Risk Analysis of Brazilian Poultry meat, Poultry meat products, Beef, Beef products, Pork and Pork products into CARICOM

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CAHFSA
CARIBBEAN AGRICULTURAL HEALTH & FOOD SAFETY AGENCY

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Glossary

ASF African Swine Fever

CAHFSA Caribbean Agricultural Health and Food Safety Agency

CARICOM Caribbean Community and Common Market

CGAL/DTEC/SDA General Coordination of Federal Animal & Plant Health Laboratories

CIDASC Companhia Integrada de Desenvolvimento Agrícola de Santa Catarina

CSF Classic Swine Fever

DIPOA Department of Inspection of Animal Products

DTEC Department for Technical Services

FMD Foot and Mouth Disease

GTA Animal Movement Permit

GRSC Granja de Reprodutores Suídeos Certificada (Certified Reproductive Breeding Farm)

LFDA Laboratórios Federais de Defesa Agropecuária (Federal Agricultural Defense Laboratories)

MAPA Ministério da Agricultura e Pecuária (Ministry of Agriculture, Livestock and Supply)

PIVDS Integrated Plan for Pig Disease Surveillance

PRRS Porcine reproductive and Respiratory Syndrome

SDA Secretariat of Animal & Plant Health Coordination of Laboratories

SIF Federal Inspection Service

SIE State Level Inspection Service

SIM Municipal Level Inspection

Objective

A risk analysis was coordinated by the Caribbean Agricultural Health and Food Safety Agency (CAHFSA) on behalf of four (4) CARICOM member states (Barbados, St. Lucia, St. Vincent and the Grenadines and Trinidad and Tobago). The objective of this risk analysis was to identify and assess the likelihood of diseases of economic importance of poultry, cattle and swine destined for international trade from Brazil being introduced in CARICOM and spreading or becoming established, together with the likelihood and magnitude of its potential consequences for animal or human health as a result of importing poultry meat, poultry meat products, beef, beef products, pork and pork products. This report therefore outlines the methods, findings and recommendations of the risk analysis.

Background

Historically CARICOM has remained an importer of meat from Brazil, especially in the form of frozen poultry meat parts. However, after 2017 concerns were raised following the police reports of illegal activities involving major meat producers and government officials. It is noted that Brazil introduced several risk mitigation measures and has carried out a significant restructuring of the competent authority.

Introduction and Outline of the Mission

A mission to Brazil was coordinated by CAHFSA on behalf of four CARICOM member states (Barbados, St. Lucia, St. Vincent and the Grenadines and Trinidad and Tobago) from May 6-10, 2024. This involved a comprehensive risk analysis of the beef, poultry and pork industry. The risk analysis led by CAHFSA was conducted by a team composed of nine expert representatives from across the CARICOM official agricultural and health services. The team divided into three sub-teams each with a focus on the official controls on poultry, beef and pork production respectively. Each sub-team was accompanied by representatives of the Brazilian Federal competent authority, the Ministry of Agriculture, Livestock, and Food Supply (Ministério da Agricultura, Pecuária e Abastecimento, MAPA) for the duration of the risk assessment.

The opening meeting was held on May 6, 2024 with representatives of the central competent authorities at the MAPA offices in Brasilia. Additional information was provided to the team at the opening meeting and throughout the risk analysis by the relevant representatives of the competent authority to supplement the material provided by the Brazilian authorities in their response to the pre-analysis questionnaire.

The closing meeting was held on May 10, 2024 at the MAPA offices in Brasilia where the risk analysis team presented preliminary feedback.

Risk Analysis Team

<u>Poultry Assessors</u>

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Pork Assessors

Dr. Lisa Benjamin – Trinidad and Tobago

Dr. Ozaye Dodson – Guyana

Dr. David Kangaloo – Trinidad and Tobago

Scope

The scope of the risk analysis encompassed evaluation of the framework, structure and processes of the competent authorities of Brazil and the official control systems governing the production and export of poultry meat, poultry products, beef, beef products, pork and pork products. The risk analysis focused on:

- Evaluation of the Veterinary Services
- Animal Health Situation
- Official control systems operated by the Brazilian competent Authority
- Export health certification
- Laboratory capacity, capability and quality assurance systems
- Legislation
- Assessment of Processing Facilities

Itinerary

Establishments and offices visited during the risk assessment to meet the objective and scope of the risk analysis were as follows:

- **Offices of MAPA – Ministry of Agriculture and Livestock, Brasilia (May 6 - Opening briefing meeting and May 10- Closing meeting with preliminary feedback)**

Brazilian Federal Inspection Service (SIFs) at all the establishments listed below:

Processing facilities (May 7, 2024):

- 1 Poultry Processing Facility – BRF S. A. (SIF 104), Chapeco
- 1 Beef processing facility– JBS S/A (SIF 862) – Goiânia/GO
- 1 pork processing facility – SEARA ALIMENTOS LTD – (SIF 3237) Sao Miguel Do Oeste SC, Santa Catarina, Brasil

Farms (May 8, 2024):

- 1 Broiler Farm, Planalto, Alegre, Santa Catalina
- 1 Cattle Farm, Goiânia/GO
- 1 Swine finishing farm, in Discanso, São Miguel Do Oeste, Santa Catarina

Laboratory (May 9, 2024):

- 1 Official Laboratory – LFDA/GO Goiânia

Evaluation of the Veterinary Services

The organization of the Veterinary Services of Brazil is a crucially important component in the delivery of animal health services and the veterinary health certification of animals and animal products. In each State is a State Veterinary Service (SVS) for animal and veterinary public health services, as well as a representative of the Federal Veterinary Service to supervise and audit the activities of the SVS.

The Ministry of Agriculture, Livestock, and Food Supply (MAPA), exercises its responsibilities through to the Secretariat for Plant and Animal Health and Inspection (SDA), being the competent authority responsible for animal health and public health.

Two departments of SDA are mainly involved:

1. The Department of Animal Health (DSA) is responsible for coordination of the national animal health system. The coordination of animal identification is done for SDC (Secretaria de Desenvolvimento Agropecuário e Cooperativismo).

2. The Department of Inspection on Animal Products (DIPOA) is responsible for veterinary public health services in slaughterhouses and animal waste.

MAPA has representations in every state of the country, called Federal Agriculture Supervision (SFA). The implementation of the Animal Health Programs is shared among different hierarchic levels of the official veterinary service (states and municipalities) with the participation of the private sector. The state governments are represented by state secretariats of agriculture and their connected institutions, which are responsible for the performance of the program in the state.

The basic structure of the competent authority, as understood by the audit team at the time of the audit, is as follows.

Central level

The Ministry of Agriculture, Livestock, and Supply (MAPA) is responsible for official controls and certification of exports of animals and animal products.

The Department of Inspection of Animal Products (DIPOA) is the central competent authority responsible for managing the Brazilian Federal Inspection Service (SIF). DIPOA sets the processes and protocols on the operation of the SIF, approves projects and registers establishments producing animal products. DIPOA has overall responsibility for the implementation of official supervision and control of food producing establishments, setting the appropriate national protocols to implement these controls, including training of officials and internal audits.

State level

The Inspection Service of Animal Products (SIPOA) main duties are to implement the guidelines issued by DIPOA in registered establishments located in their respective regions and to manage, coordinate and evaluate the activities of the local SIF in the establishments.

Local level

Local representations of the SIF are located at permanently supervised establishments. They are led by a Federal Agricultural Inspector (AFFA), a specialist government veterinarian responsible for oversight of the establishment and for staffing of the SIF. This includes official veterinarians (OVs), inspection agents (AISIPOAs) and inspection assistants.

