essential visitors should exist outside the CAZ.

You should insist that vehicles coming from suppliers (i.e. fuel, electrical, bedding) that do not have a HACCP program that covers on-farm biosecurity follow your biosecurity codes of operation. For suppliers with a HACCP program (i.e. feed mills and hatcheries), you should insist that they follow their own codes of practice. Ask your suppliers and processor what practices their employees have been told to follow to ensure they meet your biosecurity codes.

Ideally, vehicles will be cleaned and disinfected prior to entering the CAZ at the access point. The high-risk areas are wheels and wheel-wells and any part of the vehicle which has been exposed to a poultry operation. In addition, the inside foot rest area should also be included within the cleaning program when the driver or passengers have been to other sites with poultry.

Additional biosecurity measures that can be implemented in the CAZ include:

- » provide service personnel with the farm diagram prior to their farm visit to make them aware of where the CAZ and RA are located
- » ask that service providers drive slowly while near the barns to minimize dust
- » request that hatcheries and catching crews provide a documented biosecurity protocol prior to entering the RA
- » a facility at the access point(s) that provides for the cleaning and disinfection of equipment and personnel (e.g. vehicle wheels)
- » only allowing access/exit through a visually defined access point
- » wearing CAZ-specific boots and clothing or the use of disposable coveralls and booties
- » requiring suppliers (e.g. hatchery, feed mill, bedding, etc.) to sign off that they understand and are willing to comply with your farm's biosecurity measures

2.2 Setting Up the Restricted Area (RA) Inside the Barn

The goal of the Restricted Area (RA) inside the barn is the same as for the CAZ. You want to reduce the chance that any potential carrier of infectious agents will come into contact with your flock. This includes people, animals and birds.

MD

Farmers must post signs at the farm to warn people that entrance to the barn area is restricted. The signs should be easy to read and must be posted at the barn entrance.

- » The signs should read “No Entry, Biosecurity in Effect”, “Do Not Enter, Permission Required Past This Point”, or have wording with a similar meaning.

Barn doors and other entrances to the RA should be locked at all times to restrict access into the barn.

MD

Barn doors and other entrances to the RA must be kept locked when farm workers are not able to supervise the access to the barn.

Inside the buildings’ workroom or entry, establish a barrier that people must cross to enter the RA. A step-over or some other physical barrier must be used to maintain separation between the CAZ and the RA by establishing a designated area for farm workers and visitors to change footwear and/or coveralls, etc. At the very least, it should be a clearly identified line. This barrier must be effective to ensure that there is no cross-contamination by way of footwear or feet between the CAZ and the RA.

- » When designing this barrier, remember that the space where the barrier is must allow enough room on the one side for people to take off their outside gear (boots, etc.) and enough room on the other side for people to put on their gear for the RA (e.g. boots, coveralls, etc.).
- » For direct access barns (i.e. where there is no anteroom or workroom), farmers must either have a physical barrier when entering the barn to separate the flock from the footwear change area (this area must still allow for appropriate footwear change that prevents contamination between inside and outside footwear) or have a sealable container (e.g. plastic bin) outside the barn entrance either affixed to the barn or on the ground for outdoor footwear.

In situations where chickens are being raised in the same barn with livestock other than poultry, the area being used to raise chickens must be designated as its own RA. As such, designated boots are required for this RA.

HR

A physical barrier (e.g. bench, 2’x 4’ stepover attached to the wall or on blocks) should be in place to separate the CAZ and the RA. The barrier should be placed in a way that it fully separates the RA from the CAZ (i.e. no space around the barrier to be able to bypass it).

A) People Accessing the RA

Visitors or service personnel should not be allowed into the RA if they have recently been in contact with a diseased flock, after the barn has been cleaned and disinfected or when there are birds in the barn, unless emergency situations require that service personnel access the RA.

MD

All visitors (e.g. veterinarians and suppliers) accessing the RA inside the barn must complete the visitors’ log book containing date, name and previous poultry contact in the last 24 hours. For the previous poultry contact, a yes or no answer is sufficient.

- » A farm may have a log book in each barn or they may have a central log book at the entrance to the CAZ (if it is a central log book then the barn(s) entered must be listed). Catching crews do not need to sign the logbook, however there must be an accessible document indicating the name of the lead catcher, whether that be on the live haul sheets or elsewhere.

MD

Each farmer is responsible for maintaining records to be able to track movements on and off the farm in case of an emergency.

HR

Visitors must be accompanied by farm workers when accessing barns to ensure that biosecurity is respected; alternatively, the farm manager must be confident that the visitor has been educated on the farm's biosecurity protocol.

MD

You must only allow visitors or service personnel who have adhered to the following procedures to be allowed into the barn:

(1) Footwear:

- » Farm workers and all people entering the RA, after the barn has been cleaned and/or disinfected and during the grow-out period up to the point the entire flock is shipped from the barn, must take precautions not to carry pathogens from outside the barn into the barn by way of their boots. This can be accomplished by having a dedicated pair of boots at each barn or by another acceptable means (e.g. plastic/disposable boots). This footwear change is to occur at the barrier between the CAZ and the RA. A footbath is not an acceptable method of decreasing the risk of contamination.
- » Footbaths can be used to disinfect outside footwear prior to entering the CAZ inside the barn, but footbaths cannot replace a change of footwear when moving from the CAZ to the RA. If not changed daily, or when contaminated with organic material, foot baths are not an effective barrier to bacteria or disease. With repeated use, foot baths have been proven to provide a perfect breeding environment for bacteria. Dirty foot baths ensure that bacteria will spread from the environment outside to inside the barn.
- » For visitors, a supply of disposable boots, or boots that can be cleaned after each use can be stored in a central location on the farm.
- » When bedding is delivered to the barn, and workers have to be in and out of the barn, the employees should disinfect their footwear prior to starting the job.

HR

(2) Clothing:

MD

- » If any clothing used by farm workers in the RA will also be worn off of the premises, then they can only be worn on agricultural premises under common management.

HR

Farm workers are recommended to wear either: (1) barn-specific clothing/coveralls when crossing the barrier from the CAZ to the RA, or (2) premises-specific clothing that is not to be worn off of that premises.

Clothing worn in the RA can act as a vector of disease. RA clothing is not to be worn in public places (e.g. grocery/hardware stores) or on other poultry farms as diseases can be spread from your farm to other farms or from other farms to your farm.

MD

- » Anyone other than farm workers who are accessing the RA when birds are in the barn and prior to the shipment of birds must wear premises-specific coveralls when entering the farm premises or when crossing the barrier from the CAZ to the RA.
- » Each farm must have coveralls/clothing and boots/disposable boot covers available as a back-up for visitors that do not bring their own, or for emergency situations.

HR

- » During partial catching at flock thinning, the catchers should wear premises-specific coveralls or clothes and, if possible, the catching schedule should be organized so that the barn being thinned is the first barn of the catching shift.

(3) Hand-washing:

Adequate hand sanitization is best accomplished by hand washing with soap and water, or if hands are suitably clean, a hand sanitizer or a pre-packaged alcohol hand wipe.

MD

- » Visitors must wash or sanitize their hands prior to entry and upon exit from the RA, or wear barn-specific gloves when inside the RA.

HR

- » Farm workers should wash or sanitize their hands prior to entry and exit from the RA, or wear barn specific gloves when inside the RA.

MD

- » Farm workers must wash their hands or use a hand sanitizer following contact with mortalities, unless gloves have been used to collect mortalities. Hand washing or sanitizer use can occur at any location on the premises and is to be performed as soon as possible after handling mortalities.

(4) Contact with other birds:

MD

If a farmer or farm worker is involved in, or comes in contact with, another poultry operation which is not under common management, the individual must have washed their hands, changed into barn-specific boots and changed into clean clothes/coveralls prior to accessing the RA.

- » Additional biosecurity measures to consider include: (1) showering in between operations, (2) changing footwear and clothing before entering the CAZ, (3) washing hands before entering the CAZ and (4) requiring a specific amount of downtime between farms.

HR

- » There should be no domestic waterfowl on the farm premises. Farm workers or owners should never keep birds as pets.

MD

- » Domestic waterfowl must not be permitted within the CAZ and must be fenced in so they cannot access the CAZ.

B) Farm Equipment and the RA

Dirty equipment can cross-contaminate or re-contaminate the barn.

MD

- » When equipment is brought into the RA after the barn has been cleaned or during the grow-out period, it must be free of visible organic matter. Any equipment brought from another premises not under common management must be cleaned and disinfected before entering the RA.

HR

- » Farmers should consider cleaning and disinfecting any equipment prior to bringing it into the RA to reduce the chance of contamination.

C) Flock Movement

All-in/all-out scheduling is the ideal situation, keeping the completion time of poultry arrival and shipment as short as possible. To qualify as an “all-in/all-out” flock, all birds should be placed within seven days and all birds should be shipped within seven days.

When “all-in/all-out” scheduling is not used, the risk of introducing pathogens to a specific barn or to other barns on the same premises can be increased. In these cases, there are biosecurity measures that should be implemented at both the barn and premises levels:

- » additional biosecurity measures can be applied between barns to enhance barn segregation
- » traffic flow can be regulated in direction and/or timing to provide the best order of operation,

reduce possible cross contamination and proximity to live poultry (this traffic flow applies to both pedestrian and vehicular traffic)

- » particular attention can be given to manure handling and route of travel to avoid cross contamination to other barns still in production
- » limiting movement of equipment between barns and cleaning and disinfecting all equipment between barns if used in more than one barn

HR

Some farms will have a flow-through barn or have a multi-stage grow-out operation within the same RA. Flow-through barns with different aged birds need to be managed effectively to ensure disease outbreaks are controlled. In this case, you should either insist that the farm workers move from the youngest to the oldest birds as part of their normal routine or treat the different grow-out areas as if they were different barns on the same property and use separate biosecurity protocols for each production area.

MD

In a flow through barn you must ensure that:

- » All cleaning and disinfecting procedures and rest periods are adhered to in each section, as they are described in this manual
- » Biosecurity measures are in place to avoid contamination between different aged birds
- » In-barn procedures limit the spread and ability for cross-contamination of pathogens

2.3 Pest Control

An effective pest control program will have a significant impact on reducing bacterial contamination and food safety risks. For example, darkling beetles and flies are reservoirs for pathogenic bacteria (e.g. *Salmonella*, *E.coli* and *Campylobacter*) and viruses (e.g. bursal disease) and can easily transmit these to your birds.

These pests can influence your flocks' productivity, your returns, and the food safety of the final product.

MD

You must have a documented and effective pest control program for wild birds, rodents and insects and never allow pets in the barns. If there is evidence of pest presence around or inside the work area in the CAZ, a pest control measure must be used and renewed/replaced regularly to be in good working order.

An integrated pest control program makes the most effective use of the environment, management practices, facilities and direct control methods to prevent the introduction and spread of contagious disease organisms by pests.

Keep the work areas neat and tidy to help eliminate breeding areas for insects and rodents.

HR

You should avoid storing unnecessary materials within the work area. Try to keep storage areas outside of the barn(s) to keep the risk of contamination as low as possible.

MD

As a minimum standard, you must follow these maintenance routines:

- » Patch gaps under the eaves to prevent birds from nesting or entering the barn.
- » Air inlets for the barn and/or attic require a barrier such as screens to prevent wild birds from accessing the barn. Screens must deny access into the barn but still allow for normal function of the inlets in winter weather conditions (snow, ice, frost etc.). All damaged barriers must be repaired immediately.
- » Cut weeds and grass regularly within the CAZ. This makes the area around the barn less attractive to rodents, as would a strip of gravel or crushed rock.
- » Keep the area around the barn clean, tidy and free of general rubbish.

- » Fill or level any low areas where water could stagnate. This removes breeding areas for insects that could carry bacteria.
- » Clean up feed spilled below bins or augers immediately.
- » Maintain barn walls, roofs and doors in good condition. Farmers are responsible to ensure an effective barrier against rodents. Any holes where rodents can gain entry into the barn need to be repaired.
- » When using rodent traps, position the bait stations and traps close to barn walls, at entry points around the barn perimeter and inside the service area. Rodent bait should be renewed or replaced regularly according to the manufacturer's instructions.

2.4 New Barn Construction

Building a new barn is an excellent opportunity to ensure high levels of biosecurity, protecting both your birds and your investment.

- » New barns must be constructed with a concrete or similar non-porous surface on the ground floor (i.e. no dirt floors) for sanitation and ease of cleaning.
- » Consider including:
 - A designated parking area outside the CAZ (with a sign) for visitors
 - The installation of a physical barrier inside the anteroom with sufficient space to change when crossing from the CAZ to the RA
 - A two-feed bin system to more easily manage medicated feed
 - Gravel surrounding the barn to minimize rodent entry



3

FEED



Feed is a critical input that needs to be properly managed to reduce the risk of biological (e.g. *Salmonella*) and chemical (e.g. medications) hazards.

Feed and feed ingredients must be properly stored and monitored to be kept free from contamination. This includes proper storage bins and feed manufacturing. For example, pelleting can help eliminate certain bacteria such as *Salmonella* if sufficient temperature is applied to the feed during the pelleting process.

For medications, good production practices include handling medicated feed properly and minimizing the cross-contamination between medicated and non-medicated feed such that food safety will not be negatively impacted.

3.1 Feed Handling (Critical Control Point #1)

Feed handling has been identified as a Critical Control Point for the OFFSP – this is a key step in the production cycle where control is essential to prevent or eliminate a food safety hazard to reduce it to an acceptable level.

From a food safety perspective, the feed and feed ingredients you receive are very important. The feed handling protocol is intended to reduce the potential for cross-contamination between medicated and non-medicated feeds as well as to reduce the use of contaminated feeds. The following describes measures to reduce the potential for a food safety hazard:

MD

Each load of feed or feed ingredient must be stored in clearly-identified closed bins or in tanks to prevent chemical and microbial contamination. This prevents moisture build-up and keeps rodents and wild birds away from your chickens' ration.

- » Feed bins should be constructed of materials that do not let feed build-up on the inside or outside surfaces.
- » Store feeding trays and the paper you use with new flocks in a clean, dry and secure area to prevent microbial contamination, moisture build-up and contamination by rodents, wild birds, or insects.

MD

Each bill of lading/invoice or label must be checked for medications with withdrawal periods.

An inspection of all feed and feed ingredients delivered to the farm must occur to check if the proper feed has been delivered and that there are no visible signs of mold or contamination.

Keep a record of the inspection, the bin into which the feed was delivered, and the bill of lading/invoice. The "Feed" section of the Flock-Specific Form or similar, must be completed for each flock.

During the delivery and inspection, if a deviation occurs (e.g. the wrong feed is delivered or the feed contains the wrong medication), then actions to reduce the potential risks are to be taken.

Examples of these actions could include:

- » Refusing delivery of the feed prior to being blown into the feed bins.
- » Removing the feed from the feeders. Record the date the feed was removed in the Deviation Chart on the Flock-Specific Record Form.
- » Contacting the catching crew and/or processor to reschedule their activities. Record the contact contact in the Deviation Chart on the Flock-Specific Record Form.
- » Re-dedicating the feed to an appropriate flock. Discuss the deviation with the supplier.

3.2 Purchasing and Manufacturing Feed

All feeds and feed ingredients that are manufactured, sold or imported into Canada must be safe, effective and labelled as required by the Feeds Act and Regulations as well as the Health of Animals Act and Regulations.

CFC's OFFSP focusses on food safety requirements; as a result, not all federally mandated feed related requirements are addressed in this manual. Additionally, feed mills that sell feeds are considered commercial feed mills and are subject to different regulations.

A) Purchasing Feed from Feed Mills

HR

Over and above the Feeds Act and Regulations, feed should be purchased from a feed mill that has also implemented a HACCP food safety program (which includes 3rd party audits), such as the Animal Nutrition Association of Canada's (ANAC) FeedAssure program, or similar program.

Confirmation of the feed mill food safety program can be provided on the invoice or in a separate letter. A list of FeedAssure certified facilities can be found on the following website: **www.feedassure.com**

MD

If you add an ingredient (e.g. wheat) to complete or supplement your commercial feed, a sample must be taken. This can be a sample of the ingredient (e.g. whole grain) or the final feed.

- » The sample must be kept for 2 weeks after the flock has been marketed. Samples need only be tested if necessary.
- » A record of the addition of the ingredient must be maintained on the Flock Specific Record Form, or similar.

Adding an ingredient to a medicated commercial feed is considered on-farm feed mixing under the Feeds Act and Regulations; as such, be aware that additional requirements are needed to be compliant with the Feeds Regulations.

B) Mixing Medicated Feed On-Farm (Critical Control Point #2)

Mixing medicated feed on-farm has been identified as a Critical Control Point for the OFFSP – this is a key step in the production cycle where control is essential to prevent or eliminate a food safety hazard to reduce it to an acceptable level.

Measures are needed to control the risk associated with handling medicated products, which include:

- (1) weighing the correct quantity of medication
- (2) proper mixing of medications in the feed
- (3) preventing cross contamination of medications between batches of feed by flushing, sequencing or physical clean-out; and,
- (4) adherence to withdrawal times if required.

MD

When mixing medicated feed on-farm:

- » Develop a control program for your feed mixing operation. Record your control program in the SOP, or similar.
- » Medications in livestock feeds must be used according to the approvals dictated by Health Canada and the conditions outlined in the Compendium of Medicating Ingredient Brochures (CMIB) or a veterinarian's prescription. Maintain veterinary prescriptions and record the medications used on the Flock-Specific Record Form.
- » A sample must be taken of each ration. This can be a sample of the ingredients or the final feed.
 - The sample must be kept for 2 weeks after the flock has been marketed. Samples need only be tested if necessary.
- » A feed mixing record must be maintained. This includes the types of feed manufactured, the sequential order of feed manufactured, the medications used, and any flushing or physical cleaning performed.

- Record this on the On-Farm Feed Mixing Record, or similar.
- » Sequence, flush or physically clean the mixing equipment after manufacturing medicated feed to prevent cross contamination.
- For additional information on sequencing, see CFIA's website: **Medication Sequencing Guideline for Management of Drug Carryover**

In addition, if mixing any medicated feed on-farm with a withdrawal period:

- » Perform mixer efficiency tests at a minimum of every 3 years.
 - The coefficient of variation for the test batch is to be no greater than 15% for complete feeds.
 - Record these tests in the SOP, or similar, and maintain the laboratory results on file.
- » Perform scale calibration tests at a minimum of every year.
 - Scales, which have been in operation, should have a maintenance tolerance of 0.2%.
 - Metering device will be deemed to be accurate if the variation from the true weight is within 5% of the target output or the deviation does not exceed the amount delivered by one increment change in the meter setting.
 - Record these tests in the SOP, or similar, and maintain any test reports on file.

If a deviation occurs during on-farm feed mixing (e.g. using the wrong medication or quantity of medication), then actions need to be taken to reduce the potential risks.

Examples of these actions could include:

- » Removing feed (flushing or cleaning) from the feeding system. Record the date and time of removal in the Deviation Chart on the Flock-Specific Record Form.
- » Contacting the catching crew and/or processor to reschedule their activities. Record this activity in the Deviation Chart on the Flock-Specific Record Form.
- » Discussing the deviation with farm workers regarding the source of the problem and taking appropriate corrective measures to prevent a re-occurrence. Record this information in the Deviation chart on the Flock-Specific Record form.

Additional information on mixer efficiency testing, calibration of scales and equipment clean-out/sequencing procedures can be found on the CFIA website, in the Livestock Feeds section under **Guidance Documents**.

