

# FOWL TYHOID/PULLORUM REGULATION

August 2009  
Belize

**BELIZE:**

**STATUTORY INSTRUMENT  
NO. OF 2009**

**REGULATIONS** made by the Minister responsible for Agriculture, after consultation with the Authority, in exercise of the powers conferred upon him by section 86 of the Belize Agricultural Health Authority Act, Chapter 211 of the Substantive Laws of Belize, Revised Edition 2000-2003, and all other powers thereunto him enabling.

**(Gazetted ....., 2009).**

Short title.

1. These Regulations may be cited as the  
**BELIZE AGRICULTURAL HEALTH AUTHORITY (FOWL  
TYPHOID/PULLORUM) REGULATIONS, 2009.**

Interpretation.

2. In these Regulations

- 2.1 Accredited Laboratory:** means a veterinary diagnostic laboratory authorized by the Belize Agricultural Health Authority to conduct avian disease diagnostics in accordance with OIE guidelines.
- 2.2 Accredited:** means any person or legal entity to whom BAHA delegates activities related to the prevention, control and eradication of poultry diseases.
- 2.3 Backyard Poultry:** All domestic poultry that are used for the production of meat and eggs destined for consumption, the production of other commercial products, the production of game birds or the reproduction of all these categories of birds.
- 2.4 BAHA :** means the Belize Agricultural Health Authority.
- 2.5 Biosecurity:** means any sanitary measure designed to reduce the risk of introduction and/or transmission of poultry diseases into poultry establishments.
- 2.6 Buildings:** Existing structures in a farm, among which the following are highlighted: offices, storerooms, pens, feed factories, sanitary buildings, systems of water supply and residual water among others.
- 2.7 Cold chain:** Procedure which guarantees the correct refrigeration temperature of the products during their storage, transportation and administration, from the establishment where they are manufactured until they are utilized.
- 2.8 Commercial Poultry:** means poultry which are raised for trade purpose.
- 2.9 Compartment:** means an animal subpopulation contained in one or more establishment under a common biosecurity management system with an distinct health status with respect to a specific disease or specific diseases for which required surveillance, control and biosecurity measures have been applied for the purpose of international trade.

- 2.10 Compost:** means a mixture which generally contains poultry organic material which may be used as fertilizer.
- 2.11 Confirmed case:** Infected or diseased animals in which the presence of the ND virus has been proven by a diagnostic technique approved by BAHA.
- 2.12 Control phase:** Group of sanitary activities, necessary for the control and eradication of ND, realized in a strategic and sequential manner.
- 2.13 Control zone:** A particular geographical area in which are applied sanitary measures which tend to reduce the incidence and prevalence of the ND virus in a specific period.
- 2.14 Control:** means sanitary measures whose objective are to reduce the incidence and prevalence of a poultry disease in a specific geographic area.
- 2.15 Day old birds:** means birds aged not more than 72 hours after hatching.
- 2.16 Definitive quarantine:** Absolute restriction of the movement of birds, their products and by-products during a period not less than 63 days while the sanitary actions are taken for the elimination of the aetiological agent of the disease.
- 2.17 Destroyed animals:** Those animals which are killed in the control of the disease and whose carcasses are not authorized for human or animal consumption nor for industrial use, reason why they are removed through the indicated sanitary processes.
- 2.18 Diagnosis:** Study based on the joint analysis of history, clinical signs observed in the animal, as well as, serological tests, virus isolation and strain characterization which allows the confirmation or rejection of the suspicion of infection with the Fowl Typhoid/Pullorum bacteria.
- 2.19 Diagnostic test:** Laboratory techniques used to confirm or rule-out the presence of Fowl Typhoid/Pullorum bacteria in a premise or zone.
- a. Enterotropic, asymptomatic virus with an Intracerebral Pathogenic Index (ICPI) of 0.0 and with a Mean Death Time (MDT) greater than 150 hours
- 2.20 Epidemiological Surveillance:** Systematic, ongoing collection, collation, and analysis of information related to animal health and the timely dissemination of information to those who need to know so that action can be taken.
- 2.21 Eradication zone:** A particular geographical area in which are applied sanitary measures which tend to eliminate the ND virus or where epidemiological studies are conducted with the objective to prove the absence of this disease, when the slaughter methodology is applied at least for period of three months.
- 2.22 Eradication:** means the elimination of a pathogenic agent from a country or zone.
- 2.23 Fowl Typhoid/Pullorum Incubation Period:** It is considered from 4 to 6 days, in conformity with international standards.
- 2.24 Fowl Typhoid/Pullorum:** Contagious bacterial disease whose causal agents are *S. pullorum* which causes Pullorum and *S. gallinarum* which causes Fowl Typhoid.
- 2.25 FT/P** means Fowl Typhoid/Pullorum
- 2.26 Free farm certificate:** Official document granted by BAHA to proprietors of poultry establishments registered in the Poultry Health Programme and who have complied with this Regulation.
- 2.27 Free zone or country:** It is considered that a zone or country is free of Newcastle Disease when it is known that the disease has not been detected in the area for at least three years. This period can be reduced to six months after having slaughtered

