

The Pan American Foot-and-Mouth Disease Center – PANAFTOSA – was established in 1951 based on an agreement between the Organization of American States (OAS), the Pan American Sanitary Bureau (OSP) and the Brazilian Government as the first and only FMD-specialized center of the Americas. Its mission is to provide technical cooperation to the countries of the region in the organization, development and strengthening of national FMD prevention, control and eradication programmes. Originally dedicated exclusively to FMD, it now also provides technical cooperation in zoonoses and food safety.

The Center is located in the city of Duque de Caxias, State of Rio de Janeiro, in an old farm in the district of São Bento.



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PANAFTOSA has been recognized by  
WOAH as a Collaborating Centre in  
Veterinary Public Health since 2014.

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# Panaftosa

## Committed to eradicating Foot-and-Mouth Disease in the Americas since 1951

## Foot-and-Mouth Disease in South America: Eradication milestones



The Foot-and-Mouth Disease (FMD) is still one of the main diseases affecting the livestock industry globally. It is a severe, highly contagious disease that has a significant impact on animal welfare and the economy; trade restrictions imposed by the veterinary services of importing countries hinder access to markets, which have serious social and economic consequences. In addition, FMD affects small producers, threatening their food security.

Worldwide, this disease has been cause for constant concern due to its frequent reintroduction and its negative impact on some of the territories that are FMD-free with vaccination or without vaccination, such as the 2001 outbreaks in the United Kingdom and the Southern Cone of the Americas.

In South America, after FMD was introduced in the 19th century, it became endemic in all countries. When introduced in Canada (1949) and Mexico (1950), this raised a concern throughout the Americas. This situation led to the establishment in 1951 of the Pan American Foot-and-Mouth Disease Center (PANAFTOSA), through an agreement between the Organization of American States (OAS) and the Brazilian Government, which placed it under the management of the Pan American Health Organization (PAHO).

Since its establishment, the Center has been providing technical cooperation to Member Countries, generating knowledge and tools for controlling the disease, particularly: the development of vaccines and diagnostic methods; the establishment of a South American network of diagnostic laboratories; the epidemiologic characterization of ecosystems of the disease related to livestock production systems; and the implementation of an extensive capacity building and human resources development programme, mainly for national veterinary services.

## Efficient technical cooperation for an unprecedented achievement

Additionally, in 1972, PANAFTOSA established the South American Commission for the Fight Against Foot-and-Mouth Disease (COSALFA), the regional forum, with public-private partnerships for the coordination and follow-up of FMD interventions. Subsequently, through PANAFTOSA, by mandate of the countries, PAHO creates in 1987 the Hemispheric Committee for the Eradication of Foot-and-Mouth Disease (COHEFA) and, by means of joint work with official services and in close collaboration with the private sector, the first Plan of Action 1988-2009 of the Hemispheric Program for the Eradication of Foot-and-Mouth Disease (PHEFA) was created and approved, setting out the regional challenge of eradicating the disease by 2009. Later, with the second Plan of Action 2011-2020, over 95% of the territory and the population of herds and animals in South America achieved the health status of free from foot-and-mouth disease with or without vaccination. Now, with the guidelines and strategies of the new Plan of Action 2021-2025 the goal is for the entire continent to be free from foot-and-mouth disease by 2025.

So far, the PHEFA has showed a remarkable performance, with 99% of the cattle herds in South America recognized as free from the disease, with or without vaccination, by the World Organisation for Animal Health (WOAH). This significant result is due to the substantial technical and financial efforts of the Member Countries, the efficient technical cooperation provided by PANAFTOSA, and the dedicated efforts of million livestock producers who value the health of their livestock as a priority and an asset for our society.

This worldwide achievement in health is unprecedented, not only for the technical and scientific challenges involved, but also for the magnitude of the intervention, which costs around US\$1 billion a year – a sum that, in most Member Countries, has been directly funded by the livestock producers.

1951

Agreement between OAS, Pan American Sanitary Bureau and the Brazilian Government.

PANAFTOSA established on 25 August to provide technical cooperation to the countries of the Americas in the fight against Foot-and-Mouth Disease.



1952

Kick-off of the training programme for professionals of the national veterinary services on the prevention, control and eradication of Foot-and-Mouth Disease.

1953

First international course on FMD diagnosis and prevention programmes. Opening of the Virus Diagnosis Unit.

Development and standardization of diagnostic tests, definition of standard laboratory procedures, and launching of a continuous capacity-building programme by organizing and implementing a network of diagnostic and serological laboratories for FMD virus and other vesicular diseases in South American countries.



