



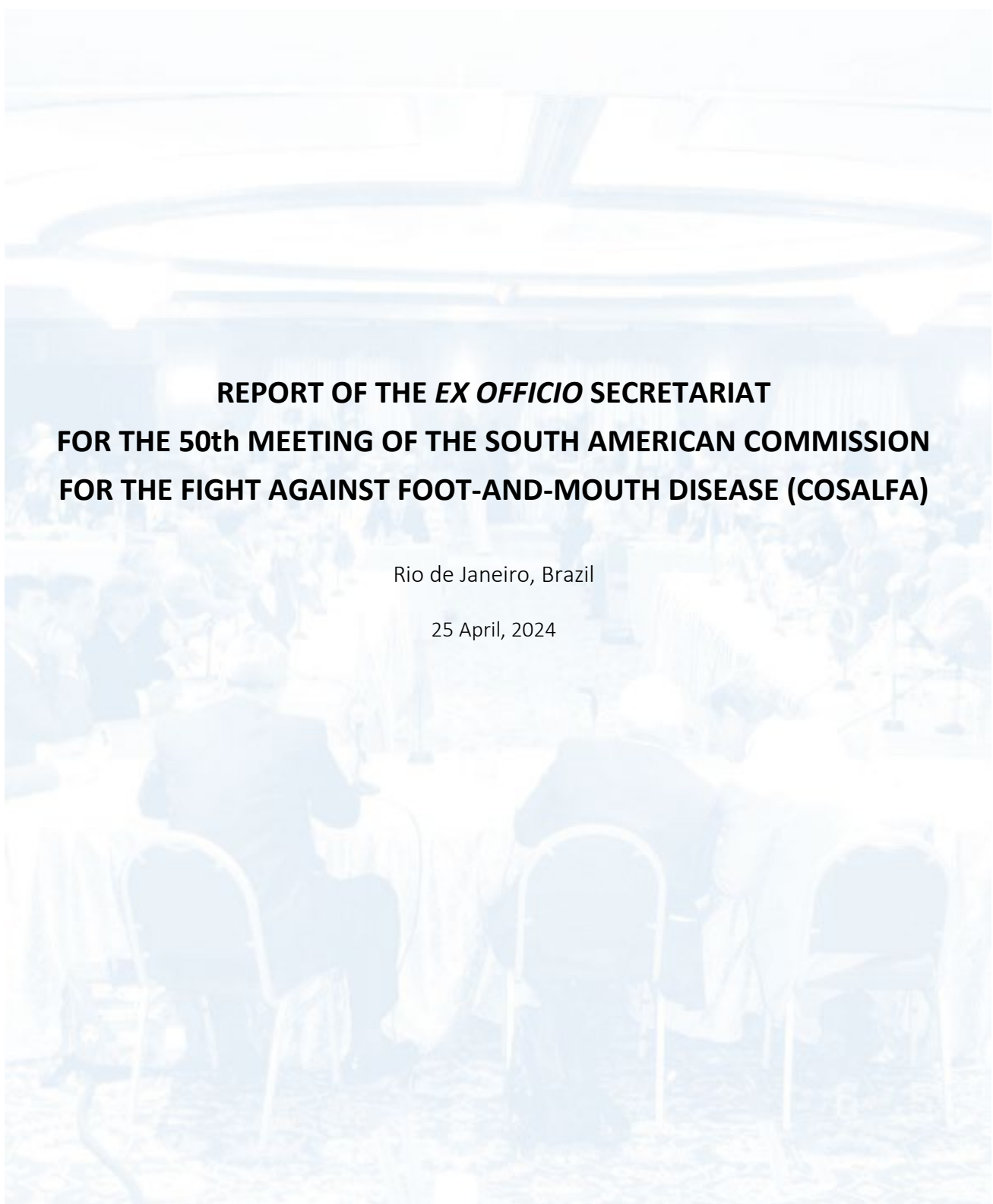
Pan American  
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World Health  
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REGIONAL OFFICE FOR THE  
Americas

**PANAFTOSA**

Pan American Center for Foot-and-Mouth  
Disease and Veterinary Public Health

A large, dimly lit conference room with many people seated at long tables, viewed from behind. The room has a high ceiling with recessed lighting and a patterned carpet.

