

CARRIBEAN POULTRY ASSOCIATION

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Item iii.e

ON-FARM FOOD SAFETY PROGRAM FOR TABLE EGG PRODUCERS

30th November, 2003

**FOR THE CONSIDERATION OF THE CARICOM
CHIEF VET OFFICERS/ CHIEF PUBLIC HEALTH OFFICERS
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A. BACKGROUND

1. Egg Farm Surveillance for *Salmonella Enteritidis*

Salmonella enteritidis (Se) is now the most common cause of human salmonellosis in most countries globally. Since 1985, the incidence of salmonellosis has rapidly increased world-wide to now become the second most common cause of all foodborne illnesses. Much of this increase has been attributed to the emergence of Se (1). Investigations have indicated that poultry and eggs harbor Se, that shell eggs are the dominant source of this organism, and that the consumption of raw or undercooked eggs is the major risk factor for infection (2, 3). The global emergence of Se appears to be due to the acquired ability of Se to silently infect the hen's ovary and contaminate the egg contents before the eggshell is formed to resulting in intact, normal-appearing yet Se-infected egg, which, if consumer raw or undercooked may result in illness. Se can be transmitted from the breeder flocks to the laying hen which then produces contaminated eggs. The infected breeder flock, laying hens and contaminated eggs all appear normal making it almost impossible to detect Se unless they are tested for the organism. Once the organism is present in a flock the infection is difficult to eliminate because vertical (from chicken to egg) and horizontal (among chickens) transmission is facilitated by sustained environmental sources (including rodents, litter, equipment, and surroundings), infected feed and water, and humans (4-6).

2. CARICOM Table Egg industry Food Safety Program

The On-Farm Food Safety Program is part of a larger CARICOM Food Safety Program for the Egg Industry being developed and promoted by the CPA. It is important to recognize that the CPA is also striving to improve the other elements of this larger program, while promoting an on-farm food safety component. These elements include:

1. On-Farm Food Safety Program and Manual
2. Model CARICOM Animal Health Act
3. CPA Procedure for Managing *Salmonella Enteritidis* (Se) Flocks
4. Laboratory Support for Program
5. Table Egg and Grading & Labeling Standards \
6. Food Safety Awareness Program
7. Product Recall Protocol
8. Funding for Programs

More details of the CARICOM Food Safety Program for the Egg Industry are attached to the On-Farm Food Safety Program Manual.

B. INTRODUCTION

Key to a CARICOM Strategy for On-Farm Food Safety in Shell Eggs.

The process for safe eggs

The process is one which will encourage every egg producer in the Caribbean to conduct production activities in a manner which respects food safety - food that is safe from biological, chemical and physical contaminants. Moreover, the process involves a combination of individual commitment and initiative as well as industry programs which will help producers recognize and respond to specific hazards in their individual production units.

Central to this commitment is the creation of an On-Farm Food Safety Program. Overall, this program will assist in improving product safety and quality as well as improving environmental hygiene. A producer manual has been developed as an active reference and record-keeping tool. The On-Farm Food Safety Program is the key to planning and its importance cannot be overstated.

The following document will not only serve as a document that producers must have regard for but also an effective record-keeping tool. In addition, the "reference manual" contains templates for record keeping, templates for letters of certification and guidelines for producers to identify their own farm practices as they refer to the On-Farm Food Safety Program.

Conclusion

The On-Farm Food Safety Program is a food safety management system which concentrates prevention strategies on known hazards and the risk of them occurring at specific process points.

Incorporating the On-Farm Food Safety Program into shell egg farming practices will assure that producers are following a food safety program and assist producers to comply with regulations, show due diligence and fulfill customer expectations for a food safety management system.

It must be remembered the standards and recommendations set under the On-Farm Food Safety Program are minimum standards. Caricom states are encouraged to enhance the program to fit their needs.

Note: Egg producers who maintain a flock of less than 100 layers are deemed exempt from this program at this time, however are asked to enhance the program voluntarily.

C. ON-FARM FOOD SAFETY PROGRAM

1. Refrigerated Storage

Egg Storage - It is important to cool eggs as soon as possible after collection to keep them fresh and prevent the growth of organisms. Eggs being kept out of refrigerated storage should not

exceed 24 hours. Temperatures which are too low can cause eggs to sweat when exposed, even temporarily, to warmer temperatures and result in problems with mould later on. Temperatures which are too high can encourage bacteria growth. Egg coolers must maintain temperatures between 7 and 13 degrees Celsius ambient air temperature. The kind of cooler needed will depend on the level of production, or how much product it must cool. It is important to keep eggs off the cooler floor.

- a) Cool to between **7°C and 13°C/45°F and 55°F** to prevent growth of Salmonella and other organisms and preserve freshness.
- b) A thermometer should be available to monitor the cooling unit. A maximum-minimum thermometer would be preferable.
- c) Record the temperature daily. **Records should be kept in accordance with the program.**
- d) In **sizing the shell egg cooler**, allow for additional one day production storage to accommodate shell egg pick up and transport problems. Also allow for easy access to service the refrigeration unit.
- e) The **refrigeration unit** should function adequately on demand. Household air conditioners will not maintain an adequate temperature control in the shell egg cooling room.
- f) Do not store pesticides, hen mortality, rejected egg trays, fuels, or any fruits or vegetables that may give off distinct odours in the shell egg storage facility. **Only eggs on carts/skids, boxes, cases, egg carts and fillers are stored in the cooler.**
- g) The refrigerated storage should be **clean and tidy**.

In addition to the above, producers “should” consider having access doors to the refrigerated storage insulated, weather-sealed and sufficiently wide to provide safe and easy access. Ideally, two doors “should” be available - one interior from the egg gathering area and one exterior for the egg truck. Furthermore, humidity is a quality issue, not a food safety issue. To retain shell egg weight and shelf life the humidity in the refrigerated storage should be 75% to 85%. A hygrometer should be installed to monitor humidity.

