B R A Z I L

COSALFA 50

FINAL REPORT

INTERNATIONAL SEMINAR – PRE-COSALFA 50

GETTING CLOSE TO REGIONAL ERADICATION: HALF A CENTURY OF PROGRESS

Rio de Janeiro, Brazil | April 22 and 23, 2024

Pan American Health Organization
World Health Organization
Regional Office for the Americas

PAHO

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

PAHO Pan American Health Organization World Health Organization Americas

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INAUGURAL SESSION

In the inaugural session, Dr. Ottorino Cosivi, director of the Pan American Foot-and-Mouth Disease Center of the Pan American Health Organization (PANAFTOSA/PAHO), welcomed the participants and invited Dr. Marcelo de Andrade Mota, director of the Department of Animal Health of the Ministry of Agriculture and Livestock (MAPA), and Paulo Henrique de Morais, from the Department of Agriculture, Fisheries and Supply of Rio de Janeiro, to join him on the main table. Dr. Cosivi began the meeting by highlighting that this seminar has been taking place since 1977 aiming to create a space for technicians, the scientific community, and private bodies to exchange experiences on plans and actions to eradicate foot-and-mouth disease in the continent.

Dr. Paulo Henrique Morais welcomed the participants, highlighting his and Mr. Governor's satisfaction with receiving the 50th COSALFA, as it was to receive the first, in 1973. On behalf of the minister, Dr. Marcelo Mota thanked PANAFTOSA/PAHO for organizing this seminar to highlight advances in the fight against foot-and-mouth disease, as well as the strengthening of Veterinary Services in the region. In turn, he also mentioned the importance of combating foot-and-mouth disease regarding food security and socioeconomic point of view. He thanked the people who were part of the history of the fifty editions of COSALFA at this important moment on the continent, with countries moving towards the status of foot-and-mouth disease-free without vaccination. Dr. Mota, in his final words, paid tribute to Dr. Mario Vasco Fernandes, Dr. Ubiratan Mendes Serrão, and Dr. Vicente Astudillo, professionals who worked at PANAFTOSA/PAHO, for their dedication to the fight against foot-and-mouth disease.

Dr. Cosivi opened the meeting highlighting that the seminar program seeks to report on the countries' experiences in achieving the objectives of the Hemispheric Foot-and-Mouth Disease Eradication Program (PHEFA), action plan 2021-2025. He thanked MAPA and the Department of Agriculture for their support in carrying out this COSALFA meeting.

The Seminar agenda is in Annex 1.

OBJECTIVE

After more than 50 years of struggle, the delegates from each COSALFA member country and the invited experts bring to the table a history of the fight against the disease in their countries, the current scenario, and the challenges that are required to maintain or advance the recognized status of free from foot-and-mouth disease, in the current context and the different strategies, for each situation. That through the discussions present the opportunity to assess current and future challenges to meet the objectives of the PHEFA Action Plan 2021-2025.

Day 1: April 22, 2024

SESSION 1: FOOT-AND-MOUTH DISEASE: SITUATION IN THE WORLD AND THE AMERICAS

Moderator and Introduction to the topic: Manuel Sánchez Vázquez, PANAFTOSA/PAHO

Dr. Sánchez, as moderator, made a brief introduction highlighting that, except for the current situation in Venezuela, the continent is progressing according to PHEFA guidelines. He reiterated that globalization and increased trade reinforce the risks of reintroduction of foot-and-mouth disease in the region and, therefore, the need to know the situation of foot-and-mouth disease at a global level. He highlighted that, at PHEFA, the objectives include advancing the status of countries in the region and maintaining the status of countries free without vaccination. He presented the sli.do platform, where participants will be able to ask questions to the speakers. He then introduced the first lecturer, Dr. David Paton, a virologist, who cooperates with the World Reference Laboratory in Pirbright, United Kingdom, and with the European Commission for the Control of Foot-and-Mouth Disease - EuFMD.

1.1 World Foot-and-Mouth Disease Situation

David Paton, Pirbright Institute, UK

Dr. Paton thanked for the invitation and to his colleagues at Pirbright and EuFMD who collaborated on this presentation. On the World Organization for Animal Health's (WOAH) map regarding foot-and-mouth disease status in the world, he highlighted the situation of countries that have disease control programs, recognized by WOAH, and the distribution of endemic pools of the virus. He also highlighted countries that had their status recently suspended, such as Guyana, for not meeting the Organization's requirements. At present, Guyana's status has been reinstated.

He then detailed the distribution of the 7 pools of virus circulating in the world, which is a work carried out by the World Reference Laboratory, which constantly monitors the emergence of new strains. He mentioned that the "Global Framework for the Progressive Control of Transboundary Animal Diseases" (GF-TADS) allowed advances in the programs of several countries to combat foot-and-mouth disease, including China and India, two countries with large herds. He highlighted that some countries, such as Indonesia, had their status downgraded, presenting outbreaks of foot-and-mouth disease.

On the other hand, EuFMD developed a vaccine prequalification initiative, to distinguish good quality vaccines from those of lower desirable quality, establishing a minimum desired standard for a vaccine to be considered efficient, as detailed in the WOAH Handbook.

Regarding the work of the WOAH reference laboratory network, he highlighted the latest global foot-and-mouth disease events (2021-2023). Some occurrences were recorded in North Africa, the Middle East, Russia, Kazakhstan, South Korea, Indonesia and India. He expressed concern about the spread of the SAT-2 serotype, due to the lack of vaccines globally against this serotype. A worth noting fact was the registration in Egypt of virus of serotypes O and A described as originating from South America. He commented on the genotypic similarity of these virus with those from Colombia and Venezuela in 2018. In addition to these occurrences, others were recorded as epidemiologically important in North Africa and the Gulf countries.