- **Mixer performance testing procedures**
- **Scale and metering device calibration procedures**
- **Compendium of Medicating Ingredient Brochures**

3.3 Medicated Feed Handling (Critical Control Point #3)

Medicated feed handling has been identified as a Critical Control Point for the OFFSP – this is a key step in the production cycle where control is essential to prevent or eliminate a food safety hazard or to reduce it to an acceptable level.

When medications are used in feed, good production practices must be followed to reduce food safety risks.

- » Make sure that the correct medications are being used at the proper time during grow-out. Check to ensure the withdrawal time is appropriate for the flock.
- » Follow the CMIB or the veterinary prescription.
- » Record medication use on the Flock-Specific Record Form (or similar) and maintain the feed invoices/labels as a record of the duration of medication use.

- » After a feed with a medication withdrawal time is used during the finishing period, feed in the feed lines must be minimized.

When a medicated feed with a withdrawal period is used at any time throughout the grow-out, control methods must be used to ensure that there is no cross-contamination between the medicated feed with a withdrawal period and the next feed that is used (i.e. either a non-medicated feed or a medicated feed that does not have a withdrawal period).

To reduce cross-contamination, the following control measures must be used:

- » For single feed bin systems, the medicated feed with a withdrawal period must be knocked down to the bottom of the bin prior to the next delivery of feed. This can be done by using a rubber mallet or similar to knock the sides of the feed bin.
- » Double bin systems offer the ability for greater control. Having two bins provides the ability to empty the feed bin containing the medicated feed with a withdrawal period (i.e. nothing sitting in the bottom/cone) and the auger before switching to the next type of feed. Examples of how this can be done include: not blending the two bins, by running the auger and the feed bin containing medicated feed with a withdrawal period empty prior to starting the next feed bin or by ensuring the bin containing medicated feed with a withdrawal period is closed off.

For either system, a record must be kept (on the Flock-Specific Record Form or similar) of when the sides of the feed bin were knocked down or when the switch in a double feed bin system was made between the medicated feed and the feed without a withdrawal period.

If a deviation occurs (e.g. the wrong medication or the wrong inclusion rate has been used), then actions to reduce the potential risks must be taken.

Examples of these actions could include:

- » Removing the feed from the feeders. Record the date the feed was removed in the Deviation Chart on the Flock-Specific Record Form.
- » Contacting the catching crew and/or processor to reschedule their activities. Record the contact removed in the Deviation Chart on the Flock-Specific Record Form.
- » Re-dedicating the feed to an appropriate flock. Discuss the deviation with the supplier.

3.4 Farm to Farm Transfer

Leftover feed can either be sent back to the feed mill for reprocessing where possible, stored until the next time this type of feed is required or transferred to another farmer. A food safety risk associated with leftover feed is that there may unknowingly be medications with a withdrawal period in the feed – therefore there is the potential for medication residues.

Feed transfers can occur on the same farm or between two farmers when a control program is used to ensure the feed does not present a food safety risk. All feed transfers between two different farmers must follow the protocol listed below. For transfers on the same farm or between farms under common management, only transfers of feed containing a medication with a withdrawal period need to follow the protocol below.

- » Farmers must keep the delivery slip for each feed delivered.
- » Keep a log of transferred feed that includes the items listed in the example record below.
- » Take a sample of the feed before it is transferred to the receiving bin. This sample must be kept until at least 14 days after the flock has been shipped.
- » Only transfer feed from the feed bin; no feed from either inside the barn or outside of the feed bin can be transferred.

- » Be able to provide documentation that cleaning of the original feed bin and the method of transportation followed the protocol listed in this manual.

Farmers need to have complete traceability of their feed and be able to demonstrate what was fed to the flock (e.g. feed slip, feed transfer log, feed samples).

Example of record:

Date Feed Moved	Jan. 23/2021
Original Farm Name and Bin #	Bob's Poultry Farm, Bin #3
Destination Farm Name and Bin #	Smith Farms, Bin #1
List any medications with withdrawal periods used in the flock (list withdrawal times)	None
Method of Transport	Truck #1
Sample Taken	✓
Cross-contamination prevention measures used at the original bin	*Inspected after the last flock, *Two-bin system: emptied before new feed delivered

To minimize the quantity of leftover feed, it is suggested that:

- » The feed inventory be closely monitored
- » The amount of feed ordered be calculated based on the flocks' expected consumption

By minimizing the amount of leftover feed, the remaining feed can either be bagged or be stored on-farm in separate bins.

The other alternative is the installation of a second bin. This not only has the advantage of solving the problem of leftover feed and maintaining a certain quantity of feed on-farm to avoid shortages but also simplifies the transition from one type of feed to another. The latter approach constitutes, in the HACCP environment, an additional control to ensure adequate withdrawal periods are respected when certain medicated feeds are used.

3.5 Feed Sampling

- » A sample of feed must be kept, either at the feed mill or at the farm, for each load of feed that is used during the grow-out.
- » If samples are being kept at the feed mill and the feed mill is not certified on the FeedAssure program, then the fact that the feed mill maintains feed samples must be indicated in a letter of assurance from the feed mill (feed mills certified on the FeedAssure program are required to maintain feed samples for a minimum of six weeks).
- » For farmers that add an ingredient to a finished feed, remember that a sample of the added ingredient must also be maintained at the farm.
- » Samples that are maintained on the farm (~500g is sufficient) need to be inspected, a record needs to be kept that the sample was taken (the "Feed" section on the Flock-Specific Record Form) and the sample must be stored in a closed container in a cool and dry location until 14 days after the birds have been shipped to the processing plant. The sample must be identified with, at minimum, the date, feed description and barn number.

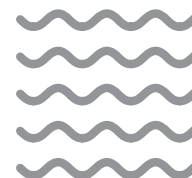
Over and above the requirements of this program, feed samples can be maintained from each load delivered to the farm for farmers who want to ensure the quality of their feed for their own quality assurance program.

Farmers should be aware that, depending on the type of ingredients contained in their feed, feed samples may discolour over time because of oxidation. This discolouration is not indicative of a sub-standard quality level of the feed delivered.



4

WATER



Water quality is extremely important for the health of your birds and the food safety of the product, as the entire water system (water source, storage, water lines and treatment systems) can be a source of infectious pathogens.

Pay particular attention to the water lines as biofilms can easily build-up due to the quality of the water being used, and the treatment (e.g. vitamins, supplements, etc.) that are administered via the water. A biofilm is a layer of microorganisms that forms onto surfaces such as the inside of water pipes and is responsible for a wide range of water quality issues. Biofilms can also be a food safety risk if the microorganisms are of public health significance (e.g. *Salmonella spp.*, *Campylobacter spp.*, etc.) as the bacterial cells from the biofilm can break off and be released into the water.

Water quality issues can impact your flock, food safety and productivity. Fortunately, prevention and control measures can minimize, if not eliminate, this risk.

4.1 Water Systems

Sources of water that are susceptible to pathogen contamination include bodies of surface water (e.g. reservoirs, ponds, lakes and rivers) and rainwater collection systems.

MD

Surface water systems pose a significantly higher risk for the introduction of infectious organisms and substances and must only be used with an ongoing water treatment program throughout the grow-out.

A closed watering system (e.g. nipple drinkers) is preferable to an open system (e.g. bell type or trough). Closed systems provide an environment that is less hospitable to bacterial growth.

MD

A visual check (e.g. cloudiness and discoloration) of the water quality must be performed on a minimum weekly basis to ensure a continuous supply of quality water. This visual check is to occur inside the barn by using a cup to collect water from the water line or by performing a check in clear riser tubes or water filters.

Water supplied through open drinkers must be checked for the presence of slime and mold on a daily basis.

These activities are to be recorded on the Flock-Specific Record Form, or similar.

4.2 Cleaning and Disinfecting Water Lines

The inside of water lines presents an environment for biofilm build-up and bacterial growth. Particular attention needs to be paid to these areas as part of your food safety practices.

MD

You must flush your water lines under full water pressure in between flocks.

Water lines should be flushed under full pressure on a minimum weekly basis to inhibit the growth of bacteria and to prevent build-up. In addition, flushing is recommended after any addition to the lines (medications, etc.) to prevent residues and biofilm build-up.

MD

To prevent issues of biofilm and water quality, water must either be cleaned or disinfected during the grow-out or water lines must be cleaned or disinfected in between flocks.

- » There are several methods that can be used to treat water; examples include chemical products (e.g. chlorine, acids, iodine, peroxide, etc.), UV light and reverse osmosis.

MD

- » All water treatment methods (e.g. chlorination, iodine, ozone, UV light, reverse osmosis, etc.) must be used and adjusted as per the manufacturer recommendations. For example:
 - Bulbs in UV light system need to be changed as per the manufacturer instructions.
 - Water filters need to be changed and maintenance performed on reverse osmosis units as per the manufacturer instructions.
 - When using a disinfectant, check the manufacturers' recommendation to determine if a cleaner should be used prior to the disinfectant.

MD

- » All water treatment methods and the verifications must be recorded on the Flock-Specific Record Form.
- » For guidance on cleaning and disinfecting water lines in between flocks, view the **water line video** on CFC's **chickenfarmers.ca** website. The recommended cleaning procedure is as follows:
 - (1) Acidify the water to a pH of 4 (let stand for 8–24 hours) – this helps to dissolve the mineral complexes in the biofilm and the water line.
 - (2) Flush the water lines with clean water.
 - (3) Add a cleaning solution and let it stand as per label instructions – this step disrupts the organic component of the biofilm.
 - (4) Flush the water lines with clean water.
 - (5) Add a disinfectant and let stand as per label recommendations – this step is to kill any remaining bacteria, which may have not been killed by the cleaning solution.
 - (6) Flush the water lines with clean water.

Note: Between each of these steps, walk the line and trigger the nipples with a broom to ensure the whole system is exposed to the treatment.

MD

If chemical products are being used to clean or sanitize the water during the grow-out, then the product level in the water must be verified at the end of the drinking line twice during the grow-out period.

- » Verification of the product concentration can be performed by using chemical test strips or kits, Oxygen-Reduction Potential (ORP) meters or other recommended test methods.
- » Chlorine test strips must measure free chlorine (not total chlorine) in order to provide an accurate effectiveness reading. When using these strips, the test result must indicate that there remains free chlorine at the furthest point from the water source, thereby indicating that active product is still available.
- » Farmers using a chlorinated municipal water source do not need to perform verification tests, unless additional chemical product is added at the farm level during the grow-out. Even when using municipal water sources, the water lines must be cleaned/disinfected either in between flocks or during the grow-out.

The effectiveness of disinfectants is severely reduced in the presence of organic matter. In addition, farmers need to consider the pH level of the water when using several cleaning products. For example, the effectiveness of chlorine is directly related to water pH; a pH of approximately 6.5 to 7 is optimal as the effectiveness of chlorine is reduced significantly at higher pH levels.

One way to verify chemical product effectiveness is by using an ORP meter; these meters measure the oxidizing activity in the water. ORP meters should be used according to manufacturer instructions (literature reports indicate an ORP reading in poultry barns should be between 700-750 mV) and should be calibrated as per manufacturer guidelines using free chlorine test strips.

The following tables can be used as guidelines for cleaning and disinfecting water lines. Always use products according to label instructions.

Table 4.1 Cleaning and Disinfecting between Flocks

	Proportioner (1 oz per gallon)	Bulk Tank
Cleaners		
Citric Acid	4-5 packs* per gallon of water or per 3.8 L of water	4-5 packs* in 128 gal of water or per 485 L of water
Vinegar	No dilution needed	1 gal in 128 gal or 3.8 L in 485 L of water
Disinfectants		
Chlorine 5%	12 oz per gallon of water or 940 mL in 10 L of water	12 oz in 128 gal of water or 880 mL in 1200 L of water
Hydrogen Peroxide (35%)	4 oz per gallon of water or 310 mL in 10 L of water	4 oz in 128 gal of water or 292 mL in 1200 L of water

* 205 g/pack; do not use when birds are present.

Table 4.2 Cleaning and Sanitizing when Birds are Present¹

	Proportioner (1 oz per gallon)	Bulk Tank
Cleaners		
Citric Acid	200 g per gal of water or 500 g in 9 L of water	200 g in 128 gal of water or 500 g in 1200 L of water
Vinegar	0.5 gal per gal of water or 500 mL per L of water	0.5 gal in 128 gal of water or 5 L in 1250 L of water
Sanitizers		
Peroxide 35%	0.5-1.0 oz per gallon of water or 40-80 mL in 10 L of water	0.5-1.0 oz per 128 gallon of water or 37-73 mL in 1200 L of water
Chlorine 12%	0.5 oz per gallon of water or 40 mL in 10 L of water	0.5 oz per 128 gallon of water or 30 mL in 1000 L of water
Iodine 18.5%	12 oz per gallon of water or 0.95 L per 10 L of water	12 oz per 128 gallon of water or 0.915 L in 1250 L of water
Chlorine 5%	1.5-5 oz per gallon of water or 117-390 mL in 10 L of water	1.5-5 oz per 128 gallon of water or 110-366 mL in 1200 L of water

¹These concentrations are safe for birds to consume but continue to monitor flock performance when using these recommendations.

These products are only examples and do not limit the use of the other products.

Testing strips and testing kits are available from multiple suppliers to test the concentration of peroxide, chlorine, iodine and citric acid in the water lines.

4.3 Bacteriological and Chemical Analysis

The intent of performing a water analysis is to evaluate the water quality supplied to the birds. There are several opportunities for contamination once water enters the barns and water lines, such as biofilms as these can cause food safety and animal health issues. In addition, the water temperature in the water lines is usually the same as the barn temperature, which contributes to bacterial growth.

As a minimum standard you must:

- » Test all water sources used for chicken production annually. Analysis must be performed at provincial or municipal public health laboratories or at private laboratories recognized by provincial health authorities.
- » The water sample must be taken inside the grow-out area at the nipples/outlet pipe.



One sample is required for each water source. In cases where a water source supplies more than one barn, water samples should be taken in different barns in subsequent years.

For guidance on how to take a water sample, view the water sampling video on CFC's chickenfarmers.ca website. The following is a suggested method for sampling:

- (1) Wear disposable gloves.
- (2) Label the plastic vessel and do not remove the lid.
- (3) Clean the nipple/pipe/outlet with an alcohol wipe.
- (4) Remove the nipple/outlet and let the water run into a bucket for 1-2 minutes. This will remove any stagnant water and debris that might contaminate the sample.
- (5) Wearing the disposable gloves, remove the lid of the vessel and let the stream of water run inside the sample and completely fill it.
- (6) Caution: Do not touch the inside of the lid, the opening of the vessel or put the lid down. If you do so, discard and take another sample.
- (7) Seal the vessel and send to the laboratory as soon as possible. The most accurate results are obtained within 6 hours of sampling. Refrigerate overnight if necessary.

Bacteriological analysis:

- » A bacteriological analysis must be performed on an annual basis. The analysis must include an enumeration of total coliforms per 100 mL and faecal coliforms (*E.coli*).

Minimum acceptable bacteriological standards:

- » The objective is no coliforms per 100 mL of water and less than 500 organisms per mL. However, water may be considered bacteriologically acceptable provided the following tolerances are not exceeded:
 - no sample contains more than 10 total coliforms per 100 mL of water
 - none of the coliform organisms detected are faecal coliforms

A water test with acceptable results must be available prior to placement for new barns if using a water source that has not previously been tested in the last year. The water sampling location is recommended to be from within the barn if possible but can be from another location that draws water from the same water source.

If you find contamination or bacteria, take immediate actions to resolve the problem. Consult with a competent authority or a regulator about what you must do to correct the problem. Water tests demonstrating acceptable bacteriological levels need to be taken to prove the corrective actions have solved the problem.

Chemical analysis:

- » The local health authorities should be contacted to check if there is a mandatory requirement for chemical analysis in your area. If you are using a municipal water source, this check does not have to be performed since chemical analysis is carried out at the source.
- » Farmers should consider performing a chemical analysis for water that is not from a municipal source as the chemical components of the water can counteract with the cleaning/disinfecting solutions or medication in the water lines.

MD

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5

BARN CLEANING



To raise quality chickens, it is imperative that you provide your flock with an environment that minimizes the incidence and spread of pathogens (poultry specific diseases and foodborne microorganisms of public health significance).

Controlling for these pathogens not only requires consultation with your veterinarian but also a thorough cleaning protocol that uses a combination of several steps including a blow-down, pressure wash with water, detergent and/or disinfectant, and downtime to break the cycle of contamination.

Detergents, disinfectants and downtime do not work well unless the barn is free of organic material. Therefore, having a protocol in place that is easy to follow will aid in reducing the presence of pathogens on your farm.

5.1 Barn Exteriors and Equipment

MD

You must:

- » Keep the barn exterior and equipment clean; use any method suitable to remove dust build-up as necessary. Pay attention around the windows, doors, feed bin areas and air intakes.
- » Clean (remove build-up), wash and disinfect the fans regularly, when practical. Plan for the ease of cleaning when you are thinking about replacing fans or about beginning new construction.

After each flock:

- » Empty and thoroughly clean the feed bin boots and feeding systems (augers and lines) between flocks. To prevent freezing during inclement weather, run starter feed through the system right after the first delivery of feed before the chicks are placed.
- » Inspect the feed bin for leaks after each flock. The inside and outside of the feed bin and parts of the feeding system outside the barn must be inspected at least once a year for feed caking and rust. If feed caking or rust exists, the proper personnel must be contacted to clean or fix the system. Cleaning can be performed using either high-pressured air, sweeping the inside of the bin or by another suitable method.
- » The inside and outside of the feed bin and parts of the feeding system outside the barn should be inspected for feed caking and rust after each flock when circumstances permit. The feed bin is a critical part in reducing feed contamination and must be kept free of caked feed and/or medicated feed residues.

HR

You should not enter the feed bin at any time. For personal safety, use a safety harness when inspecting the inside of the feed bins and take all safety precautions necessary to avoid an accident.

5.2 Barn Interiors and Equipment

Cleaning the interior of the barn involves several key components that work together to reduce disease and bacterial load.

These include the dry-clean process of removing organic matter, pressure washing with water followed by application of a detergent with a water rinse, and/or disinfectant and downtime (including a dry time to ensure the barn is dried prior to laying down new bedding for the next flock). Each one of these steps plays an important role in breaking the cycle of contamination.

If you have disease challenges in your flock, refer to Section 5.3 below.

Dry Clean:

This includes the removal of manure from inside the barn and removal of all organic matter, through blowing or brushing, from all floors, walls, ceilings, fans and equipment. All rooms within the barn (electrical/office) must be cleaned as thoroughly as possible.

- » Before cleaning the inside of the barn, all repairs to the interior and exterior of the barn should be finished. This will keep animals and birds out and lower the risk of recontamination after cleaning.
- » You should routinely clean workrooms and entryways by removing dust/debris etc., using water and detergent, and sanitizing surfaces. This reduces the risk of contamination and gives farm workers a safe working environment.

Pressure Wash:

Pressure wash the barn with water including the floors, feeders, drinkers, walls, ceilings, fans, drains, any other equipment (including any catching equipment) and barn boots.

- » Warm or cold water can be used to perform the pressure wash, although warm water may take less time to effectively wash the barn.

A common practice in some regions of the country is to leave open a door or other opening to help dry out the barn after it has been washed. In these situations, the opening to the barn should not be left open if the barn is unattended (i.e. someone on the farm premises). As this practice presents an elevated contamination risk, the barn should be disinfected after the doors have been closed.