2. All-in, all-out program is followed in each laying facility.

- a) It is recommended that only one age group be retained in a laying facility as this makes complete cleaning and disinfecting possible. It has been well documented that rodents serve as vehicles to continue disease in multi-age houses. An "all-in, all-out" policy is an opportunity to eliminate rodents and will help prevent disease transmission from older birds to new birds by creating breaks when cleaning and disinfection can occur.
- b) Consider free standing pens (not attached) so proper cleaning can be achieved.
- c) Ensure personnel movement is from youngest hens to oldest hens.

3. Cleaning and disinfecting the laying facility.

- a) The best time to clean and disinfect the facility thoroughly is right after depopulation. All repairs to the exterior of the building should be completed before cleaning and disinfecting the interior. Make sure you remove all manure from the barn. Then, you will be ready for **pressure wet washing** followed by **disinfecting**. Dry cleaning in advance of pressure wet wash is desirable.
- b) Agricultural products coming in contact with animals or their environments are regulated. Ensure your disinfectant has a pest control product (PCP) number or product code number, approved for egg layers. Check with your pest control dispenser or vet to ensure it's safety. Be sure to clean, dry and disinfect the whole facility including walls, ceilings, rafters, fans, cages, drinkers, feed troughs and conveying equipment. Before using any chemical - **Read the label, follow instructions, take all precautions, save the labels and record the information.**
- c) Finally the whole facility must be thoroughly aired out and in doing so, care must be taken not to give access to wild birds, rodents and insects as these are carriers of disease organisms. Cleaning, drying, disinfecting and airing out of depopulated houses should take a **minimum of seven days**. This rest period reduces bacteria, viruses and parasites following cleaning and disinfecting. Producers housing in **less than seven days should provide proof of microbiological analysis** verifying the effectiveness of their cleaning and disinfecting program. These tests may be accomplished by an accredited laboratory or by rapid test methodology on farm. Now that your production unit is clean, it is important to keep it that way.

Note: A minimum of seven (7) days downtime is important as it allows for a through clean up of the barn. Disinfecting and a drying time of at least three days is important to break the cycle if organisms are present. Get it clean and keep it clean.

4. Water lines purged and flushed.

- a) Drinker cups and nipples must be scrubbed and water lines cleaned with a chlorine solution. The solution must stand in the system for 24 hours before flushing it with clean water.

The following is a recommended procedure for the cleaning and disinfection of water lines.

- i. Drinkers, cups and nipples must be disconnected from the pipe system to allow for proper soaking and scrubbing. Calcium deposits (as a result of hard water) should be removed. Bicarbonate of soda may be added to assist in removing calcium build-up.
- ii. Cups and nipples can be reattached after immersion in a disinfectant solution for about 5 minutes.
- iii. Distribute an approved disinfectant throughout the drinking system.
- iv. The disinfectant, a chlorine-based sanitizer, should be used following the manufacturer's recommendations. The solution should stay in the whole pipe system for 24 hours. Remove the disinfectant through the drain plug at the end of each line or disconnect the last drinker. In most cases this method removes a lot of dirt, slime and algae from the inside of the pipe system. The procedure has to be repeated until an almost clear disinfectant rinses out of the system after 24 hours.
- v. Finally, the whole system should be flushed extensively with clean water to remove all residues.
- vi. Remove old water filters. Clean and disinfect casings and install new filters.
- vii. Save the labels and record information.
- viii. Reservoirs and lines should be flushed once monthly.
- ix. Bell drinkers should be cleaned daily.

5. Floors, walls, ceilings and ancillary equipment are maintained “free” from contaminants.

- (a) Floors, walls, ceilings, light fixtures, air intakes and exhausts should be clean. Even seemingly benign substances such as *feed and water* can serve as sources of contamination if allowed to stand. *Manure, dirt and cobwebs* must be removed and *dust* must be kept to a minimum. *Feathers, dead flies, rodent droppings* must be removed.
- (b) If applicable, cages are home to your birds so it is especially important to keep the cage area clean. The most common contaminants in these areas are bird and rodent droppings as well as caked, mouldy feed.
- (c) *Spilled feed and waste eggs* can attract rodents, flies and insects. They are also an excellent growing environment for bacteria. Also watch for spilled feed below bins.
- (d) It is important to use equipment and management systems that keep eggs clean. *Dried yolk, albumen, shell, feathers, dust, rodent droppings, dead flies and pest baits* must be removed from the egg collection system.
- (e) *Hen mortality* must not be disposed of in the manure gutter or left on the facility floor.
- (f) If litter is being used, ensure mounding or accumulation of litter does not occur around drinkers or feeders.
- (g) Record dates and sanitation activities.

Note: For the purpose of this section, in reference to dust and applying the words “free from” it is understood that the facility is “free from accumulations of” and therefore “practically free from dust”.

6. Dead birds are removed from the laying facility daily.

- a) Every day, check your flock for dead or sickly birds and remove them immediately. Sickly birds must be humanely destroyed. Mortality may be bagged for pick up by a rendering facility, may be properly composted, may be buried or may be incinerated. If storing mortality before burial or incineration, store in a sealed container in a location away from the production unit inaccessible to dogs, cats or other wild animals. Municipal and district guidelines, policy, regulation or legislation may determine the allowable storage and disposal methods for your facility.
- b) Record your daily mortality.