He commented on the potential for virus to spread over long distances, resulting from the legal or illegal transit of animals and products, remembering that South America is the largest exporter of livestock products in the world. Therefore, countries must have access to good vaccines.

To help countries select serotypes for a vaccine bank, EuFMD developed the PRAGMATIST tool that allows cross-protection between serotypes to be estimated through serological tests. In this project, EuFMD carried out cross-protection prediction work, demonstrating that, for some serotypes, the level of circulating antibodies necessary for effective protection may be high. On the other hand, with regard to the exchange of biological material, he mentioned the Nagoya Protocol, which seeks to regulate the exchange of biological material, mentioning the difficulty in supplying antigens to developing countries to produce vaccines.

The presentation is available at the following link:
https://www.paho.org/sites/default/files/1.1_situacao_global_fa_-_david_james_paton_1.pdf

1.2 Hemispheric Foot-and-Mouth Disease Eradication Program (PHEFA)

Diego Viali dos Santos, PANAFTOSA/PAHO

Dr. Viali described the progression of PHEFA's action plans, the first plan of which was developed in April 1987. The countries gathered in V RIMSA requested a Hemispheric Foot-and-Mouth Disease Eradication Program. The continent was divided into six subregions: North, Central America, and the Caribbean, with no cases, and another three subregions in South America with cases. The first PHEFA Action Plan ran from 1988 to 2009. The results did not meet the plan and the second action plan was carried out, from 2011 to 2020, and subsequently to the third, from 2021 to 2025, adapting the actions to a changing reality. Throughout these periods, there were major advances in the status of countries in the region. The free area went from 4% in 1988 to 95% in 2021. The last outbreaks of the "O" virus on the continent were registered in Colombia in 2018. The "C" serotype occurred in 2004 in Brazil and the "A" serotype in 2013 in Venezuela.

Regarding the third PHEFA Action Plan (2021-2025), there are three specific objectives: 1) eradicate the foot-and-mouth disease in Venezuela and mitigate the risk in the northern *Andean* region; 2) transition status to free without vaccination in countries that still vaccinate; and 3) maintain the status of free countries without vaccination.

Regarding objective 1, a private foundation was created in Venezuela to assist in actions to combat foot-and-mouth disease, the Venezuelan Animal Health Foundation - FUNVESSA. Vaccines were offered for use in the country, a regional commission was created to monitor the Foot-and-Mouth Disease Eradication Program - PROFA, and PANAFTOSA/PAHO technical cooperation actions with the country were increased. As for Colombia, the Norte de Santander region was recognized in the country as free with vaccination. Furthermore, an additional vaccination cycle was adopted in the border region with Venezuela, bilateral meetings were held with Venezuela, and a field simulation was conducted in the country.

Regarding objective 2, Brazil and Bolivia made progress in withdrawing the vaccine, while Paraguay and Ecuador are discussing a transition schedule to the status of vaccination-free countries. On the other hand, regarding objective 3, emergency preparedness training was carried out in several countries, and the Contingency Plans of the countries in the region were also reviewed.

The current work plan in the context of PHEFA includes the implementation of the Operational Plan in Venezuela, the reinforcement of the PROFA support commission, the intensification of border actions, the recognition of Bolivia and Brazil as free from foot-and-mouth disease, the interruption of production of vaccines with serotype "C" in the region, presentation of schedules for vaccine withdrawal in Ecuador and Paraguay, implementation of BANVACO, updating contingency plans and carrying out simulations.

In conclusion, joint work needs to be intensified, with common guidelines. There has been great progress towards eradication; however, it is necessary to propose a new action plan beyond 2025 to face the new challenges towards the eradication of foot-and-mouth disease across the region.

The presentation is available at the following link:
https://www.paho.org/sites/default/files/1.2_phefa_-_diego_viali_dos_santos_1.pdf

Session 1 Discussion

1. Dr. Paton commented on the possibility of testing the Egyptian virus against the vaccines used in South America, considering that it would be a good option, but not yet carried out. Dr. Paton made clear the need to structure national banks or a regional antigen bank for South America, given the progress observed in the last stages of PHEFA.
2. Continuing the discussion, Dr. Viali said that the risk that Venezuela represents for Brazil is low, as the border is poorly permeable and has a low density of herds. However, the border between Venezuela and Colombia is more permeable and represents a greater risk, where joint actions are necessary, such as vaccination in the border strip. He highlighted the need for mutual cooperation between countries in the subregion, especially within the scope of PROFA, in Venezuela.
3. Is there a coincidence between the detection of the virus of South American origin in Egypt and the export of cattle from Venezuela? Dr. Sánchez highlighted that it is difficult to establish a relationship between the findings of the foot-and-mouth disease virus in Egypt and the export of live animals from Venezuela to that country.
4. Dr. Viali spoke about the need for a new PHEFA to complete the eradication of foot-and-mouth disease, maintaining the specific objectives of the current plan.
5. Dr. Paton commented that surveillance for foot-and-mouth disease is improving in South America, China, and India; however, there are problems in endemic countries that suffer from political instability.
6. Dr. Viali commented on emergency strategies, especially on the need for a vaccine bank and the use of dispersion models to predict the dynamics of a possible reintroduction of the virus.
7. Dr. Sánchez highlighted that countries in the region can use exotic strains for vaccine banks, as long as they are approved by the Regional Biosafety Commission.
8. Dr. Viali spoke about the importance of the vaccine bank - BANVACO, highlighting that the region currently uses systematic vaccination for only two subtypes, while there are several in action around the world. The accession of other countries to BANVACO will enable its creation and subsequent expansion of coverage, allowing it to work with other serotypes.

