



**SAFE & SOUND:
A BIOSECURITY GUIDE FOR
SMALL POULTRY FLOCKS IN
THE CARIBBEAN**

FOREWORD

The Caribbean Poultry Association (CPA) and the School of Veterinary Medicine of The University of the West Indies (SVM UWI) are pleased to present this second booklet in our joint series aimed at providing advice to small poultry farmers that will increase their economic returns and support a resilient and sustainable regional poultry industry

This publication builds on the foundation laid in our first booklet, ***“Keeping Cool: A Guide to Managing Heat Stress in Small Poultry Flocks in the Caribbean”*** and offers clear guidance, practical tools, and explanations to help protect the health of poultry flocks.

Across the Caribbean, small farmers play a vital role in food security, rural livelihoods, and the steady supply of wholesome broiler meat and eggs. Our farms continue to face real threats from diseases that can spread quickly and cause serious losses. Strong biosecurity remains the most effective and affordable way to prevent these problems before they reach your birds.


This booklet, ***“Safe & Sound: A Biosecurity Guide for Small Poultry Flocks in the Caribbean”*** was created with you – the farmer – at the centre. It explains how diseases enter a farm, how they spread, and the simple steps you can take every day to keep your chickens healthy. By making biosecurity a “way of life”, farmers reduce the need for antibiotics, protect their flocks and consumers from antimicrobial resistance, and strengthen the long term viability of their operations.

We thank the many farmers, extension officers, veterinarians, and industry partners who continue to support this work. Your commitment to learning and improving is what keeps our regional poultry sector strong.

We hope this booklet becomes a practical guide on your farm and a reminder that biosecurity is not a cost – it is an investment in your birds, your income, and your future.



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We acknowledge the main authors, **Dr. Shayne Ramsubeik** and **Ms. Nisa Surujbally**, and the insights gained from technical experts, veterinarians, extension specialists, industry partners, and field practitioners. Their commitment to translating scientific knowledge into clear, practical guidance has made this booklet a valuable tool for farmers across the region.

We wish to thank **Dr. Victor Gongora** for his comments and final review.

We also thank the farmers who shared their experiences and challenges. Their voices helped shape the content and ensured that the information presented is grounded in the realities of Caribbean poultry production.

This booklet is the result of true collaboration – combining academic knowledge, industry experience, and on the ground wisdom. We are grateful to everyone who played a role in bringing this resource to life and for their continued support of the Caribbean poultry industry.



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1. WHAT IS BIOSECURITY

Biosecurity means keeping **disease** and infections out of your birds and stopping it from spreading if it reaches your farm. It refers to the **everyday habits** you develop over time to protect your flock, such as:

- Controlling who comes onto your farm
- Preventing wild birds and animals from entering your coop
- Keeping your coops, boots, and equipment clean
- Separating sick birds from healthy ones

Good biosecurity is the **cheapest and most effective way** to keep your birds healthy.

Every farmer has an important role to play in protecting the community's and country's poultry industry. When you follow a **simple, consistent biosecurity routine**, you are protecting your birds, your income, and your farm's future.

BIOSECURITY PROTECTS YOUR CHICKENS



	<p>STOPS GERMS FROM COMING IN Limit outside dirt, germs, and infected birds from coming in.</p>
	<p>LIMITS VISITORS AND PESTS Control and track who and what enters your coop. Keep wild animals out.</p>
	<p>KEEPS THINGS CLEAN AND SAFE Disinfect boots and equipment. Maintain clean food and water.</p>
	<p>CARES FOR YOUR FLOCK Check birds daily for signs of illness, stress, or injury.</p>

DEFINITION

Biosecurity means a set of management and physical measures designed to reduce the **risk** of introduction, **establishment** and spread of **animal** diseases, **infections** or **infestations** to, from and within an **animal population** (World Organisation of Animal Health – WOAH)

2. UNDERSTANDING POULTRY DISEASES AND HOW THEY ARE TRANSMITTED

Tiny organisms that you cannot see can make your birds sick. These include viruses, bacteria, parasites and fungi.