It is the SIFs responsibility to ensure that the food business operators' own control systems are fit for purpose and are implemented as intended. They oversee, inspect and control the facilities and activities carried out by registered food establishments including official checks in accordance with the guidelines and regulations issued by DIPOA. They are also responsible for the health marking and labelling of final

products, issuing of health certificates, and carrying out the ante- and post-mortem inspections on animals for slaughter.

Restructuring since 2017

Since 2017, MAPA has implemented significant changes in the structure and operation of the competent authority at the central, regional and local levels. The aim was to improve and strengthen inspection activities and the internal audit function. Changes were introduced to improve the chain of command by simplifying regional structures, streamline processes, adopt a risk and evidence-based approach to guide inspections and audits, and to enable the efficient allocation of resources.

In 2018, Brazil implemented Decree 9250/2017 and MAPA Ordinances No. 266/2018 and 562/2018, resulting in a substantial restructuring of the Brazilian competent authority and a more vertically integrated chain of command from the central competent authority (DIPOA) to regional (SIPOA) and local government units (SIF).

The above decree also revised the roles and responsibilities of the state superintendent of the SFA in staffing of SIPOAs and SIFs and allocated this responsibility to DIPOA.

Ordinance No. 562/2018 created two new audit divisions within DIPOA. DIPOA is now responsible for carrying out all national (internal) audits of both the regional (SIPOA) and local (SIF) offices located at establishments. Under the new system, local levels of the competent authority (the SIFs) are audited by the central internal audit team instead of the SIPOAs, ensuring a harmonised approach and good levels of central oversight.

The new audit teams are the Department of Audits in Establishments (DIAE) and the Department of National Audits (DIAN):

- DIAE is responsible for auditing SIFs located at establishments under permanent supervision
- DIAN is responsible for auditing SIFs located at establishments under periodic inspection and for auditing the regional authority (SIPOAs)

The new system for internal audits aims to enhance their independence and effectiveness through standardisation of processes, reporting directly to the central competent authority and through higher standards of training.

Certification Centres

Although the majority of export health certification is done at the SIFs, decentralised units called certification centres were created during the re-structuring after 2017 to improve the issuing of export health certificates (CSIs) for products exported from establishments under periodic inspection.

According to Internal Normative No. 01 of 2017 (IN 01/2017) the main responsibility of the SIFs is to provide direct official supervision and control in all approved establishments registered with DIPOA. The establishments are divided into two groups depending on the level of SIF supervision:

- permanent supervision (slaughterhouses)
- periodic inspection (all other food establishments)

Legislation

Brazil's DIPOA, is a department under the Ministry of Agriculture, Livestock, and Food Supply (MAPA). Law No. 1,283/1950 and Ordinance No. 562/2018 (Internal Regulation of the Secretariat of Animal Plant Health) require the official sanitary inspection of all edible and inedible products of animal origin. Decree No. 9,013/2017 (Regulation of Industrial and Sanitary Inspection of Animal Products [RIISPOA]) implements these policies and provides DIPOA with the authority to regulate the registration, the conditions of operation, hygiene, and maintenance of establishments. Article 141 of Ordinance No. 562/2018 identifies the regional Inspection Service of Products of Animal Origin (SIPOA) as responsible for scheduling, executing, monitoring, coordinating, and evaluating inspection and oversight activities of animal products including activities conducted by the Federal Inspection Service (SIF) personnel who perform daily inspections at the establishments.

RIISPOA outlines the authority and responsibility of MAPA, DIPOA, SIPOA, and SIF to enforce the laws and regulations governing meat products. CAHFSA auditors verified through record review and interviews that, within DIPOA, three entities are responsible for the uniform and consistent implementation of inspection duties at establishments certified for export to the United States: the General Coordination for Special Programs (CGPE), the General Coordination for Inspection (CGI), and the General Coordination of Control and Evaluation (CGCOA).

Since 2018, Brazil has carried out a significant restructuring of the competent authority. It has implemented new legislation and wide-ranging measures to improve official oversight and control over meat production, and to improve its ability to reduce conflicts of interest within the competent authority itself. Verification of compliance with legislation and competent authority processes, policies and operational instructions is monitored using internal audits carried out directly by newly established audit teams within the central competent authority.

New legislation and implementing measures have been introduced since 2017, including the following:

- Decree No. 9013 of 2017 (Decree 9013/2017) on the sanitary inspection of animal products
- The Regulation of Industrial and Sanitary Inspection of Products of Animal Origin (RIISPOA), supplementing Decree 9013/2017 introducing the development of official control programs to assess the safety, identification, quality and integrity of products of animal origin and their production processes
- Decree No. 9250 of 2017 (Decree 9250/2017) (as amended) on the re-structuring of the competent authority and harmonization of procedures on internal audits
- Ordinance 249/2018 establishing principles and ethical standards of conduct of public servants in order to tackle conflicts of interest
- Ordinance 431/2021 establishing procedures for health certification of products of animal origin
- Various new Normative Instructions on the official verification of Food Business Operators' (FBOs) own control programmes, official sampling and microbiological testing on food producing establishments

The Brazilian national legislation was found to adequately cover official controls and give the competent authority effective powers and authority to exercise enforcement actions. Staff across all levels of the competent authority appear to have a thorough awareness and understanding of current legislation and government policies. Competent authority staff are informed of any changes to current legislation or processes through official circular letters or Memorandums as well as the electronic information systems such as the SEI.

Animal Health Situation

The poultry diseases that must be notified to the official veterinary service are listed in the annex to Normative Instruction no. 50, dated September 24, 2013.

Diseases that are compulsorily notifiable to the Brazilian Official Veterinary Service are divided in four categories according to the reporting criteria, depending on their epidemiological situation and the need for official intervention:

Category 1. Diseases that have been eradicated or have never been reported in Brazil, which are suspected cases or laboratory confirmation demand immediate notification.

Category 2. Diseases for which immediate notification is mandatory for any suspected case.

Category 3. Diseases for which immediate notification is mandatory for any confirmed case.

Category 4. Diseases for which monthly notification is mandatory for any confirmed case

Diseases in categories 1, 2 and 3 require immediate notification to the Official Veterinary Service given that it is mandatory to carry out an official investigation and diagnosis, and to take measures for control and eradication. Avian influenza is a category 1 disease and Newcastle disease is a category 2 disease. Category 4 diseases (diseases present in the country) do not require the Official Veterinary Service to enforce mandatory sanitary measures; however, the notification of confirmed cases allows the monitoring of changes to the epidemiological situation.

In addition, Normative Instruction 50/2013 establishes that any other animal disease, even if not listed, when dealing with an exotic or emerging disease must be immediately notified to the SVO.

The notification of any suspicion or occurrence of a disease listed in Normative Instruction 50/2013, in addition to any other exotic or emerging disease, is mandatory for any citizen and all professionals working in the area of animal health diagnosis, teaching or research, according to the criteria defined in the Normative Instruction.