SESSION 1 CONCLUSIONS

- Foot-and-mouth disease is a global occurrence, characterized by seven groups, and in recent years, occurrences of viral strains have been recorded in places never detected before.
- In South America, currently, only 4% of the territory and 1% of herds remain in areas not recognized as free from foot-and-mouth disease.
- Since the establishment of PHEFA, there has been a clear evolution of the continent towards eradication. Within the 2021-2025 Action Plan, progress is expected in the three specific objectives by the end of 2025; however, eradication of the disease might not be achieved, and a new action plan will be needed.

SESSION 2: COSALFA COUNTRIES ACCORDING TO STATUS: WITHOUT RECOGNITION

Moderator and Introduction to the topic: *Guilherme H. Figueiredo Marques*, PANAFTOSA/PAHO

Dr. Marques, as moderator, made a brief introduction while presenting the topic's speaker, Dr. Wilmer Alcázar, director of animal health at the National Institute of Integral Agricultural Health - INSAI, highlighting that Venezuela is the only COSALFA country that still is not recognized as free from foot-and-mouth disease by the WOAH. Venezuela had some years a high vaccination coverage, but there has been a significant decrease in recent years.

2.1 Venezuela

Wilmer Alcazar, Delegate of COSALFA

Dr. Wilmer Alcázar, the country delegate of COSALFA, acknowledged that Venezuela still has a long way to go. He described the country's productive characteristics, presenting the cattle population, population density and the number of livestock facilities. He described that, in 2008, INSAI was created, where the Animal Health Directorate and the Foot-and-Mouth Disease Program - PROFA are located. The structure of the Official Veterinary Service - OVS - has 186 local veterinary units, 80 traffic control points and 245 official veterinarians. The country, although not recognized by the WHOA, declares itself free from foot-and-mouth disease with vaccination. The last outbreak was recorded in 2013, in the city of *Barinas*, by a serotype A virus. The country will not meet the objective of the current PHEFA Action Plan, which ends in 2025.

He highlighted that, since 2015, Venezuela has received economic sanctions from the United States, which have seriously affected the country, which has stopped receiving 300 billion dollars since that year. This affected PROFA's progress, due to the lack of resources for investment. As a result, vaccination coverage has fluctuated from 100% in 2014 to 40% at present. Herd data is out of date, which prevents an assessment of real coverage. Between 2006 and 2016, "social vaccination cycles" were implemented, in which the Venezuelan government donated vaccines to small producers. More than 60 million free doses were administered. During this period, the endemic pattern of the disease was interrupted in the country.

In 2015, the WOAH recognized Venezuela's foot-and-mouth disease control program, but withdrew it in 2017 due to declining vaccination coverage rates. International technical cooperation has been important for Venezuela, whose program is in step 2 of the FAO's progressive foot-and-mouth disease control project for the *Andean* subregion.

PANAFTOSA was the international organization that most supported the country, with monitoring of actions, training, and direct technical assistance in several areas, especially in the laboratory. A COSALFA 49 Resolution urged countries to strengthen support for the PROFA Regional Monitoring Commission.

As of 2022, the Venezuelan Foundation for Animal Health Services (FUNVESSA) was created, for which the private sector participates in actions to combat foot-and-mouth disease through a public-private partnership (PPP), aiming to re-establish high levels of vaccination coverage.

Until 2023, the vaccination calendar in Venezuela consisted of two cycles with periods of 60 days. From 2024, cycles have been reduced to 45 days. From February 2025, an additional cycle will be adopted on the border with Colombia, intended for animals under 24 months old. Finally, the plan to be presented to WOAH for recognition is based on zoning into 3 zones: zone 1 (island and peninsular), expected to be declared free without vaccination by 2026; zone 2 (South – *Orinoco Delta* and *Apure*), to be declared free with vaccination by 2027; and zone 3 (rest of the country), it is expected to be declared vaccination-free by 2028. Challenges include updating the registration of herds and properties, improving vaccination cycles, advances in zoning, strengthening surveillance and the structure of FUNVESSA.

The presentation is available at the following link:
https://www.paho.org/sites/default/files/2.1_venezuela_-_wilmer_jose_alcazar_guerra_1.pdf

Session 2 Discussion

1. What kind of cooperation does Venezuela need to advance its eradication plan toward international recognition? It was commented that the answer lies in COSALFA 49 Resolution, which deals with the PROFA Regional Monitoring Commission and requests the collaboration of countries with resources for the country.
2. What is FUNVESSA's contribution to the advancement of the program? FUNVESSA suffers from a lack of resources but has made progress in organizing the group of livestock unions and in mobilizing the private sector.
3. What policies does Venezuela hope to implement, and what are the difficulties in vaccinating its livestock? The main step is the strengthening of FUNVESSA and the consequent improvement of vaccination cycles.
4. Does the operational plan presented have the commitment of the Venezuelan minister/government for the necessary investments? What is the value of the investments? The plan is under construction and awaits recommendations from PANAFTOSA and COSALFA countries and it is necessary to define the public and private resources allocated to the operational plan.
5. How is the active and passive surveillance of foot-and-mouth disease? Are interlaboratory tests performed? Where are diagnostic kits purchased? Surveillance is largely passive, in many forms: by livestock farmers, at traffic control points, and in slaughterhouses. Surveillance recorded outbreaks of vesicular stomatitis. The national laboratory participated in the interlaboratory testing rounds. Venezuela has not conducted viral transmission studies; however, the last research evaluating vaccination coverage was satisfactory. A cooperation agreement with PANAFTOSA is under analysis.
6. How is animal movement controlled in Venezuela? With sanitary movement permit, issued to vaccinated animals. The program sanctioned more than 80 livestock farmers from the second half of 2023, for not vaccinating.
7. It was questioned whether the elections scheduled for this year could affect the program. Dr. Alcázar responded negatively, but if that were the case, it would only be until July.

