BELIZE AGRICULTURAL HEALTH AUTHORITY (PREVENTION, CONTROL AND ERADICATION OF BOVINE BRUCELLOSIS) REGULATIONS, 2011

ARRANGEMENT OF REGULATIONS

BELIZE:

STATUTORY INSTRUMENT

No. 22 of 2012

REGULATIONS made by the Minister responsible for Agriculture, on the recommendation of the Belize Agricultural Health Authority, in exercise of the powers conferred upon him by section 61 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 21st January, 2012.)

1. These Regulations may be cited as the **Citation.**

BELIZE AGRICULTURAL HEALTH AUTHORITY (PREVENTION, CONTROL AND ERADICATION OF BOVINE BRUCELLOSIS) REGULATIONS, 2011.

2. In these Regulations **Interpretation.**

"accredited veterinarian" means a veterinarian recognized and approved by the Authority to conduct sanitary activities under these Regulations;

"animal" "bovine" or "cattle" means *bos indicus*, *bos taurus* and water buffalo;

"approved laboratory" means a laboratory recognized by the Authority as a place to perform testing and sanitary activities under these Regulations;

"brucellosis" means an infection caused by the bacterium *Brucella abortus*, the symptoms of which include abortion, decreased milk production or infertility;

"confinement" means the isolation, observation and movement restriction of animals due to suspicion or existence of brucellosis prior to the final destination of the animal is determined;

"controlled production unit" refers only to those production units in which diary cattle are confined due to positive brucellosis test in order to benefit from their production before slaughter;

"dairy cattle" means the type of animal in a production unit specialized for milk production.

"diagnostic test" means the test performed under Regulation 17 to identify the presence of bovine brucellosis;

"epidemiological surveillance" means the procedure set out under Regulation 15;

"Free Herd Certificate" means the official document granted by the Authority under Regulation 7 or 8 that a herd of bovine is officially free from brucellosis or free from brucellosis, respectively;

"OIE" means The World Organization for Animal Health;

"OIE Terrestrial Code" means the most up-to-date version of the Terrestrial Animal Health Code as approved and published by the OIE from time to time;

"official veterinarian" means a veterinarian employed by the Authority who performs functions under these Regulations;

"prevalence" means the number of cases or outbreaks of brucellosis in an animal population in a defined geographical area during a specific period;

"producer" means the owner or keeper of animal whose activities include breeding, cow-calf operations, fattening or milk production;

"production unit" means a ranch, farm, stable, corral or other similar place that houses cattle;

"Programme" means the National Bovine Brucellosis Programme pursuant to Regulation 5;

"Programme coordinator" means the person designated by the Authority to coordinate programme activities;

"sample" means blood, sera, fluid, tissue, organ, milk or other product from a bovine which is usesd to conduct laboratory diagnostic tests;

"slaughterhouse" means premises used for the slaughter of animals including facilities to produce animal products and for moving or lairaging animals;

Competent authority.

3. (1) The Authority is designated as the competent authority responsible for the implementation of these Regulations.

(2) The Authority may collaborate with stakeholder organizations, the government and members of the cattle industry.

Notifiable animal disease.

4. (1) Bovine brucellosis is a notifiable animal disease in Belize declared under section 35 (a) of the Act.

(2) For the purpose of these Regulations, the Authority shall inform the OIE within twenty-four hours and subsequent weekly reports of the following in regards to bovine brucellosis:

(a) first occurrence in a zone or district in Belize;

(b) re-occurrence which follows a report declaring the end of an outbreak;

(c) sudden unexpected increase in distribution, incidence, morbidity, and mortality.

General provisions of the National Bovine Brucellosis Programme.

5. (1) A programme to be known as the National Bovine Brucellosis Programme is established for implementation in accordance with these Regulations.

(2) The Programme consists of measures to prevent, diagnose, control or eradicate brucellosis in bovine animals regardless of breed and purpose of production.

(3) The measures under sub regulation (2) includes the protection of zones, districts, communities, or herds from brucellosis, strict control of animal movement, and coordination of the Programme among all stakeholders.

(4) The Authority may designate a Programme Coordinator to coordinate activities of official veterinarians and accredited vererinarions.

Determination of health status and free herd certification.