Caribbean farmers may know diseases such as Newcastle Disease, Infectious Bronchitis, Gumboro (Infectious Bursal Disease), Chronic Respiratory Disease, E. coli, Coccidiosis and Aspergillus. Birds infected with these diseases would stop eating, grow poorly, lay less eggs or die.

Infections (Diseases) enter and spread through your farm and from your farm by different routes:

- Air and dust
- Newly placed birds, sick birds and dead birds
- Boots, clothes and equipment
- Contaminated feed or water
- Visitors and vehicles
- Wild birds (especially doves, pigeons, ducks) and yard birds
- Rats, Insects and other pests

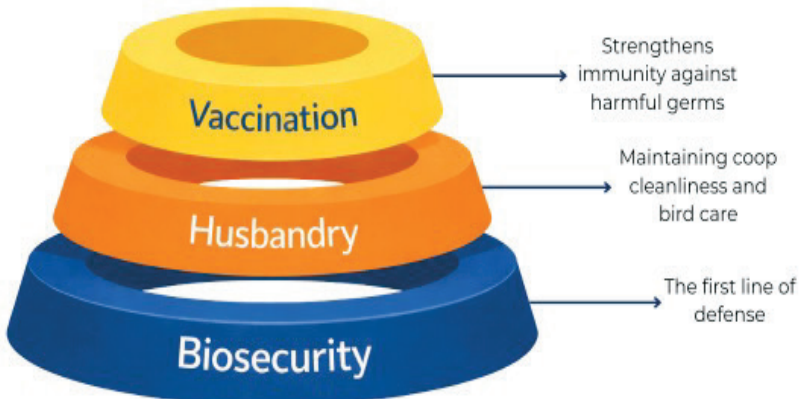


Once disease gets inside your coop, it spreads quickly through:

- Droppings getting into feed and water
- Feathers, litter, insects, droplets and dust carrying germs from one bird to another
- People walking from coop to coop without cleaning and disinfecting their boots on entering a new coop
- Sharing feeders and drinkers between different groups of birds
- Crowding, which makes it easy for germs to pass from sick birds to healthy ones

3. BIOSECURITY IS YOUR FIRST LINE OF DEFENSE

Biosecurity is your first line of defense against poultry diseases. It works hand-in-hand with sound management practices such as maintaining clean coops, providing adequate nutrition, and regularly monitoring bird health. When combined with an effective vaccination programme, these measures support the safety and productivity of your flock.



DISEASES CAUSE DIRECT AND INDIRECT LOSSES

■ High Mortality

Sudden and unexpected deaths.

■ Reduced Production

Birds stop laying eggs or do not grow as expected.

■ Economic Loss

Loss of birds and costs of veterinary care or replacement.

■ Public Health Risk

Some poultry diseases, like Avian Influenza, can affect humans.

BIOSECURITY SAVES YOU MONEY

- Less use of veterinary drugs.
- Healthier birds reaching market weight sooner.
- More eggs and better productivity.
- Wholesome broiler meat and eggs.
- A stronger, more sustainable business.

CARIBBEAN REALITY CHECK



Most small poultry farms in the Caribbean are open-sided and located close to homes and yards. This makes it easier for disease to enter.

EVERYDAY RISKS

- Wild birds sitting on roofs or inside pens.
- Backyard chickens mixing through fences.

Even if your birds never leave the farm, disease can still reach them.

It only takes one wild bird, one dirty boot, or one visitor.

4. BUILDING YOUR BIOSECURITY PLAN

A strong biosecurity plan begins with healthy birds and good management.