SESSION 2 CONCLUSIONS

- Dr. Wilmer Alcázar, public delegate of Venezuela, presented a lecture on the work carried out by INSAI and the challenges for Venezuela to be free of foot-and-mouth disease by 2028 This Operational Plan, which still needs approval from the Venezuelan Minister of Agriculture, foresees changes in vaccination cycles, with the inclusion of an additional vaccination cycle for young animals (< 24 months) in the international border area with Colombia and the reduction of two complete cycles from 60 to 45 days.
- The delegate also informed that the Operational Plan proposal will have 3 free zones with different calendars and activities, where the island area would seek recognition as free without vaccination and two other free zones with vaccination, progressively, between 2026 and 2028.

SESSION 3: COSALFA COUNTRIES ACCORDING TO STATUS: FREE WITH VACCINATION

Moderator and Introduction to the topic: Rodrigo García, PANAFTOSA/PAHO

Dr. García, as moderator, made a brief introduction, highlighting that the absence of outbreaks in vaccination-free countries, for long periods, reveals the success of national control and prevention programs. However, he highlighted that countries must move forward under the objectives contained in PHEFA. From May 1st, 260 million cattle will not be vaccinated against foot-and-mouth disease, which represents 2/3 of the continent's herd.

3.1 Paraguay

Victor Maldonado, SENACSA

Dr. Victor Maldonado, representing the delegate to COSALFA for Paraguay, presented the structure of the National Service of Quality and Animal Health (SENACSA), highlighting that the institution has 1,400 employees, of which around 700 are veterinarians. It showed the geographic distribution of service units. The current budget is around 33 million dollars. This value is generated by the institution itself.

The foot-and-mouth disease program was established by law in 1996 and, as of 2013, it was restructured. The program has a public-private support foundation created in 2017, the Animal Health Services Foundation (FUNDASSA), which is responsible for vaccination. Approximately 98% of the animal population and 85% of properties are georeferenced and vaccination coverage is 99%. The animal population is updated during vaccination cycles and surveillance is carried out using the SISA system. Passive notification resulted in more than 4 thousand notifications, of which 109 correspond to vesicular disease. SENACSA has 5 laboratories, one of which is at NB4 level. The country updated the contingency plan for foot-and-mouth disease in 2023.
Since 2015, immunity studies have been carried out, which revealed that 97% of establishments had adequate protection in 2023. Risk studies have been carried out over the last 10 years and, in the most recent study, more than 24 thousand animals were sampled.

Risk management and communication are the main pillars of the program, which has demonstrated sustainability over the last two years. The risks of reintroduction are considered low, and the country is discussing a schedule for withdrawing the vaccine. Challenges remain for the country, such as maintaining public-private cooperation, updating the registry, improving the surveillance system, and access to a vaccine bank.

The presentation is available at the following link:
https://www.paho.org/sites/default/files/3.1_paraguay_-_victor_dario_maldonado_caceres_0.pdf

3.2 Uruguay

Enrique Diego de Freitas Netto, Delegate of COSALFA

Dr. Enrique Diego de Freitas Netto, delegate to COSALFA and director of animal health at the Ministry of Agriculture, Livestock and Fisheries (MGAP) announced that he would share the presentation with Dr. María Victoria Iniarte. The country's productive characteristics were presented, with density maps of the cattle population. A brief history of the fight against foot-and-mouth disease in the country was presented, highlighting the first record in 1870.

In 1993, the country was recognized by the WOAH (formerly OIE) as free with vaccination and, in 1996, without vaccination. Unfortunately, the "O" virus was reintroduced into the country in 2000 and the "A" in 2001. The current status is free with vaccination. The structure of the MGAP was presented about the structure and human resources involved in animal health. The foot-and-mouth disease budget has reached more than $22 million in the last two years. The private sector participates through the National Honorary Commission for Animal Health (CONAHSA), in which several private entities participate, and the Permanent Indemnity Fund. The passive surveillance and certification system rely on qualified and accredited private veterinarians. Several vaccination coverage surveys were carried out, with results exceeding 80% of properties covered.

Uruguay has not joined BANVACO nor has access to vaccine banks. The country imports vaccines from Brazil, Argentina, Colombia and Paraguay. In relation to emergencies, it developed a plan that, in case of reintroduction of the virus, provides four alternatives, according to the epidemiological situation faced, which combine vaccination and slaughter. The last update of the country's contingency plan was in 2016. The last simulation was carried out in 2008; however, other training courses have been carried out since then.

The main challenges are to continue vaccination cycles, improve the surveillance system and improve emergency preparedness.

The presentation is available at the following link:
https://www.paho.org/sites/default/files/3.2_uruguay_-_enrique_diego_de_freitas_netto_0.pdf

Session 3 Discussion

1. When will Uruguay stop vaccinating? The outbreaks of 2000 and 2001 harmed the economy. The public and private sectors agree to continue vaccinating, to maintain their current status and guarantee this situation in the markets.
2. Concerning Paraguay, the process has already begun, the OVS is being restructured, with improvements in physical and human resources. The withdrawal of the vaccine will be the last step in this restructuring, carried out in a consensual manner between the public and private sectors.
    a. What challenges must countries overcome to move forward with vaccine withdrawal?
    b. In Paraguay, the foot-and-mouth disease program faces challenges such as the individual identification system, the training of human resources in the face of new scenarios, the emergency fund and, mainly, joint work with the private sector, towards a consensus on when stop vaccination.
    c. In Uruguay, the challenge is to maintain its international status, which has allowed the country to access the most demanding markets, and it is necessary to continue improving this collaboration with the private sector.

SESSION 3 CONCLUSIONS

Transition from a country from "free with vaccination" to "free without vaccination" status:

- Uruguay clarified that no schedule for the withdrawal of vaccination is currently being discussed. Therefore, plans to transition from "free with vaccination" to "free without vaccination" were not contemplated.
- In the case of Paraguay, a significant restructuring of the official veterinary service is being carried out. Subsequently, a consensual agenda will be established with the several actors involved in the livestock business.