6. (1) The Authority may declare Belize or a zone or district within Belize as free from bovine brucellosis where that zone, district or Belize complies with the following requirements:

(a) bovine brucellosis or any suspicion thereof has been notified inaccordance with Regulation 4;

(b) the cattle population of the zone, districty or Belize is under official veterinary control and it has been ascertained that the rate of bovine brucellosis infection does not exceed 0.1% of the herds in the country, district or zone under consideration;

(c) the serological tests for bovine brucellosis are periodically conducted in each herd, with or without the ring test;

(d) no animal has been vaccinated against bovine brucellosis in the last three years immediately preceding the year of intended declaration;

(e) all reactors are slaughtered;

(f) animals introduced into Belize or zone shall only come from herds officially free from bovine brucellosis or from herds free from bovine brucellosis

provided that this condition may be waived for animals which have not been vaccinated and which, prior to entry into the herd, were isolated and were subjected to the serological tests for bovine brucellosis with negative results on two occasions, with an interval of 30 days between each test.

(2) The Authority may decide on the system for further control of cattle that has qualified as officially free from bovine brucellosis and where no reactor has been found in the last five years of declaration pursuant to sub regulation (1).

Herd officially free from bovine. brucellosis.

7. (1) A bovine producer or a group of bovine producers may apply in writing to the Authority for a Free Herd Certificate that a herd of bovine is officially free from bovine brucellosis.

(2) A bovine producer or a group of bovine producers applying under subregulation (1) shall satisfy the Authority that

(a) the herd is under official veterinary control;

(b) the herd contains no animal which has been vaccinated against bovine brucellosis during three years immediately preceding the date of application;

(c) the herd contains only animals which have not showed evidence of bovine brucellosis infection during the past 6 months and all suspect cases (such as animals which have prematurely calved) have been subjected to the necessary laboratory investigations;

(d) all cattle over the age of one year (except castrated males) have been subjected to two series of serological tests yielding negative results, which testing has been conducted at an interval of 12 months between each test and that this

requirement is maintained even where the entire herd is normally tested every year or testing is conducted in conformity with other requirements established by the Authority;

(e) additions to the herd for which official free herd status is sought, come from herds officially free from bovine brucellosis

Provided that:

(i) animals which is not vaccinated comes from a herd free from bovine brucellosis;

(ii) negative results on brucellosis is shown after brucella antigen test and complement fixation test during the 30 days prior to entry into the herd ;

(iii) recently calved or calving animal is retested after 14 days.

(3) A Free Herd Certificate under sub regulation (1) is valid for one year and may be subject to renewal upon application.

(4) The form of Free Herd Certificate shall be as set out in the ***First Schedule***.

Herd free from bovine brucellosis.

8. (1) A bovine producer or a group of bovine producers may apply in writing to the Authority for a Free Herd Certificate that a herd of bovine is free from bovine brucellosis.

(2) A bovine producer or a group of bovine producers applying under subregulation (1) shall satisfy the Authority that the following conditions are met:

(a) the herd is under official veterinary control;

(b) the herd is subject to a vaccination or a non-vaccination regime;

(c) if a live vaccine is used in female animal, the vaccination is carried out when the female animal is between three and six months of age, in which case the female animal may be identified with a permanent mark approved by the Authority;

(d) all cattle over the age of one year are controlled as provided in Regulation 7(4);

(e) that cattle under 30 months of age which have been vaccinated using a live vaccine before reaching 6 months of age, were subjected to a buffered brucella antigen test yielding a positive result and the complement fixation test yielding a negative result;

(f) all cattle introduced into the herd come from a herd officially free from bovine brucellosis or from a herd free from bovine brucellosis, or from a country or zone free from bovine brucellosis.

(3) Paragraph *(f)* does not apply where animals are

(a) isolated prior to entry into the herd;

(b) subjected to two series of serological tests for bovine brucellosis yielding negative results which testing has been conducted at an interval of 30 days between each test.

(4) The tests under sub regulation (3) are not valid where done on a female animal which is calved during the past fourteen days.

(5) The form of Free Herd Certificate shall be as set out in the ***First Schedule***.

Importation for breeding or rearing.

9. (1) Subject to Part X of the Act, no person shall import a live bovine unless that person presents to the Authority an international veterinary certificate that verifies compliance with the following:

(a) where the bovine is imported for breeding or rearing that the bovine

(i) shows no clinical sign of bovine brucel losis on the date of shipment;

(ii) were kept in a herd in which no clinical sign of bovine brucellosis was officially reported or known during the 6 months immediately prior to date of shipment;

(iii) were kept in a country or zone free from bovine brucellosis or officially free from bovine brucellosis;

(iv) is from a herd officially free from bovine brucellosis;

(v) is subjected to a serological test for bovine brucellosis with negative results during the thirty days immediately prior to date of shipment;

(vi) were kept in a herd free from bovine brucellosis;

(vii) is subject to Brucella antigen and complement fixation tests the result of which is negative during the 30 days immediately prior to date of shipment;

(b) where the bovine is imported from a herd other than those in accordance with paragraph (a), that the bovine