You must first ensure that you:

- Buy chicks only from trusted, approved hatcheries.
- Provide them with clean, well-ventilated housing.
- Manage the birds following the national vaccination schedule (*with guidance from your veterinarian*).
- Use clean crates and vehicles for transport.
- House your birds in a fenced area that is far from other poultry farms and well away from any ponds, trenches, canals, or other open water.

Here are the steps to create your biosecurity plan:

STEP 1: IDENTIFY YOUR RISKS

**STEP 2: PREPARE AN ACTION LIST TO
REDUCE YOUR RISKS**

**STEP 3: MAKE YOUR BIOSECURITY PLAN A
WAY OF LIFE**

Step 1: Identify Your Risks:

Your plan should focus on preventing disease from entering the farm and controlling it promptly if detected.

Walk around your property with your veterinarian and your notebook to identify your risks. Be frank in recording your answers to the questions such as those listed below:

- a) Bird Contact: Do my birds come into contact with other birds (neighbouring flocks, wild birds, or the new birds I bring in)?
- b) Farm Personnel: Do family members visit other farms, feed stores, or live bird markets?
- c) Visitors: Do visitors come near my birds or enter the coop area?
- d) New Birds: Do I buy birds from different sources or introduce new birds without quarantine?
- e) Sick and Healthy Birds: Do I separate sick birds from healthy birds? Do I attend to sick birds before I attend to healthy birds?
- f) Wildlife & Rodents: Are rodents, wild birds, or other animals entering my coop, feed or water supply?
- g) Sanitation: Do I have controlled entry points equipped with foot baths? Is everyone washing hands before entering the coops? Do I have a procedure to clean clothes, boots, tools, and equipment before and after use?
- h) Feed and Water Supply: Is my source, storage and delivery system for feed and water secured, clean and free of pests and dirt?
- i) Dead Bird Disposal: How do I dispose of dead birds and farm wastes? Is it safe and legal?
- j) What measures are in place to ensure that vehicles transporting new birds, feed and equipment to my premises have been disinfected?

Step 2: Prepare an Action List to Reduce Your Risks

Write down a specific action for each risk identified. Here is an example:

RISK IDENTIFIED	ACTION TAKEN
My birds can mix with my neighbours birds	Confine birds: Install bird proof netting/wire around the coop
I wear the same boots everywhere	Wear farm only rubber boots: Clean them after every use
I do not have a specific area for my feed	Store feed in an area protected from pests and moisture

MOVING FORWARD – ONE STEP AT A TIME

Identifying risks on your farm is not a reason to panic; it is progress in protecting your flock. Once you recognize potential weak spots, you can begin addressing them using your best judgment and available resources.

Biosecurity is not about achieving perfection. It is about making steady, sensible improvements that make your farm safer every day. Even small changes, such as closing a gap in a fence or cleaning boots before entering the coop, can significantly reduce the risk of disease.

Focus on taking it step by step, starting with the most manageable risks. Over time, these small actions will provide strong protection for your birds, your family, and your livelihood.

Step 3: Make Your Biosecurity Plan a Way of Life

Biosecurity only works if you stick to it. Take the time to learn what to do, trust that it protects your birds, and be willing to change how you work—even if it means extra effort or some additional expenditures.

Your biosecurity plan will only work if you apply it every day. Turn your actions into simple routines that fit your farm. A checklist helps you stay on track.

The following simple schedule will help you put your plan into action and address any issues by making timely adjustments as needed.

DAILY:

- Use your farm boots only on the farm and clean tools after using them.
- Wash and clean tools and equipment brought into the farm.

EVERY FEW DAYS:

Wash and clean feeders and waterers.

WEEKLY:

Check fences, netting, and doors for holes or damage.

MONTHLY:

Look over your biosecurity plan and update it if something has changed.