SESSION 4: COSALFA COUNTRIES ACCORDING TO STATUS: FREE WITH VACCINATION AND FREE TERRITORIES WITHOUT VACCINATION

Moderator and Introduction to the topic: *Diego Viali dos Santos*, PANAFTOSA/PAHO

In his brief introduction, Dr. Viali highlighted the advances observed in the countries, mentioning the collaboration of PANAFTOSA/PAHO, within the scope of PHEFA. He introduced the three speakers on the topic; Countries are already developing their programs and are aware of the difficulties. However, Colombia faces an additional risk factor, which is the border with Venezuela.

4.1 Argentina

Horacio Angelico, SENASA

Dr. Horacio Angélico from SENASA, representing delegate to COSALFA for Argentina, began by detailing the production system in relation to recognized statuses. He detailed the map with the recognized zones, with and without vaccination, mentioned the last outbreak in 2006 and the creation of a surveillance area. He highlighted the activities, especially public-private partnerships (PPP), which are a success due to the participation of the productive sector in combating the disease. He recognized that PANAFTOSA/PAHO technical cooperation was the instrument to achieve success. The importance of this support translates into a stable situation in the absence of foot-and-mouth disease.

Vaccination is carried out by the private sector, which hires and trains accredited vaccinators. The costs of vaccination are divided into 96% for the livestock farmer and 4% for the public sector. Among the program's activities, he mentioned the vaccination data recording system through an application, via cell phone, but it is not mandatory and there is little communication on the part of livestock farmers. The compensation fund is covered by the government, according to the current assessment values.

They are developing a training program for field personnel and a contingency plan in which a simulation is scheduled in the free zone without vaccination, with the support of PANAFTOSA/PAHO and CVP. He also informed that they have their own antigen bank and that the country is not in the process of changing its status and will not interrupt vaccination. The official vaccine is composed of 4 serotypes and is the only one that still includes the "C" virus; however, its withdrawal is being studied. The country has developed an active surveillance program that uses virgin animals to search for viral circulation.

The presentation is available at the following link:
https://www.paho.org/sites/default/files/4.1_argentina_-_horacio_angelico_0.pdf

4.2 Bolivia

Javier Ernesto Suárez Hurtado, SENASAG, Delegate of COSALFA

Dr. Javier Ernesto Suárez Hurtado, from the National Agricultural Health and Food Safety Service (SENASAG) and delegate to COSALFA, detailed geographic data and the animal production sector, highlighting that cattle production is concentrated in eastern Bolivia. The current situation of free zones with and without vaccination is the result of progressive control of foot-and-mouth disease, and Bolivia has suspended vaccination and is seeking recognition of this status.

The OVS structure has more than 1,200 public servants and a budget of 33 million dollars (50% allocated to animal health). The private sector formed a National Animal Health Commission in the context of the General Animal Health Regulation (REGENSA), which also established the Compensation Fund in the Departments of *Beni* and *Santa Cruz*, financed by contributions from the private sector.

International technical cooperation has been essential for the development and implementation of the National Foot-and-Mouth Disease Eradication Program (PRONEFA) and all the advances achieved in fighting against foot-and-mouth disease. Dispersion models are implemented in emergency preparedness.

The program's future challenges are: maintaining the livestock registry; adjusting the surveillance system for early detection and immediate response; access to BANVACO; updating PRONEFA into a structuring program, and training staff for the early detection of foot-and-mouth disease.

The presentation is available at the following link:
https://www.paho.org/sites/default/files/4.2_bolivia_-_javier_ernesto_suarez_hurtado_0.pdf

4.3 Brazil

Ana Carolina Fanhani de Arruda Botelho, MAPA

Dr. Ana Carolina Fanhani de Arruda Botelho from MAPA, Brazilian delegate to COSALFA, mentioned that the country has free zones with and without vaccination and is getting closer to obtaining recognition of free without vaccination for a herd of more than 240 million cattle. To this end, the country will send documentation to WOAH for recognition as free without vaccination in 2025.

The fight against the disease began in the 1960s and, from 1992 onwards, the plan was reformulated, being strategically updated again in 2007 and 2020. Due to its size, the official service has a structure of more than 3 thousand veterinarians and 4 thousand assistants, distributed in 1,585 local units, 389 regional units, 221 traffic control posts, and 4,765 field service offices. The country has an annual budget of around 125 million dollars for the animal health sector.

The private sector, responsible for vaccination, in addition to participating in surveillance, is a member of the National and State Management Team, where the implementation of the strategic plan is debated. It has more than 193 thousand private veterinarians.

The country is a founding member of WOAH; headquarters of PANAFTOSA since 1951, and member of COSALFA since its foundation. Since then, Brazil has followed the common guidelines agreed within COSALFA and PHEFA, following the path of transition to a free country without vaccination. Currently, the country is part of Venezuela's Regional PROFA Support Commission, as per COSALFA 49 resolution.

Brazil has a contingency plan updated in 2020 and carries out annual foot-and-mouth disease simulation exercises. Training involves other public institutions and the private sector.

The 2017-2026 Strategic Plan foresees the gradual replacement of vaccination with surveillance actions aimed at early detection.

The main challenges for Brazil are: transitioning to free status without vaccination in all states of the country; updating and maintaining the livestock registry and its integration at the federal level; strengthening surveillance and implementing a vaccine bank; strengthening the official veterinary service and updating transit control of animals from countries that still vaccinate.