Detergent and Disinfectant:

Detergents are important in cleaning regimes as they aid in the physical removal of organic material from surfaces, which provides a greater opportunity for a disinfectant (if applied) to reach and destroy microorganisms within or beneath the organic material. Detergents are also used, as a first step, in helping to break down biofilms.

Disinfection is an important control measure in reducing pathogens in a livestock environment. When applied directly onto a surface (following manufacturer labeling) disinfectants can destroy or irreversibly inactivate most pathogenic microorganisms and some viruses.

The disinfection process involves a disinfectant wash or a fumigation of the barn. A disinfectant's ability to inactivate pathogens is significantly increased when used after the barn has been pressure washed with water followed by application of a detergent with a water rinse. Follow all manufacturer label instructions when using a disinfectant and/or detergent.

Being thorough in how the barn is cleaned and disinfected is essential as you can use a highly effective product but if not applied correctly (following manufacturer instructions), then contamination can occur, or the process can be ineffective. Pay special attention to cracks/holes in the walls and floors, and drains/drainage areas as these are risk factors for contamination or recontamination.

Downtime:

A rest period, which includes a dry time, optimizes the cleaning and disinfection protocol. The rest period allows for the destruction of microorganisms which could have survived the detergent/disinfection/fumigation process but are susceptible to natural dehydration/desiccation. Ensuring that surfaces in the barn are dried, for at least 24 hours, prior to introducing new bedding for the next flock has been shown to be effective in lowering bacterial contamination.

The best practice is to allow for a minimum of 14 days between when the flock has been shipped and prior to placement of the new chicks. To be effective, the dry-cleaning and washing/detergent/disinfection needs to take place as soon as the birds are shipped to break the cycle of contamination.

HR

To maximize the effectiveness of the downtime period:

- » All manure should be targeted to be removed from the barn immediately (i.e. within 48 hours) after birds have been shipped.
- » Barn cleaning, as described above, should take place as soon as the litter has been removed in order to maximize the rest period.

A) Every Flock

You must perform a dry-clean of the inside of the barn after each flock.

- » You must remove the litter from inside the barn immediately after shipping. You must plan to have the barn empty prior to the placement of the new flock for the longest possible time to allow for an appropriate downtime.
 - Store the manure far enough away so that no possible contamination to water sources, feed or barns can occur.
 - The further you keep your stockpile from the barn, the better. Ensure that the area between the barn and the storage area after you finish cleaning out the barn is free of manure.
- » Remove all organic material from the floors, walls, ceilings, fans, feeders and drinkers, drains, dedicated barn footwear, and other equipment (including any catching equipment). This can be performed by blowing, brushing or with water if the barn is being washed.
- » All rooms in the barn (i.e. electrical/office) must be cleaned (remove dust/debris, etc.) as thoroughly as possible.
- » All pails and buckets that have been used to collect and/or transport mortalities must be washed and scrubbed (hand scrubbed or pressure washed) with water followed by application of a detergent with a water rinse and/or disinfectant at the end of each flock.
- » All access to the barn (from pests to unauthorized persons) must be minimized after cleaning to avoid recontamination.
- » Water lines must be cleaned or disinfected with a cleaning or disinfecting product between flocks if a cleaning or disinfection program has not been used during the cycle of the flock. It is recommended to use the cleaning and disinfecting procedures as listed in the previous chapter. Use an adequate flush period to protect your watering system.
- » Open drinker systems must be washed with water (hand scrubbed or pressure washed) followed by application of a detergent with a water rinse and/or a disinfectant, and allowed to dry before being used again.
- » Consider applying a pressure wash with water, followed by application of a detergent with a water rinse and/or a disinfectant of the barn after each flock. This would include the feeders, drinkers, floors, walls, ceilings, fans, drains and any other equipment (including any catching equipment) and barn boots.
- » Consider a downtime of 14 days
 - If a downtime of less than 14 days in between shipping and placement is unavoidable, then a water wash with a detergent and/or a disinfectant should be performed.
- » Take care to ensure the equipment used to clean out the barn does not contaminate other buildings on your farm by removing organic matter. Refer to Chapter 2 for requirements on using equipment inside barns.

MD

HR

B) Washing, Disinfection and Downtime

One of the following options must be implemented for washing, disinfection and downtime of the barn.

Washing with detergent and/or disinfection and downtime are crucial components of breaking the cycle of disease and bacterial contamination. Different options have been provided to allow for different management practices based on the level of disease challenge within the barn.

Options 2 and 3 can only be used based on the health status of previous flocks and when the barn is not experiencing a disease/production challenge. See Section 5.3 for diseases that require a cleaning and disinfection.

Refer to Section 5.5 for an example of a cleaning and detergent/disinfection protocol.

Option 1

At least once per year, the barn (includes the walls, floors, feeders, drinkers, ceilings, fans and drains) and any other equipment (e.g. hoppers, feeding chains, catching equipment and barn boots) must be:

- a) Pressure washed with water; and
- b) A detergent with a water rinse and/or a disinfection (either a disinfectant wash or by fumigating) is to be applied.

Option 2

At least once per year:

- a) Pressure wash the barn with water (includes the walls, floors, feeders, drinkers, ceilings, fans and drains) and any other equipment (e.g. hoppers, feeding chains, catching equipment and barn boots); and
- b) A detergent with a water rinse and/or a disinfection (either a disinfectant wash or by fumigating) is to be applied to the feeder, drinker and equipment only; and
- c) A downtime of 14 days is required.

Option 3

After every flock, the barn (includes the walls, floors, feeders, drinkers, ceilings, fans and drains) and any other equipment (e.g. hoppers, feeding chains, catching equipment and barn boots) must be:

- a) Dry cleaned; and
- b) A downtime of 14 days is required.
 - To qualify, it is recommended that manure be removed from the barn within 48 hours of the birds being shipped but that it not exceed 72 hours after shipment (i.e. the maximum time period is 72 hours).
 - Given that schedule changes can occur (i.e. delivery of chicks or shipment dates), a downtime of less than 14 days can occur a maximum of 2 times in the previous 12 months. If this is greater than 2 times in the previous 12 months, then Option 3 cannot be used.

Table 5.1 Summary of the Washing, Disinfection and Downtime Options – Mandatory Requirements

	Step 1 Pressure Washing	Step 2 Use of detergent and/or disinfectant	Step 3 Downtime
Option 1	MD Pressure wash the barn* and equipment with water at least once per year	MD Detergent and/or disinfect the barn* and equipment at least once per year	N/A
Option 2	MD Pressure wash the barn* and equipment with water at least once per year	MD Detergent and/or disinfect the feeders, drinkers and equipment at least once per year	MD 14-day downtime at least once per year
Option 3	N/A	N/A	MD 14-day downtime after every flock**

Note: Options 2 and 3 can only be used based on the health status of previous flocks and when the barn is not experiencing a disease/production challenge.

* The barn includes the walls, floors, feeders, drinkers, ceilings, fans, drains, any other equipment (e.g. hoppers, feeding chains etc., including any catching equipment and barn boots).

** To qualify, it is recommended that manure be removed from the barn within 48 hours of the birds being shipped but that it not exceed 72 hours after shipment (i.e. the maximum time period is 72 hours). Also, given that schedule changes can occur (i.e. delivery of chicks or shipment dates), a downtime of less than 14 days can occur a maximum of 2 times in the previous 12 months. If this is greater than 2 times in the previous 12 months, then Option 3 cannot be used.

Although not requested at present, be aware that eventually, you will have to prove that you are contributing to the industry pathogen reduction effort. In order to do so, the scientific approach suggests that you should have each barn tested for bacterial pathogens during the growth period and after cleaning and disinfecting. This will provide you with your flock microbial status, allow you to assess the validity of any corrective actions taken and to assess the effectiveness of your cleaning and disinfecting.

5.3 Diseases that Require Cleaning and Detergent/Disinfection

HR

Consult your veterinarian for advice on cleaning and detergent/disinfecting your barn if you suspect a disease in your flock, if the flock has experienced higher than expected morbidity or mortality, or if the flock has been diagnosed with any of the following:

- » *Clostridium perfringens* (Necrotic enteritis)
- » Coccidiosis
- » Infectious Bursal Disease (IBD)
- » Inclusion Body Hepatitis (IBH)
- » Infectious Laryngotracheitis (ILT)
- » *Mycoplasma* (*M. gallisepticum*/*M. synoviae*)
- » Reovirus
- » *Salmonella Enteritidis*
- » Federally Reportable Diseases (e.g. Avian Influenza and Newcastle Disease)



In cases of disease that resulted in a veterinarian recommendation to clean and disinfect the barn, the barn is to be cleaned and detergent/disinfected, as well as any freezers used to store mortalities and equipment that was used in the barn clean-out. In some cases, a heat treatment, in consultation with a veterinarian, can be used in place of disinfection.

Consult the example cleaning and detergent/disinfection protocol in Section 5.5.

5.4 Manure Storage

You should dispose of manure safely. Good environmental citizenship builds a good public image for chicken farmers and for chicken. You should establish a manure management plan. Review it regularly. Many provincial governments have regulations concerning manure storage and management. Farmers should ensure that they are knowledgeable and are in compliance with these regulations.



Where manure is stored and spread on the premises it must be stored and managed in a manner that does not allow for its accidental re-introduction into the RA by people, equipment, vehicles or weather.

Manure must not be spread in the CAZ.

Ideally, manure should be stored at least 15 m away from the barn and when possible, all new barns should be built to incorporate a 15 m CAZ.

If manure is currently stored in the 15 m zone:

- » Manure should be moved as soon as possible; however, the duration of storage depends on the time of year. Storage should be for the least amount of time possible; manure should be moved right away in the summer but can sit longer in the winter, if needed.
- » If there was a disease outbreak in the previous flock, consider consulting your veterinarian on how long manure should be stored on your premises before being moved off-site. This will reduce the risk of disease transmission during transport of manure.
- » Manure should be stored on a cement pad that slopes away from the barn.
- » The space between the barn and the manure pad should be clear of manure.

Note: Manure should not be completely covered because it is a combustible material. If manure is kept covered, ensure there is adequate ventilation.

5.5 Example Cleaning and Detergent/Disinfection Protocol

The following cleaning and detergent/disinfection protocol is an example of the steps that can be taken. This is not a prescriptive list that is required to be followed, as the selected process is dependent on a number of factors. The following is presented for consideration to not only aid in reducing the presence of pathogens and viruses on your farm but for reducing the contamination of future flocks:

- 1) Consult your veterinarian.
- 2) Conduct a complete cleaning and detergent/disinfection of all barns on the premises.

- Being thorough in how the barn is cleaned is essential as you can use a highly effective product but if not applied correctly (following manufacturer instructions), then failure to reduce pathogens will result. As such, pay special attention to all equipment, cracks/holes in the walls and floors, drains/drainage areas, and include the walls and ceilings. The following steps are recommended:

Step (1) Remove all litter as soon as possible (within 24 hours) after the flock has been shipped.

Step (2) Dry clean the barn to remove any residual organic material from the walls, floors, feeders, drinkers and other surfaces in the barn.

Step (3) Pressure wash with water (15-20°C).

Step (4) Apply a detergent (allow a minimum contact time of 20 minutes or according to the label instructions) followed by a water rinse (15-20°C).

Step (5) Apply a disinfectant (follow label instructions).

Step (6) Allow the whole barn to dry for 24-48 hours at minimum (or longer depending on outside temperatures). Heat can be used as well to speed up drying time.

Step (7) Allow a minimum of 14 days downtime and ensure that the clean barn is not exposed to recontamination from the outside environment (i.e. from pests or unauthorized persons etc.).

- Consult with your veterinarian or products representative on the type of detergent and disinfectant products that should be used. Examples of products that can be used include, but are not limited to:
 - > Detergent products you may consider include: (a) alkyl dimethyl amine oxide, sodium aryl sulphonate, sodium hydroxide; (b) a sodium hypochlorite detergent
 - > Disinfectant products you may consider include: (a) Quaternary Ammonium Compound disinfectants; (b) Chlorocresol-based disinfectants; (c) an Acetic acid, hydrogen peroxide and peracetic acid compound disinfectant; or (d) a Hydrogen peroxide, peracetic acid, octanoic acid disinfectant.
- Always follow the manufacturer instructions when using detergents and disinfectants.

3) Clean and disinfect water lines.

- Refer to the following weblink for a short video that details how to disinfect water lines: **C&D Water Lines**.
- Water lines can act as a source of contamination. The following protocol is recommended:
 - Step (1) Acidify the water to a pH of four (let stand for 8-24 hours). This helps to dissolve the mineral complexes in the biofilm and the water line.
 - Step (2) Add a product such as hydrogen peroxide in a final concentration of 0.8% – 3% (let stand for 12–72 hours). This step disrupts the organic component of the biofilm.
 - Step (3) Add a disinfectant (let stand for 30 minutes to 48 hours based on product specifications). This step is to kill any remaining bacteria, which have been exposed to, but not killed by, the peroxide.
- During each step, walk the line and trigger the nipples with a clean broom to ensure that the whole system is exposed to the treatment. A high-pressure flush of five minutes (or one minute per 100 feet of line) is necessary between each of these steps.
- Always follow the manufacturer instructions when using water products in your water system.

- 4) Review your pest control program as rodents are significant vectors for foodborne pathogens (e.g. *Salmonella*, *Campylobacter*, *E.coli*). Considerations should be made to review pest management practices in the following areas:
 - > Darkling beetles: review the level of presence, timing of product application and product effectiveness.
 - > Flies: review the level of presence, the products being used and their effectiveness.
 - > Rodents: review the barn barrier and potential entry points and review the effectiveness of current baiting/trap systems.
 - > Consider consulting a third-party pest control company.
- 5) Review the good production practices on your farm that are designed to reduce the presence of pathogens. This could include:
 - > Review the MD's and HR's in the this OFFSP manual.
 - > Thoroughly clean and disinfect of all boots worn in the barns.
 - > Thoroughly clean and disinfect the anteroom and non-bird production areas in the barns.
 - > Examine the design of the anteroom at the point of separation between the CAZ and the RA to reduce the contamination between the two zones as much as possible (e.g. placing a bench where there was none).
 - > Implementing adequate hand washing with warm water and soap or using hand sanitizer before entry into the RA.
 - > Implementing optimal biosecurity including wearing barn specific clothing and boots for each barn (or production area if not sharing a common RA) on your premises.
 - > Water acidification – consult with your veterinarian.

6 MEDICATIONS AND OTHER INPUTS



Medications and other inputs that are used on the farm can have a large impact on the safety of the final food product. Consider the products that are used on the farm and be aware of the safety precautions that are required with each one.

Take into account the quality of the products being purchased, the need to store products separately from others, training of farm workers on the use of these products, withdrawal periods, and the food safety impact that these products might pose.

Many different products are being considered to develop and maintain good gut health. These include probiotics, yeasts, enzymes, essential oils, herbs and acidifying agents. Careful consideration and collaboration with veterinarians, feed representatives and others will be important to ensure safety of the products being used and their efficacy. Ensure products are registered for use in Canada and use according to label directions.

6.1 Receiving, Storage and Use of Inputs

Precautions need to be taken with all inputs used on the farm to prevent food safety issues. Inputs include medications, vaccines, water additives, feed additives, cleaning and disinfectant products, rodent/pest control products (e.g. rodenticides) and other chemical products used in farming operations.

The federal government and many provincial governments have regulations concerning the purchasing, use and storage of medications and/or chemicals. Farmers should ensure that they are knowledgeable and are in compliance with these regulations.

Receiving:

- » Buy inputs from reputable companies or manufacturers who have a quality control program. This should be indicated by a quality assurance mark/logo or traceability number (DIN or PC#) on the label or through a letter of assurance from the manufacturer.
- » Check the supplies when they come to the farm and verify that the label matches what was ordered.
- » The inputs must come in unopened containers with a label indicating what it is, its concentration and strength. There must be instructions for use and this information must be maintained in your records.
- » Develop a plan for how you will handle products that do not meet these conditions. Record any corrective actions you take on the Flock-Specific Record Form.

Storage:

- » Store medications, vitamins and other feed additives in closed containers, according to manufacturer recommendations and only with compatible products. Medication must remain in its original packaging or the label information must be transferred to a record.
- » All input/chemical containers must be labeled (with the product name, expiry date and concentration if different from original) and stored separately from medications and/or feed inputs.
- » Any expired products (e.g. supplements, water additives, feed additives, chemical products, chemical test strips/kits, etc.) must be stored separately from non-expired products until they can be disposed of properly.

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Use:

- » Products must be used according to manufacturer label directions, or your veterinarians' directions.
- » Ensure that farm workers are properly educated before they use any chemical (e.g. cleaners, disinfectants, rodenticides, etc.) products.
- » Chemicals and other inputs used in the RA during the grow-out period (e.g. insecticides) must be recorded on the Flock-Specific Record Form or similar.
- » When using products (e.g. medications, water additives, cleaning agents, etc.) through the water, the container must be labelled with the name and concentration of the product being used.

Chemical products (e.g. disinfectants, cleaners, water acidifiers, rodenticides, etc.)

- Chemicals must either be approved for use in food animal premises [e.g. all disinfectants are required to have a Drug Identification Number (DIN)], have directions specific for use in chicken production or livestock barns, be listed on the **Organic permitted substances list**, or be used in conjunction with a veterinarian.
- The products must be used according to manufacturer's instructions (e.g. pool cleaners as water disinfectants and motor oil as a wood preservative are not permitted for use) or your veterinarian.

Feed and water additives (e.g. vitamins, probiotics, essential oils, etc.)

- Feeds can only contain ingredients as approved by CFIA.
- Water additives must be approved for use by:
 - > CFIA, and have a Feed Registration #;
 - > Health Canada, and have a DIN; or,
 - > Health Canada, as a Veterinary Health Product, and have a notification number.

Products approved under the "Veterinary Health Product" program are labelled with "Veterinary Health Product" on the product packaging; however, the notification number may not necessarily be included. The list of permitted substances and products are found on "**List C**" published by Health Canada.

- The products are to be used according to the manufacturer's instructions or your veterinarian.

Vaccines

- Only vaccines approved by the Canadian Centre for Veterinary Biologics of the CFIA can be used.
- A listing of the veterinary biologics licensed in Canada is provided on the **CFIA website**.

Medications

- As described in further detail below, only medications approved for use by the Veterinary Drugs Directorate of Health Canada which have a valid DIN can be used.

6.2 Medication Use (Critical Control Point #3)

Medication use has been identified as a CCP for the OFFSP – this is a key step in the production cycle where control is essential to prevent or eliminate a food safety hazard to reduce it to an acceptable level.

Strict adherence to regulations, product instructions and veterinary prescriptions must be observed in order to ensure the food safety of the final product.

Medications need to be properly used to avoid medication residues and antimicrobial resistance. Any detectable residues outside of the allowable limits will not be allowed for human consumption.

A) Responsible Use

CFC has implemented an antibiotic use strategy that focuses on the preventive use of antibiotics of importance to human medicine as listed in Categories I, II and III by Health Canada. CFC's strategy strives to provide a sustainable means of meeting consumer expectations, while protecting animal health. CFC's strategy is not an RWA (Raised without the Use of Antibiotics) strategy.

Key elements of CFC's strategy include:

- » To maintain the use of ionophores (Category IV) and coccidiostats for prevention
- » To maintain the use of antibiotics for therapeutic purposes (to treat disease)

For guidance on CFC's Antimicrobial Use (AMU) strategy and antimicrobial resistance, visit the **Farmer Resource Portal**. This website includes helpful hints to consider when reducing antimicrobial use and provides context to antimicrobial use and resistance in Canada.