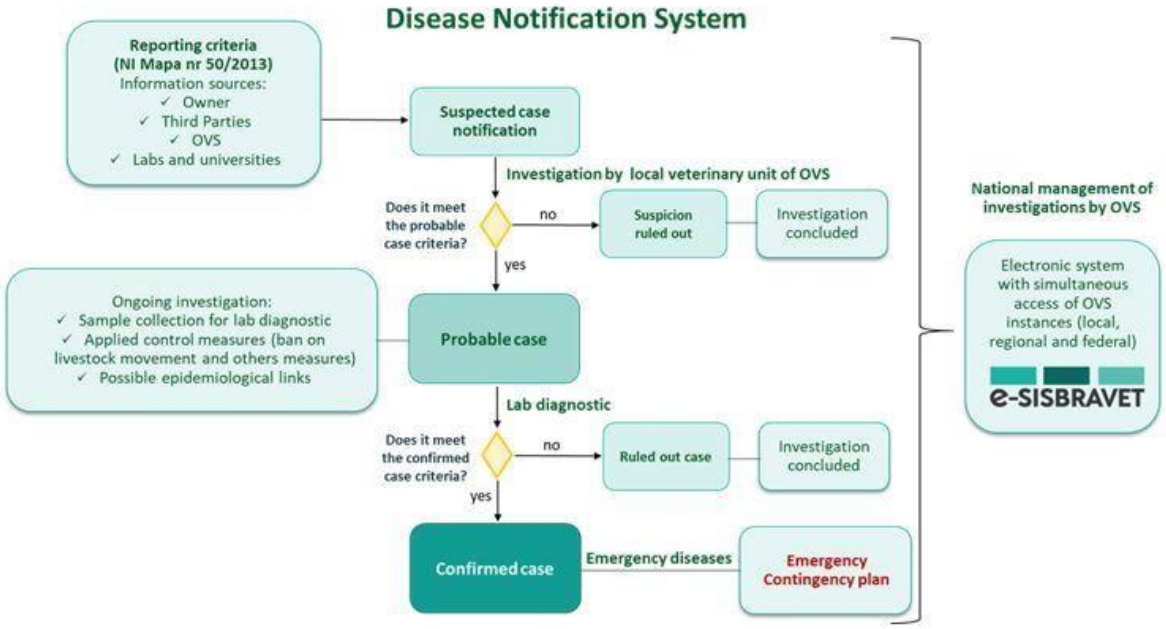

Figure 1: Brazil Disease Notification System

Veterinary Diagnostic Laboratories

There is a National Network of Agricultural and Livestock Laboratories composed of official laboratories of the Ministry of Agriculture and Livestock (MAPA) called Federal Laboratories of Animal and Plant Health and Inspection (LFDAs) which are public laboratories and other Authorized Laboratories which are public (but not federal) and private laboratories. These laboratories complement the federal network of laboratories enabling MAPA to meet the increasing demands for testing to satisfy trade requirements.

The General Coordination of Laboratories (CGAL) is responsible for the composition and functioning of this network of laboratories. CGAL function is to co-ordinate, manage, monitor and approve the laboratories and develop strategies to implement the required testing programmes. The labs must participate in proficiency tests, as part of an ISO 17025 requirement and interlaboratory comparison tests, in which they must show satisfactory results. Laboratories of the network are monitored through audits promoted by CGAL/SDA (Secretariat of Animal and Plant Health), reports on assessment of participation in proficiency testing and evaluation of test reports.

There are six (6) MAPA LFDAs all of which are accredited by The National Institute of Metrology, Quality and Technology (INMETRO) to ISO/IEC 17025, for the methods required by the control programmes. INMETRO is a member of the International Laboratory Accreditation Cooperation (ILAC) and as a result is recognized internationally for its accreditation activities.

LFDAs are responsible for carrying out studies, trials, developing, updating and validating methodologies, producing and keeping reference materials, carrying out fiscal, expert, monitoring and diagnostic analyses, while the Authorized Laboratories are homologated by MAPA to carry out the demands of the official MAPA programs and controls.

CGAL AND LFDA are represented on COMBioLAB, the Permanent Commission for the Management of Biological Risks and Biosafety in Laboratories of the National Network of Agricultural Laboratories.

The LFDAs range of expertise includes Animal and Plant Health Diagnostics, Pesticides, Classification of Foods of Plant Origin, Physio-Chemical classification of Foods of Animal Origin, Feed, Water, Beverages & Vinegars, Fertilizers, Correctives, Substrates and similar products, Veterinary Dugs, Genetic Identification and Animal Breeding Material, Biological Products of Agronomic Use, Microbiology in Food and Water, Biotechnology and Genetically Modified Organisms, Milk Quality, Residues and Contaminants in Food, Seeds and Seedlings.

In general the testing capacity in Avian Disease Diagnostics are for Avian Salmonellosis, Pullorum disease, Avian Mycoplasmosis, Newcastle disease – ND, Avian influenza – AI and Avian infectious laryngotracheitis – ILT.

The six (6) LFDAs while highlighting those performing avian disease diagnosis are as follows:

LFDA - São Paulo

National Reference Laboratory / WOAH HPAI Reference Laboratory since 2016. Biosecurity (BS) Level 3 for Avian Diseases Diagnosis - Avian influenza, Newcastle Disease, Avian mycoplasmosis, Avian Salmonellosis, Avian infectious laryngotracheitis & Vaccine Tests – for Newcastle Disease, Gumboro Disease, Infectious bronchitis and other diseases.

LFDA - Rio Grande do Sul

Avian influenza & Newcastle Disease screening tests.

Samples of suspected cases are performed only in LFDA São Paulo

LFDA - Pará

LFDA - Pernambuco

LFDA - Minas Gerais (BS Level 3 for Foot and mouth disease – FMD affecting cattle, swine, sheep, goat, other cloven-hoofed animals)

LFDA – Goiânia

MAPA Authorized Laboratories

Those which perform only screening for HPAI and NCD tests are:

- Centro de Diagnóstico "Marcos Enrietti" - CDME; CEDISA – Centro de Diagnóstico de Sanidade Animal
- IB – Instituto Biológico (Bastos - SP)
- IB – Instituto Biológico (Descalvado - SP)

There are also MAPA Authorized Laboratories to carry out salmonella and mycoplasma tests. Authorized laboratories may only perform avian diseases screening tests for animal import/export certification and farm certification purposes.

The network of laboratories exists to support:

1. The comprehensive Passive and Active Surveillance systems for AI and ND.
   Passive surveillance of domestic and wild birds, a strategy used to enable early detection of these diseases, and is to be based on mandatory immediate notification of suspected cases for investigation by the official animal health service. Active surveillance in farmed poultry, backyard flocks, and in AI and ND-free compartments, a strategy used in order to prove absence of the circulation of HPAI and ND viruses in domestic farmed poultry, in order to attain certification for the purposes of international trade of poultry genetic material and poultry

products, or to identify the circulation of LPAI so as to contain any spread of the disease and prevent highly pathogenic strains evolving.

2. Sanitary Certification programs of Breeding Farms for Salmonella and Mycoplasma of interest to public health and to poultry production by means of an active surveillance with periodical sampling and by taking sanitary measures, whenever necessary.
3. The Department of Inspection of Animal Products (DIPOA) sampling cycles to detect, control and monitor Salmonella spp. in commercial broiler and turkey farms and in the slaughterhouses of poultry, hens, breeder and slaughter turkeys registered with the Federal Inspection Service (SIF), in order to reduce this agent's prevalence and to establish an appropriate level of consumer protection.
4. DIPOA National Program for Pathogen Control (PNCP) to reduce the prevalence of pathogens relevant for public health in animal products that are inspected by the Federal Inspection Service (SIF/DIPOA). These include Pathogen Reduction Program for *Salmonella spp*. in chicken and turkey carcasses, control over Listeria monocytogenes in ready-to-eat products, prevalence of Campylobacter in chicken carcasses in SIF registered slaughterhouses.
5. MAPA National Plan for Control of Residues and Contaminants in Animal Products, a risk management program coordinated by the General Coordination for Special Programs (CGPE) of the Department of Inspection of Animal Products (DIPOA/MAPA), with the objective of promoting the chemical safety of food of animal origin produced in establishments controlled by the Federal Inspection Service (SIF) registered with DIPOA/MAPA. The current scope of analysis includes a wide array of approved and prohibited veterinary drugs, agricultural chemicals, and environmental and industrial contaminants.