The presentation is available at the following link:
https://www.paho.org/sites/default/files/4.3_brasil_-_ana_carolina_fanhani_de_arruda_botelho_0.pdf

4.4 Colombia

Edilberto Brito Sierra, ICA

Dr. Edilberto Brito Sierra from ICA, Colombian delegate to COSALFA, mentioned the country's productive data and explained the criteria for zoning Colombia, divided into two free zones without vaccination and five with vaccination. The first free zone appeared in 1997, a scenario that has evolved to the current one. In 2009, there was an outbreak on the department of *Nariño* when the country lost its status, which was regained in the same year. In 2017 and 2018, new outbreaks were registered with a further loss of status, recovered again in 2020.

The official ICA structure has 460 veterinarians in 178 local units, 16 regional units and 190 traffic control posts. This structure is supported by the private sector, which works in the organization and execution of vaccination, with 4 thousand vaccinators, under the supervision of the ICA. Vaccination cycles occur in two stages, covering the entire cattle and buffalo population, twice a year and, from 2023, an additional cycle for young animals. Vaccination coverage exceeds 98%, with an average coverage of 95% over the last 10 years. Immunity studies are carried out with protection levels of around 90%.

A national foot-and-mouth disease simulation was carried out in 2022 and another is being scheduled this year 2024, in conjunction with Venezuela.

Colombia exports live animals to Middle Eastern countries and animal products to several countries. Exports were diversified with the control of foot-and-mouth disease.

The main challenges include maintaining the achieved status, adjusting vaccination cycles, strengthening the OVS, establishing a new vaccination-free zone, suspending the additional cycle at the border and continuing joint work with Venezuela. The prospects for work with Venezuela include increasing the participation of PANAFTOSA/PAHO, carrying out joint simulations, periodic bilateral meetings, strengthening technical exchange, carrying out immunity studies at the border and seeking donations of vaccines for the border area.

The presentation is available at the following link:
https://www.paho.org/sites/default/files/4.4_colombia_-_edilberto_brito_sierra_0.pdf

4.5 Ecuador

Christian Antonio Zambrano Pesantez, AGROCALIDAD, Delegate to COSALFA

Dr. Christian Antonio Zambrano Pesantez, from AGROCALIDAD and delegate to COSALFA, began by presenting the productive characteristics of his country, then went on to explain the zoning process in the face of foot-and-mouth disease, which divides the country into two zones: the island, which it is free without vaccination, and the continental one, free with vaccination since 2014. Several outbreaks were recorded in the country between 1979 and 2011, with the last outbreak recorded in 2011 in Ecuador.

The OVS structure has 128 veterinarians, 1,024 private brigadiers, and another 76 professionals distributed across 23 regional units, 72 local ones, and 19 traffic control posts. Its budget is more than 5 million dollars. Ecuador has benefited from the support of PANAFTOSA/PAHO and FAO, which have provided technical cooperation and financial and human resources to advance the national program.

Through a technical cooperation agreement with PANAFTOSA/PAHO, in force since 2014, more than one million dollars were invested in strengthening diagnostic capacity, carrying out sampling, and direct technical cooperation from professionals. A risk analysis is currently being carried out in cooperation with PANAFTOSA/PAHO and the University of California.

Private sector participation occurs through agreements to carry out vaccination, which guide the activity, as well as passive surveillance. This was achieved through education and effective communication with producers, which is essential to make them aware of the importance of biosecurity in the cattle herd and to open new international markets. Vaccination cycles, which use imported vaccines, last 45 days and cover all age groups.

The transition to FMD-free status without vaccination presents numerous challenges that require careful planning, coordination, and collaboration between different actors in the livestock sector, besides international support and adoption of appropriate biosecurity and surveillance measures.

Challenges include maintaining vaccination cycles and status achieved; strengthening surveillance and prevention; emergency preparedness; sustainability of the official veterinary service (OVS); and the redirection of resources. Ecuador has joined BANVACO.

The presentation is available at the following link:
https://www.paho.org/sites/default/files/4.5_Equador_-_christian_antonio_zambrano_pesantez_0.pdf

Session 4 Discussion

At the end of the session, the debate was opened.

1. Dr. Suarez from Bolivia commented that he respects the decision of some countries to maintain vaccination, but highlighted that there is a commitment to moving towards vaccination-free status, and that complete eradication will only occur when everyone stops vaccinating.
2. Dr. Botelho from Brazil supported Dr. Suarez and highlighted that the country has a strategic plan aligned with PHEFA. She added that Brazil expects all countries to achieve the same FMD-free status without vaccination in the coming years. Brazil monitors its international borders, a situation that will be reinforced as the country's status advances.
3. Dr. Angélico from Argentina said that the removal of the "C" virus from the vaccine formulation is under discussion and that a decision will be made soon.

4. Dr. Brito clarified that in Colombia the six-monthly vaccination cycles are intended for animals of all age categories, with an additional cycle on the border with Venezuela for animals under 24 months. He emphasized that the country is moving towards vaccination-free status.
5. Dr. Zambrano from Ecuador mentioned that the delay in the transition schedule to the new status is due to the risk analysis, which will serve as the basis for withdrawing the vaccine.

SESSION 4 CONCLUSIONS

- Colombia has a project to adjust its annual vaccination cycles, including the provision of a vaccination-free zone in 2026, covering 3 states.
- Bolivia and Brazil are in transition and have the prospect of becoming disease-free countries by 2025 or 2026.
- Ecuador is working this year on a risk analysis and then preparing its roadmap.
- Argentina is in an internal discussion process to exchange its tetravalent vaccine for a bivalent one.

Day 2: April 23, 2024

PRESENT AND FUTURE CHALLENGES FOR MAINTAINING FREE AREAS WITHOUT VACCINATION
Wilna Vosloo, Australian Animal Health Laboratory, CSIRO, Australia
Moderator and Introduction to the topic: *Manuel Sánchez Vázquez, PANAFTOSA/PAHO*

Dr. Sánchez, as moderator, gave a brief introduction to the topic and introduced Dr. Wilna Vosloo, speaker from the Australian Animal Health Laboratory, CSIRO, Australia.