**REPORT OF THE *EX OFFICIO* SECRETARIAT  
FOR THE 50th MEETING OF THE SOUTH AMERICAN COMMISSION  
FOR THE FIGHT AGAINST FOOT-AND-MOUTH DISEASE (COSALFA)**

Rio de Janeiro, Brazil

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(Working document)

**INTRODUCTION**

The report of the *ex officio* Secretariat presents a summary of the actions taken for the eradication and prevention of foot-and-mouth disease (FMD) in South America and Panama during the period July 2022-December 2023. It includes an assessment of compliance with the resolutions of the 49th COSALFA, held on August 25, 2022, by the countries and the Pan American Center for Foot-and-Mouth Disease and Veterinary Public Health (PANAFTOSA/VPH-PAHO/WHO). Also, information is provided on general technical cooperation activities, the outcome of agreements and projects, and interinstitutional and collaborative efforts with other cooperation agencies undertaken by PANAFTOSA-PAHO in support of the countries.

The regional situation of foot-and-mouth disease relies on the reports sent by the countries to PANAFTOSA-PAHO, and the information gathered by the Center, complemented by analyses of relevant data published in several media.

The compliance with Resolutions is assessed based on the information gathered by the *ex officio* Secretariat within the framework of the commitments to the Hemispheric Program for the Eradication on Foot-and-Mouth Disease (PHEFA), and it can be improved with the contributions of delegates.

## I – SITUATION OF THE FOOT-AND-MOUTH DISEASE IN SOUTH AMERICA AND PANAMA - 2022/2023

Throughout the years 2022 and 2023, the countries of the region, except for Venezuela, consolidated their progress leaving the risk of foot-and-mouth disease increasingly far behind, maintaining the status of free with or without vaccination recognized by the World Organisation for Animal Health (WOAH). In fact, in the 90th General Session of the World Assembly of Delegates of May 2023, the WOAH proceeded to recognize 29 municipalities of the Department of Northern Santander in Colombia as a free zone with vaccination, and the Department of Beni and the North of the Department of La Paz, in Bolivia, as a free zone without vaccination.

The regional attention is focused on Venezuela and its border with Colombia, where the last outbreaks of the region, associated with serotype O, have been detected. PANAFTOSA-PAHO technical cooperation has given priority to Venezuela, where a series of weaknesses in its program have been observed, including an outdated registry of farms and animals, staff shortage, need of technical and administrative training, structural deficiencies, need to update technical protocols, deficient financial resources for adequate surveillance by the INSAI and flaws in quality control of the domestically produced vaccine. Currently, PANAFTOSA-PAHO technical cooperation efforts are focused on strengthening vaccination, giving rise to the opportunity to advance with the activities of the newly established Venezuelan Foundation for Animal Health Services (*Fundación Venezolana de Servicios de Salud Animal* - FUNVESSA), working with the official Venezuelan service (INSAI), and with the support of the Regional Commission for the Follow-up of the National Plan for the Eradication of Foot-and-Mouth Disease in Venezuela coordinated by PANAFTOSA-PAHO.

Regarding the transition from the status of free with vaccination to the status of free without vaccination, each country advances at its own pace. Brazil, for instance, has a plan seeking to declare the country free from vaccination by 2026, and already in 2023 suspended vaccination in more than 115 million of bovines from 8 states in the transition towards the status of free without vaccination. Bolivia is also progressing in this transition and, in addition to the recent recognition of new zones as free without vaccination, it stopped vaccination in 2023 in the region of Santa Cruz and is working to obtain the recognition as free without vaccination in the whole country by 2025. Ecuador continues with its plan aligned with the PHEFA Plan of Action 2021-2025, maintaining vaccination in 2023 and planning a risk assessment in 2024 to decide on the withdrawal of the vaccine. Argentina, Paraguay and Uruguay have not defined a schedule with the road map yet.

Currently, the region has 99% of the bovine herds in zones recognized by the WOAH as free from foot-and-mouth disease (36% without vaccination and 64% with vaccination) (Table 1 and Map 1).