One of the Official Federal Laboratories (LFDA- Goiânia) was visited during the Risk Assessment exercise in Brazil with an appreciation of the structure of the laboratory, equipment and range of testing capabilities.

Poultry Health Situation

Highly pathogenic avian influenza (poultry), Influenza A viruses of high pathogenicity (other than poultry, including wild birds), Newcastle disease, Duck virus hepatitis, Turkey rhinotracheitis are bird diseases that are immediately notified to the World Organization for Animal Health (WOAH) according to criteria laid down in Chapter 1.1, Article 1.1.3. of the Terrestrial Animal Health Code.

In addition, information of occurrences of the other listed diseases is sent to the WOAH every six months and made available for public access on the World Animal Health Information System (WAHIS) platform.

Table 1: Status of avian diseases in Brazil and frequency of notification to the World Organization for Animal Health (WOAH)

Avian Disease	**Status in Brazil**	**Notification Frequency WOAH**
Avian chlamydiosis (wild)	Infection present in the country (wild) / Last occurrence in domestic 1956	SEMESTER
Avian infectious laryngotracheitis	Disease present in the country	SEMESTER
Avian infectious bronchitis	Disease present in the country	SEMESTER
Avian mycoplasmosis (*M. gallisepticum*)	Disease present in the country	SEMESTER
Avian mycoplasmosis (*M. synoviae*)	Disease present in the country	SEMESTER
Fowl typhoid (*S. Gallinarum*)	Disease present in the country	SEMESTER
Influenza A viruses of high pathogenicity (other than poultry, including wild birds)	Disease limited to one or more zones (wild birds) (since 15, May 2023)	IMMEDIATE
Infectious bursal disease (Gumboro)	Disease present in the country	SEMESTER
Pullorum disease (*S. Pullorum*)	Disease present in the country	SEMESTER
Newcastle disease	Last occurrence Nov, 2006	IMMEDIATE
Duck virus hepatitis	Never reported	IMMEDIATE
Highly pathogenic avian influenza (poultry)	Never reported	IMMEDIATE
Turkey rhinotracheitis	Never reported	IMMEDIATE

Vaccination against avian influenza is banned in Brazil, in accordance with Normative Instruction no. 32, dated May 13, 2002. Nonetheless, it may be applied on an emergency basis in Brazil when authorized by DSA, after risk assessment and an analysis of the epidemiological situation, as set forth in the HPAI-specific Part of the Contingency Plan.

Poultry Industry

One of the traditions of the Brazilian poultry industry is the integration model which prevails in 90% of the country's poultry production systems. Implemented in Brazil in the 1970s, this model was one of the main strategies responsible for the exponential growth in activities, be it in the domestic or foreign market.

It is characterized by partnerships in which the growers and the industry combine their assets and efforts in order to boost production. The agribusiness corporation provides animals, feed, medications, transportation, inputs and the technical assistance necessary for production; whereas the grower provides the facilities, equipment, water and electricity, and handles the animals (raising and growing) until they are ready for slaughter. The poultry production is passed on to the company, which ensures financial reward for the grower, and a stable supply of quality raw material. This organizational model has been adopted by the poultry meat exporting companies. Integration usually applies to the production of broilers.

The breeder birds are raised within an intensive, fully controlled, high performance system. Poultry genetic material producers and exporters are multinational companies, possessing farms that meet high levels of biosecurity in order to avoid the introduction or dissemination of diseases.

Consequently, the integrated relationship, has further reinforced quality management, health, and sustainability. This "win-win" relationship was legally guaranteed by Law No. 13,288 of 2016 the so-called Integration Law. The legislation established rules and created regulatory bodies for the industry. There is permanent support to poultry farmers with the advice of veterinarians, agronomists, agricultural technicians, supply of balanced feed, and day-old chicks.

Farm management

The BRF farm visited in Planalto, Alegre, Santa Catalina had 63 000 birds separated into two (2) flocks. All birds originated from BRF hatcheries which are vaccinated for Marek's Disease, Fowpox, Gumboro and Infectious Bronchitis. A vaccination challenge is performed on the parent stock and Newcastle vaccination information from parent stock is obtained.

Good biosecurity measures were incorporated including the use of ammonium-based disinfectant, maintenance of a strict visitor protocol, proper protective equipment and white lime foot baths. The integrated pest management system utilized involved anti-rodent fencing and baiting stations. An all-in/ all-out farming system was utilized.

Veterinarians perform training sessions with farmers and conduct pre-housing, housing, routine and preslaughter inspections. Additionally, environmental Salmonella swabs were collected. The grow out period of the chickens is 40-45 days while for turkeys, this period is 115 days.

In the event of suspected notifiable disease cases. The state veterinarian takes responsibility for the management of the case on-farm. Only approved drugs can be utilized. A four-stage feed was used for the flock from an automated feed system with no coccidiostats used in the final stage of feed.

BRF S. A. (SIF 104)

The BRF plant visited was located in Chapeco. A maximum of 210, 000 chickens are slaughtered daily and a maximum of 80, 000 turkeys are slaughtered daily. The facility contained four (4) processing plants, one (1) rendering plant and one (1) feed mill.

Ante-mortem inspection involved a document check with sanitary bulletin complete with all flock information. Clinical evaluation of a sample of the flock is performed and the review and completion of a standardized form is done. The birds are allowed a rest time

of 2-3 hours in a dark, cool, well-ventilated area pre-slaughter. Stunning of birds is performed by electrocution in water.

The official veterinarians are responsible for verifying the self-controls of the plants to include N1 01/17. A robust recall and traceability system was demonstrated. Recall simulations are normally performed on a monthly basis. Critical information to include the name of the product, batch number and date of production are traced in these monthly simulations.

Birds were inspected on colour coded lines allowing staff to focus on carcasses and viscera placed on lines of a specific colour. The staff were also provided adequate breaks in between to minimize eye strain. Any carcasses which required further inspection were moved to a slower line to allow for more detailed inspections.

HACCP monitoring is 100% and verification is performed per shift at the plant. Internal audits are performed every three (3) months with a HACCP internal audit performed every quarter and a corporate internal audit conducted annually. Staff to perform HACCP training are provided specialized training and assessment.

Products for International Trade

In the case of animal products intended for international trade, the animal and public inspection and surveillance initiatives are the responsibility of the Secretariat of Animal and Plant Health and Inspection (SDA/MAPA), which are coordinated by the Department of Inspection of Animal Products (DIPOA/SDA) to maintain a level of specificity in achieving public health safety in domestic products. DIPOA is the central competent authority responsible for managing the Brazilian Federal Inspection Service (SIF).

The Federal Inspection Service (SIF) is the local unit of animal product health inspection services, being responsible for directly inspecting establishments registered in DIPOA. SIFs are installed permanently in slaughtering establishments and provide periodic inspection in all other establishments. Official controls cover all stages of production

from receipt of raw materials or animals to dispatch of finished products and official health certification when required.