7. There is no visible infestation of rodents, flies, wild birds or other pests.

- a) Fly strips and rodent traps are good supplemental tools for controlling pests. They are helpful for removing the occasional rodent or small populations of mice and flies. They are also helpful in determining the size and location of pest populations and in letting you know how well you are doing controlling pests.
- b) Bait containers or stations are preferred over loosely scattered bait.
- c) The bait must be replaced at regular intervals. Replace moist or spoiled bait with fresh product.
- d) ***Producer should maintain a log book*** recording his/her monitoring checks.
- e) Check for signs of rodents - droppings, body grease marks, chewed material, disturbed bait, night observations with flashlight and number of and types of rodents caught in traps.
- f) Check for signs of wild birds - droppings in production unit, nests in eaves and rafters and chirping sounds.
- g) Check for flies - caught in traps or glue strips and signs of droppings on eggs or on indicators specifically placed such as white paper or recipe cards. A fly index can be developed to trigger chemical applications.
- h) Record location of traps and bait stations on a schematic; record pesticides used, date of placement and location; record observations; record type of pests trapped or found.

These visual checks are an important tool in an Integrated Pest Management Program to gauge whether your pest control programs are effective. They can be used to determine the timing of chemical application or to determine whether a certain chemical is providing desirable control. These visual checks can be accomplished during the daily walk through to take out hen mortality and check feed troughs and watering equipment.

Regular housekeeping of the exterior will go a long way in eliminating breeding areas for flies and rodents. Patch gaps under eaves to prohibit wild birds from nesting and rodents from entering the facility. It's a good idea to do any repairs needed to the exterior before cleaning and disinfecting the interior. This way, a cleaned interior will stay clean.

8. Excessively dirty or visibly cracked eggs and leakers are segregated from clean eggs during the collection process.

- a) Cracked and leaky eggs love to play host to bacteria. Manure-soiled eggs, too, should be removed from the collection system at the earliest opportunity. Handle excessively dirty eggs, visibly cracked eggs and leakers separately.

During gathering, sorting and packing shell eggs, there may be shell eggs not suitable for shipping. To avoid potential biological cross contamination and to avoid providing opportunity food for rodents and flies, these eggs must be deposited into a container and at the end of the day and disposed of in a proper manner. Inedible eggs must not be deposited in gutters under the cages or in long-term dry manure storage. Where inedible eggs cannot be deposited into a long-term liquid storage, composting or burial may be an alternative.

The program recognizes it is a practice to wash some eggs on the farm. It is important that only clean running water be used.

If running water is not readily available in the egg cleaning and packing area and pailed water is used, a recognized sanitizer must be used following manufacturers directions.

*Record number of cracked/damaged eggs.

9. Use only new or clean fibre trays.

- a) The use of used fibre trays or one dozen cartons is not recommended. The spread of diseases from one producer premises to another, as well as transporting of micro-organisms, such as Salmonella to production facilities is possible if used or soiled packing material is used.

Egg trucks deliver egg trays to the production unit. Producers must inspect egg trays for contaminants (dust, rodent droppings, dried yolk, albumen, feathers, or moisture) before using them for clean shell eggs. Egg trays must never be in direct contact with the floor.

10. Premises: Outside Property and Building Exterior

Restricted and unrestricted zones defined.

- a) One of the most basic requirements for effective biosecurity is a sign at the layer barn and driveway or approach road. This sign should read:

DO NOT ENTER
BIOSECURITY IN EFFECT

As well, the sign should say what visitors should do, such as report to the house. The purpose of such a sign is to keep visitors to a minimum.

- b) Another basic requirement for effective biosecurity is the setting up of a restricted zone to protect birds and eggs from disease-causing organisms. Ordinarily the restricted zone is set up to include the production unit. The number of visitors permitted into these zones must be restricted and visitors should be willing to respect the precautionary measures suggested. The unrestricted zone is a free access area in which vehicles are free to enter and people may move about without restriction. The family residence is included in this zone. The way in which restricted and unrestricted zones are set up will differ from farm to farm. The zones must be defined with signs, a gate, fencing, rope or a combination of these.
- c) All entrances to buildings in restricted zones should be well lit and locked to prevent unauthorized access. NO ENTRY signs must be placed at these entrances and any other point where the restricted zone begins.
- d) Vehicle tires could be a source of contaminants picked up off the farm. By creating a parking area away from the layers, you prevent the contaminants from reaching your birds. By making the area easily visible, you can keep track of visitors on your farm, thereby controlling their movements. Make sure the parking area is away from the direct path of exhaust generated by the production unit, if applicable. This will help prevent your farm from being the source of contaminants spread to another operation. The parking area must also be away from air intakes as currents could carry pathogens from the vehicles into the laying facility.

In addition to the above, producers “should” consider the land area around the production unit and what is planted or built on it. Consider,

- a) Roadways and approaches to the production unit should be properly graded and maintained to minimize dust. Vehicular traffic flow can be a potential contaminant. Avoid dust drift and ponding of water.
- b) Location of the production unit in relation to other buildings, especially livestock buildings and more importantly other feather livestock buildings. Prevailing winds can cause cross contamination.
- c) Wood lots, windbreaks and orchards provide nesting areas for wild birds. Bird droppings attract flies.
- d) If field crops are grown in close proximity of the layer barn, ensure over spray of chemicals or germicidal dust does not drift towards the laying house.
- e) The water-supply location in relation to the production unit.
- f) Location and type of manure storage in relation to the production unit and driveways and roadways. Are you traveling along your air-intakes side of the production unit to access fields or roadways?

- g) Location of feed storage in relation to the air intakes of the production unit and the approaches from the roadway that a feed truck would access.
- h) If guard dogs are present on the farm, it is recommended that signs indicating this should be posted. The dogs should be under control of the owner to ensure visitors safety.

To recognize these hazards around their production unit, producers should prepare a schematic of their farm as well as a schematic of their production unit. Templates are provided in the Appendices.

11. Only one kind of poultry maintained on the farm.

- a) Some producers maintain multi-livestock operations. Doing so can make good business sense. These producers must know, however, that having more than one kind of livestock, and particularly more than one kind of feather enterprise, such as pheasants, ducks, turkeys, geese, or pet birds, puts the egg operation at risk for disease. It is strongly recommended that only one kind of poultry production unit be maintained on the farm. To reduce the risk, extra attention must be paid to biosecurity and practices which minimize the spread of organisms from one enterprise to another. As a minimum, separate footwear should be worn and stored in each production unit.
- b) Production units must not be adjacent to other poultry livestock buildings and each poultry production unit has its own staff or a change of outerwear is available.