the last affected animal for the countries that apply depopulation, whether associated with vaccination against ND or not.

- 2.28 Free zone:** Designates a zone in which the absence of Fowl Typhoid/Pullorum has been demonstrated in this Directive or that the Programmes define.
- 2.29 Hazardous Waste:** means the containers and materials used in the activities for prevention, treatment and control of poultry diseases which constitute a risk to human health and the environment either alone or when combined with other waste materials.
- 2.30 International or external quarantine:** Application of restrictive measures to prevent the introduction of Fowl Typhoid/Pullorum in national territory or even into a determined geographical region within countries. .
- 2.31 Notification:** Formal written or electronic communication to BAHA on the suspicion or existence of Fowl Typhoid/Pullorum, providing in a sufficient and necessary manner the relevant epidemiological data for its corresponding identification, localization and attention.
- 2.32 Official Diagnostic Laboratory:** Diagnostic establishment of the official veterinary services that conducts the assays and analyses that allow the determination of the absence or presence of Fowl Typhoid/Pullorum.
- 2.33 Official Veterinarian:** means a veterinarian authorized by BAHA to perform certain designated official tasks associated with animal health and/or public health.
- 2.34 OIE:** means the World Organization for Animal Health.
- 2.35 Outbreak:** means the occurrence of one or more cases of disease or an infection in an epidemiological unit.
- 2.36 Polyvalent K antigen:** Biological product used for the serological detection of Pullorum and Fowl Typhoid, which contains the following strains: intermediate strain 4, standard strain 11 and variant strains 77, 79, 269.
- 2.37 Poultry Disease :** means Avian Influenza, Avian Infectious Laringotracheitis, Newcastle Disease, Pullorum or Fowl Typhoid.
- 2.38 Poultry Establishment:** means farms, slaughtering plants, hatcheries, feed mills, processing plants and poultry litter outlets.
- 2.39 Poultry Farm:** means establishment, where poultry are raised for commercial purposes and includes layers, breeders, broilers, pet birds, and fighting cocks.
- 2.40 Poultry Litter:** means the excrement of birds, pure or mixed with feed and other by-products accumulated during production.
- 2.41 Poultry :** means all domesticated birds including backyard poultry, used for the production of meat or eggs for consumption, for the production of other commercial products, for restocking supply of game, for breeding these categories of birds, as well as fighting cocks, caged birds, song birds used for any purpose.
- 2.42 Prevention:** means sanitary measures based on epidemiological studies with the objective of preventing the introduction, establishment and/or spread of poultry disease.
- 2.43 Programme:** means Programme for the prevention, control and eradication of poultry diseases established with the appropriate legal, financial and human resources.
- 2.44 Proprietor:** means the person or group of persons who owns and is responsible for the poultry establishment.