To ensure the responsible use of medications:

- » Veterinarians should be consulted when disease or clinical signs are suspected based on their expertise of disease diagnosis and their use of pharmacological information and principles.
- » Antibiotics of importance to humans (i.e. Category I, II and III) must only be used in conjunction with a veterinary prescription, including directions for use.
- » Antibiotics categorized as Category IV must be used according to their product instructions; otherwise, a veterinary prescription is required (see Extra Label Use below).
- » Only medications approved for use by the Veterinary Drugs Directorate of Health Canada which have a valid DIN can be used.
 - Active pharmaceutical ingredients (a substance that is intended to be used in the manufacture of a medicinal product) and products obtained under the Own-Use Provision of the Food and Drugs Act (drug products imported from another country) are not permitted for use.
- » Antibiotics categorized by Health Canada as Category I or Category II are not permitted to be used in a preventive manner. This includes use at the hatchery, in feed or in water.
- » For medication use via water, follow the medicator calibration procedures listed below before each medication use.
- » Prescriptions are to be obtained within the confines of a valid Veterinary–Client–Patient Relationship (VCPR).
- » Farm workers administering medications must understand how to properly handle and administer the medications.
- » Category IV antibiotics should only be used in conjunction with a veterinary prescription.

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Medication Use Reporting

There are two different forms where medications used during the grow-out need to be recorded.

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- » Flock-Specific Record Form: All antibiotic use must be recorded on the Flock-Specific Record Form or other similar document. All antibiotics (Category I-IV) are to be recorded.
- » Flock Information Reporting Form: The specific details on the medications that must be reported on the Flock Information Reporting Form can be found on the back of the Flock Information Reporting Form.

B) Extra Label Use (Critical Control Point #3)

“Extra label” use is defined as a use that is not consistent with the directions for use as approved by Health Canada. For example, this can include use with an alternate species (e.g. chickens versus cattle) or using a different dosage.

MD

- » Medications can only be used in an extra-label manner in conjunction with a veterinary prescription.

When prescribing extra label medications for chicken production, veterinarians are required to obtain a withdrawal time information from a source such as the Canadian global Food Animal Residue Avoidance Databank (CgFARAD).

Medications can be identified as being used in an extra label manner by looking for a CgFARAD reference number (e.g. ON-135862-16513) on the veterinary prescription.

MD

When extra label medications are used, a copy of the veterinary prescription must be submitted with the advance copy of the Flock Information Reporting Form.

- » The veterinary prescription must include the withdrawal time and the CgFARAD reference number. If another source was used, then the name and telephone number (or e-mail address) of the person who provided the information must be included on the prescription.
- » All use of extra label medication needs to be recorded on the Flock Information Reporting Form, regardless if it is for preventive or curative purposes.

Processors have been instructed by CFIA not to pick up loads of live poultry unless they have received a copy of the prescription whenever the flock has been treated with extra label medications.

C) Medicator Calibration (Critical Control Point #3)

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Water medicators must be tested each time before a medication is administered. The results of the tests, the method of testing, any deviations and subsequent repairs must be recorded on the Flock-Specific Record Form or equivalent.

The following calibration is one method to perform these tests; other calibration protocols (i.e. manufacturers’ recommendations) can also be used to test accuracy.

View the **medicator calibration video** on CFC’s chickenfarmers.ca website.

- (1) Disconnect the outflow side of the medicator from the water line (usually connected by a union or a “quick connect” coupler).
- (2) Use a measuring cup that measures mL and fill with water.
- (3) Place the end of the medicator intake tube into the measuring cup, place a pail under the outflow of the medicator, and turn on the water supply through the medicator.
- (4) If the correct amounts are disappearing out of the measuring cup, then the water medicator is working properly. If not, your medicator needs servicing.

D) Medication Withdrawal (Critical Control Point #3)

You must withdraw medications from feed and water before you ship your birds for processing. The withdrawal period must be according to the label directions or the veterinary prescription.

This will give enough time for the medication to clear from the birds' systems and prevent any residues in the final product. Note: Some medications will have a zero-day withdrawal period (e.g. some coccidiostats are not readily absorbed in the intestine).

When a medication with a withdrawal time has been used during the finishing period (last two weeks) of grow-out, steps must be taken to prevent residues. If used in the feed, the feed in the feed lines must be minimized. If used in the water lines, then the water lines must be flushed. Dates of these actions need to be recorded on the Flock-Specific Record Form.

If a deviation occurs (e.g. the wrong inclusion rate has been used or the proper withdrawal time was not adhered to), then actions must be taken to reduce the potential risks.

Examples of these actions could include:

- » Removing the feed from the feeders or stopping the use of the medication in the water. Record the date the medication was stopped on the Flock-Specific Record Form.
- » Contacting the catching crew and/or processor to reschedule their activities. Record the contact on the Flock-Specific Record Form.
- » Discuss the deviation with farm workers involved on your operation to prevent re-occurrences.

E) Antibiotic Categorization

All antibiotics approved by Health Canada are issued a DIN.

For a listing of antibiotics approved by Health Canada, and to find the specific conditions of use, check the following websites:

- www.poultryindustrycouncil.ca (click on “vet compendium”)
- www.inspection.gc.ca (search Compendium of Medicating Ingredient Brochures)

Health Canada categorizes antibiotics based on their importance to human medicine (Category I-IV). Category I antibiotics are considered to be of the highest importance to humans, whereas Category IV antibiotics are not used in human medicine.

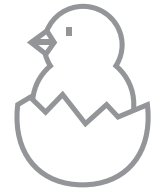
Table 6.1: Categorization chart and antibiotic brand names

CATEGORY	DRUG FAMILY	BRAND NAME
I - Very High Importance (Essential for serious human infections with limited or no alternatives available)		
	Ceftiofur	Excenel (extra-label)
	Enrofloxacin	Baytril (extra-label)
II - High Importance (Essential for treating serious human infections and few alternatives available)		
	Virginiamycin	Stafac, Virginiamycin
	Penicillins	Paracillin SP, Pot-Pen, Penicillin G Potassium, Pen-P, Penicillin G Procaine, Vibiomed Booster, Medivit, Super Booster
	Tylosin	Tylan
	Gentamycin	Gentocin
	Lincosamides	Lincomix, Lincomycin, Linco-Spectin, L-5 soluble powder
	Trimethoprim-Sulfadiazole	Uniprim (extra-label)
III - Medium Importance (Important for treating human infections and alternatives are generally available)		
	Bacitracin	BMD, Albac, Zinc Bacitracin
	Sulphonamides	Sulfa, Sodium Sulfamethazine, Sulphaquinoxaline, Quinnoxine S
	Apramycin	Apralan (extra-label)
	Spectinomycin	Spectam (extra-label)
	Tetracyclines	Aureomycin, Oxy, Oxysol, Oxytetracycline, Terramycin, Onycin, Neo-Tetramed, Tetra, Tetracycline
	Neomycin (Sulfate, Oxytetracycline, Tetracycline)	Neomix, Neomycin, Neomed, Neo Oxymed, Neotet, Neox, Neo-Chlor, Neo-Tetramed
IV - Low Importance (Not used in human medicine)		
	Bambermycin	Flavomycin
	Ionophores	Rumensin, Monensin, Coban, Monteban, Maxiban, Aviax, Salinomycin Premix, Sacox, Bio-Cox, Coxistac, Posistac, Cygro, Bovatec, Avatec
Uncategorized		
	Avilamycin	Surmax

Chemical coccidiostats, which are not defined as antibiotics, include: Nicarb, Robenz, Amprol, Zoamix, Coyden, Stenerol, Clinicox and Deccox. These are not defined as antibiotics; however, they are included in the definition of “medication”.

7

CHICKS AND BROODING



7.1 Purchasing Chicks

All hatcheries operating in Canada with an incubation capacity over 1,000 eggs are monitored by the CFIA hatchery program and regulated under the Health of Animals Act and Regulations. The regulated requirements include a food safety preventive control plan.

MD

All chicks and hatching eggs are to be acquired from hatcheries with a CFIA hatchery license.

A list of CFIA licensed hatcheries can be found on the [CFIA website](#).

HR

Furthermore, it is recommended that you buy from hatcheries that are HACCP-certified. The HACCP certificate should be presented upon request when dealing with your hatchery operator.

Further to your discussions with your chick supplier, the following information must accompany each lot delivered to your farm.

A) Vaccines Received at the Hatchery or Administered at the Farm

MD

Written assurance regarding the vaccination history (type of vaccines administered) must be provided on the invoice slip, or attached to the invoice slip, by the hatchery operator. This information is required on the Flock Information Reporting Form, which will be forwarded to the processing plant.

HR

Obtaining written assurance from the hatchery operator regarding the dosage level of vaccines is highly recommended. This information can be helpful to allow you to adequately manage your flock during the grow-out period.

MD

Any vaccines administered at the farm must also be recorded on the Flock Information Reporting Form, and all withdrawal times must be adhered to.

B) Medication Received Including the Withdrawal Period

Day-old chicks may be injected with medications at the hatchery and for some of these medications, a withdrawal period applies. For instance, if a medication has a withdrawal period of thirty (30) days, this means that chicks treated with that medication cannot be marketed for 30 days after the latest treatment with that medication.

MD

All medications given at the hatchery level (including the dosage) must appear on the invoice slip.

Farmers that produce Cornish chickens (sent to market in less than 30 days) must not send birds for processing prior to the prescribed withdrawal period for any medications that have been administered to the flock.

C) The Age Group of the Breeding Flock(s)

From the beginning of the laying period (approximately 25 weeks of age) to the end of the laying period (approximately 60 weeks of age), a hatching egg supply flock will produce increasingly larger eggs resulting in larger day-old chicks with varying immunity levels depending on the age of the flock of origin.

Since hatchery operators must have supply flocks of different ages to meet a constant demand, they must contend with different sizes of eggs and consequently different sizes of chicks. In order to deliver a large number of chicks of as uniform weight ranges as possible, the general practice in the hatchery industry is to group production by age groups or sizes of birds. For instance, they may group together the eggs/chicks of:

- » The 24-30 week-old breeding flocks (small)
- » The 31-45 week-old breeding flocks (medium)
- » The 46-60 week-old breeding flocks (large)

Knowing from which age groups the incoming lot(s) are from may, in cases, influence where the lot(s) would be placed for brooding. For example, the smaller chicks may be placed on the upper floors where it is generally warmer. The age group of the supply flocks may be disclosed to the farmer on the invoice, provided that information is not to be used to require future lots from specified age ranges of breeder flocks. Pressure by farmers to get particular size ranges of chicks would push for a different pricing structure and would most likely result in greater waste at the hatchery level.

D) Lot Identification

For trace-back purposes, flock identification information should appear on the bill of sale (or the bill of lading) to inform the farmer of the origin of the chicks.

Chicken farmers do not need to know the name of the exact breeder flock or the name of the farm of origin. A coding system that could provide a traceable indication of the origin of the flock is sufficient.

E) Date of Hatching

Whenever a farmer is to receive chicks that have been pulled from the hatchery for more than 12 hours, hatchery operators must inform the farmer of the particular status of the incoming chicks. This will allow farmers to take appropriate measures to ensure an optimal environment for the incoming flock.

F) In-barn hatching

In-barn hatching is an emerging practice that has regulatory implications in Canada.

Within current federal regulations, farms must obtain a permit to operate a hatchery from CFIA before hatching eggs on farm. This involves providing an application to CFIA and a full review being conducted.

As part of the application process, a preventive control plan is required for food safety and animal welfare, including elements such as temperature and humidity monitoring, cleaning and disinfection, environmental mold and *Salmonella* testing, processing of unhatched eggs and processing of hatched egg shells.

Any farms considering in-barn hatching are encouraged to thoroughly review the regulatory requirements and liaise with their hatchery.

7.2 Barn Preparation and Delivery

A) Bedding Materials

Be careful not to bring contamination into the barn with bedding materials. These include shavings, straw, shredded paper and the like. Take steps to make sure that these are as free from impurities as possible. The risk varies, depending on the type of material.

MD

Bedding must not present a food safety risk to the flock. Ensure bedding does not contain harmful compounds, is absent of sharp edges, is dry and free of mold, wild bird droppings, feathers and pests.

HR

If you buy bedding materials, check that the supplier has a control program to keep the material clean. The program should apply both during storage and during delivery. You should insist that the suppliers' delivery trucks follow your procedures for service vehicles.

It is highly recommended that bedding material be stored in a dry and enclosed location with the intent of keeping domestic and wild animals away. The storage premises should be included in your rodent control program.

MD

Rodenticides being used in the bedding storage area must not be put in the bedding where they can contaminate the bedding prior to placement.

Upon placement in the barn, the bedding must be checked for mold, feathers and bird droppings and this activity must be recorded on the Flock-Specific Record Form or similar.

When spreading bedding materials in the barn, take great care not to re-contaminate the barn.

B) Barn Preparation

Once the date and time of delivery is obtained from the hatchery, make sure that the barn is ready before the chicks are delivered. Ensuring a proper environment for the birds will ensure their immune systems are not taxed and will set them up well, including for good gut health.

MD

The Flock-Specific Record Form must be completed and used to ensure that the barn and all the equipment (including the brooders, the feeders and waterers) have been properly cleaned and to ensure that the barn is ready for placement upon arrival of the chicks.

The following procedures apply:

- » The bedding must be clean, soft and dry. An adequate layer is required to absorb the droppings of the chick. The thickness depends on the type of bedding used.
- » The barn must be pre-heated in advance to ensure that the body temperature of the chick remains the same from hatchery transfer time, until they can regulate their body temperature.
- » Drinking lines must be ready to be adjusted to ensure that an adequate water supply is immediately available for the birds.

C) Delivery

The chicken farmer or one of his/her representatives should always be present at the time of delivery and placement, to make sure that the chicks delivered are in good physical condition.

MD

You must inspect your new flock as soon as you get the chicks. You must also check and record the flock condition three to four days into the grow-out period. Record your observations and make note of any corrective actions you take.

- » *Alertness*: an alert chick has wide-open bright eyes and appears to be curious.
- » *Vigour*: a vigorous chick is instantly active when disturbed and shows no signs of weakness.
- » *Condition*: the condition of the chick is evaluated by handling. A chick in good condition is firm, not mushy. The navel is healed, the fluff is not matted and the chick presents no signs of dehydration. Unhealed navels provide an early access route for bacterial infections, resulting in chick losses.
- » *Normality*: a normal chick has no apparent deformity and shows no signs of abnormality such as twisted beaks, twisted toes, crippled or straddled legs, etc. There should not be noticeably undersized birds within the lot.

In order to minimize the risk of introducing contamination inside your clean (and disinfected) barn, chicken farmers and hatchery employees should adhere to the following procedures at the time of placement:

- » The delivery area should be dry, clean, and free of debris and organic material.
- » Hatchery delivery employees should wear appropriate clean clothing and impervious footwear, which can be cleaned and sanitized upon arrival on the farm.
- » Ideally, the incoming boxes of chicks should be unloaded outside the RA by hatchery employees (truck driver and/or employees). A farmer crew would then take over placing the chicks in the barn. If the hatchery crew takes part in the placement process within the barn, additional care should be taken to prevent the introduction of foreign contamination.



Biosecurity procedures for those entering the RA inside the barn outlined in Chapter 2, “Controlling Access to the Farm”, must be respected.

D) Brooding

Brooding is defined as the first 7-10 days after hatch and is the most critical period in a chickens' life. A strong brooding program can minimize mortality at seven days while maximizing chick weight.

The goal is to set the birds up for success by creating an optimal environment to promote animal health and gut integrity by encouraging water and feed consumption, and by reducing disease pressures in the barn.

There is no one-size-fits-all brooding program - each barn and each flock is unique.

Consider the following brooding opportunities:

- » Create a comfortable environment
 - Ensure the barn is pre-heated prior to placement – both the bedding and the floor
 - Take chick temperatures for the first 3-4 days; the preferred range is 103-105°F
 - Use a good light intensity for the birds to locate feed and water
- » Promote feed intake
 - Use chick paper and have 40-50 g feed/chick available at placement
 - Check the crop fill of chicks on the day of placement and for first few days. A guide is for 80% of the chicks to have full crops by 4 hours and 100% by 24 hours.
 - Stimulate chicks to eat and drink by walking around the barn
 - Weigh the chicks at placement, and again at 7 and 14 days; day 7 weights should be 4-5 times higher than the weight at placement
- » Promote water intake
 - Flush lines prior to placement and throughout the brooding period to ensure a fresh water supply
 - Adjust the height of the water line throughout the brooding period

- » Inspect the flock
 - Monitor the activity level of chicks at placement and continue checking on a frequent basis
 - Inspect the flock for signs of disease or abnormalities
 - Consult with your veterinarian as issues arise
- » Cull unhealthy birds
 - Early culling of unthrifty and ill chicks is important to reduce reservoirs of bacterial and viral infections
 - Culling diseased chicks (e.g. yolk sac infections) can result in less shedding of bacteria, and can replace the need for medications

For further guidance on brooding, reference **CFC's AMU Magazine**.



8

FLOCK MONITORING



8.1 Flock Supervision

Monitor your flock and watch for clinical signs of disease. Be on watch for unusually high mortality, changes in water or feed consumption and environmental conditions within the barn.

If you suspect a disease problem, work with your veterinarian to diagnose the problem. Samples may need to be sent to your veterinarian or a diagnostic laboratory to obtain treatment recommendations. Maintain these reports and written recommendations from your veterinarian.

It is not expected that farmers be able to diagnose diseases; however, it is important that farm workers are suitably experienced or educated to identify any changes in behaviour, appearance, mortality or productivity within the flock which may indicate that an infectious disease is present.

MD

You must check your chickens at least twice a day during the entire grow-out period; more often during the first week after their arrival.

If deviations from the normal patterns are identified, farm workers must know what actions to take.

A veterinarian must be contacted in cases of unexplained elevated mortality or morbidity.

The following is an example list of clinical signs that should trigger consultation with a veterinarian:

- » Decreased feed or water intake
- » Nervous behaviour (trembling, shaking, paralysis etc.)
- » Coughing or sneezing (respiratory distress)
- » Elevated mortalities
- » Diarrhea
- » Lack of energy (depressed behaviour)
- » Swelling of tissues around eyes and neck
- » Purple wattles and combs
- » Muscular tremors, depression, drooping wings, twisting of heads and necks, lack of coordination or complete paralysis

There will always be a proportion of chicks that are unable to thrive and birds that show clinical signs of disease. These birds can act as reservoirs of bacterial and viral infections. One of the most effective tools available to farmers is the early culling of unthrifty, ill or injured birds. The greatest positive impact is achieved when culling is performed immediately after those birds are identified.

In many cases, an effective culling program can improve animal welfare, food safety and minimize or replace the need for medication therapy.

MD

You must treat or euthanize sick or injured chickens on a daily basis.

Refer to the requirements of the CFC *Raised by a Canadian Farmer* Animal Care Program for proper euthanasia techniques.

To help monitor the growth and health of the flock, birds can be weighed throughout the grow-out period. Weighing is best performed electronically using in-barn scales.

8.2 Managing Mortality

Take care when you are moving mortality anywhere on your farm. An infectious disease may be present in your flock without any clinical signs becoming apparent during its early incubation period. Make sure that you keep the chance of bacterial or disease transfer to a minimum.



Dead birds must be collected and removed from the floor of the barn daily and a daily mortality log must be maintained. Refer to the requirements of the CFC *Raised by a Canadian Farmer* Animal Care Program for more details.