**Table 1.** Health Situation of Foot-and-Mouth Disease in South America - December 2023

HEALTH SITUATION (WOAH recognition)	AREA		HERD OF BOVINES/BUFFALOES		TOTAL BOVINES/BUFFALOES	
	Km <sup>2</sup>	%	Number	%	Number	%
<b>Free WITHOUT vaccination</b>	5,166,617	29%	1,912,724	35%	64,113,971	16%
<b>Free WITH vaccination</b>	12,007,811	66%	3,428,577	64%	309,385,605	80%
<b>NOT Free</b>	916,445	5%	64,116	1%	15,134,590	4%
<b>TOTAL</b>	18,090,873		5,405,417		388,634,166	



**Map 1.** Health Situation of the countries as of December 2023 according to the official recognition by the WOAH

## II – LEVEL OF ACCOMPLISHMENT OF THE RESOLUTIONS OF THE 49th COSALFA

### RESOLUTION I – TECHNICAL COOPERATION TO VENEZUELA

#### IT IS RESOLVED:

1. To request that PANAFTOSA-PAHO to continue providing the required technical cooperation to Venezuela.
2. To urge the current member countries of the Regional Commission for the Follow-up of the National Plan for the Eradication of Foot-and-Mouth Disease to contribute with resources for the strengthening of the foot-and-mouth disease program of Venezuela and encourage the participation of delegations from other countries to become part of such Commission.
3. To request the authorities of Colombia and Venezuela to implement joint works in the border to mitigate the risk of foot-and-mouth disease, with the technical cooperation of international organisms; additionally, to urge the authorities of Brazil and Venezuela to strengthen the collaboration provided in the last few years for the control of foot-and-mouth disease in their border.
4. To urge the INSAI to adopt the necessary procedures and identify the resources for the comprehensive execution of the National Program for the Eradication of Foot-and-Mouth Disease.
5. To urge the FUNVESSA to implement the required actions to efficiently materialize the commitment made to the foot-and-mouth disease vaccination program in the entire national territory.

#### LEVEL OF ACCOMPLISHMENT

PANAFTOSA-PAHO continued providing technical cooperation by organizing several meetings, both virtually and in person, with the National Institute of Integral Agricultural Health (*Instituto Nacional de Salud Agrícola Integral - INSAI*) and the Venezuelan Foundation for Animal Health Services (*Fundación Venezolana de Servicios de Salud Animal - FUNVESSA*). Three technical missions were conducted to evaluate and assist in surveillance, laboratory diagnosis, vaccination cycles and control of the vaccine produced in Venezuela.

PANAFTOSA-PAHO prepared and sent biannual reports to COSALFA delegates about vaccination cycles and activities conducted in Venezuela. Three meetings were organized in Venezuela with the member countries of the Regional Commission for the Follow-up of the National Plan for the Eradication of Foot-and-Mouth Disease (Brazil, Chile, Colombia, Paraguay and Peru), two of them virtually (2022 and 2024) and one in person (2023). So far, only Brazil has contributed effectively with resources for the actions in Venezuela.

PANAFTOSA-PAHO coordinated two in-person meetings with the authorities of the official services of Venezuela and Colombia: one in Rio de Janeiro in April 2023 and the other in Cúcuta, Colombia, in October 2023.

These meetings resulted in joint agreements to perform activities related to foot-and-mouth disease coordinated in the border between both countries. As for Brazil and Venezuela, PANAFTOSA-PAHO coordinated a mission in the State of Bolívar, with the participation of Brazilian technicians, to discuss joint activities in the border and define the support of Brazil to Venezuela.

No significant changes were documented in the INSAI showing the strengthening of actions from the Venezuelan Official Veterinary Service (OVS) to comply with the PROFA.

The FUNVESSA adopted a resolution, proposed by the Venezuelan private sector, establishing an additional contribution of USD 0.20 per administered dose of vaccine, starting in 2024. This will allow to assume its responsibility more effectively in vaccination cycles.

***Resolution partially accomplished.***

## **RESOLUTION II –REGIONAL FOOT-AND-MOUTH DISEASE ANTIGEN/VACCINE BANK - BANVACO**

### **IT IS RESOLVED:**

1. To congratulate the Government of Ecuador for the relevant and strategic decision to sign, jointly with PAHO, its adherence to the BANVACO.
2. To acknowledge the effective work that PANAFTOSA-PAHO is carrying out for the establishment of the BANVACO, and to request the Center to maintain this significant regional task.