Chicken is the most widely consumed protein in Brazil, as it is often the substitute for the preferred, but more expensive, beef option. Brazil is currently the second-largest chicken meat producer in the world, behind the United States, per official USDA data. The South region of Brazil – composed of the states of Paraná, Santa Catarina, and Rio Grande do Sul – continue to lead the country in chicken production, representing almost 60% of the national production. Paraná state is the single largest producer, responsible for 35% of total chicken meat coming out of Brazil in the third quarter of 2023, followed by Santa Catarina, São Paulo, Rio Grande do Sul, and Goiás.

Brazil's commercial plants continue to be free from Highly Pathogenic Avian Influenza (HPAI). Brazilian chicken meat exports in January of 2024 were a little over 382,000 million tonnes of chicken meat with China, Japan, and the United Arab Emirates accounting for 10% of the exports, each. These markets were followed by Saudi Arabia with 9%, and South Africa with 8% of total exports. The top ten (10) destinations of exports for this period were the same as in 2023.

Brazil also imports live birds and poultry genetic material. For the country to be on the list of countries authorized to export to Brazil, there must be an import protocol previously agreed between the exporting country and MAPA, attesting the compliance with the zoo-sanitary requirements established in the regulations of import, which includes the health status of the country of origin for poultry diseases, as well as monitoring and diagnostic tests for specific diseases, among other controls. During the period 2020-2022 Brazil has imported hatching eggs of the *Gallus domesticus spp.* and other species, from the United States, France, Germany, Canada, United Kingdom, Netherlands, Spain, and Mexico, and well as live day old birds from Portugal and Spain.

It was found that the Poultry industry is heavily regulated with various regulations governing the prevention, control and eradication of animal diseases.

Cattle Health Situation

Information was sought and obtained on the following diseases of importance in cattle production in Brazil:

- Foot and Mouth Disease (FMD)
- Rabies
- Bovine Tuberculosis and Brucellosis
- Bovine Spongiform Encephalopathy

Cattle Vaccination Programme

In the state of Goiás, Brazil, cattle are typically required to receive the following vaccinations as per Brazilian regulations:

Foot-and-Mouth Disease (FMD): Cattle are vaccinated against FMD twice a year, usually in May and November.

Brucellosis: Female calves aged 3-8 months must be vaccinated against Brucellosis using the RB51 vaccine.

Rabies: Cattle in areas where Rabies is endemic are required to be vaccinated annually.

Clostridial Diseases: Vaccines against diseases such as blackleg (Clostridial Myositis) are commonly administered, although not always mandatory, they are highly recommended for herd health.

Leptospirosis: While not always mandatory, vaccination against leptospirosis is often recommended, especially in regions where the disease is prevalent.

Bovine Respiratory Diseases: Vaccines against diseases such as Infectious Bovine Rhinotracheitis (IBR) and Bovine Viral Diarrhea (BVD) are recommended to protect against respiratory illnesses.

These vaccinations are part of a comprehensive herd health management plan aimed at preventing outbreaks and ensuring the overall well-being of the cattle. Compliance with vaccination schedules is monitored by the state's agricultural and veterinary authorities, ensuring that all livestock owners adhere to these regulations.

Beef Industry

Cattle production in Brazil is a significant part of the agricultural sector, with Brazil being one of the world's largest producers and exporters of beef. This overview focuses on a typical cattle operation in Goiânia in Goiás State, Brazil, where a cattle ranch raises 2800 heads on 1500 hectares of land.

Owner: Danilo de Freitas Martins

Location and Farm Size

Location: Goiânia, Goiás State, Brazil

(Lat -16,35014; Long -49,53484)

Farm Size: 1500 hectares

Cattle Heads: Approximately 2800

Cattle

The Zebu breed is widely utilized in Brazilian cattle production due to its exceptional adaptability to the country's tropical climate and its strong resistance to diseases. These cattle are highly valued for their hardiness, ability to thrive on pasture-based diets, and efficient growth rates under challenging environmental conditions. Their genetic traits contribute to better heat tolerance and parasite resistance, making them a reliable choice for Brazilian farmers who seek to maintain high productivity and animal health in regions with high temperatures and humidity. This resilience ensures sustainable beef production, aligning with Brazil's significant role in the global beef market.

All animals were branded and tagged with RFID chips for identification and traceability.

Production Cycle

The production cycle begins with the initial phase where calves are raised on pasture. This is followed by the grow-out and fattening phase, which spans from 12 to 24 months. Finally, the harvest phase occurs at 36 months, when the animals are typically slaughtered, weighing around 500-600 kg.

Feeding

The primary feed is pasture grazing, utilizing the farm's extensive land. The farm employs rotational grazing which is critical to optimize pasture use and maintain soil health.

Supplements: An on-farm mixture including Corn which provides energy and carbohydrates, cotton seed meal as a protein source and mineral salts to ensure the cattle receive necessary nutrients for growth and health.

Harvest and Processing

Age at Harvest: 36 months

Weight at Harvest: 500-600 kg

Dressing Percentage: 50-60% (the ratio of carcass weight to live weight after slaughter)

Processing: Animals are sold to JBS (SIF 862), a leading global food company with a strong presence in the beef processing industry.

Movement of Animals

The movement of cattle into the farm and to the processing plant is strictly regulated to ensure traceability and health standards. Cattle entering the farm must be accompanied by a GTA (Guia de Trânsito Animal). A GTA is issued by the Brazilian Ministry of Agriculture, Livestock, and Food Supply (Ministério da Agricultura, Pecuária e Abastecimento - MAPA). This document certifies the health status and origin of the

animals being transported and is a crucial component of the country's animal health and traceability system.

Each animal must have an updated vaccination record and be tagged with RFID chips for electronic identification. When cattle are transported to the processing plant, similar documentation is required, including the GTA, health certificates, and transport permits, ensuring compliance with Brazilian agricultural and sanitary regulations.

JBS SA SIF 862

During the visit the team was able to assess the facility JBS SA SIF 862 located at A: V Lago Azul S/N Fazenda Caveiras, Zona Rural, Goinia, Goias. This plant is a Beef Slaughter Facility with a daily capacity of 1140 bovines slaughtered daily with 900 of the animals from the previous days' slaughter being deboned and the remaining animals cut up (bone in) for local sales.

DIPOA, a department within MAPA, continues to serve as the Competent Authority (CA) for Brazil's meat inspection system. DIPOA provides sanitary inspection and oversight of animal products and identifies the regional Inspection Service of Products of Animal Origin (SIPOA) as responsible for scheduling, executing, monitoring, and evaluating inspection and oversight activities of animal products including activities conducted by the Federal Inspection Service (SIF). The SIF team is headed by an official veterinarian who is supported by online inspection staff consisting of inspection agents and inspection auxiliaries. The SIF has the responsibility and authority to implement and enforce inspection laws at the establishment level. The team verified that official personnel conduct ante-mortem inspection of all animals and online post-mortem inspection of every carcass and all parts and once per shift inspection verification during deboning and processing operations. At this facility there is one Official Veterinarian, 4 Sanitary Inspection Agents and 16 online Inspection Auxiliaries.