Farm workers must wash their hands with soap and water or use a hand sanitizer following contact with mortalities, unless gloves have been used to collect mortalities. Hand washing or sanitizer use can occur at any location on the premises and is to be performed as soon as possible after handling mortalities.

Many provincial governments have regulations concerning mortality management. Farmers should ensure that they are knowledgeable and are in compliance with these regulations. You may be able to incinerate, compost or ship dead birds off the farm for rendering.



Mortalities must be disposed of in a location outside of the RA (commonly referred to as the Production Area) including any anterooms that are designated as the RA. Freezers are allowed in the anterooms as a storage method. The disposal area must be located to prevent contamination of feed and water sources and must be maintained to prevent rodents/scavengers from accessing the mortality. Any disposal method must be permitted by provincial disposal regulations.

The following are guidelines for different types of mortality disposal:

- (1) Off-Farm Rendering
 - » Carcasses are to be stored in a manner that does not allow for escape of any organic material or allow for access by pests or rodents and be moved to the access point or outside the CAZ when the rendering truck arrives.
- (2) On-Farm Incineration
 - » Incinerators are to be clean and well maintained.
 - » Complete incineration is to occur at every run.
 - » Maximum capacity should not be exceeded when running the incinerator.
 - » When incinerators are newly installed, they should not be located on the same side of the barn as the air inlets.
- (3) Burial
 - » Carcasses are to be covered with enough soil or other material to prevent access from scavengers.
 - » Burial site is to be located appropriate to soil type and water table.
- (4) Composting
 - » Composters are to be designed and operated in a manner consistent with science-based composting methods such that proper temperatures for composting are maintained.
 - » It is recommended that temperatures are monitored to ensure that composting is working effectively.
 - » Composters are to be maintained to minimize the attraction of flies, rodents and other animals.
- (5) Deadstock Removal Off-Farm (e.g. zoos)
 - » Protocol and location of disposal are to be recorded.
 - » Disposal method must not present a food safety or animal health risk.

MD

In times of heightened biosecurity when a disease is suspected or confirmed in the vicinity of your farm:

- » Mortalities that are not moved to the disposal area immediately (e.g. they are kept in containers for a period of time) must be kept in covered containers, and
- » Carcasses that are moved off the farm must be transported in covered containers.

If birds that have been accidentally exposed to insecticides or other chemicals resulting in mortality are being sent to rendering facilities, the rendering facility operators should be informed of the cause of the mortality to prevent the re-introduction of harmful residues into the food chain.

8.3 Back-Up Systems

MD

A monitoring and alarm system must be functional to inform you of any power failure and temperature variations outside of the critical limits.

Your barns should have a standby power system. Refer to the requirements of the CFC *Raised by a Canadian Farmer* Animal Care Program for generator requirements.

8.4 Shipping

A) Flock Information Reporting Form

This form contains all the information you need to fulfill the requirements of the CFIA for birds to be processed.

MD

Copies of the Flock Information Reporting Form must be sent twice to the processing plants to which your birds are shipped:

- » A first, partially completed copy, must be sent 3-4 days prior to catching to inform the processing plant of the nature of the birds they will be receiving (including diseases, medication/vaccine use and mortality rate). Individual arrangements for the transmission must be made by each farmer and his/her processing plant.
- » A completed second copy must accompany the birds at the time of shipment.

Further information can be found in Chapter 9 “Flock Information Reporting Form”. A complete set of instructions for filling out the Flock Information Reporting Form can be found on the back of the form.

MD

All pertinent information regarding access to feed, catching/loading and shipping must be recorded on the Flock Information Reporting Form.

B) Feed Withdrawal

To ensure that the bird’s gut is completely empty by the time it is processed, you will need to withdraw feed for a time of fasting.

Timing is important. Data indicates that access to feed should optimally be cut off between 6 and 10 hours prior to evisceration. Cutting access to feed too late or too early can each cause serious contamination problems at the processing plant.

The right feed withdrawal time depends on several factors, including:

- » your feeding program
- » the size of the bird
- » the scheduled time for catching
- » how long the birds will be transported
- » how long the birds will wait at the plant before processing

MD

You must check with your processor for instructions on feed withdrawal.

The instructions you receive may differ, depending on the management of the processor. In some instances, processors will provide you with a precise withdrawal time. Others will provide the planned processing time and your feed withdrawal contamination data from previous flocks. You will be able to reduce contaminations and better manage feed withdrawal using this data.

Another method of decreasing the potential for post-harvest crop contamination is to reduce the pH of the intestine prior to shipping the flock. Acidification products (e.g. mineral acids, organic/inorganic acids) can be used in the drinking water during the withdrawal time to reduce the bacterial load.

C) Catching

Catching protocols can have an impact on food safety - such as biosecurity to limit the introduction of contamination to the barn and by reducing stress of the birds.

When preparing for catching, gradually bring the temperature inside the barn towards par with the outside temperature, guard against getting the birds wet and protect them from sources of heat and steam.

Catching crews should:

- » Change into clean clothes and footwear when they enter the RA
- » Be properly trained in the basics of animal welfare (by their employers)
- » Be skillful in handling birds

For additional information, refer to the requirements of the CFC *Raised by a Canadian Farmer* Animal Care Program related to catching.

Partial depopulation of a flock or thinning is a reported risk factor for bacterial contamination such as *Campylobacter* colonization of the remaining birds due to a lack in maintaining biosecurity during this process.

HR

Before thinning a flock, the catching crew should provide the farmer with a documented biosecurity protocol (e.g. letter).

Possible options to reduce the risks associated with thinning are:

- » Schedule the flock as the first catch of the night
- » Have the catching crew change into clean clothes (barn specific clothes or disposable coveralls) and footwear (barn specific boots or disposable boots) when entering the RA
- » Have the catching crew disinfect their hands with a hand sanitizer before and after the flock thinning process
- » Catching crews should remove clothing and footwear and dispose them at the farm

8.5 Disease Response Protocols

MD

Each farm must have an emergency response/farm quarantine plan that is to be initiated whenever a contagious disease is suspected, or after confirmation has been received from a veterinarian.

The written emergency response/farm quarantine must include, at minimum, the following items:

- » Contacting a veterinarian in cases where a disease is suspected
- » Discussing the situation with family members and farm workers
- » Blocking the entranceway to the CAZ (using a gate, rope/chain, wagon or other means) to prevent unwanted traffic or access
- » Limiting movement between barns and off of the premises

- » Limiting any equipment movement on and off the farm
- » Enhanced cleaning and disinfection process for vehicles entering and exiting the CAZ
- » Enhanced barn cleaning and disinfection and mortality management
- » Notifying the provincial board office and other industry personnel that a disease is suspected or confirmed

If a reportable disease (Avian Influenza, Newcastle Disease or Fowl Typhoid) is suspected or confirmed, you must immediately inform a veterinarian from the CFIA and your provincial board office.

Each farmer should be aware of their role in the Provincial Emergency Response Plan. This can be accomplished by contacting your Provincial Board Office.



9

RECORD KEEPING



Record keeping is the key to a strong HACCP-based program. Records allow for farmers to prove that they are doing what they say they do. The record keeping forms are designed to:

- » Prove that you have control of your operations.
- » Provide a record of what you have done.
- » Provide reminders of what needs to be done and to ensure that farm food safety production practices are followed.

The information on these forms will be required during your on-farm audit – they will play a major role in demonstrating that you have properly implemented the good production practices and critical control points of this program.

Record templates have been provided with this manual. If you already have your own record system that meets the objectives of this program, you do not have to change from the forms you are currently using. You will, however, want to ensure that the information on your forms meets the level of information required by this manual.

9.1 Types of Records

There are three main records associated with the CFC *Raised by a Canadian Farmer* OFFSP.

MD

A) Standard Operating Procedures (SOP)

- » The SOP forms allow you to describe the procedures you would normally use on your farm. These forms must be completed in order to demonstrate what practices are used on your farm on an ongoing basis.
- » These forms must be completed prior to initial implementation on the farm. They must also be reviewed annually or updated as necessary. Be sure to sign and date these forms each time a change has been made.
- » To complete the forms, place a check in the box beside each question if it pertains to your farm, by providing a longer answer where required or by using “N/A” or a stroke for any question that does not relate to your operation. If the information being requested can already be found elsewhere, simply indicate where the information can be found – and be sure that it is available during the on-farm audit.

B) Flock-Specific Record Forms (to be completed during each cycle)

- » The purpose of these records is to demonstrate what procedures were used during each individual grow-out.
- » A full set of these records must be completed for each flock you raise. These records also require that you keep bills of lading from the feed and from the chick supplier.
- » Other formats have also been developed to record this individual flock information. Some may be provided to you by your provincial board or through suppliers. Just remember to check that all the information required by this program is included on the record forms that you are using.
- » Farmers will be required to retain at least one year’s worth of records at all times.

- » To complete the forms, check the boxes as they pertain to the flock, and record the product names that were used. For any space that does not apply to your operation, indicate this with a stroke or write “N/A”. On the Barn Preparation Checklist, record the date for each activity along with a description of the activity, chemical product and/or concentration; a “*” indicates a required entry.

C) Flock Information Reporting Form (Flock Sheet)

- » The Flock Information Reporting Form is used to communicate food safety related information from the farm to the processing plant.
- » The instructions on how to use the Flock Information Reporting Form can be found on the reverse side of the form.
- » A few important instructions are:
 - > List the name of all vaccines and medications administered at the hatchery (as per hatchery invoice).
 - > List vaccines administered at the farm.
 - > List all diseases or syndromes that were diagnosed by a veterinarian, including those for which no medications were administered.
 - > Include all medications given to the flock throughout the entire grow-out that were administered as a result of a disease or a syndrome.
 - > For preventive medications provided in the feed, only those with a withdrawal period given to the flock in the last 14 days need to be listed.
- » The information on the Flock Information Reporting Form must be maintained even for farmers that ship to provincial processing plants. The information can be recorded on the Flock Information Reporting Form, or on another record form.

9.2 Deviation Form

A deviation is anything that happens outside of the normal SOP’s for your farm. In other words, extenuating circumstances or occurrences that are not part of your normal operations or production practices, but occur nevertheless.

Deviations are not run-of-the-mill occurrences, such as temperature adjustments within the SOP range. Rather, they are significant events such as a disease outbreak or a barn system failure.

Thorough deviation records are a strong asset to producers as they can provide clues to identify and address the source of a problem as well as help mitigate issues before they arise.

Any occurrence that is different from what should normally happen on farm is a deviation worth noting. Deviations only need to be recorded if they exceed the upper or lower limits outlined in the SOP. For example, a generator malfunction during a power outage leading to significant changes in lighting or to a feed and water delivery outage, would need to be recorded. Some deviations may occur for obvious reasons and can be readily addressed by the producer. However, other situations may be more complex such as a steep increase in mortality rate, which may require consulting a veterinarian and/or a feed representative to confirm and address the suspected issue. The length of the deviation record should match the complexity of the issue.

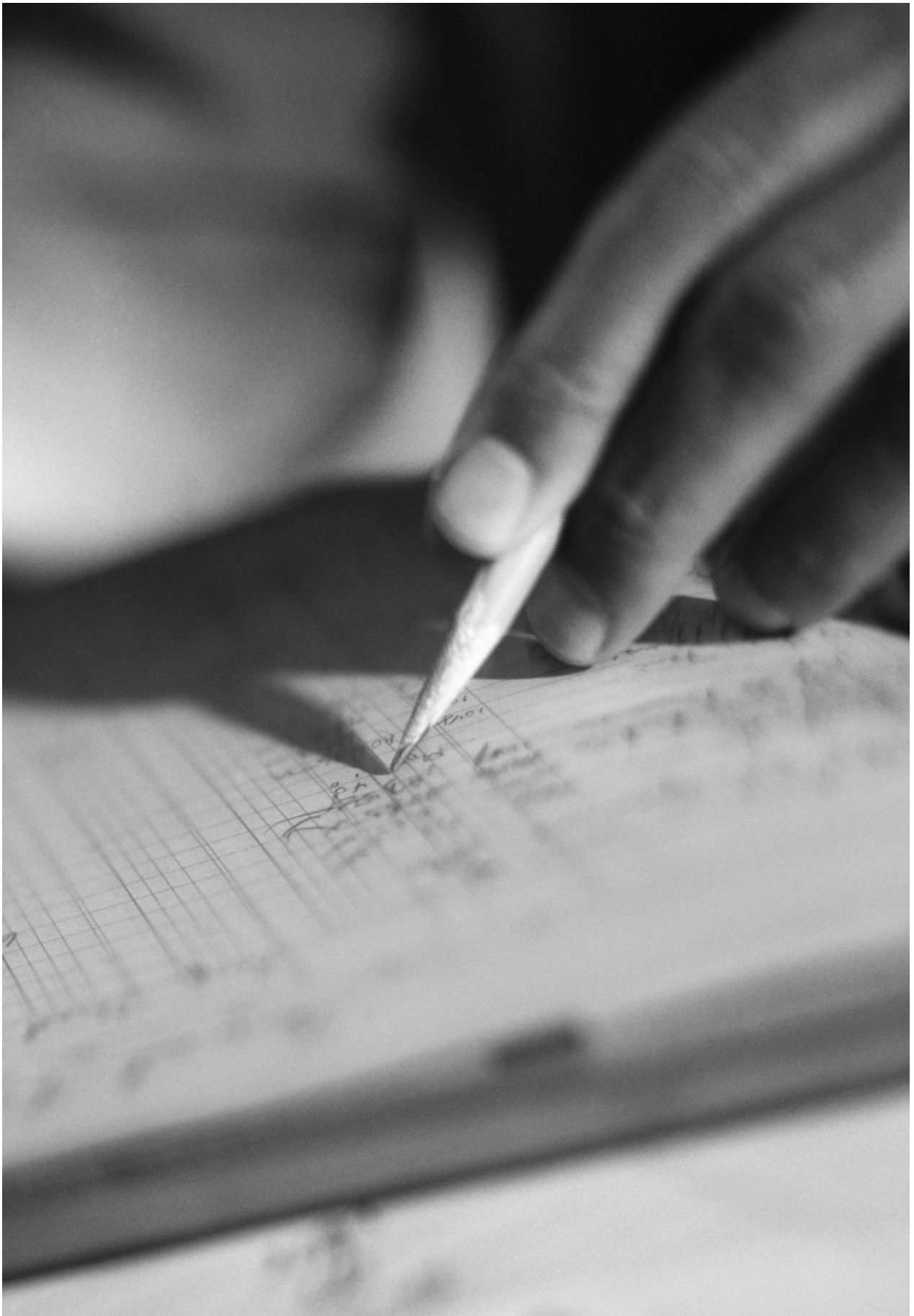
Each time a deviation occurs, the deviation, and the reason behind it (e.g. chlorine not detected at the end of the water lines etc.) must be recorded on the Deviation Record on the Flock-Specific Record Form, or similar.

A single deviation does not directly affect certification. Based on the reason for the deviation a change in management practice may need to take place in order to prevent the deviation from re-occurring.

MD

Farmers should evaluate the deviation, make a decision on how to correct the deviation in the future and document any changes that have been made.

If a particular deviation becomes an ongoing occurrence (e.g. re-occurs within the next three flocks), the farmer must take corrective actions in order to receive/maintain certification. Preventive measures must be taken to prevent those deviations from re-occurring (e.g. farm worker re-training may be an option).



10

SUMMARY OF PROGRAM REQUIREMENTS



The following checklist covers all of the mandatory and highly recommended items in the OFFSP manual. This is not the exact checklist that an auditor will use, but it should be used as a guide to indicate if your farm is ready for an audit and can point to items that need to be addressed.

Check off the items that are currently being performed and focus on those that remain.

✓	Chapter 1 – Mandatory Requirements
	All farm workers must be trained and understand the objectives and SOPs of the OFFSP manual
	A training record is kept for each farm worker
	Farmers must address any additional food safety or animal health risks on their farm
✓	Chapter 2 – Mandatory Requirements
	Each barn has a designated Controlled Access Zone (CAZ) and Restricted Area (RA)
	A diagram has been drawn depicting the CAZ, RA and farm layout (including roadways, feed bins, manure storage, visitor parking)
	The perimeter of the CAZ includes the barn and feed tanks and any utilities (e.g. propane, fuel, hydro meters) close to the barn
	Manure is stored outside of the CAZ
	The CAZ is maintained (e.g. grass cut etc.) and free of rodent attractants (e.g. firewood piles)
	Entry points to the CAZ (i.e. roadways) are identified by a sign or physical barrier
	Suppliers only enter the barn if necessary
	Signs are posted at the barn entrance to indicate the RA
	Barn entrances to the RA are kept locked when farm workers are not able to supervise access to the barn
	A barrier exists to separate the CAZ from the RA
	Where chickens are being raised in the same barn with livestock other than poultry, the area being used to raise chickens is designated as its own RA
	Visitors log-book is maintained for the RA or the whole farm
	The farm manager accompanies visitors accessing the barn
	Visitors and workers follow your biosecurity protocol when entering the barn
	Dedicated boots, or similar, are available for each barn
	Any clothing used by farm workers in the RA worn off the premises is only worn on agricultural premises under common management

	Anyone other than farm workers who are accessing the RA must wear premises-specific coveralls when entering the farm premises or when crossing the barrier from the CAZ to the RA
	Each farm has coveralls/clothing and boots/disposable boot covers available for visitors or service personnel
	Visitors must wash or sanitize their hands prior to entry and upon exit from the RA, or wear specific gloves
	Farm workers must wash their hands or use a hand sanitizer following contact with mortalities
	Farm workers wash hands and change boots and clothes/coveralls prior to accessing the RA when they've come into contact with another poultry operation which is not under common management
	Domestic waterfowl must not be permitted within the CAZ and must be fenced in so they cannot access the CAZ
	Equipment is free of visible organic material when it is brought into the RA after the barn has been cleaned or during the grow-out period. Any equipment from a premises not under common management must be cleaned and disinfected before entering the RA
	Proper procedures are used for flow-through barns
	Pests are prevented from entering the barn and the pest control program is documented
	Pets are not allowed in the RA
	Barn electrical room/office kept clean/free of debris
	Gaps in the eaves are patched
	Air inlets are screened and damaged air inlet screens are repaired
	Weeds and grass are cut regularly within the CAZ
	Area around the barn is kept free of debris
	Potholes/depressions filled where water can stagnate
	Feed spills below augers and bins removed
	Barn walls, roofs and doors are maintained in good condition
	Position bait stations and traps close to barn walls, at entry points around the barn perimeter and inside the service area
	New barns must be constructed with a concrete floor or similar non-porous surface on the ground floor (i.e. no dirt floors) for sanitation and ease of cleaning
✓	Chapter 3 – Mandatory Requirements
	Monitoring, deviation and verification procedures are implemented for the CCPs of the program – Feed receiving, feed ingredients mixing and medication use
	Feed or feed ingredients are stored in clearly-identified closed bins or in tanks
	All delivered feed is inspected for proper delivery and no signs of mold or contamination
	When adding an ingredient to a purchased feed, a record of the addition is kept on file and a sample is kept for two weeks post processing