Dr. Vosloo recognized South America's success in controlling and eradicating foot-and-mouth disease. She highlighted that there are many differences between working in endemic countries and free countries. In Australia, the last outbreak occurred in 1872 and the disease did not become endemic due to the rapid and rigorous measures adopted. However, this fact led to changes in legislation that facilitated emergency response actions. Foot-and-mouth disease arrived in South America almost at the same time as it arrived in Australia and, in her opinion, contrary to what happened in that country, it became endemic due to multiple introductions in several countries, the lack of OVS structure, the inadequate legislation and the extensive movement of animals during colonization.

Obtaining free status is just the beginning; There are numerous challenges to maintaining this status. Among the challenges faced by countries and free zones are: controlling movement between areas with different statuses; the loss of political and industrial interest; decreased surveillance and emergency preparedness; the lack of population immunity; globalization; political instability and bioterrorism. However, about bioterrorism, Dr. Vosloo mentioned that in Australia the biggest concern is people who may inadvertently spread the virus.

Maintaining laboratory capacity in free countries is also a challenge. Australia, for example, is legally prevented from keeping the foot-and-mouth disease virus on its territory due to the risk of escape. For this reason, there are difficulties in validating tests and carrying out research.

Vaccine banks are important and must be evaluated regarding their useful life. It is important to define the types and quantities of antigens, the selection of strains, the type of adjuvant, the speed of production and delivery, and the number of doses required. Import permits and emergency registrations are required.

The entire process must include industry, government, including state governments, and take external risks into account. To this end, she mentioned the use of the PRAGMATIST tool.

To conclude, she reported that, at the moment, there is a rapid change in the global epidemiological scenario with the introduction of ASF in Indonesia and Papua New Guinea, foot-and-mouth disease, and contagious nodular dermatosis in Indonesia.

The presentation is available at the following link:
https://www.paho.org/sites/default/files/5.0_present_and_future_challenges_-_wilna_vosloo_0.pdf

Plenary discussion

1. Regarding regional risk, Dr. Vosloo mentioned that Australia has been helping its neighbors in disease prevention for 20 years, through cooperation in the field and in the laboratory and with the vaccine/antigen bank.
2. Regarding the use of the vaccine bank, she mentioned that her research showed that the need for doses depends on the traffic control capacity of the country or area.
3. Mentioned that both the government and the private sector participate in financing Australia's animal health program.
4. Among the challenges to consider, is the lack of knowledge of clinical disease is a problem. However, CSIRO periodically trains field staff and promotes the sending of suspected samples, just as EuFMD carries out training, sending technicians to endemic countries to see the disease and find out what steps to take.
5. It is important to view suspected vesicular diseases as potential outbreaks of foot-and-mouth disease, to maintain high levels of surveillance.

SESSION 5: COSALFA COUNTRIES ACCORDING TO FREE STATUS WITHOUT VACCINATION

Moderator and Introduction to the topic: *Manuel Sánchez Vázquez*, PANAFTOSA/PAHO

Dr. Sánchez, as moderator, gave a brief introduction while presenting the speakers. He highlighted that countries with different productive and epidemiological situations managed to maintain their status.

5.1 Chile

Carlos Hernán Orellana Vaquero, SAG, **Delegate to COSALFA**

Dr. Carlos Orellana Vaquero from SAG and delegate to COSALFA presented the situation according to the model, highlighting the surveillance that guarantees the status, mentioning the so-called "*veranadas*". Foot-and-mouth disease is the only disease with specific legislation. He reported how Chile prepares for emergencies, detailing the actions. Chile has not yet joined BANVACO. He then presented data on Chile's productive sector, with its different climates. Next, he went over the history of the eradication of foot-and-mouth disease over more than 60 years of fighting the disease. The country was recognized as free without vaccination in 1981 and underwent two reintroductions in 1984 and 1987. Based on a vigorous eradication program, it regained its status in 1988. The maintenance of this status is due to a program that prioritizes the prevention of entry and early detection, supported by a regulatory framework, inspections, and border controls, an efficient quarantine system, and the constant updating of health strategies.

The SAG structure includes more than 580 veterinarians, a total of 1,500 employees, distributed across 66 Local Veterinary Units (LVU), 16 regional ones, 35 traffic control points, and a laboratory. The private sector participates in passive surveillance, with veterinarians accredited by the SAG for numerous activities across the country. Foot-and-mouth disease is the only disease subject to compensation in Chile. Throughout the entire process, SAG counted on the cooperation of PANAFTOSA/PAHO, from the definition of control and eradication plans, training of field and laboratory personnel, and use of vaccines, and diagnostic kits to the presentation of international projects.

Chile has a national emergency system created in 2020. Periodic simulations are carried out with its contingency plan created in 2019. The country does not have access to a vaccine bank and has not joined BANVACO Its emergency plan is based on surveillance and rapid response.

The challenges for maintaining the status include preventive actions (identification of new threats), epidemiological analysis with advanced tools, emergency preparedness, and updating technical standards.

The presentation is available at the following link:
https://www.paho.org/sites/default/files/5.1_chile_-_carlos_hernan_orellana_vaquero_0.pdf

5.2 Guyana

Praimnauth Tihul, GLDA, Delegate to COSALFA

Dr. Praimnauth Tihul from GLDA and delegate to COSALFA began by detailing his country's productive sector, which has a livestock sector with 230 thousand cattle and other smaller species, distributed mainly along the coast and with few properties close to the border with Brazil. The last outbreak of foot-and-mouth disease occurred in 1978, and the country was recognized as free without vaccination by the WOAH in 2001. He highlighted that PANAFTOSA/PAHO has collaborated with the health authorities since the beginning and continues to provide technical cooperation with various actions linked to animal health in the country. The OVS structure includes 17 veterinarians, 52 para-veterinarians, 12 LVUs, 10 regional, and 10 traffic control points. Its annual budget is 780 thousand dollars.