Processing

- Animals transported to plant in well-ventilated vehicles and kept in antemortem area for minimum of 24 hours with feed being withheld for this period.
- Handling of live animals is satisfactory, with allowances for adequate resting, fasting, and a good supply of drinking water. Humane handling practices observed. Misting of lairage area assists in keeping animals cool.
- Lairage was suitable, with adequate space and suitable floor covering as well as provision of sheltered areas.
- Antemortem facilities were excellent with appropriate areas for holding suspect animals as well as provision of devices such as crushes for detailed examination. A separate facility was used for slaughtering of suspected or condemned animals.
- It was verified that an in-plant official veterinarian conducts ante-mortem inspection on the day of slaughter, including review of incoming registration and identification documents. Brazilian ante-mortem inspection procedures require the SIF veterinarian to observe the animals just prior to slaughter at rest and in motion from both sides. Each establishment had designated observation pens for further examination of suspect animals.
- Stunning at all beef facilities was via pneumatic captive bolt stun guns. Halal slaughter being practiced with Slaughtermen and Supervisor being attached to National Halal Authority.
- Blood is not collected for edible purposes but is allowed to flow into drains. No congealing of blood for disposal purposes. The dehiding/skinning in cattle process was conducted so as to preclude contamination of product. Dehiding was conducted on line with the use of hide pullers to aid the process mechanically.
- Eviscerated carcasses were split on line prior to inspection with splitting saw being sanitized between each carcass.
- Carcasses after splitting and inspection are moved via rail to chill room and chilled for 24-48 hours to achieve a carcass temperature of 0^0C.

- After chilling the product is moved to further processing and deboned while maintaining temperatures at 0^0C. Products after labelling are subsequently vacuum packaged and frozen. Temperature of chill room and freezer are adequately maintained.
- Chill Room 0°C
- Freezer -7°C (Temperature gauges are functional). Sanitation in these rooms is acceptable.
- Appropriate color-coded crates used for storage of product during processing and storage.
- No retained carcass space was available for inspector in refrigerated rooms as all suspect products are removed from line and condemned.
- Temperature monitoring of product throughout processing was monitored and recorded via central monitoring systems and insertable thermocouple temperature probes.
- Labelling of processed product is via a bar-coded system with adequate embedded trace back to animal ID.
- Knife Sanitation Stations were present throughout the establishment. There was a system of collection of all knives to centrally sterilize. Hand washing stations located strategically throughout plants with adequate signage concerning adequate hand washing practices.
- Sanitation procedures for knives, splitting saw and other equipment described in SSOP.
- With respect to postmortem, inspection of the head, feet, viscera and carcass done simultaneously. Appropriate line stop mechanism with alarm located at inspection stations. Final inspection for carcass involves critical control for zero faecal contamination.
- Storage of all finished product at -7^0C in labelled plastic bags which are then multiply packed according to weight in cardboard cartons.

Swine Health Situation

Integrated Plan for Pig Disease Surveillance (PIVDS)

Pork production is concentrated in the South and Midwest of Brazil. Santa Catarina state is the number one producer of pork in Brazil and 80% of the pigs in this state are grown in the São Miguel Do Oeste region. There is a standardised plan for all pig farms in the state of Santa Catarina. CIDASC is the executing agency for the state of Santa Catarina.

Five components of PIVDS:

- Risk based serological surveillance
- Clinical surveillance in raising farms
- Serological surveillance for feral pigs
- Slaughterhouse inspection
- Investigation of suspected cases

Diseases targeted are Classic swine fever (CSF), African swine fever (ASF) and Porcine Reproductive and Respiratory Syndrome (PRRS). In 2014, MAPA amended the active surveillance for Foot and Mouth Disease (FMD) to visual rather than serological. The last surveillance was conducted in August 2023. Santa Catarina has been free of FMD without vaccination since 2007 and free of CSF since 2015.

CIDASC

The CIDASC personnel, veterinarians and veterinary assistant accompanied us to the farm. The State of Catarina has:

- 245 veterinarians in Animal Health
- 53 Public Health Veterinarians (SIE)

• 148 Local Veterinary Offices

• 319 Community Service Offices

• 58 Border Station Posts

• 442 Auxiliary Agriculture Health Officers

CISDAC has one Head Office and 19 Regional Offices

Swine Industry

Swine Finishing Farm

The farm visited was one of 188 finishing contract farms. It was located in the community of Belmonte, which is in the town of Descanso, a part of the São Miguel Do Oeste region of Santa Catarina. There are 10 veterinary units in São Miguel Do Oeste and 1 veterinarian in Descanso. At the time of the visit there were 1374 pigs on the farm, but the approved population of the farm is 1400 pigs. The system of management is all in- all out. Overall pigs are transported to the slaughterhouse 3.2 times per year. The time between batches is determined at the company level and also depends on the distance of the farm from the slaughterhouse. A typical time between batches was 7 to 10 days.

Piglets are vaccinated against circovirus, enzootic pneumonia and ileitis before arrival on the farm. The males are immuno-castrated (chemical). Pigs enter the farm around 74 days old, at about 28 kg, and are slaughtered at 177 days old, when they are 135 kg. The pigs are sourced from nurseries by JBS SEARA within Santa Catarina state. A GTA permit must be issued by the state veterinary services to allow for the movement of these pigs to the farm.

The biosecurity on the farm was excellent. Disposal boot covers are used by those permitted to enter. Inspectors were not allowed to enter, but we viewed the operation using live camera demonstration.

Breeding Stock

All breeding stock must originate from GRSC certified farms that are Certified Reproductive Breeder farms for Breeding Purposes. Certification and surveillance are conducted on certified breeding farms twice annually. Blood was collected 1 month before the 6-month certification expires. These certified farms must be free of CSF, Aujeszky's disease, brucellosis, tuberculosis and mange. Leptospirosis should also be controlled as animals on these GRSC certified farms either be free or vaccinated. There is onsite inspection of the farm's biosecurity. Sows are impregnated exclusively by artificial insemination (AI). The AI stations must be GRSC certified. Teaser boars are kept on farms.

Piglet Producing Units (UPL) produce piglets that are sent to finishing farms. The UPL are a part of the Certified Porcine Reduction Plan and must source breeding sows from GRSC certified farms. GRSC is one of the pillars of the MAPA Integrated Plan for Surveillance (PIVDS).

SEARA ALIMENTOS LTD – (SIF 3237)

The JBS company in Brazil produces 45 000 tons of animal feed per month in their feed mills and 33 000 piglets per week. The company has 41 contract farms on which piglets are reared piglets until they are 28 days old. The piglets are then transferred to one of the 92 nursery farms on which they are grown from the age of 29 days to 73 days old. The final grow out, from 74 days (28 kg) to 177 days old (135 kg live weight), is conducted on 188 contract farms.

AREA OF THE COMPOUND: 200 916m^2

BUILDING AREA: 25 629 m^2

Production Capacity

The facility has:

- 9 chilling rooms
- 2 storage freezing rooms

• 4000 pigs are slaughtered daily

• 320 pigs/hour are processed per hour

• 4682 halves

• 813 tons

Movement of CAHFSA auditors through the plant was the reverse of the processing of the product and preparation for shipping to avoid contamination of the finished product.

Figure 2: Movement of CARICOM auditors through the plant

Rendering Plant

There is one rendering plant that is capable of the following daily production:

• 130 tons/day by-products

• 18 tons/day visceral meat

• 15 tons/day oil

Staff

- 1740 employees
- People from 20 cities in the region are employed at the company
- Staff work a 6-day week
- 2 shifts daily
- Absenteeism is at 2.05%
- Average time spent in the company is 2 to 3 years
- Turnover is at 3.86%
- Typically, within 5 to 6 years an employee can reach a leadership position
- There have been 603 internal promotions
- 17 women leaders in the plant

Functions

There were six (6) lines of product inspection (Table 1), each with 2 Auxiliary inspectors present (equivalent to Public Health Inspectors) except for the line for the inspection on kidneys which had one (1) inspector.