12. Pest barriers around the production unit.

- a) Openings such as those around feed pipes, and the electrical service, or damaged walls are invitations for rodents, wild birds and insects. Seal up the openings to prevent access. Damaged screens must be repaired promptly. Exterior cladding must be installed in such a manner that prevents access by pests. Another effective barrier is a metal rodent guard strip between the foundation and the siding such as is frequently found with new barns.
- b) Rodents can carry diseases that affect humans and poultry. Clearing long grass, weeds and debris from around the production unit helps to discourage rodent nestings near hens and eggs. Areas within 4.5 meters of the production unit are kept free of debris and long grass and weeds.
- c) Stagnant water could carry Salmonella and other organisms as well as be the ideal environment for insects and other vectors. Any low areas within 60 meters of the production unit on your property must be leveled or properly drained.
- d) A coarse gravel or asphalt border around the outside foundation will discourage rodents from entering and burrowing under the production unit. Recommendations for such barriers do vary, but one recommendation that seems quite practical is to have a coarse gravel barrier more than one foot wide and slightly deeper than the footing of the building.

13. Restricted and unrestricted zones are defined.

- a) Another basic requirement for effective biosecurity is the setting up of a restricted zone to protect birds and eggs from disease-causing organisms. Ordinarily the restricted zone is set up to include at least the laying facility, the egg collection room and the cooler, if applicable. The number of visitors permitted into these zones must be restricted and visitors should be willing to respect the precautionary measures suggested. The unrestricted zone is a free-access area in which people may move about without restriction. The way in which restricted and unrestricted zones are set up will differ from farm to farm. The zones must be defined with signs, painted lines, walls and/or partial walls.

14. Hand washing facility or sanitizing lotion available.

- a) Hands should be washed before and after collecting eggs as bacteria and other organisms on hands can contaminate the eggs. Contamination can occur when clean eggs are handled after dirty ones. Hand washing facilities with disposable paper towels should be readily available and used. Use of hand sanitizing lotion is an acceptable alternative.

15. Sanitary outer clothing and a change of boots are required before anyone enters the restricted areas of the production unit.

- a) Microbes love to hitch rides on people. Microbes can be found on hands, hair, clothing and shoes. A visual mark, such as a partial wall or a line painted on the floor, to a restricted area will serve as a reminder that precautions must be taken before entering. Everyone, including the producer, must change footwear at this point, making sure there is no common contact between the two zones. Crossing zones with the same pair of boots on invites big trouble with bacteria and other organisms. Reserving separate footwear for restricted zones will go a long way in reducing the disease-causing organisms entering restricted areas. Extra care must be taken with visitors and staff who have recently had contact with other poultry and livestock. While it is strongly recommended that such individuals must not have access to your poultry production unit, should that be necessary, then these people must change boots and clothing at the point of entering the restricted zone. This applies particularly to producers keeping other livestock besides laying hens and to service personnel who have just come from another farm. This minimizes the spreading of disease agents such as bacteria, viruses and parasites from one farm to another.

NOTE: Producers “should” consider programs to train those individuals working in the production unit. The objective of a training program is to ensure safe food handling practices. Consider the following:

1. 10 Point Clean Routine Plan

- a) Be as clean as possible at all times.
- b) Tell your manager about any illness you might have such as diarrhea or vomiting. It might mean Salmonella bacteria are around.
- c) Wear clean clothes and shoes to work.
- d) Sanitize your hands often, especially after handling eggs, dirty objects, broken eggs, hen mortality, rodents, flies, wild birds, or manure.
- e) Wash your hands after lunch and when leaving the washroom.
- f) Don't cut corners when cleaning and sanitizing equipment, floors, carts or any other objects. Do it right.
- g) Put all garbage and broken eggs and egg shells in containers that have lids. Make sure that garbage and inedible eggs do not touch clean eggs or other workers.
- h) Do not leave eggs outside of the cooler for very long. Never leave them out overnight.
- i) Tell the manager about any accident that might have spoiled the eggs.
- j) Think of ways that could make the production unit cleaner. Tell your manager about them. Remember: You're not just protecting people from illness. You're protecting your own job.

2. Technical Training

- a) Each employee is trained in daily, weekly, monthly and annual routines.
- b) All aspects of the production unit biosecurity program.

- c) All aspects of facility hygiene.
- d) All aspects of pest management program.
- e) All aspects of egg handling.
- f) Reading and recording thermometers and any electronic devices that may be used in the production unit.
- g) Starting standby generator.
- h) Report any problems encountered during the workday.
- i) Letter signed by employee that he has been trained in the safe handling of eggs.

16. Records

A well-established and designed record-keeping system provides the producer with the assurance that his shell eggs were produced according to established procedures. Good records can also provide an early indication of problems and permit a rapid response if necessary. Records are also a means for an inspector to verify compliance with the prerequisites of an On-Farm Food Safety Program over a period of time rather than only on a day of inspection. *In general, records may be kept in any form that is convenient for the producer.*

- a) **Laying facility temperature recorded daily.** Recording maximum - minimum temperatures is preferable. Producers may wish to place 3 or 4 thermometers throughout the laying facility to determine uniformity of temperature. Those facilities that are monitored electronically need to record their temperatures also.
- b) **Mortality recorded daily.** Recording mortality provides the producer with an overview of flock health. Mortality in excess of ½% per month should be investigated by a veterinarian.
- c) **Egg production recorded daily.** Indicate volume of eggs gathered and date gathered. Monitoring egg production is also an early indicator of flock health.
- d) **Sanitation record.** Record date, service person, cleaning procedure (wet/dry), detergents used, name of detergent, amounts used, disinfectant used, name, amounts used, fumigants used and amount. It is recommended that the producer retain the product labels for documentation. Describe details of cleaning procedure. If applicable, record environmental testing procedure, date and results. Producers should also record their general sanitation program (dates manure removed from laying facility, dates that dust and cobwebs are blown down from walls and ceilings).
- e) **Pest control records.** If service is provided by a professional pest control company, record the company name and retain their service records for inspection. If the producer maintains his own program, then record number of bait stations and locations, number of traps and locations, type of pesticide used, amounts used. Record P.C.P. number and retain labels for documentation. Record pest activity (for example, number of rodents per station or trap). Record visual checks.
- f) **Cooler temperature recorded daily (if applicable).** THE COOLER IS AN IMPORTANT CONTROL POINT. The recording of maximum-minimum temperatures is preferred. The recording of cooler temperatures provides the producer with information on the functioning of his refrigeration unit and validates that the producer is in compliance with the prerequisite program.