5. SOME BIOSECURITY BEST PRACTICES

The collective expertise of veterinarians, nutritionists, extension officers, industry partners, and poultry farmers has yielded valuable insights into effective and ineffective practices for protecting poultry flocks from disease within the Caribbean context. Drawing upon their guidance, we have compiled a set of straightforward management guidelines designed to strengthen and ensure the effectiveness of biosecurity plans.

a) *All In/All Out: A Smart Way to Manage Your Flock*

All In/All Out means raising one group of birds of the same species, age, and type and not mixing new birds into the group. When the group is done (sold, butchered, or retired), clean and disinfect the coop before starting with a new batch. This helps break the cycle of disease and keeps your flock healthier. Even in a small backyard setup, keeping layers and broilers separate and avoiding mixing birds from different sources can make a big difference.



Keep birds of the same age together and clean between batches

b) *Keep Your Chickens Separate*

Do not mix your birds with other flocks

Keep your chickens away from chicken, turkeys, ducks and geese from other farms or neighbours. Mixing birds spreads sickness fast.

Keep out wild birds and predators

Build a strong coop and use wire, netting, or fencing to prevent wild birds, dogs, mongooses, opossums (manicous) and other animals from entering.

No pets or other livestock in the coop

Keep dogs, cats, goats, and other animals away from your birds. They can carry germs on their feet and fur.

Quarantine new birds

Keep new birds in a separate coop for at least 2 weeks. Watch them for any signs of sickness. Handle them last, then wash your hands.

c) *Control People, Equipment & Movement*

Limit visitors

Only allow people who need to be there.

Use signs

Put up signs like “Keep Out” or “Clean Boots”.

Farm-only clothes & boots

Wear clean boots and clothes just for the chicken area.

Keep a disinfectant footbath at each coop entrance.

Wash hands

Use soap or hand sanitizer before and after handling birds.

Shower after visiting other farms

Clean up before going near your own birds.

Keep vehicles out

Do not let motorbikes, cars or trucks drive close to your coop.

Clean delivery areas

Disinfect vehicles and spots where feed or supplies are dropped off.

Clean tools & equipment

Do not share tools and equipment with other farms. Wash and clean them if needed.



d) *Keep Everything Clean*
Clean first, then
disinfect

Remove poop and dirt before using disinfectant.

Use proper disinfectants

Follow label instructions carefully.

Remove dead birds quickly

Bury them deeply or use approved composting. Do not leave carcasses lying around.

Manage waste

Dispose of manure the proper, approved way, and clean up spilled feed to keep pests away.

Clean feeders and waterers

Keep them elevated and free from droppings.

Control Dust and Dander

Good ventilation and proper litter management helps reduce dust and dander which can carry disease.



Daily cleaning helps to:

- Keep ammonia levels low
- Reduce flies and other pests
- Prevent disease from spreading
- Keep birds breathing easier and growing better

e) Stop Pests

Seal holes and cracks

Block entry points for rats, mice, and insects.

Store feed safely

Use sealed, rodent-proof rooms or containers.

Clean up spills

Sweep up feed and trash right away.

Use rodent traps safely

Place snap traps or bait stations away from birds.

Trim grass and bushes

Keep the area around the coop tidy and clutter-free.



f) Watch Your Flock's Health

Check your birds often

Look for signs of sickness like sneezing, coughing, diarrhoea, lameness or unusual behavior.

Call your vet if needed
Report any signs of disease right away.

Review your plan

Go over your biosecurity steps with your vet regularly.



A BIOSECURITY PLAN FOR SMALL POULTRY FARMS

1. CONTROL ENTRY

- Only workers and essential visitors allowed
- Everyone must wash hands
- Use the footbath at the gate and at each coop
- Keep a simple visitor log

2. CLEAN BOOTS & HANDS

- Keep footbaths filled with fresh water and disinfectant every day
- Wash hands before and after handling birds

3. PROTECT FEED & WATER

- Store feed in covered containers
- Clean feeders and drinkers daily
- Remove spilled feed to keep pests away

4. SEPARATE SICK BIRDS

- Move weak or coughing birds to a sick coop immediately
- Do not share tools between sick and healthy birds