LINE DETAILS

A1 Inspection of heads and lymph nodes

B Inspection of intestines, stomach, spleen, pancreas and bladder

C Inspection of heart and tongue

D Inspection of liver and lung

E Inspection of carcass

F Inspection of kidneys

The 63 inspectors employed by JBS are under the supervision of the 3 SIF Official Veterinarians to conduct postmortem inspection. Antemortem inspection is conducted by the State Veterinarians when the pigs arrive at the plant.

The Auxiliary inspectors are recruited by an independent third-party company to conduct meat inspection. They undergo in-house training mainly under the supervision of the SIF veterinarians and the more experienced Auxiliary technicians. The use of a third party to recruit auxiliary technicians is required by the USA, one of the countries to which the company exports.

State veterinarians are also present with the SIF veterinarians and auxiliary technicians at the processing lines performing and conducting postmortem inspection. If SIF identifies an issue with the pigs on any day that is not serious, the animals slaughtered on that day will not be exported to any country. However, if SIF veterinarians identify a serious problem, production will be suspended, MAPA will be contacted, and the destination country will be informed.

Plant Environment

The interior of the plant was very clean . The equipment was sanitized between shifts with no evidence of condensation. The equipment was sanitized with a chlorine solution. Employees on the various production and slaughter lines worked in harmony with one

another and at a fast pace without any obvious issues. They appeared to be very focused on their job and no obvious evidence of socializing was apparent.

This facility applies both HACCP and BRC (British Retail Consortium) Global standards to maintain the plant food safety and product quality assurance. The Lairage/ antemortem area is well covered and ventilated with an orientation that allows animals to move smoothly from the antemortem holding area to the stunning area. There was a systematic approach to the movement of animals from the farm to the slaughtering facilities with the relevant GTA documentation that allows for traceability. The area of inspections listed as lines A to F has a total of 63 auxiliary staff from SIF and 3 official veterinarians attached to the plant. This facilitates the inspection and sanitary checks established for pork products destined for human consumption are in accordance with the internal norms established by DIPOA/SDA number 01, of the 8th March, 2017. However, there were no mirrors present at the time of RA team visits.

Labelling was approved by the competent authorities and is also designed to meet the standards requirements of importing countries. Overall, the area of inspection can be deemed as adequate since it provides the necessary quality assurance and food safety systems for the final products.

On-site veterinarians

Three veterinarians were permanently based at the SEARA ALIMENTOS Ltda location. They are:

i. Dr Eloi Rost -the Official Veterinarian from SIF

ii. Dr Gabriel Trentin Frigeri - Official Veterinarian

iii. Dr Lais Bittencourt Costa - Official Veterinarian

Exports

The company exports to the following countries which also audits its operations:

China, the United States of America, Japan, Chile, Mexico, Canada, South Korea, Venezuela, Ghana, Haiti, Uruguay, Argentina, Singapore, Angola, Vietnam, Hong Kong and South Africa.

Ready to eat sausages

The company also produces ready-to-eat sausages for export to Japan but not for the domestic

(Brazilian market):

- 43 tons/month
- 90 tons/month

The ready-to-eat operation was not viewed when the inspectors visited the plant.

Assessment of Processing Facilities

The processing plant was assessed in the areas of external environment, building infrastructure, plant operations & provisions sanitation, plant operations & provisions processing, plant personnel and inspector provisions.

External Environment

Location

- Establishments had the necessary approvals from the relevant authorities regarding Environmental Protection, Public Health as well as Regional Municipal Authorities.
- Suitably located away from sources of strong offensive odors, smoke, dust and other air contaminants.
- Surrounding areas were adequately drained.
- Readily accessible potable water supply.
- Adequate Power supplies with necessary backup generators.

Premises

- Roads, yards and parking lots free from excessive dust and in a good state of repair.
- Efficient drains adequately positioned, well maintained (gradient-able to cope with maximum load), as well as outfitted with necessary screens and other filtration mechanisms.
- Insect and rodent control program in place and part of Plants SSOP.

Building Infrastructure

- Building maintained in a state of good repair.
- Design, materials and construction of walls floors and ceilings allow for their maintenance in a sanitary manner. Plant design allows adequate space to accommodate the operation without hampering sanitary clean up and without crowding of equipment and personnel.
- Plant is conditioned but condensation minimal and where present adequate measures in place to prevent product contamination.
- Lights in processing plant are of safety type and are equipped with protective shields. Although not measured, lighting appears more than adequate.
- Availability of an ample supply of hot and cold potable water under adequate pressure always during the working hours. Hot water available at hand washing stations as well as areas for equipment sanitation.

Plant Operations/Provisions

- Product contact surfaces of all equipment, containers and utensils constructed from suitable, smooth, impervious, non-toxic, corrosion-resistant material.
- Design and location of equipment, containers and utensils are such that they provide protection from contaminants. Accessibility for cleaning/sanitizing, maintenance and inspection of equipment such as knife sanitizers appropriate. Adequate well labelled containers for waste and condemned products available.
- Approved chemicals used for cleaning and sanitizing.
- Product contact surfaces or equipment, containers and utensils thoroughly cleaned and sanitized after use and whenever necessary (based on what is in SSOP).
- An in-plant sanitation program documented and implemented.
- Separate slaughter facility for emergency slaughter or slaughter of suspect or condemned animals. Animals from this facility are not reintegrated into production but rendered in separate plant.

- Chilling facilities adequate to maintain raw materials or finished product in a chilled state (0^0C).
- Refrigeration facilities adequate to maintain products in a frozen state (-7^0C).
- Storage arrangements preclude contamination or adulteration of product.
- Thermometer present and functional in refrigerator or logged centrally. Temperature log kept and maintained by facility. Verification/Calibration of these instruments periodically, done by competent authority.
- Product packed so as to present it from contamination or deterioration. Product vacuum packed in plastic and placed in cardboard cartons.
- Transport of product for export via refrigerated container (reefer), which is loaded on site and then transported to port.

Welfare Facilities

- Toilet facilities provided were adequate and conveniently located. Welfare facilities located away from processing areas. Facilities for hand washing were provided with hand and boot cleansing and sanitizing agents. Appropriate hand and boot washing stations provided prior to plant entry.
- Rooms for workers to change clothing with appropriate lockers were provided.
- Worker hygiene and cleanliness covered in HACCP or SSOP document.
- Worker clothing consists of coveralls, PVC aprons, hairnets, helmets and rubber boots, gloves. All protective clothing provided by plant.
- First aid facilities available.
- Restrictive visitor policy in place.
- The Risk Assessment (RA) team did not verify the systematic approaches available for reporting and management of staff who are suffering from or carriers of any communicable disease or have any infected wounds or open lesions. However, this information can be requested from the facility in writing.
- The management of the facility has an active occupational health and safety program throughout the facility to ensure workers uphold all health and safety

practices and measures during the production and processing of the port products.

Inspectors Provisions

- Proper offices provided for inspectors with appropriate storage for files, and other required documentation.
- Separate provisions for inspector's welfare needs.
- The practice of supervision of auxiliary staff was observed and the facility meets compliance. Training of all staff working with the establishment is done both internally and by an institution that is specifically designed to train meat inspectors working at the facility.
- Adequate and well-furnished office space is available for the inspectorate staff.

Certification

Plants must meet Federal requirements to be registered to operate. The “TITULO DEREGISTRO” is issued by the MAPA and signed by DIPOA. The GTA permit, issued by CIDASC, is required for the transport of animals from the farm to the plant.