** The maintenance of accurate records for daily egg production and hen mortality, sanitation, pest control, refrigerated storage and laying facility temperatures, and rejected trays is a requirement for the participation in the Caribbean Poultry Association's On-Farm Food Safety Program.

17. Corrective Action Log

As it is a requirement to keep records for participation in the Caribbean Poultry Association's On-Farm Food Safety Program, it will also be a requirement to maintain a corrective action log.

In the event the daily routine is interrupted, i.e. the cooler breaks down, the actions taken to correct the interruption should be recorded as to when it broke down, how long it was down, and when it was repaired. The back of the monthly recording form may be used, or a separate log book can be maintained.

Daily Egg Production and Hen Mortality Record

Producer Number _____
 Producer Name _____
 Birds Housed _____
 Date Housed _____
 Flock Number _____
 Month and Year Recorded _____
 Monthly Beginning Inventory _____
 Monthly Ending Inventory _____

DAY	MORTALIT Y or CULLS	EGGS GATHERED		
		PICK 1	PICK 2	TOTAL
1	3	3216	804	4020
2	7	3390	848	4238
3	8	3749	937	4686
4	6	3990	997	4987
5	10	4014	1003	5017
6	15	4186	1046	5232
7	1	4599	1150	5749
8	0	5090	1273	6363
9	2	5579	1395	6974
10	3	5788	1447	7235
11	0	6042	1511	7553
12	0	6385	1596	7981
13	0	6582	1645	8227
14	1	6857	1714	8571
15	1	6954	1739	8693
16	2	7199	1800	8999
17	1	7208	1802	9010
18	0	7240	1810	9050
19	0	7234	1809	9043
20	1	7245	1811	9056
21	1	7306	1827	9133
22	3	7461	1865	9326
23	3	7471	1868	9339
24	2	7421	1855	9276
25	3	7430	1857	9287
26	2	7489	1872	9361
27	1	7382	1845	9227
28	0	7386	1846	9232
29	1	7497	1874	9371
30	3	7430	1857	9287
31	1	7450	1862	9312
TOTAL	81			242835

Sanitation Record (On-going)

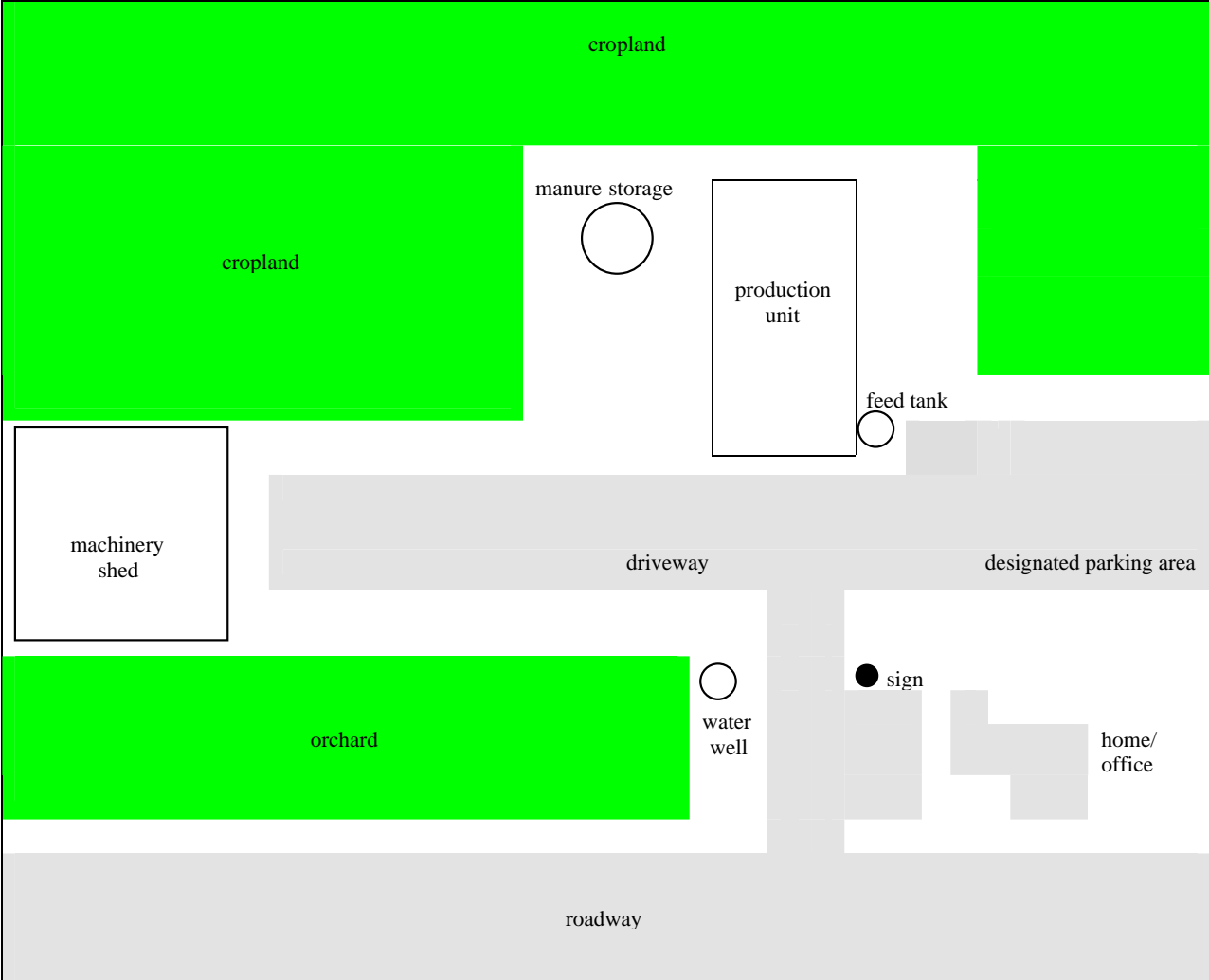
NOTE: The following is an example of what a producer might record for an on going sanitation program.