(i) was isolated prior to the date of shipment;
(ii) is subjected to two serological tests for bovine brucellosis with negative results of the two occasions;
(iii) are not being eliminated as part of an eradication programme against bovine brucellosis;

(c) where the bovine is imported for slaughter, that the bovine

(iv) showed no clinical sign of bovine brucellosis on the date of shipment;
(v) are not being eliminated as part of an eradication programme against bovine brucellosis;
(vi) were kept in a country or zone free from bovine brucellosis;
(vii) were kept in a herd free from bovine brucellosis;
(viii) were kept in a herd free from bovine brucellosis;
(ix) were subjected to a serological test for bovine brucellosis with negative results during thirty days immediately prior to shipment.

(2) A test conducted under sub regulation (1)(a) or (b) is not valid in female animals which have calved during the past fourteen days.

(3) The tests conducted under sub regulation (1)(b)(ii), shall be conducted on intervals of not less than thirty days with the second test conducted during the fifteen days prior to the date of shipment.

(4) No person shall import a castrated male bovine for a purpose specified under sub regulation (1).

(5) The importation of bovine semen by a person is conditional upon the presentation of an international veterinary certificate that verifies compliance with the following:

(a) where the semen is from an artificial insemination centre, that the testing programme included the buffered Brucella antigen and complement fixation tests;

(b) where the semen is not from an artificial insemination centre, that the donor animals were kept

(i) in a country or zone free from bovine brucellosis;

(ii) in a herd officially free from bovine brucellosis, showed no clinical sign of bovine brucellosis on the day of collection of the semen, and were subjected to a buffered Brucella antigen test with negative results during the 30 days prior to collection;

(iii) in a herd free from bovine brucellosis, showed no clinical sign of bovine brucellosis on the day of collection and were subjected to the buffered Brucella antigen and complement fixation tests with negative results during the 30 days prior to semen collection,

(c) that the semen was collected, processed and stored in conformity with the OIE Terrestrial Code, Chapters 4.5 and 4.6.,

(5) The importation of *in vivo* derived bovine embryos by a person is conditional upon the presentation of an international veterinary certificate that verifies that the embryos were collected, processed and stored in conformity with the OIE Terrestrial Code Chapters 4.7and 4.9.

(6) The importation of *in vitro* produced bovine embryos or oocytes by a person is conditional upon the presentation of an international veterinary certificate that verifies compliance with the following:

(a) that the donor females

(i) were kept in a country or zone free from bovine brucellosis;

(ii) were kept in a herd free from bovine brucellosis and were subjected to tests in the OIE Terrestrial Code, Chapter 1.3.,

(b) that the oocytes were fertilised with semen meeting the conditions of the OIE Terrestrial Code, Chapters 4.5 and 4.6.;

(c) that the embryos or oocytes, as the case may be, were collected, processed and stored in conformity with the OIE Terrestrial Code, Chapters 4.8 and 4.9..

Exportation.

10. A person who engages in the exportation of live animals, products or by products shall meet the conditions of importation of the importing country.

Antigens and vaccines.

11. (1) The Authority is the sole entity authorized to

(a) produce or authorize the production,
(b) import or authorize the imporation,
(c) regulate the use and distribution,
(d) conduct quality control,

of brucella antigens for diagnosis of bovine brucellosis.

(2) The vaccination against bovine brucellosis in Belize is regulated by the Authority in accordance with these Regulations.

Programme evaluation.

12. (1) The Authority may conduct inspection visits to verify compliance by the farmer with the requirements for the health status of each bovine and shall issue a statement on the change of status according to the findings of the visits.

(2) The Authority, in consultation with stakeholders shall submit to the Minister an annual report on the evaluations of the Programme, and its operations in the regions and districts.

Identification. S.I.77 of 2011.

13. (1) All animals must be fully identified in accordance with the Belize Agricultural Health Authority (Animal Identification) Regulations, 2011.

(2) For the purpose of the Programme, the following shall apply to animals:

(a) a permanent "B" mark is fixed on the right masseter muscle of animals that tests positive for brucellosis;

(b) the identification number pursuant to sub regulation (1) that corresponds to each animal shall be registered in the official documents of diagnostic tests;

(d) an animal identified under the Belize Agricultural Health Authority (Animal Identification) Regulations, 2011 shall be exempt from any other identification mark.

Compensation.

14. Subject to section 58 of the Act, the Ministry, Belize Livestock Producers Association and other stakeholders are to implement a mechanism in which owners of bovine slaughtered as a consequence of positive testing for bovine brucellosis receive financial compensation.

Epidemiological surveillance.