1957

Establishment of the FMD Vaccine Production Plant.

Start of research with the Virus Diagnosis Unit on the antigenicity and immunogenicity of the circulating field virus strains for selecting strains for vaccines production.

Start of the research, with the Virus Diagnosis Unit, on the direct and indirect methods for controlling the efficacy of FMD vaccines.

1958/59

PANAFTOSA organizes two international conferences in Venezuela (1958) and Colombia (1959), with the participation of Colombia, Ecuador, Panama and Venezuela, where it recommends establishing a programme for preventing the transmission of FMD on the Colombia and Panama border.



1969

During the 2nd Inter-American Ministerial Meeting on Control of Foot-and-Mouth Disease and Other Zoonoses (RICAZ II), the Member Countries recognize PANAFTOSA as a reference laboratory on vesicular diseases for the Americas, which was later recognized by the Food and Agriculture Organization of the United Nations (FAO) and OIE.

1965

**An unprecedented achievement.** The Inter-American Development Bank (IADB) provides loans for the development of national plans to control the disease in South American countries.

PANAFTOSA produces guidelines for developing FMD national control programmes, which are rapidly established by South American countries.

1964

The South American Conference to Fight FMD is held in Brazil, with the technical and ministerial participation of all countries of the region, a landmark in the establishment of national FMD control programmes.



1962

PANAFTOSA organizes the 1st Technical meeting to fight FMD, with the participation of Argentina, Brazil, Chile, Paraguay and Uruguay, to address key methodological issues on controlling the disease.

An inter-countries commission makes recommendations on the international transit of animals and defines the standards of disease control in border areas.

These actions pave the way to the continental planning in the fight against FMD.

1960

PAHO defines PANAFTOSA as a regular programme and authorizes its Director to annually convene the Inter-American Ministerial Meeting on Control of Foot-and-Mouth Disease and Other Zoonoses (RICAZ), with the participation of the Ministers of Agriculture of all countries of the Americas. The objective was to promote regional integration and bilateral agreements among FMD-affected and disease-free areas.

PANAFTOSA urges countries to establish national plans for the control and prevention of FMD.



1970

The 1970s are characterized by concerns over the quality of the FMD vaccines used for the control of the disease in the infected areas.

1971

**The New Epidemiological Ecosystem Model.**

This model – which takes into consideration the characteristics of livestock production and the socioeconomic, political and cultural aspects that influence the production processes – becomes the basis for the FMD eradication strategy. It makes it possible to evaluate the degree of vulnerability in areas of livestock production in their FMD prevention stage.

1972

**Establishment of the COSALFA** – The South American Commission for the Fight Against Foot-and-Mouth Disease composed of the executive heads of the animal health services and the representatives of the livestock production sector of the countries of South America.

1973

**The First Ordinary Meeting of COSALFA, held in Brazil.**

Launching of the Continental Epidemiological Surveillance System



PANAFTOSA develops and standardizes the methodology for the industrial production of a FMD vaccine with an oil-based adjuvant and conducts field studies on this new product.

1970s

This decade is characterized by a reduction in the number of outbreaks due to the efforts of the national programmes that apply a model for FMD risk characterization at the regional level, based on the definition of FMD epidemiological ecosystems guiding the control strategies.

1981

**Chile becomes the first South American country internationally recognized as FMD-free.**

PANAFTOSA develops the Epidemiological FMD Data Bank.



The Brazilian Minister of Agriculture, Livestock and Food Supply visits PANAFTOSA.

1984

PANAFTOSA organizes the International Workshop on the "Evaluation of the Oil-Adjuvant Vaccine Use in the FMD Control Programs in South America".



1990s

1994

**PANAFTOSA reaches the milestone of 6,180 professionals from the countries of the region and other continents trained at its headquarters.**

PANAFTOSA develops the enzyme-linked immunoelectrotransfer blot (EITB) test to identify viral activity in the field, supporting the PHEFA in the identification and expansion of FMD virus-free zones.

1993

PANAFTOSA develops and provides Member Countries with the Guidelines to Maintain, Increase and Establish FMD-free Areas in South America.

1992

PANAFTOSA produces the oil-based FMD vaccine to respond to emergencies and implements systematic vaccination plans in Bolivia, Brazil, Ecuador, Paraguay and Peru.

1991

Uruguay, Argentina, Paraguay and the Brazilian States of Rio Grande do Sul and Santa Catarina, which have most of the bovine population of South America, are internationally recognized as FMD-free with vaccination.