SANITATION				
DAY	FLOOR	WALLS	CEILING	EQUIPMENT
1	sweep			gath tables
2				gath tables
3	sweep			
4				gath tables
5	sweep			gath tables
6				
7	sweep	blowdown	blowdown	manure/wash
8				gath tables
9	sweep			gath tables
10				gath tables
11	sweep			gath tables
12				gath tables
13				
14	sweep	blowdown	blowdown	manure/wash
15				gath tables
16	sweep			gath tables
17				gath tables
18	sweep			gath tables
19				gath tables
20				
21	sweep	blowdown	blowdown	manure/wash
22				gath tables
23	sweep			gath tables
24				gath tables
25	sweep			gath tables
26				gath tables
27	sweep			gath tables
28				gath tables
29	sweep	blowdown	blowdown	manure/wash
30				gath tables
31	sweep			gath tables

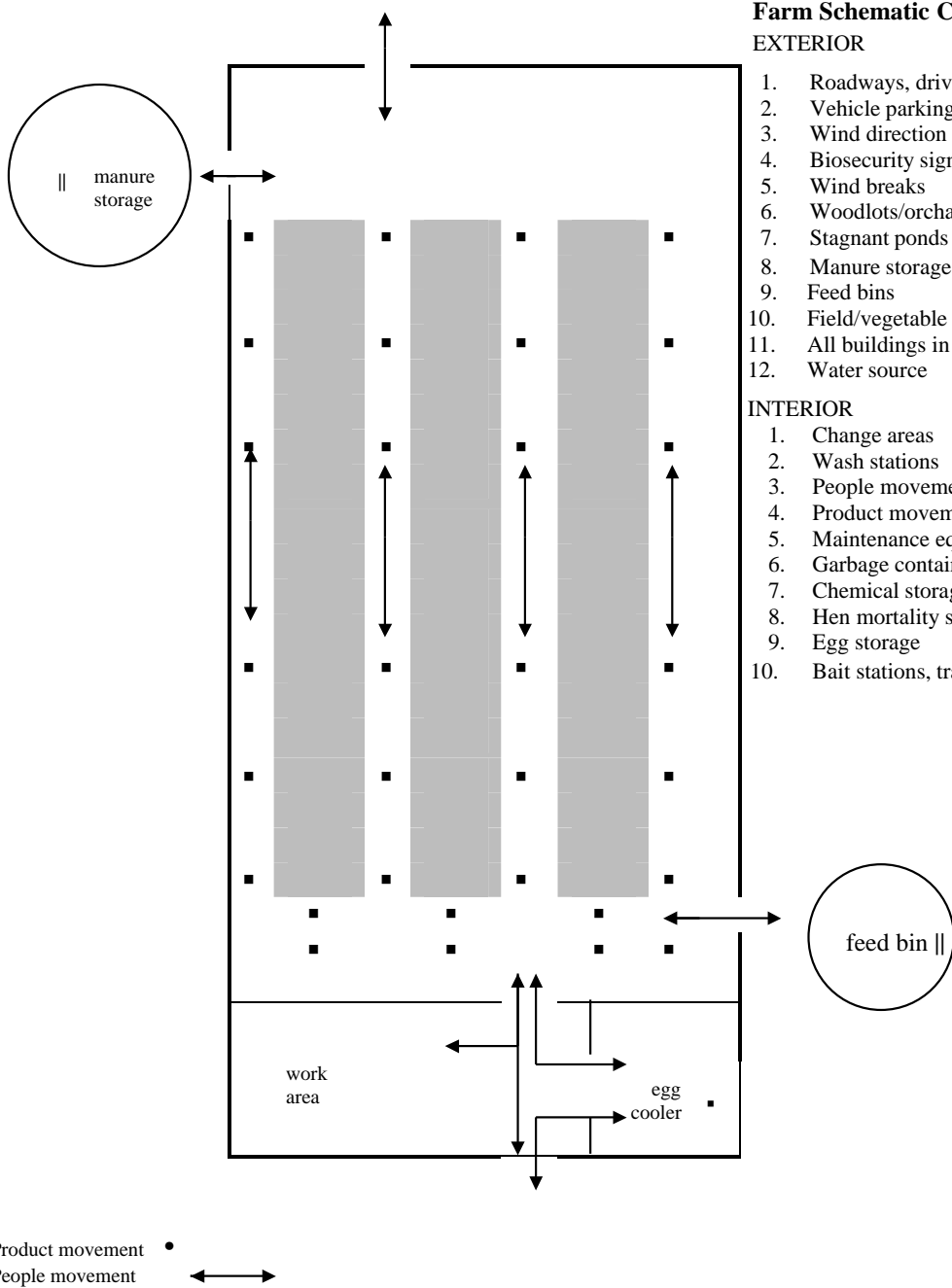
Day	Cooler Room Temperature	Laying Facility Temperature
1	10/13	19/23
2	10/14	20/24
3	9/13	20/24
4	9/13	19/23
5	9/13	20/24
6	9/12	20/24
7	10/14	20/24
8	9/13	
9	9/13	
10	9/13	
11	9/14	
12	9/13	
13	9/12	
14	9/14	
15	9/13	
16	9/14	
17	9/12	
18	9/14	
19	10/13	
20	9/12	
21	9/14	
22	9/13	
23	9/13	
24	9/12	
25	9/14	
26	9/13	
27	9/12	
28	9/14	
29	9/13	
30	9/12	
31	9/12	

Note: The above example of minimum - maximum temperatures might be what a producer would record on his chart.