15. (1) All producers shall participate in the Milk Monitoring Programme within the Programme which includes the Brucella Ring Test.

(2) All producers shall participate in the Slaughterhouse Monitoring Programme within the Programme which includes the following diagnostic tests:

(a) card test;
(b) rivanol;
(c) complement fixation; and
(d) bacteriology.

(3) The head of a laboratory shall provide the Director of Animal Health with all tests results of the Programme.

(4) The Authority shall make determinations under Regulation 4(2)(c) based on laboratory results.

(5) Every laboratory conducting tests for bovine brusellosis shall notify the Authority on the detection of reactors in an infected herd.

(6) The Authority shall notify the Director of Health Services in the Ministry of Health of infected herd that is detected and which poses a risk to consumers of dairy products.

Sanctions by the Authority.

16. (1) The Authority may impose the following sanctions (if applicable) on a person who fails to comply with the implementation of the Programme:

(a) a notification or order requesting compliance within a specified period;

(b) suspension or revocation of Free Herd Certificate;

(c) restriction of movement of animals owned by the person to slaughterhouses only;

(d) restriction of movement of animals into a production unit owned or kept by the person;

(e) implementation of biosecurity measures for a specified period;

(f) seek enforcement of compliance from the courts.

(4) Where the Authority lifts a notification or order on the basis that the person who own or keep a production unit has entered the Programme, it shall issue an official certificate to the owner or manager of the production unit.

Diagnosis.

17. (1) The diagnostic tests for bovine brucellosis shall be performed in laboratories of the Authority or laboratories approved by the Authority, on samples consisting of serum, milk, body fluids and tissues.

(2) The diagnostic tests referred to under subsection (1) may include immunological and bacteriological tests or any other tests as may be authorised by the Authority.

(3) The following immunological tests established by the Authority shall be conducted by an official or accredited veterinarian for smooth species

(a) the card test,
(b) the rivanol,
(c) the ELISA test,
(d) the complement fixation,
(e) the milk ring test,

(4) the immunological tests referred to under subregulation (3) shall be conducted as follows

(a) the card test and the milk ring test shall be carried out by an official or accredited veterinarian or at an approved laboratory in accordance with subregulation (5) below,

(b) the rivanol test, complement fixation and double immunodiffusion, shall be carried out at an approved laboratory.

(5) An accredited veterinarian performing immunological tests under this Regulation shall conduct the card test in the field while an approved laboratory shall perform proficiency tests, and are required to have the minimum infrastructure necessary that guarantees the accuracy of the test and it shall record all tests and reagents used.

(6) All laboratory results required under this Regulation shall be issued by the official veterinarian or accredited veterinarian on all brucelosis diagnostics conducted.

(7) Laboratories shall store serum samples for a period of 3 months after testing in freezers that comply with requirements established by Authority.

(8) An accredited veterinarian conducting testing under this Regulation shall inform the Authority on all diagnostic activities specifying the reagents and the test performed, including laboratory used, lot number and expiry date of product used.

(9) Where a card test is conducted under this Regulation it shall be conducted

(a) with non heamolysed serum,

(b) with an antigen authorized by the Authority that fulfills the following characteristics

(i) elaborated with strain 1119-3 of Bru cella abortu,
(ii) stained with rose bengal in lactic acid,
(iii) pH of 3.65 (± 0.05),
(iv) with cellular concentration of 8% for cattle and

(10) The results of a card test conducted under this Regulation shall be interpreted as are either positive of negative, depending on the presence or absence of agglutination.

(11) The rivanol test conducted under this Regulation shall be performed only on bovine serum

(a) with non heamolized será, positive to the card test,

(b) with an antigen authorized by the Authority and with rivanol reagent (2 etoxi lactate 6,9 diamino acridine),

(c) with an antigen elaborated with strain 1119-3 of *Brucella abortus* shall comply with the following characteristics

(i) stained with a mixture of flourescent green and violet crystal,

(ii) pH of 5.8 to 6.2,

(iii) cellular concentration of 4%.

(12) (a) The results of a rivanol test conducted under this Regulation shall be interpreted as either positive or negative sera whererepositive are the sera of animals that present a reaction of complete agglutination in whichever of the following dilutions, from 1/25 to 1/400. In the case of a vaccinated animal a complete agglutination of a dilution greater or equal to 1/50 will be a positive test.

(12)(b) The ELISA test may be used in addition or in place of Rivanol testing as described in item (12) (a)

(13) (a) A complement fixation test conducted under this Regulation shall be conducted with a non heamolysed sera that has tested positive to the card and rivanol tests. An antigen authorized by the Authority to be used for this test, shall be prepared with the strain 1119-3 of *Brucella abortus*, without staining but in conformance with the following specifications

(a) pH 6.8 to 7.0,

(b) cellular concentration of 4.5%.