### **LEVEL OF ACCOMPLISHMENT**

PANAFTOSA-PAHO coordinated eight ordinary meetings and one extraordinary meeting of the Provisional Steering Committee of the BANVACO, attended by representatives of eight countries: Bolivia, Brazil, Chile, Colombia, Ecuador, Paraguay, Peru, and Uruguay. Furthermore, the meetings were held under the coordination of PANAFTOSA-PAHO with the members of the BANVACO Technical Advisory Committee to advance in the operationalization of the management and funding model, and to define the necessary initial contributions to cover the fixed costs of the member countries upon adhesion.

To date, the Republic of Paraguay and the Republic of Ecuador signed the Constitutive Agreement of the BANVACO, thus becoming plenary members. The rest of the countries are in the process of adhesion, with the imminent signing of the Republic of Bolivia and the Republic of Brazil. PANAFTOSA-PAHO continues to support all the countries in the realization of this regional project, and developed a webpage for the BANVACO that allows access to all related information: <https://www.paho.org/es/PANAFTOSA-PAHO/banvaco>

In 2023, the COSALFA Regional Commission on Biological Risk and Biosafety was re-established to address the demands of the members of the BANVACO and comply with the resolutions approved by the COSALFA.

***Resolution accomplished.***



## **RESOLUTION III – FOOT-AND-MOUTH DISEASE EMERGENCY PREPAREDNESS**

### **IT IS RESOLVED:**

1. To request PANAFTOSA-PAHO to provide technical cooperation to the countries in order to train professionals of the official veterinary services in the event of a foot-and-mouth disease emergency, and to support the countries in the review and adaptation of contingency plans.
2. To request PANAFTOSA-PAHO to provide technical cooperation to incorporate and adapt the tools to simulate foot-and-mouth disease outbreaks in the region and to contribute to the development of information systems for the management of foot-and-mouth disease emergencies.

### **LEVEL OF ACCOMPLISHMENT**

PANAFTOSA-PAHO supported the organization, execution and assessment of two field simulation exercises (field drills) in Colombia and Ecuador at the request of the countries. During this training, and as a complementary activity, the center provided technical assistance to review and improve foot-and-mouth disease contingency plans in both countries.

Additionally, PANAFTOSA-PAHO, in collaboration with the University of North Carolina (USA), organized three workshops intended for professionals of all the American countries, focused on modeling for the simulation of foot-and-mouth disease outbreaks and the implementation of control measures. These workshops were developed in a blended format, combining virtual and in-presence sessions. In-person sessions took place twice at PANAFTOSA-PAHO facilities in Rio de Janeiro and once in Santa Cruz de la Sierra, Bolivia. In total, 31 professionals from seven South American countries were trained in these workshops.

***Resolution accomplished.***

## **RESOLUTION IV – BIENNIAL PLAN 2022-2023 OF THE PHEFA**

### **IT IS RESOLVED:**

1. To approve the Biennial Plan 2022-2023 of the Technical Cooperation of PANAFTOSA-PAHO to the PHEFA.
2. That the public and private sectors represented in the COSALFA are committed to identify and provide the necessary resources outlined in the budget of the Biennial Plan, with the aim of fulfilling the technical cooperation and monitoring actions of the PHEFA 2021-2025.
3. That PANAFTOSA-PAHO guides the countries on the tools and mechanisms (Trust Fund, Agreements and Technical Cooperation Agreements) that will enable PAHO to receive resources from the countries to comply with the technical cooperation actions within the framework of the PHEFA.

### **LEVEL OF ACCOMPLISHMENT**

PANAFTOSA-PAHO elaborated the Biennial Operational Plan 2022-2023, its schedule and budget, and continues to disseminate different resource mobilization tools, jointly with the member countries to comply with the technical cooperation actions within the framework of the PHEFA.

The Biennial Plan 2022-2023 for the strengthening of PANAFTOSA-PAHO technical cooperation towards the consolidation of the Hemispheric Program for the Eradication of Foot-and-Mouth Disease (PHEFA) is registered in the IRIS collection. The access link is: <https://iris.paho.org/handle/10665.2/56486>

***Resolution accomplished.***

## **OTHER FOOT-AND-MOUTH DISEASE COOPERATION ACTIVITIES**

### **1. Technical Cooperation with Bolivia**

PANAFTOSA-PAHO has provided technical cooperation to the SENASAG in its transition toward the status of foot-and-mouth disease free country without vaccination. This cooperation included assisting in the design of sampling in 2022 and participating in meetings and technical discussions with farmers in 2023, responding to requests from the official veterinary service of the country.