- 2.45 Region/Zone:** means a clearly defined part of a territory containing an animal subpopulation with a distinct health status with respect to a specific disease for which required surveillance, control and biosecurity measures have been applied for the purpose of international trade.
- 2.46 Report:** Presentation of an official document on the detection of disease in a specified place and time.
- 2.47 Rest period:** means the period of 2 to 3 weeks when the barns are emptied and cleaning and disinfection are done.
- 2.48 Risk analysis:** designates the process which encompasses hazard identification, risk evaluation, risk management and risk communication.
- 2.49 Slaughtered animals:** Those birds which for the purpose of control of the disease do not have any restrictions for their use and consumption.
- 2.50 Solid waste:** means disposed of objects and materials resulting from human activities during the process of consumption, transformation and production of poultry that represents no human health risk..
- 2.51 Suspect case:** Animal probably infected or diseased in which the presence of the aetiological agent causing disease has not been confirmed by laboratory diagnosis.
- 2.52 Vaccinated animals:** Those animals in which a duly approved biological product is administered, with the purpose of immunization for the prevention, control and eradication of disease.
- 2.53 Veterinary certificate:** Official document issued by BAHA or by approved or accredited or authorized persons or legal entities to confirm compliance with this Regulation.

### **3. OBJECTIVE AND APPLICATION**

#### **3.1 Objective**

The present Regulation has as its objective to establish the sanitary measures for the Prevention, control and eradication programme for Fowl Typhoid/Pullorum.

#### **3.2 Scope of Application**

Compliance with this Regulation corresponds to every person, group of persons or legal entity who is dedicated to production, industrialization, commerce and services in the poultry industry.

#### **3.3 Competent Authority**

BAHA, through the Department of Animal Health, is the Competent Authority for the application of the present Regulation.

## **4 GENERAL PROVISIONS**

- 4.1** The Programme for Fowl Typhoid/Pullorum is designed to establish the technical measures for the prevention, control and eradication of the disease.
- 4.2** The planning and coordination of the programme for Fowl Typhoid/Pullorum, shall be a shared responsibility among BAHA, Ministry of Agriculture and Fisheries and the Belize Poultry Association.
- 4.3** The programme for Fowl Typhoid/Pullorum shall be active and permanent.
- 4.4** BAHA may accredit or authorize private veterinarians and laboratories to conduct official activities of the programme for Fowl Typhoid/Pullorum.
- 4.5** Vaccination against Fowl Typhoid and Pullorum shall not be permitted.

## **5 PHASES OF THE PROGRAMME FOR THE PREVENTION, CONTROL AND ERADICATION OF FOWL TYPHOID/PULLORUM**

### **5.1 Of the Programme**

The Programme contemplates the phases of prevention, control and eradication as well as considers the following conditions which must meet the OIE guidelines.

- a) Have an Fowl Typhoid/Pullorum prevention, control and eradication Programme that complies with OIE and other international technical guidelines and these must be verified and evaluated for their confirmation.
- b) The national Fowl Typhoid/Pullorum prevention, control and eradication programme should have the legal support and manuals which allow its operation.
- c) The programme should have control and verification points for the movement of birds, their products and by-products.

**5.2 Programme phases:** For the execution of this Programme the following operational phases are established:

5.2.1 Prevention

5.2.2 Control

5.2.3 Eradication

5.2.4 Free

**5.3** The phases should be conducted in the following levels:

**5.3.1** Farm

**5.3.2** District

### 5.3.3 Zone

### 5.3.4 Free country

**5.4 Prevention phase:** This phase shall be applied when Fowl Typhoid/Pullorum have not been any confirmed in the farm, zone or country declared as free of the disease.

**5.4.1 Biosecurity:** In this phase, the BAHA shall guarantee that the farms in their countries comply with the biosecurity measures established in the POULTRY ACTIVITY REGULATION.