5. KEEP COOPS CLEAN

- Remove droppings often and preferably every day
- Wash and disinfect between batches
- Bury, compost, or burn dead birds safely

6. STOP WILD BIRDS & RODENTS

- Fix holes in coops and roofing
- Use traps or bait stations
- Keep grass short around the coops

7. SMART MOVEMENT

- Work from youngest to oldest birds
- Handle healthy birds before sick ones
- Do not borrow equipment from other farms

8. KEEP SIMPLE RECORDS

- Note sickness, deaths, treatments, and visitors
- Helps you catch problems early

LAYER FARMS - ADDITIONAL PRACTICES

9. NEST & EGG HANDLING

- Keep nest boxes clean, dry, and comfortable
- Add fresh nesting material often
- Collect eggs 3–4 times a day
- Separate dirty eggs from clean ones
- Keep egg trays and crates clean
- Use trays that belong ONLY to your farm

10. BIRD HEALTH

- Remove weak or non-laying birds quickly
- Keep young and old birds separate

11. MOVEMENT & VISITORS

- Do not let egg buyers enter the poultry house
- Use dedicated tools for egg collection only

12. EGG STORAGE

- Store eggs in a clean, cool room away from birds
- Keep storage separate from feed, manure, and chemicals

DAILY QUICK CHECK

- Footbath clean
- Feed covered
- Sick birds separated
- Coops clean
- No wild birds or rodents seen

Tip: Set reminders on your phone or calendar to help build consistency

WHAT TO DO IN A NOTIFIABLE DISEASE OUTBREAK

Step 1: Separate Sick Birds

- ❑ Immediately move any sick or weak birds to a separate coop.
- ❑ Wash your hands thoroughly and avoid contact with healthy birds after handling sick ones.

Step 2: Immediately Quarantine Your Coops

- ❑ Do not allow any birds to enter or leave the affected area.
- ❑ Ensure all farm personnel strictly follow your established sanitation protocols.
- ❑ Do not sell or move any birds, eggs, or manure until a diagnosis is confirmed.

Step 3: Call the Government Authorities

- ❑ Report the outbreak to your local veterinary officer, national animal health authority, or agriculture department, as required by law.
- ❑ Allow the authorities to assess your operations and records to determine if your biosecurity measures have been implemented and are effective.
- ❑ Cooperate fully and allow officials to take samples as needed.

In the event of a positive diagnosis of a Notifiable Disease

Step 4: Follow All Directions for a Notifiable Disease Outbreak as Required by Law

- ❑ Implement the official guidelines for treating, controlling, and disposing of dead birds, as well as for cleaning and disinfecting your facility.

Step 5: Maintain Farm Records

- ❑ Daily health log – numbers affected, deaths, culls.
- ❑ Movement of personnel and vehicles.
- ❑ Feed and Water Consumption.

Step 6: Follow Official Post-Outbreak Instructions

- ❑ After the outbreak, clean, wash, and disinfect all houses, boots, tools, feeders, and drinkers.
- ❑ Leave the coops empty for the stipulated "down-time" period before bringing in new birds to ensure all disease-causing agents are killed.

DEFINITION

Notifiable disease means a disease listed by the Veterinary Authority, and that, as soon as detected or suspected, should be brought to the attention of this Authority, in accordance with national regulations (WOAH)



Partnering for the Success of Poultry Farmers

The Caribbean Poultry Association and the School of Veterinary Medicine of The University of the West Indies are working together to support poultry farmers in the Caribbean.

Our goal is to help make your farms stronger, safer, and more profitable. Our partnership focuses on the issues that matter most for small poultry farms — keeping birds cool, preventing disease, using antibiotics wisely, feeding birds properly, and running operations in a sustainable manner.

Our guides offer straightforward, practical tips for managing farms successfully. We hope they will be useful for government officers and technical teams as they train and support farmers throughout the region.



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