### **2. Technical Cooperation with Brazil**

PANAFTOSA-PAHO continues providing technical cooperation to Brazil, offering technical support in the final stage of the PHEFA and participating in meetings, training events, and working groups. In addition, PANAFTOSA-PAHO has continuously participated in internal meetings of the Brazilian Ministry of Agriculture and other governmental institutions such as the National Congress and the Ministry of Foreign Affairs, to promote the adhesion of Brazil to the BANVACO.

PANAFTOSA-PAHO has also coordinated virtual and field meetings between the authorities of Brazil and Venezuela to advance in the eradication of foot-and-mouth disease in Venezuela.

### **3. Technical Cooperation with Colombia**

PANAFTOSA-PAHO continued to provide technical cooperation to the ICA for the harmonization of vaccination and surveillance actions in the border region with Venezuela, and for designing sampling activities carried out in the country both for immunity and virus transmission. In August 2022, upon ICA's request, PANAFTOSA-PAHO coordinated an emergency foot-and-mouth disease simulation in Dibulla, Colombia, in the border with the Republic of Venezuela. In October 2023, a binational meeting between Colombia and Venezuela was held in Cúcuta, Colombia, attended by experts of PANAFTOSA-PAHO, animal health authorities, and responsible parties of foot-and-mouth disease programs of both countries, in addition to state and departmental representatives of the border zone. Future strategies for the border region were discussed in the meeting, focusing on aligning tactics to improve the effectiveness of vaccination cycles and harmonizing technical and operational criteria for a more efficient joint performance.

Furthermore, risk characterization of vesicular stomatitis was carried out using surveillance data of clinical presence of the disease, together with productive and environmental data. This led to dividing the national territory into four different zones according to productive and environmental characteristics, with a different risk of vesicular stomatitis.

#### 4. Technical Cooperation with Ecuador

PANAFTOSA-PAHO continued providing cooperation actions within the framework of the Technical Cooperation Agreement with Agrocalidad, for the provision of diagnostic kits/sets and reference materials related to the National Program for the Eradication of Foot-and-Mouth Disease, in response to surveillance actions and immunity and virus circulation studies, as well as for validation of new techniques, quality assurance and compliance with the requirements of the ISO/IEC 17025 Standard before the Ecuadorian Accreditation Service (*Servicio de Acreditación Ecuatoriano - SAE*).

Cooperation continued to be provided for the design and analysis of results of serological studies in the strategy of the country for the adherence to the BANVACO and withdrawal of vaccination, as well as for the procurement of 65 temperature recorders with calibration certification compliant with international standards for use in the cold chain of Agrocalidad for vaccines.

Also, PANAFTOSA-PAHO is assisting in the elaboration of a risk analysis to assess foot-and-mouth disease introduction and spread in continental Ecuador, with the support of the University of Davis, USA.

The agreement supported the table-top simulation of foot-and-mouth disease carried out on November 14 – 19, 2022, in three different places simultaneously - Province of Pichincha, in the city of Quito; Province of Morona Santiago, in the city of Macas; and Province of Chimborazo in the city of Riobamba.

Likewise, from September 30 to October 06, 2023, in the context of the Technical Cooperation Agreement and with the support of PANAFTOSA-PAHO, AGROCALIDAD conducted a simulation exercise of a health emergency consisting in simulating a foot-and-mouth disease outbreak at field level. This exercise included reviewing the National Contingency Plan for Foot-and-Mouth Disease and simulating the introduction of the foot-and-mouth disease virus in the Province of Napo, located in the Northern Central Amazon Ecuadorian region, as well as the work deployed for its detection, control and elimination by the technical teams of AGROCALIDAD, with the collaboration of the private sector, authorities and local organizations. A total of 92 professionals participated, including official veterinary doctors performing duties in 23 provinces, laboratories and the headquarters of the General Coordination of Animal Health working on foot-and-mouth disease prevention and surveillance.