### 5.4.2 Epidemiological surveillance:

5.4.2.1 Fowl Typhoid/Pullorum is a notifiable disease.

**5.4.2.2** The farm owners or their legal representatives as well as veterinarians and accredited or official laboratories are mandated to immediately notify BAHA upon the presentation of any suspicion or positive laboratory result to Fowl Typhoid/Pullorum. The surveillance shall be conducted through inspection of poultry, their products and by-products and of the official documentation required for movement.

**5.4.2.3** Active epidemiological surveillance refers to the search for the disease in the susceptible population, especially in breeders given the vertical transmission.

The active epidemiological surveillance of FT/P should be conducted through bacteriology culture in the commercial poultry population following the guidelines proposed by OIE, and those that the country considers pertinent.

The statistical determination of the sample size should be conducted through the WIN programme EPISCOPE, which contemplates a sampling scheme at a 95% confidence level, an expected prevalence of sampling units of 1%, with a precision level of 1% (range 0 - 2%) and the prevalence within each community of 10%, which increases the size of the sample and its precision.

It is based on the statistical calculation which contemplates the following formula:

$$N = \frac{1 - (1 - a)^{1/d}}{a} [N - (D - 1)/2]$$

where

N = sample size

a = confidence level      95% = 0.95

D = number of sick animals      prevalence X population

N = population size

Estimated prevalence =      10% = 0.1

### 5.4.3 Diagnosis

**5.4.3.1** For the purpose of prevention, control and eradication, the diagnosis must be conducted in official diagnostic laboratories or authorized laboratories.

**5.4.3.2** The official laboratory tests for the diagnosis of FT/P are those determined by BAHA and shall be in accordance with OIE guidelines.

**5.4.3.3.** The official diagnostic laboratory shall establish the method of sample referral to the international diagnostic reference laboratory.

5.4.3.4 The BAHA shall respond to notifications, and immediately conduct an epidemiological investigation.

**5.2.3.1.1** The disease response measures applied shall be according to the findings and to the FT/P Emergency Preparedness Plan.

**5.4.2.1.1 Monitoring:** The bacteriology culture should be used as a tool in epidemiological surveillance similar to what is being proposed by the OIE on the Directive for the control and prevention of infections by *Salmonella* spp. in poultry flocks.

**5.4.2.2 Passive surveillance:** It is conducted through the report and notification of cases and suspect outbreaks.

**5.4.2.2.1 Response to cases:** In the prevention phase this activity shall be of strict compliance when the clinical picture is compatible with Fowl Typhoid/Pullorum and it can be conducted through clinical, serological or bacteriology culture diagnosis until every case has been closed.

**5.5 Control phase:** This phase of the programme shall be applied when cases are confirmed in a farm, zone or country free of Fowl Typhoid/Pullorum.

The provisions described in the prevention phase shall be applied in this phase and the following action shall be established:

**5.5.1 Movement control (internal quarantine):** In this phase it is indispensable to establish the movement controls for poultry, their products and by-products as well as materials and equipment capable of transmitting Fowl Typhoid/Pullorum.

**5.5.2 Zoning:** This shall be established according to the situation found in epidemiological surveillance, being classified as endemic, in control, in eradication and free. Strict movement control measures shall be applied in zoning. Poultry, their products and by-products proceeding from free zones can circulate freely to any of the other zones.

**5.5.3 Control and elimination of outbreaks**

**5.5.3.1** On confirming the presence of Fowl Typhoid/Pullorum in breeder farms, the disease control response shall be depopulation, either by destruction and burial of birds or by the slaughter of the birds at slaughter plants and making use of the products.

**5.5.3.2** Poultry shall be destroyed when the management of slaughter of the poultry in the processing plants is not safe because of the travel routes of either the live birds or the products.

**5.5.4 Cleaning and disinfection:** In every premise where the presence of Fowl Typhoid/Pullorum has been confirmed, the installations, equipment and materials should be cleaned and disinfected and the materials that these processes cannot guarantee should be destroyed.