Farm Schematic Form



Production Unit Schematic Form



Farm Schematic Check List

EXTERIOR

1. Roadways, driveways
2. Vehicle parking areas
3. Wind direction
4. Biosecurity signs
5. Wind breaks
6. Woodlots/orchards
7. Stagnant ponds
8. Manure storage
9. Feed bins
10. Field/vegetable crop proximity
11. All buildings in farm layout
12. Water source

INTERIOR

1. Change areas
2. Wash stations
3. People movement
4. Product movement
5. Maintenance equip storage
6. Garbage containers
7. Chemical storage
8. Hen mortality storage
9. Egg storage
10. Bait stations, traps

Letters of Certification

Letters of certification from all suppliers of livestock feed or materials that contribute to egg production on any given farm, is a requirement for participation in the Caribbean Poultry Association's On-Farm Food Safety Program.

Sample Letter - Feed Supply

A large empty rectangular box with a black border, intended for a sample letter.

A LETTER OF CERTIFICATION

FEED SUPPLY

DATE,

PRODUCER TO WHOM ADDRESSED:

We, the undersigned feed supplier, do hereby certify that any feed or feed supplements supplied by us for the purposes of shell egg production, to the premises designated by the above shell egg producer, will not knowingly be contaminated with Salmonella Enteritidis bacteria or with pharmaceutical residues.

Furthermore, we certify that all our feed is manufactured following a Good Management Practice Program.

FEED SUPPLIER NAME,
ADDRESS,
and TELEPHONE NUMBER,

Signed on behalf of the feed supplier,

Sample Letter - Laying Hens

A Letter Of Certification

viii.CPA_OnFarmFoodSafetyProgram_Eggs1To3rdCVOs
4/5/2006

CHICKS/ STARTED PULLETS

DATE,

PRODUCER TO WHOM ADDRESSED:

We, the undersigned layer hen supplier, do hereby certify that any and all layer hens supplied by us for the purposes of shell egg production, to the premises designated by the above shell egg producer, will not knowingly be contaminated with Salmonella Enteritidis bacteria or with pharmaceutical residues.

Furthermore, we will supply a flock history that will provide information about the breeder flock and hatch date of the laying hens supplied, pullet grower and location, vaccination programs and mortality record.

LAYER HEN SUPPLIER NAME,
ADDRESS,
and TELEPHONE NUMBER

Signed on behalf of the layer hen supplier,

Sample Letter - Conveyance and Packaging Material

A LETTER OF CERTIFICATION

CONVEYANCE and PACKAGING MATERIAL

DATE,

PRODUCER TO WHOM ADDRESSED:

We, the undersigned supplier of egg trays, carts and/or skids, dividers or cartons to the premises designated by the above shell egg producer, for the purpose of safe, clean packaging and conveyance of shell eggs, do hereby certify that any and all materials supplied by us for the purpose of shell egg packaging and conveyance will not knowingly be contaminated with Salmonella Enteritidis bacteria or with chemical residues.

CONVEYANCE and PACKAGING MATERIAL SUPPLIER NAME, ADDRESS,
and TELEPHONE

Signed on behalf of the materials supplier,

The Caribbean Poultry Association recognizes

**As a Caribbean Egg Producer who abides
by the Caribbean Egg Industry's On -
Farm Food Safety Program. You have
attained a superior rating indicating that
you practice and maintain a clean and**

healthy environment which enhances the production of safe, quality eggs.

Chairman / President

Date of Issue

Expires one year from date of issue

CARIBBEAN EGG PRODUCERS RECORD OF ACTIVITY

MONTH _____

PRODUCER _____

VISITORS:

	NAME	IN	OUT		NAME	IN	OUT		NAME	IN	OUT
1				6				11			
2				7				12			
3				8				13			
4				9				14			

CARIBBEAN POULTRY ASSOCIATION
ON-FARM FOOD SAFETY PROGRAM RATING FORM

	MAX	
Maintains biosecurity zones on farms - including signage	8	
Collect eggs twice per day	8	
Removes cracked and damaged eggs	8	
Uses clean/dry packing material	8	
Layer houses well ventilated	8	
Removes dead birds and disposes of them properly	8	
Maintains fly and rodent control program	8	
Practices good manure management	8	
Maintains clean, tidy buildings - Interior and Exterior	8	
Egg gathering equipment kept clean and sound	8	

BONUS SECTION:

Maintains records on all of above	10	
Operating cooler at 7-13 °C (45-55 °F)	10	

Producer who rates less then 80% should consider their operation at risk to introduction of human health related microbial disease organism.	100	
---	-----	--

PRODUCER SIGNATURE: _____

INSPECTOR SIGNATURE: _____

DATE: _____

CODE OF FARM MANAGEMENT PRACTICE FOR CARIBBEAN EGG PRODUCERS

CARIBBEAN POULTRY ASSOCIATION

The Caribbean Poultry Association recommends that as a producer of eggs in the Caribbean, and to produce safe, quality eggs, you should to the best of your ability:

Create and maintain Biosecurity zones on my farm.

Collect eggs twice or more daily.

Remove obvious cracked and damaged eggs before grading or packaging.

Always use clean and dry packing material.

Maintain a well ventilated laying house.

Remove dead birds daily and dispose of them in a proper manner.