During the period, PAHO, through PANAFTOSA-PAHO and AGROCALIDAD signed, in December 2022, the 8th Amendment of the Agreement for the provision of new resources for USD 33,163.58. Likewise, in March 2023, the 9th Amendment was signed with a contribution of over USD 200,000.00, for the technical cooperation of PANAFTOSA-PAHO to AGROCALIDAD. Additionally, it is worth noting that cooperation was also essential for the provision of reagents and guidance during the highly pathogenic Avian Influenza health emergency in Ecuador.

## **5. Technical Cooperation with Paraguay**

In June 2023, PANAFTOSA-PAHO conducted a technical mission in Paraguay aimed at providing technical support for the promotion and dissemination of the Plan of Action 2021-2025 for the eradication of foot-and-mouth disease (PHEFA). This activity was requested by the National Service of Quality and Animal Health (Servicio Nacional de Calidad y Salud Animal - SENACSA) and was aimed at the authorities, the private sector, and the industry in Paraguay.

## **6. Technical Cooperation with Venezuela**

PANAFTOSA-PAHO carried out a technical cooperation mission in the country from June 11 – 18, 2023, participating in executive meetings with national teams of the INSAI and the FUNVESSA, presidents of livestock federations from most states, representatives of private veterinary services, owners of resale and distribution companies, as well as with the national foot-and-mouth disease vaccine production laboratory. Also, technical visits were conducted to the National Reference Laboratory for vesicular diseases of the INSAI and to the vaccine production laboratory.

During the second semester of 2023, PANAFTOSA-PAHO conducted two technical missions, one from September 23 to October 21 and another from November 20 to December 9, totaling 49 days of field activities. This mission sought to assist in the implementation of the working plan approved by the Regional Commission for the Follow-up of the National Plan for the Eradication of Foot-and-Mouth Disease in Venezuela, supported by the INSAI and with the participation of public and private representatives from Brazil, Chile, Colombia, Paraguay and Peru. Important meetings were held with the Minister of People's Power for Agriculture and Land and the president of the INSAI, in addition to executive meetings with INSAI and FUNVESSA teams, strengthening cooperation and knowledge sharing.

Three professionals from PANAFTOSA-PAHO and two from the MAPA/Brazil participated in the missions, visiting local and regional units of the INSAI, meeting the private livestock sector and visiting distributors of biological products. Strategic meetings were organized with governors of Zulia, Táchira, Barinas, Bolívar, Apure, Cojedes, Monagas and Guárico, key areas for their border location and contribution to the livestock sector that accounts for more than 80% of national livestock. Meetings were also held with high-ranking military officials to reinforce controls on animal and product mobilization, totaling 75 sessions of awareness-raising and technical guidance in 12 Venezuelan states, covering approximately 7,500 km.

Technical support visits were conducted at foot-and-mouth disease vaccination farms and at a property with animals for testing the quality of the local vaccine. This monitoring also included visits to bovine slaughterhouses across the country.

During the September - October mission, a theoretical and practical workshop on foot-and-mouth disease was held in Maracay, attended by technicians from all Venezuelan states representing the INSAI and FUNVESSA's technical personnel from 9 states.

## **7. Other activities with the countries of the COSALFA**

PANAFTOSA-PAHO held biannual virtual meetings with responsible parties of the foot-and-mouth disease programs of the countries of the COSALFA. The purpose of these meetings was to identify the needs of each country regarding technical cooperation in the area of foot-and-mouth disease and coordinate strategies for their implementation. Also, a network was established with all national responsible parties of the foot-and-mouth disease program, where PANAFTOSA-PAHO weekly sends by email technical and scientific materials relating to foot-and-mouth disease.

## **8. Permanent Veterinary Committee (PVC)**

PANAFTOSA-PAHO continues to support the PVC, collaborating with the needs of the foot-and-mouth disease technical group. PANAFTOSA-PAHO participated in the meeting of the Animal Health Commission in Buenos Aires in July 2023, where the Technical Note “Foot-and-mouth disease: comparative analysis between the status with and without vaccination (2023)” drafted by Center was presented to service head officers.