	<p>If you mix medicated feed on-farm: A feed mixing record and feed samples are maintained; proper sequencing or physical cleaning of the equipment occurs between feed batches</p> <p>If you mix medicated feed on-farm with a withdrawal period: Mixer efficiency tests (once every 3 years) and scale calibrations (annually) are performed</p>
	Check that the correct medications are being used at the proper time during grow-out. Check to ensure the withdrawal time is appropriate.
	Control measures are used to prevent cross-contamination between medicated feed with a withdrawal period and the next feed that is used
	Feed transfer protocol used for all feed transfers to other farms and for transfers of medicated feed with a withdrawal period on the same farm
	A sample of feed must be kept, either at the feed mill or on the farm, for each load of feed that is delivered during the grow-out
✓	Chapter 4 – Mandatory Requirements
	Surface water is only used with an on-going water treatment program
	A visual check (e.g. cloudiness and discoloration) of the water quality is performed on a minimum weekly basis
	Open drinkers are checked for the presence of slime and mold on a daily basis
	Water lines are flushed at full pressure between flocks
	Water lines are cleaned or disinfected during the grow-out or in between flocks
	All water treatment methods (e.g. chlorination, iodine, ozone, UV light, reverse osmosis, etc.) must be used and adjusted as per the manufacturer recommendations
	All water treatment methods and the verifications must be recorded on the Flock-Specific Record Form
	The product level of chemical water treatments used during the grow-out must be verified twice at the end of the drinking line during the grow-out period
	If used, chlorine test strips must measure free chlorine (not total chlorine)
	Water analysis test is performed inside the grow-out area yearly at the nipples/outlet pipe, with acceptable results
	A water test with acceptable results must be available prior to placement for new barns if using a water source that has not previously been tested in the last year
✓	Chapter 5 – Mandatory Requirements
	The barn exterior and equipment must be cleaned; dust build-up is removed from barn exteriors and equipment
	Build-up is removed from fans regularly
	Feed bin boots and lines are emptied between flocks
	Feed bins are inspected for leaks after each flock
	Feed bins are inspected for rust and feed caking at least once per year and cleaned if necessary
	After each flock, you must perform a dry-clean of the inside of the barn and all equipment to remove organic material

	Electrical/office rooms in barns are cleaned as thoroughly as possible
	Mortality pails/buckets are washed/scrubbed with water, and a detergent with a water rinse and/or disinfectant after each flock
	All access to the barn (from pests to unauthorized persons) must be minimized after cleaning to avoid recontamination
	Water lines must be cleaned or disinfected between flocks if a cleaning or disinfection program has not been used during the grow-out
	Open drinkers are washed with water, and a detergent with a water rinse and/or disinfectant, and dried before use
	Option 1: at least once a year the barn (including equipment) is pressure washed with water followed by application of a detergent with a water rinse and/or and disinfectant
	Option 2: at least once a year the barn (including equipment) is pressure washed with water; a detergent and/or disinfectant is applied to feeders, drinkers and equipment only, followed by 14-day downtime
	Option 3: after every flock, the barn (including equipment) is dry cleaned followed by a 14-day downtime
	For diseases where a veterinarian recommended the barn be cleaned and disinfected, clean and use detergent/disinfect the barn as well as any freezers used to store mortalities and equipment that was used in the barn clean-out
	Manure is stored so as not to allow for contamination back into the RA
	Manure is not spread within the CAZ
✓	Chapter 6 – Mandatory Requirements
	Supplies are checked when they come to the farm and the label matches what was ordered
	Inputs must come in unopened containers with a label indicating what it is, its concentration and strength
	Medications, vitamins and other feed additives are stored in closed containers, according to manufacturer recommendation
	Medication is kept in original packaging or label information transferred to a record
	All input/chemical containers are labeled and stored separately from medications and/or feed inputs.
	Expired products are stored separately from non-expired products and disposed of properly
	Farm workers are properly educated to use chemical products and how to properly administer medications
	Only use products according to instructions from the manufacturer or your veterinarian
	Chemicals used during the grow-out are recorded
	Chemicals used must be approved for use in food animal premises, be included on the Organic permitted substances list, have directions specific to use in chicken production or livestock barns, or be used in conjunction with a veterinarian
	Feeds can only contain ingredients approved by CFIA

	Water additives must be approved for use by: (1) CFIA and have a Feed Registration #; (2) Health Canada and have a DIN; or (3) as a Veterinary Health Product and have a notification number
	Only use vaccines approved by the Canadian Centre for Veterinary Biologics of CFIA
	Only use medications approved by the Veterinary Drugs Directorate of Health Canada with a DIN
	A veterinary prescription is available for all Category I-III use, and all Category IV medications are used according to label instructions
	Category I and Category II antibiotics are not permitted to be used in a preventive manner
	Prescriptions are to be obtained within a valid client-patient relationship (VCPR)
	Extra-label medications are used only with a veterinary prescription
	All use of extra label medications need to be recorded on the Flock Information Reporting Form, regardless if it is for preventive or curative purposes, along with a copy of the veterinary prescription
	Water medicator is tested for accuracy before each use
	Medications are withdrawn from feed and water as per the withdrawal period prior to processing
	Feed in lines is minimized and water lines flushed when a medication with a withdrawal period is used during the finishing period
✓	Chapter 7 – Mandatory Requirements
	All chicks and hatching eggs are to be acquired from hatcheries with a CFIA hatchery license
	Written assurance regarding vaccinations (type administered) must appear on the hatchery invoice
	Written assurance regarding medications with dosage level given at the hatchery must appear on the hatchery invoice
	Cornish chickens must not be sent for processing prior to the prescribed withdrawal period for any medications administered to the flock
	Ensure bedding does not contain harmful compounds, is absent of sharp edges, is dry and free of mold, wild bird droppings, feathers and pests
	Rodenticides used in the storage area must not be put in with the bedding
	The barn is prepared prior to chick delivery (adequate bedding provided, temperature and drinking lines adjusted)
	Chicks are observed at arrival and 3-4 days into grow-out; observations are recorded
✓	Chapter 8 – Mandatory Requirements
	Chickens are checked at least twice a day during grow-out
	Farm workers must know what actions to take when there are deviations from normal circumstances
	Farmers must contact a veterinarian in cases of unexplained elevated mortality or morbidity
	Sick/injured birds are treated/culled on a daily basis

	Dead birds are removed daily and a mortality log is maintained
	Mortalities are disposed of outside of the RA and anteroom (freezers are allowed in the ante-room); the disposal area must be located to prevent contamination of feed and water sources and must be maintained to prevent rodents/ scavengers from accessing the mortality
	Mortalities that are stored or moved off the farm when a disease is suspected or confirmed within the vicinity of your farm must be in covered containers
	A monitoring system for power failures and temperature variations is functional
	Information from processor must be used to determine feed withdrawal times
	Each farm has a written emergency/quarantine plan
	You must inform the CFIA and your provincial board if a reportable disease is suspected or confirmed on your farm
✓	Chapter 9 – Mandatory Requirements
	The Standard Operating Procedure (SOP), or similar, must be completed prior to initial implementation on the farm and be updated on a minimum annual basis
	The Flock Specific Record Form, or similar, is to be completed for each cycle. At least one year's worth of records must be retained at all times
	The Flock Information Reporting Form must be completed for each flock shipped, according to the instructions provided; the form is sent to the processor in advance of shipping and at the time of shipping
	Information on the Flock Information Reporting Form is maintained even for farmers shipping to provincially-inspected plants
	Corrective actions with deviations are recorded on the deviation record sheet or other form
✓	Chapter 2 – Highly Recommended Requirements
	The CAZ is at least 15 meters around each barn
	A visitor's parking area for non-essential visitors should exist outside the CAZ
	Ask suppliers for their biosecurity programs/codes
	A physical barrier should be in place to separate the CAZ and RA (e.g., bench, 2'x 4' stepover attached to the wall or on blocks)
	Garbage bins/bags should be on the farm and should be removed, at minimum, between flocks
	Employees should disinfect their footwear before delivering bedding into the barn
	Barn-specific clothing should be worn in the RA or premises-specific clothing
	During partial thinning, catchers should wear premises-specific clothing and catchers should start in the barn that needs thinning
	Hands should be washed or sanitized prior to entry and exit of the RA or barn specific gloves should be worn when inside the RA
	There should be no domestic waterfowl on the farm premises. You should not raise other poultry or keep birds as pets
	Equipment is cleaned and disinfected prior to bringing it into the RA to reduce the chance of contamination

	Flow through barns should have a separate biosecurity for each production area
	Avoid storing unnecessary materials within the work area to lower the risk of contamination
✓	Chapter 3 – Highly Recommended Requirements
	Feed should be purchased from a feed mill that has implemented a HACCP food safety program
✓	Chapter 5 – Highly Recommended Requirements
	Inside and outside of the feed bin inspected after each flock for feed caking and rust
	All manure should be targeted to be removed immediately (i.e. within 48 hours) after birds have been shipped
	Barn cleaning should take place as soon as the litter has been removed in order to maximize the rest period
	Consider pressure washing the barn with water, followed by application of a detergent with a water rinse and/or a disinfectant, after each flock
	Consider a downtime of 14 days. If 14-days between shipping and placement is unavoidable, then a water wash with detergent and/or a disinfectant should be performed.
	Consult your veterinarian for advice on cleaning and detergent/disinfecting your barn if you suspect a disease or experience higher morbidity/mortality in your flock
✓	Chapter 6 – Highly Recommended Requirements
	Buy inputs from reputable companies or manufacturers who have implemented a quality control program
	A plan has been developed as to how to deal with products delivered to the farm that do not meet specifications
	Veterinarians should be consulted due to disease or clinical signs in the flock
	Category IV antibiotics should only be used in conjunction with a veterinary prescription
✓	Chapter 7 – Highly Recommended Requirements
	Chicks should only be purchased from hatcheries that are HACCP certified
	Written assurance regarding the dosage level of vaccinations is provided by the hatchery, if applicable
	Bedding materials are purchased from a supplier with a control program
	Bedding material is stored in a dry, enclosed location and managed by a pest control program
	Do not re-contaminate the barn when spreading bedding materials
	A separate crew than the hatchery places the chicks
✓	Chapter 8– Highly Recommended Requirements
	Before thinning a flock, the catching crew should provide a documented biosecurity protocol

[illegible]



V7.0

Raised by a Canadian Farmer

On-Farm Food Safety Program Standard Operating Procedures

These Standard Operating Procedures (SOPs) are to be updated whenever a change is made and at minimum on an annual basis. The space below is to be signed and dated whenever the SOPs are reviewed or when a change is made. The farm worker (e.g. farmer, farm manager, quota holder) who was involved with the development or the review of the SOPs is required to sign and date below.

Signature _____ Date _____ m/yr

Signature _____ Date _____ m/yr

Signature _____ Date _____ m/yr

Signature _____ Date _____ m/yr

Signature _____ Date _____ m/yr

Signature _____ Date _____ m/yr

Record any deviations from these SOPs in the Deviation Chart, along with the reasons of the deviation and any corrective actions taken to correct the deviation, on the Flock Specific Record Form or similar.

CHAPTER 1: OFFSP TRAINING RECORD

- (1) Have each farm worker sign and date that they have been provided with and have understood the *Raised by a Canadian Farmer* On-Farm Food Safety Program (OFFSP) and the Standard Operating Procedures (SOPs) for the areas in which they are responsible. This should be updated whenever the SOPs are updated. Service personnel (e.g. feed reps, hatchery crew, catching crew) and farm workers responsible for developing the SOPs (e.g. farmer or farm manager who signed on the first page of the SOPs) are not required to sign the training log.

Name	Signature	Date

- (2) List any other training that farm workers have received with respect to biosecurity and/or food safety:

Name	Training	Date

CHAPTER 2: CONTROLLING ACCESS TO THE FARM

A) Controlling Access to the Controlled Access Zone (CAZ)

- (1) ☐ A farm diagram is available which indicates the layout of the property, barns, feed bins, manure storage, visitor parking area, and the location of the CAZ and the RA
- (2) Indicate to whom you have provided your farm diagram (HR):

- (3) ☐ A sign or a ☐ physical barrier is used to identify the entrance to the CAZ

- (4) List any specific biosecurity measures required for supplier vehicles that enter the CAZ (HR):

B) Controlling Access to the Restricted Area (RA)

- (1) ☐ A sign is posted at the entrance to the RA to indicate the area is restricted
- (2) ☐ Barn doors and other entrances to the RA are kept locked when farm workers are not able to supervise the access to the barn
- (3) ☐ Indicate the type of barrier or demarcation used to separate the CAZ and the RA in each barn:

- (4) Indicate the biosecurity measures taken for farm workers before entering the RA:

- ☐ Barn-specific boots or ☐ disposable boots
- ☐ Barn-specific clothing/coveralls (HR)
- ☐ Premises-specific clothing (e.g. clothing worn in the barn is not worn off of the premises)
- ☐ Clothing is only worn on farm operations under common management
- ☐ Hats/bonnets (HR)
- ☐ Masks (HR)
- ☐ Hand sanitization (using either ☐ soap and water or ☐ hand sanitizer)
- ☐ List any other biosecurity measures taken:

(5) Indicate the biosecurity measures taken for suppliers/visitors entering the RA:

- ☐ Barn-specific boots or ☐ disposable boots
- ☐ Barn-specific or ☐ premises specific coveralls
- ☐ Hats/bonnets (HR)
- ☐ Masks (HR)
- ☐ Hand sanitization (using either ☐ soap and water or ☐ hand sanitizer)
- ☐ Suppliers/visitors are required to sign a logbook
- ☐ Farm manager/worker accompanies visitors to ensure biosecurity is respected
- ☐ List any other biosecurity measures taken:

- ☐ Are there any exceptions to the list above that suppliers/visitors must follow?

- ☐ If thinning occurs, what measures are taken by the catching crew to reduce the risks associated with this activity? (if applicable):

(6) For farm workers that have contact with another poultry operation, which is not under common management, list the steps taken to avoid cross-contamination:

- ☐ Hands are sanitized prior to accessing the RA
- ☐ Clothes are changed before entering the RA or ☐ Coveralls are worn in your RA
- ☐ Boots are changed prior to entering your CAZ
- ☐ A shower is required in between farms (HR)
- ☐ There is a downtime of ____ hours or ____ days before entering your RA
- ☐ Other:

(7) Define your protocol for bringing equipment inside the RA after the barn has been cleaned and disinfected or when there are birds in the RA:

- ☐ Equipment is visually inspected to ensure no organic matter is visible; any equipment with visible organic matter is cleaned (and disinfected)
- ☐ All equipment is cleaned and disinfected
- ☐ Equipment from another premises is cleaned and disinfected
- ☐ Other:

(8) If you have a flow-through barn, list your protocols to limit cross-contamination between different aged birds:

- ☐ Movement from youngest birds to the oldest birds
- ☐ Separate biosecurity protocols used for each RA
- ☐ List any other biosecurity measures that are taken:

(9) List any other biosecurity measures used on your farm for humans or equipment when entering the RA:

C) Pest Control

(1) Pest Situation Analysis: Rate your farms' pest problems in the previous year (none, some, lots):

	None	Some	Lots
Rodents			
Wild Birds			
Flies			
Beetles			
Other Pests			

List other pests (if applicable): _____

(2) Check the boxes that reflect the pest control program used on the farm:

- ☐ Vegetation, equipment and debris kept away from the exterior of the barn(s)
- ☐ Feed spills are cleaned up immediately
- ☐ The barn is kept in good repair to reduce rodent activity
- ☐ Wild birds are prevented from entering the barn
- ☐ Domestic pets (e.g. cats and dogs) are prevented from entering the RA
- ☐ Areas where water can stagnate are filled
- ☐ Pest activity is monitored daily

(3) Indicate the control measures used for wild birds:

(4) Indicate the control measures used for flies:

(5) Indicate the control measures used for rodents:

(6) Indicate the control measures used for darkling beetles:

(7) Indicate any other pest control measures that are used on the farm:

- (8) ☐ There are no domestic waterfowl on the premises, or
☐ Any domestic waterfowl are not permitted in the CAZ and are fenced in

CHAPTER 3: FEED

A) Feed Handling (Critical Control Point #1)

- (1) ☐ All feed bins on the farm are identified
- (2) ☐ Indicate how often the feed bins are inspected for feed build-up and/or rust:

- (3) ☐ Each feed delivery slip is checked for the presence of medications
- (4) Indicate the control measures used for dealing with a medication with a withdrawal period (Critical Control Point #3):
 - ☐ Two feed bin system
 - ☐ Using a rubber mallet to knock the sides of the feed bin
 - ☐ Other:

- (5) What do you do with left-over feed?
 - ☐ Kept in a feed bin until the next flock; Indicate feed bin #: _____
 - ☐ Stored in bags until the next flock
 - ☐ Transferred to another barn on the same premises
 - ☐ Transferred to another farm premises
 - ☐ Returned to the feed mill

B) Purchased Feed

- (1) ☐ Your feed mill has provided written confirmation that they are HACCP certified or are following a food safety program
- (2) ☐ A sample of feed from each delivery is ☐ maintained on farm or ☐ at the feed mill
- (3) ☐ A sample of any ingredient (e.g. wheat) added to a purchased feed or the final feed is maintained on-farm
- (4) ☐ A record of adding the ingredient must be kept on the Flock-Specific Record Form, or similar
- (5) ☐ Feed delivery slips are kept on file for each feed delivery

C) On-Farm Medicated Feed Mixing (Critical Control Point #2)

(1) Do you mix medicated feed on farm: ☐ Yes ☐ No

If yes:

a) A sample of the ☐ finished feed or ☐ feed ingredients are kept for 14 days after processing

b) Preventing Cross-Contamination:

Describe the procedures used to prevent medication cross contamination between feed batches when mixing medicated feed, such as sequencing, flushing or physical clean-out procedures:

(2) Do you mix medication that requires a withdrawal period? ☐ Yes ☐ No

If yes:

a) Mixer Efficiency Tests:

Describe the procedure used to perform mixer efficiency tests, and the frequency of tests (minimum once every 3 years):

b) Scale Calibration Tests:

Describe the procedure used to perform scale calibration tests, and the frequency of tests (minimum annually):

c) Record the date and results of the mixer efficiency tests (laboratory results are to be kept on file)

Date	Results

d) Record the date and results of the scale calibration tests

Date	Results

(3) Confirmation of the feed mill control program by the feed mill operator/supervisor:

Name	Signature	Date

CHAPTER 4: WATER

A) Water Source and Inputs used in the Water

(1) Indicate your water source:

- ☐ Municipal water supply
- ☐ Well
- ☐ Surface water (e.g. lake)
- ☐ Other: _____

(2) List the type of cleaner and disinfectant used in the water/water lines (list the product names and frequency of use)

☐ During the grow-out:

☐ In-between flocks:

☐ Acidifiers/pH products:

☐ Animal health products (e.g. probiotics, vitamins, minerals, etc.):

(3) For cleaning/disinfectant products used in the water lines during the grow-out, indicate how, at what location, and at what frequency the concentration of water treatment is verified:

B) Annual Water Test

- (1) ☐ Indicate where in the barn the annual water test sample is taken from:

- (2) ☐ Results of the annual water test are maintained on file and corrective actions are taken as necessary. Record any corrective actions:

CHAPTER 5: BARN CLEANING

A) Cleaning, Disinfection and Downtime Procedures

(1) Describe how you, or the cleaning crew, clean your barn at the end of every flock:

✓	Procedure at the end of every flock
	Remove litter/manure from barn
	Dry-clean (i.e., blow down/brushing) the barn, entranceway and equipment (includes floors, walls, ceilings, fans, feeders and drinkers, drains, dedicated barn footwear, catching equipment, etc.)
	Remove dust/debris etc. from all rooms in the barn (i.e., electrical/office)
	Mortality pails/buckets are hand scrubbed or pressure washed with water followed by a detergent and/or disinfectant
	Barn and equipment (as per the above dry-clean list) is pressure washed with water
	Barn and equipment (as per the above dry-clean list) is washed with detergent
	Barn and equipment (as per the above dry-clean list) is disinfected/fumigated
	Equipment used during clean-out is cleaned (and disinfected as per barn process)
	Empty and thoroughly clean the feed bin boots and feeding systems (augers and lines) between flocks
	Feed bins are inspected for leaks
	Flush, clean and/or disinfect water lines (open drinkers disinfected if applicable)
	Indicate the desired number of days downtime (the number of days from when the flock was shipped to the placement of chicks) between flocks # Days Downtime: _____

(2) Indicate how your barns meet the OFFSP requirements for washing, disinfection and downtime:

Options 2 and 3 can only be used based on the health status of previous flocks and when the barn is not experiencing a disease/production challenge.