Maintain a rodent and fly control program.

Maintain my egg gathering equipment in a clean and sound mechanical condition.

Practice good manure management and handling.

Maintain my buildings in a clean and tidy condition - both inside and out.

Consider the installation of a cooling room for eggs that can maintain an operating temperature between 45-55°F / 7-13° C and humidity level of 75 - 85%.

Keep records on all of the above.

Will constantly strive to continue producing safe quality eggs.

Daily Egg Production and Hen Mortality Record

Producer Number _____
 Producer Name _____
 Birds Housed _____
 Date Housed _____
 Flock Number _____
 Month and Year Recorded _____
 Monthly Beginning Inventory _____
 Monthly Ending Inventory _____

DAY	MORTALITY or CULLS	EGGS GATHERED		
		PICK 1	PICK 2	TOTAL
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
31				
TOTAL				

Sanitation Record (On-going)

DAY	FLOOR	SANITATION		
		WALLS	CEILING	EQUIPMENT
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
31				

Refrigerated Storage and Laying Facility Temperatures Daily Record

Day	Cooler Room Temperature	Laying Facility Temperature
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		
31		

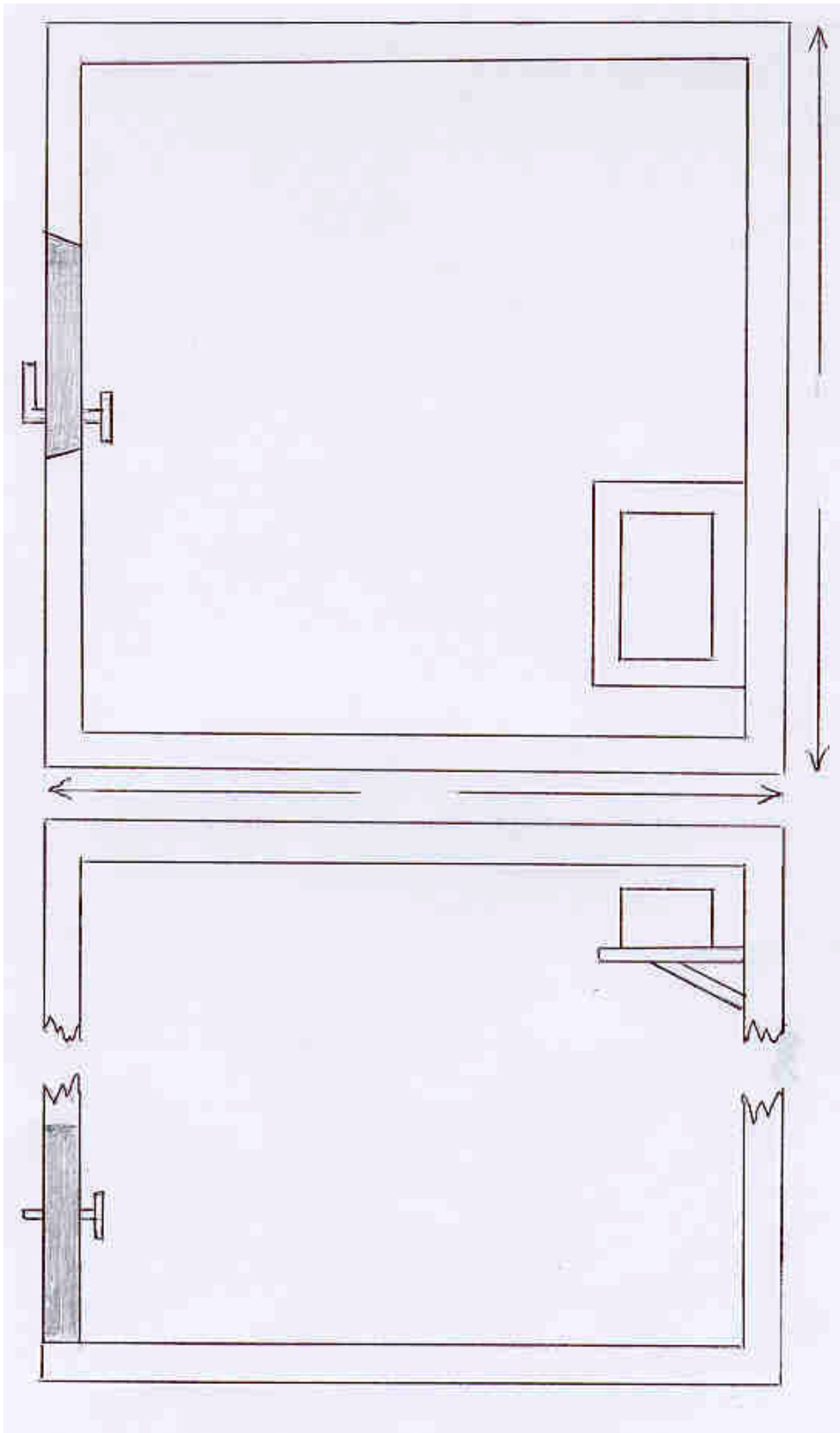
Rejected Tray Record

Day	Rejected Trays
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	
26	
27	
28	
29	
30	
31	
TOTAL	

Appendix 1

Environmental testing of each laying flock premise should be tested for the presence of Salmonella Enteritidis (Se). The Caribbean Poultry Association will endeavor to develop and enact a program and protocol for a test program.

Appendix 2



Specifications for 6 x 6 Egg Cooler

- One weeks egg storage for approximately 5,000 hens
- Poured concrete floor
- Walls: Concrete block with insulation inside – finished inside with hard surface material, suitable for cleaning.
- Refrigeration Unit: check with local refrigeration dealer for correct size
- Install thermometer and hygrometer on wall inside door.

Appendix 3

**DONOT ENTER
WITHOUT
AUTHORIZATION**

**BIOSECURITYIN
EFFECT**

Dimensions: 2' x 2'
Bright yellow with black letters