Subcommittees were established for the Prevention of FMD in North and Central America, and Caribbean countries.

1988

**PANAFTOSA develops the Hemispheric Program for the Eradication of Foot-and-Mouth Disease (PHEFA).**

At the 1st Meeting of COHEFA in Washington, D.C., USA, the 1st PHEFA Plan of Action 1988-2009 is approved.

1987

The establishment of the Hemispheric Committee for the Eradication of the Foot-and-Mouth Disease (COHEFA), composed of six sub-regions: the Amazon, the Andean, the Caribbean, the Southern Cone, Central America and North America.

1986

The River Plate Basin Agreement is signed with the aim to control FMD at the sub-regional level.



2000s

2001

**PANAFTOSA provides technical cooperation to the countries of South America in the process of certification for official status recognition of Foot-and-Mouth Disease by the World Organization for Animal Health (OIE).**

2002

COSALFA recommends Member Countries to use the diagnostic system I-ELISA 3ABC/EITB, developed by PANAFTOSA, for serological diagnosis in support of FMD surveillance activities.



2003

Establishment of the Continental Epidemiological Surveillance System – **SivCont**. During the COSALFA, countries requested PANAFTOSA to lead research for the development and adaption of serological and virological tests to meet the new requirements for FMD-free areas.

2004

**The Houston Conference and the establishment of GIEFA.**



held in Houston, Texas, USA, which established the Inter-American Group for the Eradication of Foot-and-Mouth Disease (GIEFA) with the mission of mobilizing financial resources for PHEFA.

First international training course on the use of SivCont.



2006

IADB and PAHO/ PANAFTOSA start the Technical Cooperation Project "Regional Program for FMD Control for the expanded Mercosur Countries".

2007

Implementation of the Technical Cooperation Agreement between the Ministry of Agriculture, Livestock and Food Supply of Brazil (MAPA) and PAHO/PANAFTOSA, with the aim of strengthening animal health programmes in Brazil.



2013

Through COSALFA, countries request PANAFTOSA to develop a project for the creation of a **Regional Bank of Antigens/Vaccines (BANVACO)** to meet the needs of the Member Countries of the COSALFA.

2012

The Republic of Panama becomes a full member of COSALFA. PANAFTOSA, by request of the Permanent Veterinary Committee of the Southern Cone (CVP), with the participation of 56 technical staff from Brazil, Uruguay, Bolivia and Argentina, coordinates the field and laboratory technical cooperation to support Paraguay in demonstrating the lack of viral circulation for restoring the FMD-free with vaccination status.

The Technical Cooperation Agreement between the Development Bank of Latin America (CAF) and PAHO/ PANAFTOSA is signed to strengthen actions for FMD prevention and control on the Peru and Ecuador border.

The Animal Health Coordinating Association (ACONASA) of Paraguay signs a Memorandum of Understanding with PAHO to contribute to the Trust Fund for financing the technical cooperation of PANAFTOSA in support of PHEFA.

2011

**The PHEFA Plan of Action 2011-2020 begins implementation.**

A new landmark for Latin America is set: **85% of the bovine population attains the FMD-free status.**



2010

**The new PHEFA Plan of Action 2011-2020 is approved. The Trust Fund for Strengthening PHEFA (PHEFA Trust Fund).**

At COSALFA, the Member Countries endorse the proposal for creating a Trust Fund for strengthening PANAFTOSA's technical cooperation to support the consolidation of PHEFA – the PHEFA Trust Fund – and request the drafting of a new PHEFA Plan of Action 2011-2020.

During the 2nd Extraordinary COHEFA meeting, the new **Plan of Action 2011-2020 of the PHEFA** is approved.



A Technical Cooperation Agreement between the Brazilian National Beef Cattle Council (CNPC) and PAHO/PANAFTOSA is signed to support actions for strengthening the PHEFA, in particular the FMD control programme in Ecuador.

2010s

2014

**OIE recognizes PANAFTOSA as a Collaborating Center in Veterinary Public Health.**

Beginning of the agreement between Agrocalidad, Ecuador, and PAHO/ PANAFTOSA to finance technical cooperation programmes for Animal Health and Foot-and-Mouth Disease eradication.

PANAFTOSA initiates technical cooperation missions to evaluate the program for the prevention and eradication of FMD in Suriname.

PANAFTOSA's OIE/FAO Reference Laboratory for Vesicular Diseases begins its activities in the facilities of the National Agriculture Laboratory of Pedro Leopoldo, Minas Gerais State, Brazil (LANAGRO – MG), that fulfills the biosecurity BSL4-OIE standards.