✓	Options	Step 1: Pressure Washing	Step 2: Use of detergent and/ or disinfectant	Step 3: Downtime
	Option 1	MD Pressure wash the barn* and equipment with water at least once per year	MD Detergent and/or disinfect the barn* and equipment once at least per year	N/A
	Option 2	MD Pressure wash the barn* and equipment with water at least once per year	MD Detergent and/or disinfect the feeders, drinkers and equipment at least once per year	MD 14-day downtime at least once per year
	Option 3	N/A	N/A	MD 14-day downtime after every flock**

* The barn includes the walls, floors, feeders, drinkers, ceilings, fans, drains, any other equipment (e.g., hoppers, feeding chains etc., including any catching equipment and barn boots).

** To qualify, it is recommended that manure be removed from the barn within 48 hours of the birds being shipped but that it not exceed 72 hours after shipment (i.e., the maximum time period is 72 hours). Also, given that schedule changes can occur (i.e., delivery of chicks or shipment dates), a downtime of less than 14-days can occur a maximum of 2 times in the previous 12 months. If this is greater than 2 times in the previous 12 months, then Option 3 cannot be used.

(3) ☐ If a veterinarian recommends a cleaning and detergent/disinfection due to disease, the veterinary recommendation will be followed and documented.

(4) If the cleaning and/or disinfection is contracted out, indicate the following:

Cleaning firm name: _____

Telephone number: _____

B) Manure Management

(1) Describe your manure management plan:

(2) When do you target to remove the manure from the barn after the birds have been shipped (days)? _____

C) Equipment

(1) Equipment used in the cleanout process is:

☐ Only used on the one farm premises, or

☐ Used on multiple farm premises. If yes, indicate the control measures used to prevent cross-contamination between premises:

CHAPTER 6: MEDICATIONS AND OTHER INPUTS

A) Storage and Use of Products

- (1) ☐ Chemical products are stored separately from medications and/or feed and water additives. Indicate your storage areas for these products:

- (2) ☐ Farm workers using medications and other inputs understand how to properly handle and use the products
- (3) ☐ Containers are labelled with the name and concentration of the product being used through the water (e.g., medications, water additives, cleaning agents etc.)

B) Medications (Critical Control Point #3)

- (1) ☐ All Category I, II, and III antibiotics are used in conjunction with a veterinary prescription
- (2) ☐ Category IV antibiotics are used according to their product instructions; otherwise, a veterinary prescription is required
- (3) Recording medication use:
- ☐ All medications used are recorded on the Flock-Specific Record Form or other similar document. All antibiotics (Category I-IV) are to be recorded.
 - ☐ Medications are recorded on the Flock Information Reporting Form as per instructions
- (4) ☐ Medication withdrawal times are adhered to prior to processing as per veterinary prescription or medication instructions
- (5) ☐ After a feed with a medication withdrawal time is used during the finishing period (the last 2 weeks of production), feed in the feed lines must be minimized
- (6) ☐ Describe the method you use to test the accuracy of the medicator:

C) Chemical Products (e.g. detergent, cleaners, disinfectants, water acidifiers, rodenticides, etc.)

- (1) ☐ Chemical products being used are:
- Approved for use on farm animal premises (e.g. DIN);
 - Listed on the Canadian Organic permitted substances list;
 - Have directions for use in chicken production or livestock barns; or,
 - Are used in conjunction with a veterinarian
- (2) ☐ Chemical products are used according to the manufacturers' instructions or your veterinarian
- (3) ☐ All chemical containers are labeled with the product name, expiry date and concentration (if different from the original)
- (4) ☐ Chemicals and other inputs used in the RA during the grow-out period (e.g. insecticides) are recorded on the Flock-Specific Record Form or similar, and any withdrawal times are adhered to

D) Feed and Water additives (e.g. vitamins, probiotics, essential oils, etc.)

- (1) ☐ Water additives being used are approved by:
- CFIA and have a feed registration #;
 - Health Canada and have a Drug Identification Number (DIN); or,
 - Health Canada as a Veterinary Health Product and have a notification number
- (2) ☐ Feed and water additives are used according to the manufacturers' instructions or your veterinarian, and these are kept on file

CHAPTER 7: CHICKS AND BROODING

A) Hatchery

- (1) ☐ Indicate the hatchery federal register number: _____
- (2) ☐ Hatchery has provided written confirmation that they are HACCP certified (HR)
- (3) ☐ Hatchery invoice slips are verified for any medications (including dosage) and/or vaccines given at the hatchery

B) Bedding Materials

- (1) ☐ Indicate the type of bedding used:
☐ Wood Shavings; ☐ Straw; ☐ Other: _____
- (2) ☐ Bedding is checked for mold, feathers and bird droppings, and does not contain harmful compounds, is absent of sharp edges and is soft and dry prior to being laid in the barn
- (3) ☐ Rodenticides that are used in the bedding storage area are kept separate from the bedding so as not to contaminate the bedding prior to placement

C) Barn Preparation, Delivery of Chicks and Brooding

- (1) ☐ The barn is pre-heated in advance of chick delivery
- (2) ☐ Additional feed is available for easy access for chicks
- (3) ☐ Water lines are flushed, and water is available immediately to chicks
- (4) ☐ Indicate who places the boxes and chicks in the barn:
☐ Farm Workers or ☐ Hatchery employees
If hatchery employees, indicate what biosecurity measures are taken:
☐ Clean clothing; ☐ Farm-specific boots; ☐ Cleaned and sanitized footwear;
☐ Hands washed (with soap and water) or sanitized prior to entry
- (5) ☐ Chick temperatures are monitored for the first 3-4 days
- (6) ☐ Crop fill is monitored for the first few days
- (7) ☐ Chick weights are monitored at placement, day 7 and 14
- (8) ☐ Culling of unthrifty and ill chicks to reduce disease pressure
- (9) ☐ Activity level and health status is monitored at placement and throughout brooding

CHAPTER 8: FLOCK MONITORING

A) Disease Recognition

- (1) Indicate how many times the flock is checked each day: _____
- (2) Indicate when a veterinarian is contacted:
 - ☐ In cases of unexplained elevated mortality or morbidity. Indicate if there is a specific mortality trigger:

- ☐ Other:
-

B) Mortalities

- (1) ☐ A daily mortality and cull log is maintained for each flock and each floor of production
- (2) Indicate your protocol for disposing of mortalities:

- (3) ☐ Farm workers wash hands with ☐ soap and water or ☐ hand sanitizer following contact with mortalities

C) Disease Response Protocols

When a contagious disease is suspected, or after a confirmation has been received from a veterinarian, the following emergency response/farm quarantine is put in place. This protocol is for a suspect or confirmed case on your farm or within the vicinity of your farm.

- ☐ Keep the barns locked and use a visitor's log to record all movement on and off the farm, not just within the RA.
- ☐ Block the laneway to the CAZ (using a gate, rope/chain, wagon, etc) to prevent unwanted traffic or access.
- ☐ Inform your provincial board office.
- ☐ Reduce movement on and off the farm (CAZ and RA) to a minimum, including family members.
- ☐ Whenever possible, conduct activities through non-contact methods, such as telephone or e-mail.
- ☐ Eliminate or delay all activities that if undertaken, could act as a vector to spread disease. Avoid direct contact with off-farm poultry operations or poultry personnel.

- ☐ No other farms should be visited and avoid visiting common gathering places, such as local coffee shops or town meetings.
- ☐ Delay or reduce all service and other visits to the farm. Refer to your emergency contact list and exercise extreme caution when allowing necessary visits from input suppliers or service providers.
- ☐ People entering the CAZ must wear disposable boot covers (or use of foot spray) and disposable coveralls while on farm. Used disposable supplies must remain on the farm. Hand disinfecting or vigorous washing with warm water and soap prior to entering and leaving is recommended.
- ☐ Vehicles accessing the CAZ should be run through a truck wash prior to visiting the farm. Disinfectant should be spray applied to tires, wheel wells and undercarriage (upon entry and exit). The interior truck cab including areas such as the floor, pedals, steering wheel, and door handles should also be disinfected.
- ☐ Family members attending activities away from the farm such as work or school should limit access to the barn. They should avoid contact with other feathered species (including pets). Strict biosecurity protocols must be followed to minimize risks.
- ☐ Limit flock management to specific individuals. Clean laundered clothing and dedicated footwear should be utilized for each barn. Ensure that no equipment enters or leaves the area unless thoroughly cleaned and disinfected. Hand disinfecting or vigorous washing with warm water and soap is also recommended prior to leaving the barn.
- ☐ Barn entrances should be cleaned and sanitized on a daily basis.
- ☐ Dead bird disposal should be confined on farm until the situation is clear. Practice proper composting or freezing and ensure no wild or domestic animals have access the dead birds.
- ☐ Mortalities are kept in covered containers before being moved to the disposal area and, if they are being transported off farm, are transported in covered containers.
- ☐ Garbage disposal should be well thought out, so that care and control of material generated on the farm is maintained until the situation is clear.
- ☐ If the disease is in your vicinity, review your flock health records for feed/water consumption and for signs of abnormalities. Watch your flock and report any unusual illness or mortality to your veterinarian, your provincial board office and industry personnel.
- ☐ Make every effort to heighten your biosecurity protocols. Indicate any other measures that would be taken on your farm:

D) Monitoring and Back-up Systems

(1) Describe your monitoring/alarm system:

☐ Type of system: _____

Inputs monitored: ☐ power; ☐ temperature; ☐ feed; ☐ water; ☐ humidity;
☐ other: _____

(2) Describe your standby power system:

☐ Type of system: _____

☐ Testing frequency: _____

E) Preventing Post-Harvest Crop Contamination

(1) Describe the measure(s) taken to reduce post-harvest crop contamination:

☐ Communicate with processor for instructions on feed withdrawal

☐ Feed withdrawal occurs 6–10 hours pre-slaughter

☐ Acidification of the drinking water prior to shipping

☐ Other:

On-Farm Medicated Feed Mixing Record Template

Complete this record, or similar, for complete feeds made on-farm.

Record each batch in chronological order, and record when a flush or physical cleaning has been used.

Record deviations in the Deviation Chart on the Flock Specific Record Form.

[illegible]

Note: CFC's OFFSP focusses on food safety requirements and does not address all aspects of the Feeds Act and Regulations and the Health of Animals Act and Regulations; additional requirements are needed to be compliant with federal regulations.

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

[illegible]

[illegible]

Flock Mortality & Daily Records

[illegible][illegible]

- 1 Record all Corrective Actions in the Deviation Chart.
- 2 Day 1 represents the first 24 hr period after placement.

Barn Preparation Checklist

BARN CLEANING	DATE(S) COMPLETED	RECORD THE PRODUCT NAME AND/OR A DESCRIPTION OF THE PROCEDURE
Remove litter/manure from barn *If using Option #3 - Time since shipment of last flock:	*	* Location:
Dry-clean (i.e. blow down/brushing) barn, entranceway and equipment (feeders/drinkers/fans/floor/walls/barn footwear/catching equipment etc.)	*	
Mortality buckets/pails are washed with water and detergent and/or disinfectant	*	* Product name:
Barn and equipment (as per the above dry-clean list) is pressure washed with water	*	
Option 1: <input type="checkbox"/> Detergent and/or <input type="checkbox"/> disinfectant/fumigation used in the barn and on the equipment	*	* Product name(s):
Option 2: <input type="checkbox"/> Detergent and/or <input type="checkbox"/> disinfectant/fumigation used on the equipment	*	* Product name(s):
Equipment used during clean-out is cleaned	*	* Product name:
Flush, clean and/or disinfect water lines (open drinkers disinfected if applicable)	*	* <input type="checkbox"/> Flush Product name:
Inspect inside and outside of feed bin and clean if needed (min. 1/year)	*	* Description:
Downtime: Indicate the number of days from when the flock was shipped to the placement of chicks		*
Facilities Preparation	Dates(s)	
Water system checked (including filters or UV bulbs)	*	* Dates of filters/bulbs changed:
Heating system checked	*	
Stand-by generator checked	*	
Monitoring system checked	*	
Ventilation system checked	*	
Light system checked	*	
Drinkers and feeders checked individually	*	
Bedding material (checked for mold/feathers/droppings/sharp edges or harmful compounds at placement)	*	
Pest Control – Describe the pest control methods used	Dates(s)	
Describe any barn repairs	*	*Description:
Vegetation cut around building(s)	*	*
CAZ kept maintained	*	*
Rodent controls used	*	* Product:
Wild bird controls used	*	* Product:
Fly controls used	*	* Product:
Insecticides (e.g. for darkling beetles) used	*	* Product:
Other pests (names) and controls used	*	* Controls:
No pets in the RA (✓)	*	* Signature:



Raised by a Canadian Farmer
On-Farm Food Safety Program (2021) and
Animal Care Program (2018) Flock-Specific Records
V7.0



Production Information

Quota Period: _____

Barn #: _____

Floor #: _____

Placement Date: _____

Name of farm representative available
at placement: _____

Chick Quality Assessment

Quality Assessment	Upon Receipt of Chicks		3-4 Day-old Chicks	
	Acceptable	Not Acceptable	Acceptable	Not Acceptable
Alertness				
Vigour				
Condition				
Normality				

Water – Record all products (e.g. for cleaning, acidification/pH, probiotics, etc.) used in the water. For cleaning products, record the verification results (at least twice during the grow-out)

Product Name	Date(s) Used	Chemical Concentration Verification	
		Dates	Results (e.g. ppm, pH)

Feed

Each load of feed is visually inspected and the bill checked for medications and kept in the producer's file: _____ (initial)

Record the date that control measures were used when switching from a medicated feed with a withdrawal period to feed without a withdrawal period*	Record the type and amount of ingredients (e.g. wheat) added to finished feeds	Record the dates of feed samples (if required)

* For single-bin systems record the date when the sides of the bin were knocked down to prevent feed hang-ups; for double-bin systems record the date when the switch to the feed bin without a withdrawal period occurred.

Feed Transfer Record

Date feed moved	Original farm name and bin #	Destination farm name and bin #	List any medications with withdrawal periods used in the flock	Method of transport	Sample taken	Cross-contamination prevention measures used at the original bin

Visitors Log Book

Date	Name	Has there been any previous poultry contact within the last 24 hours?

Medications – Complete the following table for all medications administered through feed or water

Name of Medications	Route of Administration	Water Medicator Tested			Record any control measures used in the last 2 weeks of grow-out*
		Date	Results	Corrective Actions (if any)	
	<input type="checkbox"/> feed <input type="checkbox"/> water				
	<input type="checkbox"/> feed <input type="checkbox"/> water				
	<input type="checkbox"/> feed <input type="checkbox"/> water				
	<input type="checkbox"/> feed <input type="checkbox"/> water				

*For medication with a withdrawal period used in the last 14 days. Record the date feed was minimized or the water lines flushed.

Flock Density

Floor #	# Birds at time of shipment*	Average bird weight (specify kg or lb)	Floor Area (specify ft² or m²)	Density at shipping (weight/floor area)

*The # birds at the time of shipment is the number of birds placed per floor minus the mortality and culls for the floor right before shipping.

Ammonia – For all densities, record the ammonia level (ppm) per floor, starting the week of day 21-27, at least once weekly

Floor #	Date	Ammonia Level	Date	Ammonia Level	Date	Ammonia Level

Deviation Chart

Complete this table when a deviation from any Standard Operating Procedures occurs including:

- ☐ Temperature levels
- ☐ Lighting program
- ☐ Humidity or ammonia levels
- ☐ High mortality
- ☐ Bedding quality
- ☐ Medications delivered through feed or water
- ☐ Alarms

Deviations only need to be recorded if they exceed upper or lower limits outlined in SOP.

Date	Description of the Deviation	Reason for the Deviation	Actions taken to Correct the Deviation

Shipping

Name of farm representative available locally to assist catching crew: _____

☐ Feeders and waterers lifted prior to catching

☐ Light intensity reduced prior to catching

☐ Flock evaluated for fitness prior to transport with catching supervisor

Inside barn temperature: _____ °C/°F at loading

Outside temperature: _____ °C/°F at loading

Catching & loading comments: _____

Number of culls left: _____

Barn temperature reduced prior to loading: _____ hours: _____

Date and time of euthanasia of leftover birds: _____

Daily Checks

I confirm that the information on these Flock-Specific records is accurate and that the following food safety and animal care checks have been performed on a daily basis (any deviations from SOP's are to be recorded in the Deviation Chart):

- ☐ Feed quality and availability
- ☐ Thermal comfort of the flock
- ☐ Ventilation system
- ☐ Ammonia levels
- ☐ Temperature levels
- ☐ Humidity levels
- ☐ Litter quality
- ☐ Water quality (mold and slime) for open drinkers
- ☐ Water availability (quality – cloudiness and discoloration – checked weekly)
- ☐ Heating system
- ☐ Lighting system
- ☐ Flock Health
- ☐ Birds inspected minimum twice daily

Signature

Date

Flock Mortality & Daily Records

Floor #:	Flocks with a Grow-Out Density between 31-38 kg/m²					
	Temperature		Humidity or Ammonia		Water Meter Reading	Record any Alarms¹
	Min.	Max.	Min.	Max.		
	Age	Mortality	Culls	Date		
	24					
	25					
	26					
	27					
	28					
	29					
	30					
	31					
	32					
	33					
	34					
	35					
	36					
	37					
	38					
	39					
	40					
	41					
	42					
	43					
	44					
	45					
	46					

Floor #:	Flocks with a Grow-Out Density between 31-38 kg/m²					
	Temperature		Humidity or Ammonia		Water Meter Reading	Record any Alarms¹
	Min.	Max.	Min.	Max.		
	Age	Mortality	Culls	Date		
	1²					
	2					
	3					
	4					
	5					
	6					
	7					
	8					
	9					
	10					
	11					
	12					
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	17					
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	20					
	21					
	22					
	23					

- 1 Record all Corrective Actions in the Deviation Chart.
- 2 Day 1 represents the first 24 hr period after placement.

Flock Mortality & Daily Records

Floor #:	Flocks with a Grow-Out Density between 31-38 kg/m²					
	Temperature		Humidity or Ammonia		Water Meter Reading	Record any Alarms¹
	Min.	Max.	Min.	Max.		
	Age	Mortality	Culls	Date		
	24					
	25					
	26					
	27					
	28					
	29					
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	42					
	43					
	44					
	45					
	46					

Floor #:	Flocks with a Grow-Out Density between 31-38 kg/m²					
	Temperature		Humidity or Ammonia		Water Meter Reading	Record any Alarms¹
	Min.	Max.	Min.	Max.		
	Age	Mortality	Culls	Date		
	1²					
	2					
	3					
	4					
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- 1 Record all Corrective Actions in the Deviation Chart.
- 2 Day 1 represents the first 24 hr period after placement.

BARN WASHING, DISINFECTION AND DOWNTIME



Cleaning the interior of the barn involves several key steps that work together to reduce disease and bacteria load – and each one of these play an important role in breaking the cycle of contamination.