In the case of swine, for the issue of a permit, SEARA enters the required information regarding the request into the CIDASC platform and this information is reviewed and considered for approval by CIDASC. On the farm, the pigs are checked two (2) weeks before they are due to leave (not necessarily by a veterinarian) to verify the numbers to be sent, that the animals look healthy and to confirm that they are permitted to leave the farm. The antemortem inspection is conducted by the State veterinarian when the animals first arrive at the processing plant. On antemortem inspection, any pigs that are observed with physical injuries were separated and slaughtered or isolated separately. Any pigs with elevated temperatures were cooled with sprinklers and monitored for not more than one day prior to being admitted for slaughter.

HACCP and SSOP Plan

The risk assessors verified that the CA requires each official establishment to develop, implement, and maintain written sanitation standard operating procedures (SOPs) to prevent direct product contamination or insanitary conditions. Plants have documented HACCP plans with enclosed SSOPs within those documents. SSOPs were comprehensive addressed all areas of concern well, forming a good prerequisite to the HACCP document. Plans are audited by the competent authority as necessary.

Microbial verification done on all equipment with schedule that ensures that each piece of equipment is tested monthly.

Reviews of the in-plant inspection's associated zero tolerance verification records were conducted. The establishment audited was conducting 100 percent monitoring of carcasses for this critical control point (CCP). The review of the establishment's corrective actions in response to the few observed deviations from the zero-tolerance critical limit indicated that corrective actions were correctly addressed.

Assessment of the effectiveness and reliability of the trace-back systems as well as the strength of the epidemiological systems:

The identification system allows for the implementation of an effective and reliable trace back system.

Traceback at the farm level is good. At the product level, products can be traced back to individual animal or slaughtered lot and then subsequently to the farm level.

The epidemiological system is well supported by legislation, regulations, and surveillance systems with the necessary laboratory network, local, regional and international agency support.

Conclusion

Overall, the operations at the processing plants and farms were deemed to be consistent with required practices and the laboratory support is appropriate and suitable for the detection and control of diseases of importance to trade and public health.

Recommendations

Following the meetings, visits and analysis of all the information received from Brazil, the following are the general recommendations. The risk associated with the importation of poultry meat and poultry meat products, beef, beef products, pork and pork products can be considered as negligible provided that the following risk management options are applied.

1. **The live cattle are imported from states that are free from FMD without vaccination, such as Santa Catarina and Rio Grande do Sul.**

2. **Poultry meat, poultry meat products, beef, beef products, pork and pork products are imported only from approved facilities such as JBS, BRF and SEARA as assessed by the team.**

3. **A robust communication system is implemented between the national competent authorities of Brazil and CARICOM ensure effective and expedient communication of any delisting of establishments.**

4. **Written protocols are communicated to competent authority staff at all relevant levels to ensure that any consignments rejected at CARICOM ports are prevented from being re-exported to CARICOM.**

Additional Information

1. Complete folder of MAPA documents https://mregovbr-my.sharepoint.com/:f:/g/personal/diana_valle_itamaraty_gov_br/Em-KLXrIC-5Mj_Qka9mhprMBcFCXuviuDuhRIrmM589FfA?e=IQmXLx
2. Online database of authorized laboratories- https://www.gov.br/agricultura/pt-br/assuntos/lfda/laboratorios-credenciados/laboratorios-credenciados/consultar-laboratorios-credenciados
3. **CARICOM- SAUDE - ANIMAL** contained in this link: https://mregovbr-my.sharepoint.com/:f:/g/personal/diana_valle_itamaraty_gov_br/Em-KLXrIC-5Mj_Qka9mhprMBcFCXuviuDuhRIrmM589FfA?e=IQmXLx provides detailed information on these diseases and their management in Brazil.
4. Decree 24, 548 https://docs.google.com/document/d/1WaW-Mrx1aLQw1DJ1zeg-h92NYdtXX-g_azpLjoCmbxY/edit?usp=sharing
5. Decree N 24, 548 https://docs.google.com/document/d/1WaW-Mrx1aLQw1DJ1zeg-h92NYdtXX-g_azpLjoCmbxY/edit
6. Law N 569 https://docs.google.com/document/d/1-w8FJJcHtEQJmx1B_DWOK7JzaRM4D79p-kTBKVh-kH4/edit?usp=sharing

10. Approval for regulation for enforcement of animal health measures Decree 27 532 https://docs.google.com/document/d/1RyGIoA2wLpwYszCTbPIKeaio1tQ5BDL_FlDzTHba3WE/edit?usp=sharing

8. Organization of the unified animal and plant health system Decree N 5,741 https://docs.google.com/document/d/1B2LuAVprcAPInQCSOt2UVdf4jf145uLfpE73cqmox3U/edit?usp=sharing

Amendment of the provisions of law 569 https://docs.google.com/document/d/1B2LuAVprcAPInQCSOt2UVdf4jf145uLfpE73cqmox3U/edit?usp=sharing

10. Law 12 873 https://docs.google.com/document/d/1eKZncnjenr30nU7vP8CKXjn6X8nlzVzbBZy-Gs4gok4/edit?usp=sharing

11. NR 50
    https://mail.google.com/mail/u/0?ui=2&ik=00288d6167&attid=0.9&permmsgid=msg-f:1808900841446844194&th=191a81bb38582722&view=att&disp=inline
12. National Force of Unified Animal health and Plant Health System N 8,762
    https://docs.google.com/document/d/125QtvDjFTvYnuRlnjf0S8uykhUNHhqSsi272A4F9As8/edit?usp=sharing
13. Normative instruction N 15
    https://docs.google.com/document/d/125QtvDjFTvYnuRlnjf0S8uykhUNHhqSsi272A4F9As8/edit?usp=sharing
14. Contingency Plan for Animal Health Emergencies
    https://docs.google.com/document/d/1FddjDXIKXpB6N2H6Xq_Hrp5iIeMjsvhd_ye4cpEnhlM/edit?usp=sharing
15. Normative Instruction 5
    https://docs.google.com/document/d/1owW03N_iA8dvzWRJ4zTxiOW61lTjEjfOdq1UddxkdiI/edit?usp=sharing
16. Normative Instruction 44
    https://docs.google.com/document/d/1rnLq8K1qvnTgpoU-BIU6S9QctYSfEarh-O1GcWlPecQ/edit?usp=sharing
17. SDA Normative Instruction 10
18. https://docs.google.com/document/d/1cbHjAwLSCX8NOwW8cSUPY2mh2aj_SrciJ4iowNTaS-g/edit
19. https://docs.google.com/document/d/1cbHjAwLSCX8NOwW8cSUPY2mh2aj_SrciJ4iowNTaS-g/edit?usp=sharing
20. Normative instruction 11
    https://docs.google.com/document/d/1fhfYJpQ5GI9DFUMk3YqwKjWbOsi6QAV3cyscjMheXJw/edit?usp=sharing

References

Audit report: enhanced controls for beef, poultry meat and poultry meat products from Brazil - GOV.UK (www.gov.uk)

Food Safety and Inspection Service : https://www.fsis.usda.gov/news-events/publications/...

Brazil: Foreign Audit Report | Food Safety and Inspection Service

Audit report: enhanced controls for beef, poultry meat and poultry meat products from Brazil - GOV.UK (www.gov.uk)

brazil-oie-pvs-final-261207.pdf (woah.org)

CAHFSA Risk Assessment Pre-Questionnaire from Brazil – Risk Analysis for Export of Poultry Products to Caricom Member States

USDA Foreign Agriculture Service & Global Agricultural Information Network (GAIN). Poultry and Products Semi-annual Report. Brazil. Date: March 11, 2024 Report Number: BR2024-0002

woah.org/app/uploads/2018/03/handbook_on_import_risk_analysis_-_oie_-_vol__i.pdf