**5.5.5 Sanitary rest period:** It shall be mandatory to leave a minimum of 30 days sanitary rest period after the disinfection to be able to repopulate the premises with

new poultry and these should proceed from establishments free of Fowl Typhoid/Pullorum. Moreover, bacteriology culture for salmonella shall be made of the premises to verify the efficacy of disinfection.

**5.5.6** Surveillance around the infected premises shall be intensified with the objective to detect any clinical manifestation, which must be complemented with serological and bacterial culture studies until control is achieved.

**5.5.7** In the control phase the following requirements shall apply:

**5.5.7.1** Strict control of the movement of poultry, their products and by-products and implements.

**5.5.7.2** Compliance with the epidemiological surveillance systems established.

**5.5.7.3** Certification of the sanitary status of premises: breeders, layers, broilers, pet birds, fighting cocks and backyard poultry.

## **5.6 Eradication phase**

This phase of the programme shall be implemented when there is an epidemiological silence of at least 30 days. The sanitary measures to apply shall be those of the prevention phase. An Emergency Preparedness Plan should be available to proceed to the elimination of outbreaks with all the speed possible. The breeder birds play an important role in the eradication of the disease.

**5.6.1 Elimination of cases:** As in the control phase, infected premises shall be depopulated in a rapid manner, by elimination and destruction of infected birds.

**5.6.2** In the eradication phase, the following requirements shall apply.

**5.6.2.1** strict control of the movement of birds and poultry products, by-products and implements.

**5.6.2.2** Vaccination against Fowl Typhoid and Pullorum shall not be permitted..

**5.6.2.3** The Avian Health Programme shall strengthen the Information and Education Units.

**5.6.2.4** adequate epidemiologic surveillance system maintained.

**5.6.2.5** After the control of outbreaks, the official laboratory shall execute sampling to ensure the absence of Fowl Typhoid/Pullorum in the establishments that were affected by the disease.

**5.7 Free phase:** This phase is initiated 3 months after the elimination of the last outbreak of Fowl typhoid/Pullorum.

**5.7.1** Free farm: Have at least three samplings with negative results based on the analyses of the laboratory authorized by the BAHA, according to international standards. The first sampling shall be conducted prior to entering the production phase and the second and third during the production phase.

**5.7.2** Free zone: designates a zone in which the absence of Fowl Typhoid/Pullorum has been demonstrated by compliance with the prescribed conditions and through specific laboratory studies.

**5.7.3** Notifiable: Fowl Typhoid/Pullorum shall be notifiable when it presents.

**5.8 Diagnosis:** The official tests for the programme are:

**5.8.1** Bacterial tests of culture and any other authorized by the BAHA according to international standards.

**5.8.2** The official laboratory or laboratory authorized by the BAHA shall prepare a procedures manual for sample collection and submission.

**5.9 Hatcheries:**

**5.9.1** Hatcheries cannot trade broiler chicks or replacement pullets proceeding from infected farms.

**5.9.2** Hatcheries dedicated to the production and sale, whether national or foreign, of fertile eggs, chicks for reproduction, chicks for replacement of birds, of commercial layers or broilers, should be certified by the national avian health programme as free of *Salmonella gallinarum* and *Salmonella pullorum*.

**5.10 Transportation:**

**5.10.1** The vehicles transporting fertile eggs, replacement chicks and table eggs should be washed and disinfected before being loaded and after unloading. This procedure shall be verified by the BAHA when it considers it necessary.

**5.10.2** The packaging for hatching eggs and table eggs shall be new, non-returnable, with stamped label that identifies the packing enterprise, registry code supplied by the Programme; the date of production of the egg should appear stamped on the box.

**5.11** *The poultry farms shall have a sampling programme of poultry feed for the detection of Salmonella gallinarum and Salmonella pullorum.* The use of pellet feed or feed that has been subjected to other salmonellosis decontamination procedures is recommended.