(b) For the purpose of this Regulation, sera shall be classified as positives or negative where positives are titres greater than 1/16 (cool) or greater than 1/8 (warm).

(14) (a) The milk ring test conducted under this Regulation shall be conducted as a surveillance test and results are to be confirmed with serological tests. This test shall be performed on fresh milk, fluids, with antigen authorized by the Authority and the test shall fulfill the following characteristics

(i) stained with hematoxilin,
(ii) pH between 4.0 and 4.3,
(iii) cellular concentration of 4%.

(b) For bovines, the results of the milk ring test shall be interpreted as negative in the absence of a stained ring or positive if present on the surface.

(15) The bacteriological study required to be conducted under this Regulation shall be performed on milk, blood, body fluids or tissue fragments placed in sterile containers with hermatic lid for submission to an approved laboratory for diagnosis. The presence of *Brucella* specie signifies a positive animal, even if serological testing methods indicate absence of antibodies.

(16) Animals in which bovine brucelosis has been diagnosed shall trigger an epidemiological investigation, where the sampling of all adjacent farms including animals that have come in contact with positive animals shall be conducted.

(17) Further to testing under subregulation (16) above, animals exposed to bovine brucellosis shall remain in the farms where found unless a veterinary certificate is issued by the Authority for movement directly to a slaughterhouse or to a controlled production unit.

Controlled Production Unit.

18. (1) An animal that is subject to confinement shall be placed in a controlled production unit.

(2) The Authority shall monitor a controlled production unit and undertake the following:

(a) comply with biosecurity measures determined by the Authority to ensure confinement;
(b) have an accredited veterinarian responsible for the unit;
(c) equip the Production Unit with facilities such as loading ramp, corral with chute, feed storage space, and water;
(d) not overcrowd the unit;
(e) have a disinfection system and wildlife control in place;
(f) manage the animals in the Production Unit according to the infrastructure available;
(g) not allow susceptible species to brucellosis such as equines or canines to enter the Production Unit;
(h) allow reactor animals to enter the controlled production unit only if in possession of the corresponding veterinary certificate;
(i) allow a reactor animal to move out of the farm if the animal is in possession of a veterinary certificate certifying that the animal is destined for slaughter;
(j) disinfect vehicles leaving a controlled production unit and a slaughterhouse.

Disinfection.

19. (1) The owner or manager of a production unit shall disinfect the production unit whenever a reactor is identified.

(2) Organic matter found in a production unit shall be removed with soap and water before disinfection.

(3) Aborted material found in a production unit shall be incinerated or buried at a minimum depth of 1.5 meters and covered with a layer of limestone.

(4) All chemical disinfectants used in the Programme shall be approved and registered by the Authority.

(5) The owner or manager of a production unit shall avoid any contact of disinfectant with foods designed for human consumption and foods designed for animal consumption.

(6) The following disinfectants are recommended disinfectants approved by the Authority to eliminate the brucella species

(a) Sodium hypochlorite solution or calcium hypochlorite,
(b) Caustic soda solution 2%,
(c) Limestone 15%,
(d) Creolin 5%,
(e) Phenol 1%,
(f) Other disinfectants as determined by the Authority.

Fees.

20. (1) The Authority may charge the owner, keeper or producer a fee of $10.00 per animal for testing and services relating to testing for brucellosis.

(2) Notwithstanding sub regulation(1), or any other Regulation which provides for testing in relation to tuberculosis or the application of ear tags under the regulations relating to cattle identification, where more than one service is to be performed on a bovine the fee to be charged is $10.00.

Penalties.

21. A person who contravenes these Regulations commits an offence and is liable on summary conviction to a fine not exceeding five thousand dollars or to imprisonment for a period not exceeding two years or to both fine and imprisonment.

Commencement.

22. These Regulations come into force on the 1st day of September, 2011.

FIRST SCHEDULE
FORMS OF FREE HERD CERTIFICATE
[Reg. 7(1), 8(5)]

National Bovine Brucellosis Programme

Free Herd Certificate

Establishment Identification Number: _____

This is to certify that the herd owned by:

_____

First Name Middle Name Surname

_____

Address

Has met all requirements for certified free status, as of _____, and will remain valid for one year one so as long as programme requirements are met.

Date of issue: _____

Date of expiration: _____

_____ _____

Director of Animal Health
BAHA

Official Veterinarian
BAHA

MADE this 1st day of August , 2011.

_____

(RENE MONTERO)

Minister of Agriculture

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