The Technical Cooperation Agreement between the National Service of Quality and Animal Health (SENACSA), Paraguay and PAHO/PANAFTOSA is signed to support the animal health and FMD eradication programmes.

**Bolivia** attains the status of FMD-free country.

2015

**OIE certifies Ecuador as FMD-free with vaccination, with the Galapagos Islands as FMD-free without vaccination.**



Suriname becomes a full member of COSALFA.

During the 5th COSALFA Extraordinary Meeting, countries approve the **Technical Guidelines** for the implementation of the last stage in the PHEFA Plan of Action 2011-2020, i.e. the transition from FMD-free with vaccination to FMD-free without vaccination.

2016

The COHEFA Meeting held in Paraguay recommends that PAHO/PANAFTOSA manages and administers the BANVACO.

2017

**South America reaches the landmark of 95.5% of the bovine and buffalo population FMD-free.**

Brazil approves its new National FMD Prevention and Eradication Program aiming at becoming a FMD-free without vaccination country by 2023.

PANAFTOSA submits to the countries the **Agreement establishing BANVACO** and establishes the Regional Committee for Biological Risk Management and Biosafety.

PANAFTOSA recommends countries to suspend the administration of the FMD vaccine type-C virus in the region.

2018

OIE certifies the entire **Brazilian territory** as FMD-free – with 26 states as FMD-free with vaccination and one state as FMD-free without vaccination.

**Peru** attains the FMD-free without vaccination status and becomes the second South American country to achieve such a status as a result of a FMD control and eradication programme.

**Suriname** is recognized as FMD-free without vaccination.

2019

**Bolivia** obtains OIE recognition of Pando as an FMD-free zone without vaccination.

Every year, the region progresses towards the international recognition of FMD-free territories with or without vaccination, and countries such as Bolivia and Brazil review their plans for vaccine withdrawal.

May 2025

**South America attains WOAHA recognition for 99% of the cattle herds as FMD free – 66% without vaccination and 34% with vaccination.**

WOAHA certifies **Bolivia** and **Brazil** as foot-and-mouth disease free **without vaccination** throughout their national territories.

Argentina removes the C3 Indaial strain from the foot-and-mouth disease vaccine formulation; thereby, this serotype is now completely excluded from the vaccination programs of the region.

All countries in South American, except for Venezuela, maintain the FMD-free status.

**The American continent is closer to eradication, with over 80% of cattle FMD free without vaccination.**

2024

The **50<sup>th</sup> Ordinary Meeting of the COSALFA** takes place as a historic milestone for this public-private Commission devoted to eradicating foot-and-mouth disease in the region.



During the COSALFA 50, the countries visited the facilities of the new **WOAHA Reference Laboratory for Foot-and-Mouth Disease**, located at the PANAFTOSA campus, which meets BSL-3 Plus biosecurity standards.

PANAFTOSA holds the Meeting of the Animal Health **Laboratory Network** of the COSALFA.

**Bolivia** and **Brazil** submit to the WOAHA the dossier for the recognition of their entire territories as FMD-free without vaccination.

2023

**Ecuador** is the second country to sign its adhesion to the BANVACO.

Colombia obtains the certification from the WOAHA (founded as OIE) for Norte de Santander, thereby enabling the restoration of the entire country's status as a free.

2022

PANAFTOSA continues prioritizing **Venezuela**, aiming at reinforcing vaccination campaigns.

In Venezuela, the public-private initiative INSAI-FUNVESSA is consolidated to contribute to strengthening vaccination campaigns.

2021

**The PHEFA Plan of Action 2021-2025 begins implementation.**



A new milestone for **South America**: over 95% of its territories, 98.8% of its cattle herds and 95.9% of its bovine population have achieved FMD-free status.

Colombia obtains OIE recognition for the protection zone along the border with Venezuela, comprising the municipalities of the departments of Arauca, Vichada and Boyacá.

**Paraguay** is the first country to sign its adhesion to the Agreement of the BANVACO.

PANAFTOSA develops the **ELISA FMD gIII** (multispecies) which enables in vitro detection of antibodies against the non-structural protein of the foot-and-mouth disease virus.

2020

**The new PHEFA Plan of Action 2021-2025 is approved.**

During the 3<sup>rd</sup> Extraordinary Meeting of the Hemispheric Committee for the Eradication of Foot and Mouth Disease (COHEFA), the new **Plan of Action 2021-2025 of the PHEFA** is approved. **Colombia** regains its FMD-free status for the zone that had been suspended after the 2017-2018 outbreaks.

2020s

1950s