## **9. World Organisation for Animal Health (WOAH)**

Technical cooperation between PANAFTOSA-PAHO and the WOAH has been maintained. Virtual and in person participation as expert took place in 2022 y 2023, respectively, in the meeting of the WOAH ad hoc Group on Foot-and-Mouth Disease Status and in different consultations to this Group throughout the period. Likewise, PANAFTOSA-PAHO attended, virtually, the 89th General Assembly of Delegates held in May 2022.

PANAFTOSA-PAHO participated actively in the activities of the OIE/FAO National Network of Reference Laboratories for foot-and-mouth disease and collaborated in the review and updating of the chapters on foot-and-mouth disease and vesicular stomatitis of the OIE Terrestrial Manual.

Moreover, PANAFTOSA-PAHO is chair of the Global Committee Coordination on Foot-and-Mouth Disease (GCC-FMD). The GCC-FMD was established by FAO and WOAH in 2021 to provide feedback on the global strategy for the control of foot-and-mouth disease with the regional strategies and experience. In 2023, a plan of action focusing on 6 blocks was proposed: Block 1: Strengthen regional governance mechanisms; Block 2: Promote the creation of a network of public-private associations; Block 3: Ensure the effective promotion of foot-and-mouth disease control at national and regional level; Block 4: Facilitate knowledge and access to laboratory diagnostic tools; Block 5: Facilitate knowledge and access to epidemiological tools; and Block 6: Promote the use of quality vaccines.

## **10. PANAFTOSA-PAHO/WHO Laboratories**

### **a) WOAH/FAO Reference Laboratory for Foot-and-Mouth Disease and Vesicular Stomatitis – LREF/PANAFTOSA-PAHO/WHO**

In the period July 2022-December 2023 the LREF/PANAFTOSA-PAHO/WHO continued providing technical cooperation in the countries of the region for the strengthening of activities for regional harmonization of diagnostic procedures, methodology validation and maintenance of quality systems, as well as for maintaining projects for the evaluation of the immunological response of livestock, contributing to the health surveillance of these herds and the production of reference materials.

In the framework of collaboration in the South American National Reference Laboratory Network, different activities were carried out as WOAH-Reference Laboratory for foot-and-mouth disease and vesicular stomatitis, training, provision of reference materials and diagnostic kits, laboratory diagnosis, and direct technical cooperation to official veterinary services of the countries.

Technical and operational participation continued for the training of professionals of the region in three simulation exercises, two carried out in Brazil, in support of the MAPA, and one in Ecuador, conducted within the scope of the Cooperation Agreement between PANAFTOSA-PAHO and Agrocalidad, promoting the technical and practical review of clinical and epidemiological research, sample collection and shipment to the laboratory, foot-and-mouth disease diagnosis, biosafety and spread control, information system and communication flow, as well as the discussion and evaluation of strategies and methods for the containment of virus spread. Additionally, training of professionals with a role in national reference laboratories was promoted, with a practical approach, in order to improve exchange and strengthening of foot-and-mouth disease diagnosis.

In March 2023, the LREF conducted a technical mission to the Animal Health Laboratory of Veterinary Services (GLDA) of Guyana, to reinforce zoonitary surveillance, addressing topics such as sample collection and shipment, diagnostic tools, review of facilities and equipment, as well as diagnostic capabilities for foot-and-mouth disease and other vesicular diseases, with the recommendations of reinforcing the surveillance, the monitoring of animal diseases and the need to train staff. Also, the zoonitary emergency simulation, organized by the GLDA of Guyana, was attended as LREF, to simulate the shipment of samples, and evaluate shipment logistics, timely arrival to the PANAFTOSA-PAHO Reference Laboratory and adequate recording of information and procedures for the shipment of samples. PANAFTOSA-PAHO was supported by the MAPA of Brazil for the nationalization of the material in the border between the two countries.

In June 2023, the LREF participated in a technical cooperation mission, within the framework of the PHEFA, to the National Institute of Integral Agricultural Health (INSAI) and foot-and-mouth disease vaccine manufacturing and distribution companies in Venezuela, with the purpose of evaluating the laboratory conditions for the diagnosis of vesicular diseases and, based on this, define the need of providing training to laboratory staff, among other topics.