THESE STEPS INCLUDE:

- » **Dry-cleaning:** The removal of litter and removal of all organic matter, through blowing or brushing (or by water when washing the barn).
- » **Pressure washing with water:** Warm or cold water can be used to perform the pressure wash, although warm water may take less time to effectively wash the barn.
- » **Detergent and/or disinfectant:** Detergents are important to remove soil and organic material from surfaces, and to break down biofilms. Detergents give disinfectants a better opportunity to reach and destroy microorganisms. The disinfection process involves a disinfectant wash or a fumigation.
- » **Downtime:** The downtime allows for the destruction of microorganisms, which could have survived the cleaning process but are susceptible to natural dehydration/desiccation.

To be most effective, the barn cleaning process should take place as soon as the birds have been shipped to provide as much downtime as possible.

Remember to always follow all manufacturer directions for the products you are using. Being thorough in how the barn is cleaned and disinfected is essential as you can use a highly effective product but if not applied correctly (following manufacturer instructions), then the process can be ineffective.

If your flock had a disease challenge, or if you have been recommended by a veterinarian to perform a cleaning and disinfection, check Section 5.5 of the OFFSP manual for a suggested protocol.

INCREASED FLEXIBILITY FOR WASHING, DISINFECTION AND DOWNTIME

The new version of the CFC OFFSP provides for three options for washing, use of detergent/disinfectant and for downtime. Different options have been provided to allow for different management practices based on the level of disease challenge within the barn.

These three options have been developed to provide farmers more flexibility while still meeting the objectives of the breaking the cycle of contamination.

- » **Option 1** is similar to the current manual (pressure wash the barn and equipment at least annually), with increased flexibility in that a detergent or a disinfectant can be used.
 - The option of using a detergent or a disinfectant is being allowed based on literature reporting common levels of effectiveness.
- » **Option 2** is a pressure wash of the barn and equipment at least annually, while a detergent or a disinfectant need only be used on the feeders, drinkers and equipment. This is to be followed by a 14-day downtime.
 - This option has been developed for those farms that would rather only disinfect the equipment. Using a 14-day downtime replaces the requirement to disinfect the entire barn.
- » **Option 3** involves a dry-clean of the barn and a 14-day downtime after every flock. No washing or detergent/disinfection is required with this option, although manure must be removed from the barn within 72 hours of the birds being shipped. Less than 14 days downtime can occur a maximum of twice in the previous 12 months due to scheduling issues.
 - The 14-day downtime in Option 2 and 3 is based on the Canadian Food Inspection Agency's National Avian On-Farm Biosecurity Standard that recommends a 14-day downtime when no other interventions are used.

Options 2 and 3 can only be used based on the health status of previous flocks and when the barn is not experiencing a disease/production challenge. The decision to use Option 2 or 3 is based off of your assessment of the performance of the previous flocks.

CALCULATING DOWNTIME

Downtime is defined as the time from when the previous flock is shipped through to the placement of the subsequent flock. As an example, given the requirement for a 14-day downtime, a barn where the last flock was shipped on May 3rd would be in a position to place a new flock as of May 17th.

SUMMARY OF WASHING, DISINFECTION AND DOWNTIME OPTIONS – MANDATORY REQUIREMENTS

	Step 1: Pressure Washing	Step 2: Use of detergent and/or disinfectant	Step 3: Downtime
Option 1	MD Pressure wash the barn* and equipment with water at least once per year	MD Detergent and/or disinfect the barn* and equipment at least once per year	N/A
Option 2	MD Pressure wash the barn* and equipment with water at least once per year	MD Detergent and/or disinfect the feeders, drinkers and equipment at least once per year	MD 14-day downtime at least once per year
Option 3	N/A	N/A	14-day downtime after every flock**

Note: Options 2 and 3 can only be used based on the health status of previous flocks and when the barn is not experiencing a disease/production challenge.

* The barn includes the walls, floors, feeders, drinkers, ceilings, fans, drains, any other equipment (e.g., hoppers, feeding chains etc., including any catching equipment and barn boots).

** To qualify, it is recommended that manure be removed from the barn within 48 hours of the birds being shipped but that it not exceed 72 hours after shipment (i.e., the maximum time period is 72 hours). Also, given that schedule changes can occur (i.e., delivery of chicks or shipment dates), a downtime of less than 14-days can occur a maximum of 2 times in the previous 12 months. If this is greater than 2 times in the previous 12 months, then Option 3 cannot be used.

More information can be found in the OFFSP manual.



CAN I USE THIS PRODUCT IN MY BARN?



Great Question!

No matter what type of product is being used, you always need to consider if that product is approved to be used in agricultural facilities, and what the potential impact of that product may be on the food safety of the final product – chicken.

Remember, always use the correct product for your situation and always follow the label directions. Record the use of each of these products in your flock records.

Labels can be confusing. It's true. But here's a few helpful hints to help figure out if a product can be used in or around your barns.

RODENTICIDES/PESTICIDES

- » All pest control products must be approved by the Pest Management Regulatory Agency of Canada.
- » Approved products are given an individual "Registration number".
- » The approved list of products can be found using an **online search**, or you can **download an app** on your phone.
- » Health Canada's restrictions for using rodenticides on agricultural premises **is here**.

MEDICATIONS

- » All medications must be approved by Health Canada.
- » Approved products are issued a "Drug identification Number" (DIN).
- » A listing of approved medications can be found on **Health Canada's Drug Product Database**.
- » The Canadian Food Inspection Agency approves the medications that are permitted to be used in feed; these are listed in the **Compendium of Medicating Ingredient Brochures (CMIB)**.

VACCINES

- » All vaccines must be approved by the Canadian Food Inspection Agency.
- » Approved products are given a "CCVB Number".
- » A complete listing of approved vaccines can be found on the **CFIA veterinary biologics website**.

DISINFECTANTS

- » Products labeled as disinfectants are regulated by Health Canada.
- » Approved disinfectants are issued a "Drug Identification Number" (DIN).
- » A listing of approved disinfectants can be found on **Health Canada's Drug Product Database**.

CLEANERS/SANITIZERS (FOR BARN, EQUIPMENT, WATER LINES), PH MODIFIERS

- » Cleaning and sanitizing products are registered differently depending on their use and how they are marketed.
- » While all products need to respect Canadian government requirements for labeling and safety, there is no government registration required. Some products may have a "Drug identification Number" (DIN), but most will not.
- » To be used, products must either be approved for use in food animal premises by having a "Drug Identification Number" (DIN), have directions specific for use in chicken production or livestock barns, be listed on the **Organic permitted substances list**, or be used in conjunction with a veterinarian.

FEED ADDITIVES

- » Any products used in feed must be approved for use by the Canadian Food Inspection Agency.

WATER ADDITIVES

- » Water additives (e.g. vitamins, probiotics, essential oils, etc.) that are being used to impact the health or nutrition of the flock must be approved for use by either the Canadian Food Inspection Agency or Health Canada.
- » Water additives are registered differently depending on how they are being used. Water additives must be approved in one of the following ways:
 - As a feed by the Canadian Food Inspection Agency - and have been issued a Feed Registration Number.
 - As a drug by Health Canada - and have been issued a Drug Identification Number (DIN). These can be found on **Health Canada's Drug Product Database**.
 - As a Veterinary Health Product by Health Canada - and have been issued a notification number. A list of these products can be found on **"List C" published by Health Canada**.

More information can be found in the OFFSP manual.

MIXING MEDICATED FEED ON-FARM



When mixing medicated feed on-farm, measures are needed to prevent bacterial contamination and to control the risk associated with handling medicated products (e.g. weighing the correct quantity of medications, that medications are properly mixed, and that medication withdrawal times are adhered to).

CFC's OFFSP focusses on food safety requirements; as a result, not all federally mandated feed related requirements are addressed in the OFFSP. Additionally, feed mills that sell feeds are considered commercial feed mills and are subject to different regulations.

ON-FARM MEDICATED FEED MIXING CHECKLIST

- ☒ Buy inputs from reputable companies or manufacturers who have a quality control program.
- ☒ Develop a control program for your feed mixing operation. Record your control program in the SOP, or similar.
- ☒ Keep a feed mixing record.
 - » This includes the types of feed manufactured, the sequential order of feed manufactured, the medications used and their rates of inclusion.
 - » Record this on the On-Farm Feed Mixing Record, or similar
- ☒ Sequence, flush or physically clean the mixing equipment after manufacturing medicated feed to prevent cross contamination.
- ☒ Record the storage location (e.g. feed bin) where the feed is stored.
- ☒ Take a sample of the ingredients or the final feed.
 - » The sample is to be kept for 2 weeks after the flock has been marketed.
- ☒ If a deviation occurs during on-farm feed mixing (e.g. the wrong medication or quantity of medication), then actions need to be taken to reduce the potential risks. Examples of these actions could include:
 - » Removing feed (flushing or cleaning) from the feeding system.

- » Contacting the catching crew and/or processor to reschedule their activities.
- » Discussing the deviation with farm workers regarding the source of problem and taking appropriate corrective measures to prevent a re-occurrence.

WHEN MIXING MEDICATIONS WITH A WITHDRAWAL PERIOD

Additional controls are needed when mixing medications that require a withdrawal period.

- ☒ Perform scale calibration tests at a minimum of every year.
- ☒ Perform mixer efficiency tests at a minimum of every 3 years.
- ☒ Keep a record of scale calibrations, laboratory reports for mixer efficiency tests, and any corrective actions taken.

DO YOU ADD AN INGREDIENT (E.G. WHEAT) TO SUPPLEMENT YOUR COMMERCIALLY PURCHASED FEED?

- ☒ To meet the requirements of the CFC OFFSP, a sample of the added ingredient or the final feed need to be taken and kept for 2 weeks after the flock has been processed.
- ☒ Note: Adding an ingredient to a medicated commercial feed is considered on-farm feed mixing under the Feeds Act and Regulations; as such, be aware that additional requirements are needed to be compliant with the Feeds Regulations.

WHERE CAN I FIND OUT MORE ABOUT SEQUENCING GUIDELINES FOR MIXING MEDICATED FEED?

- ✓ The CFIA has developed sequencing guidelines to permit the production of medicated and non-medicated feeds in cross-utilized equipment, where feeds containing medications are followed only by feeds intended to contain those same medications, or by feeds where residual levels of the carryover medications present an acceptable risk.
- ✓ Check out **CFIA's sequencing guidelines** for a listing of each approved drug, and the types of feed (by species and class of animals) that can be safely sequenced.

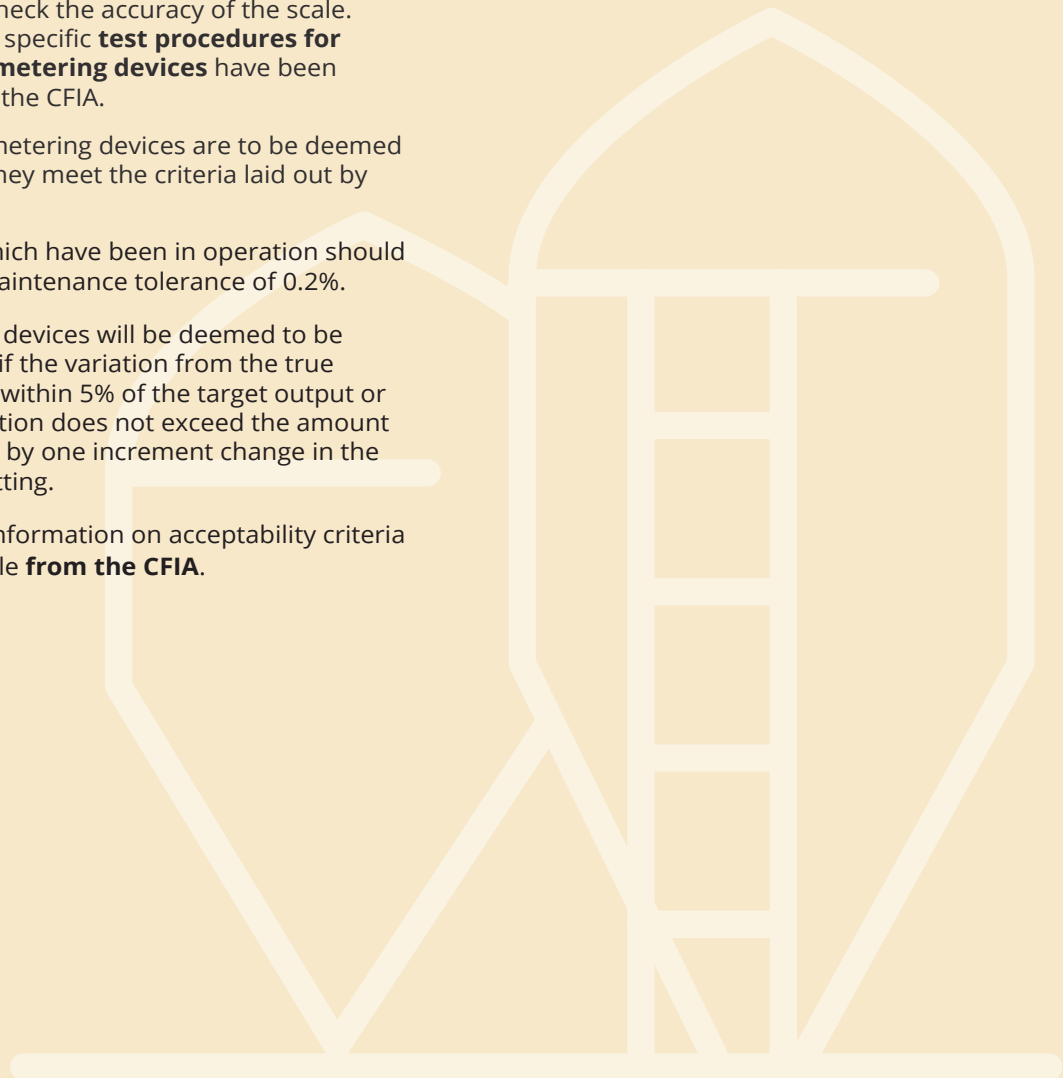
HOW DO I PERFORM A SCALE CALIBRATION TEST?

- ✓ Scales and metering devices are to be calibrated and maintained properly to avoid errors in measurement of medications and other ingredients.
- ✓ Calibration tests are performed by using test weights to check the accuracy of the scale. Examples of specific **test procedures for scales and metering devices** have been provided by the CFIA.
- ✓ Scales and metering devices are to be deemed accurate if they meet the criteria laid out by the CFIA:
 - » Scales which have been in operation should have a maintenance tolerance of 0.2%.
 - » Metering devices will be deemed to be accurate if the variation from the true weight is within 5% of the target output or the deviation does not exceed the amount delivered by one increment change in the meter setting.
 - » Further information on acceptability criteria is available **from the CFIA**.

HOW DO I PERFORM A MIXER EFFICIENCY TEST?

- ✓ Mixer efficiency tests are performed to determine whether the feed is mixed uniformly.
- ✓ Mixer efficiency tests are performed by using a test substance (e.g. sodium, chloride, zinc, etc.) and taking multiple samples of finished product. These samples are then tested by a laboratory to determine the coefficient of variation (CV) for the mixer. Examples of specific **mixer efficiency tests** have been provided by the CFIA.
- ✓ Mixers are considered to be producing homogeneous feeds when the coefficient of variation (CV) for the test batch is no greater than 15% for complete feeds.

Check out the OFFSP manual and **CFIA's National Feed Inspection Program** webpage for more information related to on-farm feed mixing.



WATERLINE CLEANER/ DISINFECTANT VS pH ADJUSTERS



The OFFSP manual requires that a cleaning/disinfecting process be used either in between flocks or during the grow-out period.

Some farmers may choose to go over and above this requirement – by cleaning/disinfecting both during and in-between flocks. It's also important to note that using a product to adjust the pH of the water/acidify the water is different than a cleaning/disinfecting process.

A cleaning/disinfection of the waterlines is important to remove biofilms which may have built up in the water lines. Biofilms are a layer of microorganisms that form on the inside of water pipes that come from the water itself, or from products added to the water. Biofilms are responsible for a wide range of water quality issues and can also be a food safety risk if the microorganisms are of public health significance (e.g. *Salmonella* spp., *Campylobacter* spp. etc.), as the bacterial cells from the biofilm can break off and be released into the water.

There are several methods that can be used to clean/disinfect water; examples include chemical products (e.g. chlorine, chlorine dioxide, iodine, hydrogen peroxide), UV light and reverse osmosis.

DIFFERENTIATING BETWEEN A CLEANING/DISINFECTION PRODUCT AND A PH MODIFIER/WATER ACIDIFIER

When chemical products are being used in the water lines, there can be confusion about what products can be used to clean/disinfect water lines vs. those products which are specifically used to adjust the pH of the water.

The bottom line is that products need to be used for the purposes as described on their product label, or for the purposes as described in the directions that are being used.

Here's a list of products – based on their label claims and guidelines – that are used for cleaning/disinfecting water lines vs. those that are used to adjust pH of the water¹. This is not a complete list of chemicals or products, but rather an example.

Cleaners/Disinfectants	pH modifiers
<p>The majority are chlorine or hydrogen peroxide-based products. Some examples include:</p> <ul style="list-style-type: none">» AquaPrime» Hyperox» Oxy-Blast» Proxy Clean» Twin oxide <p>Cleaning/Disinfecting chemicals include:</p> <ul style="list-style-type: none">» Chlorine/Bleach» Chlorine dioxide» Hydrogen peroxide» Iodine» Vinegar	<p>These product labels specifically refer to water acidification. Some examples include:</p> <ul style="list-style-type: none">» 4wayacid pack» Agriacid» AquaPrime Trigger» Evolve» Jefacid» PWT (Poultry Water Treatment)» Selko Prohydro» Soluacid <p>Acids used for water acidification can include:</p> <ul style="list-style-type: none">» Acetic, citric, hydrochloric, muriatic, sulfuric, etc.

Acids alone are not recommended to be used as the sole method of water cleaning/disinfection as they can cause bacterial or fungal growth in water systems¹. While acids and combinations of acid products are primarily used for water acidification, there are published guidelines for using these as the cleaning/disinfection process. When used in this manner, the label directions or the published guidelines are to be kept on file in order to demonstrate that the process is being followed correctly.

Following manufacturer instructions is important as some cleaners/disinfectants can react with the pH modifier in a way that decreases the effectiveness of the cleaner. Therefore, it is vital that manufacturer instructions be followed (i.e., the type of product that should be used first and the contact time required before adding the next product).

When using cleaners/disinfectants during the grow-out, remember that the concentration of the product needs to be tested twice during the flock.

WHAT PRODUCTS CAN BE USED?

Remember, products used for cleaning/disinfecting must either:

- » be approved for use in food animal premises (all disinfectants are required to have a DIN);
- » have directions specific for use in chicken production or livestock barns;
- » be listed on the Organic permitted substances list; or,
- » be used in conjunction with a veterinarian.

This means:

- » **Option #1:** The product has label directions for cleaning/disinfecting water lines
- » **Option #2:** The chemical being used (e.g. hydrogen peroxide, chlorine, iodine) is being used according to specific cleaning/disinfection directions for that product in water lines
- » **Option #3:** The product/chemical is being used according to veterinarian recommendations

For option #2, an example of concentration levels can be found in Tables 4.1 and 4.2 in the OFFSP manual. Other examples may be from research papers and published guidelines.

¹ Watkins, Susan. 2007. Water Line Sanitation. Aviotech Technical Information for the Broiler Industry. Aviagen Incorporated.