## **1. QUARANTINE MEASURES**

1.1 All Poultry establishments shall be subjected to precautionary or definitive quarantine in the following circumstances:

1.2 When an outbreak of Fowl Typhoid/Pullorum is suspected.

1.3 When an outbreak is confirmed through culture of *Salmonella gallinarum* or *Salmonella pullorum*.

1.4 The BAHA shall notify the proprietor of the poultry establishment of the quarantine measures including the restrictions, motive and sanitary measures that shall be established.

1.5 The quarantine measures can only be suspended upon notification by BAHA.

### **1.6 Epidemiologic surveillance**

- 1.6.1 Farm owners and/or their legal representatives, as well as veterinarians and approved laboratories are under obligation to notify to BAHA within 24 (twenty four) hours, the presentation of an outbreak or any positive result to culture of *S. gallinarum* and *S. pullorum*.
- 1.6.2 The avian health programmes shall define the avian salmonellosis surveillance strategy to follow in partnership with the private sector and recognized international organizations.
- 1.6.3 The Avian Health Programme shall establish verification procedures for poultry, their products and by-products and the official documentation required for their movement from control or eradication areas to eradication or free areas.

### **1.7 Information system**

- 1.7.1 Every programme shall have an information system which allows having reliable data to understand the behaviour of the disease and to apply control and eradication strategies besides maintaining the users duly informed.

### **1.8 Training**

There should be a continuous training plan which contemplates the holding of seminars, talks and simulations in Fowl Typhoid/Pullorum.

The training plan shall be directed to technical personnel, official and private, poultry producers, backyard poultry owners, poultry merchants and all those related directly or indirectly with the poultry sector.

**6.9 Awareness campaign:** the design and distribution of stickers, informative and educational material, highway bills, radio spots, addressed to the different sectors, according to their educational level, to maintain the alert among the poultry owners in the rural and urban sectors and invite them to notify abnormalities observed in domestic poultry.

### **6.10 Import control**

There should be compliance with the sanitary requirements for the importation of poultry, products and by-products established and harmonized in the region in accordance with the OIE guidelines.

**6.10.1** The control criteria established at level of border posts, ports and airports should be applied.

**6.10.2** Risk analysis shall be applied for decision making in the prevention, control and eradication of avian salmonellosis.

**6.11** For effects of exportation and to maintain their authorization, the diagnosis should be conducted at least once a year by an official laboratory

### **6.12 Emergency preparedness plan**

The programme shall have the emergency plan written and updated with the purpose of its application in this phase, in the event that new cases present.

## **2. MOVEMENT OF BIRDS, POULTRY PRODUCTS AND BY-PRODUCTS, POULTRY IMPLEMENTS AND MEAL OF ANIMAL ORIGIN**

- 2.1 The movement of birds shall be regulated throughout the national territory according to the zone of origin and destination, and purpose for movement. The vehicles that are used for the movement of poultry shall be washed and disinfected before and after their movement.
- 2.2 Birds for cockfights, fairs, expositions, pet birds and songbirds shall not lose their place of origin as long as they remain not more than 18 days in the place of destination, being able to return to their place of origin, as long as tests are conducted with negative results to bacterial culture for *Salmonella gallinarum* and *Salmonella pullorum*. The tests should be conducted before moving the birds to their place of destination. Need to present Certificate of free flock, farm or bird or in control for Fowl Typhoid and Pullorum except for those birds whose origin is from free zones; these should present the Veterinary Certificate, exclusively.
- 2.3 The movement of poultry products shall be regulated throughout the national territory according to the zones of origin and destination, and purpose for movement.
- 2.4 The movement of poultry implements shall be regulated throughout the national territory according to the Zones of Origin and Destination.

## **5 OFFENSES AND SANCTIONS**

Non-compliance with the provisions contained in this regulation shall be sanctioned according to the BAHA Act and its auxiliary regulations.

- 9 These Regulations shall come into force on the      day of                      2009.

**MADE** by the Minister of Agriculture this                      day of August, 2009.

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**(RENE MONTERO)**  
**Minister of Agriculture and Fisheries**