For the Proficiency Test Program for diagnostic tests and foot-and-mouth disease and vesicular stomatitis vaccine control, the LREF organized the 2023 round, which was attended by 26 national reference laboratories, including some foot-and-mouth disease vaccine manufacturing laboratories from 15 countries of the region of the Americas, a significant tool for controlling the quality of testing laboratories which, for foot-and-mouth disease, have a few available suppliers and, therefore, this is a strategic activity regularly offered by PANAFTOSA-PAHO to attend the demand of the countries.

A collaborative study was organized to evaluate the performance of the PANAFTOSA-PAHO kit ELISA FMD gIII, used for antibody detection against the 3ABC protein of the foot-and-mouth disease virus; 33 laboratories were invited and 22 participated, including 16 national laboratories, 2 vaccine manufacturing laboratories and 4 international reference laboratories, all of which contributed to the success of the study.

The laboratory participated in some research projects upon request of the countries, the most notable being the performance study of FMDV inactivation of 8 commercial products in field samples suspected of foot-and-mouth disease, and the performance evaluation on the samples before shipment to the laboratory; also, the preservation of the nucleic acid in the material was evaluated, for use in RT-qPCR/RT-PCR tests. The treatment for virus inactivation in the sample on the field before shipment can be a relevant measure for risk mitigation, cost reduction and simplification of the shipment process, in addition to allowing manipulation of the material in Level 2 laboratories, thus increasing the capillarity of diagnosis in the countries of the region.

The laboratory represented the position of the region in international discussion forums, promoted by the WOAHA, as well as in interactions with other international reference organisms. In 2023, it participated in the “18th Annual Meeting of WOAHA/FAO Reference Laboratory Network for Foot-and-Mouth Disease”, sharing data on the current situation of the foot-and-mouth disease in South America.

The LREF/PANAFTOSA-PAHO participated in the proficiency test programs organized by the WRLFMD (stage XXXV: 2023), complying with all the requirements and being classified as PCP 4 and PCP 5, consistent with reference laboratory, compliant with the criteria established by the WOAHA.

The LREF maintains all the methods used in diagnostic routine, accredited according to the ISO 17025 Standard by the CGCRE/INMETRO (Brazilian accreditation organism), totaling 11 accredited tests.

## **b) Production Laboratory - LPRO/PANAFTOSA-PAHO/WHO**

PANAFTOSA-PAHO Production Laboratory (LPRO) remained active in the production and shipment of reagents to the countries of the region. This strategic action continues to contribute significantly to the strengthening of national programs for the eradication of foot-and-mouth disease, providing essential support for an accurate diagnosis, the development of epidemiological studies, and vaccine quality control. This highlights the relevance of PANAFTOSA-PAHO work through its production laboratory, in the context of the PHEFA (Table 2).



**TABLE 2.** Kits/Sets distributed to the countries by the LPRO, between July 2022 and December 2023

<b>KITS/SETS</b>	<b>PSE-001 ELISA FMD gIII</b>	<b>PSE-110 ELISA 3ABC</b>	<b>PSE-002 EITB (confirmatory)</b>	<b>PCV-004 CFL-FA (O)</b>	<b>PCV-005 CFL-FA (A)</b>	<b>PDP 003 TYPIIFICATION</b>
<b>TOTAL</b>	223	28	175	181	182	29

With each kit/set, it is possible to process a maximum of:

- *ELISA FMD gIII*: 880 samples/Kit
- *ELISA 3ABC*: 890 samples/kit
- *EITB (confirmatory)*: 132 samples/kit
- *CFL-FA (O) y (A)*: 192 samples/Set
- *Typification*: 175 samples/Set

It is worth noting the work and the activities conducted jointly with the reference laboratory, with integrated technical assistance to the countries of the region for the strengthening of foot-and-mouth disease laboratory diagnosis, for the effective use of kits/sets produced and offered by PANAFTOSA-PAHO.

Jointly with other reference laboratories, a collaborative study is being carried out to assess and prove the efficacy of PANAFTOSA-PAHO Kit FMD gIII, multispecies, with the aim of checking its performance for in vitro diagnosis of foot-and-mouth disease in other regions.

In the period, the LPRO implemented and validated a robust quality production system aimed at ensuring the excellence and reliability of the kits/sets made available to the countries.

This dual action, characterized by technical assistance and the commitment to quality, positions the LPRO as an invaluable strategic partner for the eradication of foot-and-mouth disease in the region.