The private sector participates in surveillance, research, simulations, and investments, and has 15 veterinarians. The country has an emergency fund under the responsibility of the Ministry of Finance and the Civil Defense Commission. In 2015, the country adopted the PANAFTOSA/PAHO emergency response manual, and in 2023 a simulation was carried out in region 9 of the country.

Challenges faced include: a wide porous border and, due to political insecurity, increased illegal movement of livestock along the northwest border; the effects of globalization; smuggling of animals and products; inadequate access to diagnostic platforms; low number of veterinarians specialized in emergency care; lack of active livestock associations; OVS sustainability and emergency preparedness.

The presentation is available at the following link:
https://www.paho.org/sites/default/files/5.2_guyana_-_praimnauth_tihul_0.pdf

5.3 Panama

Concepción Santos Sanjur, MIDA, Delegate to COSALFA

Dr. Concepción Santos Sanjur, from MIDA and delegate to COSALFA, presented the country's productive characteristics, with maps of the concentration of the animal population, which includes approximately 1.5 million heads of cattle, besides other species. Surveillance in Panama is focused on the international border with Colombia – *Darién* – where an inspection and control zone by the Panama-US Commission for the Eradication of Screwworm (COPEG) was established. In this area, the raising of cattle is not permitted, only pigs, used as sentinels.

Panama is historically free of foot-and-mouth disease without vaccination. The country began the surveillance for foot-and-mouth disease in 1951, with the disease's entry into Colombia. In 1972, the Panama-United States Agreement for the Fight against Foot-and-Mouth Disease (COPFA) was signed. In 2012, Panama joined COSALFA, hosting its 40th meeting the following year.

Joining COSALFA allowed Panama to follow the strategy to combat foot-and-mouth disease applied in the Southern Cone and to be part of PANAFTOSA/PAHO plans and programs for surveillance, control, and eradication of foot-and-mouth disease. The country receives support with training for field and laboratory technical personnel, risk analysis studies, emergency response simulations, and other communicable diseases.

Since 1932, the country has been divided into five animal health zones. The OVS structure has 75 LVUs, and 11 regional, 69 traffic control posts, where 121 veterinarians work, in addition to supporting staff. The private sector participates in passive surveillance and issuing animal transit permits.

The BS3 level vesicular diseases laboratory – LADIVES – serves all Central American countries. The sector's budget has varied between 10 and 14 million dollars in the last four years, not including spending on quarantines, which are the responsibility of OIRSA.

There are veterinarians at fairs (auctions) and in slaughterhouses, as well as in ports, airports, and international traffic control posts. There are no public-private partnerships and there is no compensation fund, despite the law that protects breeders in the event of animal slaughter, and funds are allocated through the national budget. The contingency plan dates back to 1998. The country does not have access to a vaccine bank. The last simulation was carried out in 2018, but another will be carried out in 2024 with the support of FAO and OIRSA.

The challenges that arise are: reinforcing super-surveillance in the Colombian-Panamanian border area, due to the health risk posed by the migration of people through the *Darién* forest; strengthening surveillance and control at air, sea, and land ports, due to the increased movement of people and goods through the country's different ports; improve coordination between the other institutions that make up the animal disease surveillance and control network at national level; improve emergency preparedness; and strengthen the OVS.

The presentation is available at the following link:
https://www.paho.org/sites/default/files/5.3_panama_-_concepcion_santos_sanjur_0.pdf

5.4 Peru

Eglinton Rubén Villacaqui Ayllón, SENASA, Delegate to COSALFA

Dr. Eglinton Rubén Villacaqui Ayllón from SENASA and delegate to COSALFA, presented the country's productive characteristics, highlighting that Peru has the largest herd of camelids in the world. Historically, foot-and-mouth disease has been controlled through vaccination. In 2005, WOAH recognized 10 southern departments as free without vaccination. The last outbreak of foot-and-mouth disease occurred in June 2004. In 2017, Peru stopped vaccination and, the following year, it was recognized as a free country without vaccination.

PANAFTOSA/PAHO has supported Peru in several epidemiological studies, such as risk characterization based on the movement and slaughter of cattle in slaughterhouses; risk analysis and evaluation of surveillance activities in the vaccination-free zone; carrying out field simulations for emergency care for foot-and-mouth disease; training of SENASA professionals; and participation in bilateral and trilateral meetings with neighboring countries. FAO also supported the country with training and simulations. Peru would not have achieved its vaccination-free status without the support of international organizations. The official structure is divided into 89 LVUs and 25 regional offices, besides 66 checkpoints, with a staff of 265 veterinarians and 65 paraprofessionals.

In turn, the private sector plays an important role in passive surveillance and there are several partnerships with producer associations. SENASA created 244 Local Animal Health Committees (AHC) and recognized 301 Community Leaders throughout the national territory. There is no compensation for producers in the event of foot-and-mouth disease and the country does not have an emergency fund. The creation of a health compensation fund for foot-and-mouth disease outbreaks is being discussed with the private sector. The country's contingency plan dates back to 2013 and the last foot-and-mouth disease simulation was carried out in 2019. Prevention of the disease includes the establishment of sanitary requirements for the import of animals, products, and by-products, as well as transit control through health certificates.

Peru's main challenges in maintaining its status are: raising awareness of the surveillance system, training breeders and producers, and coordinating with border authorities. Preparedness for foot-and-mouth disease emergencies: foot-and-mouth disease simulations, epidemiological modeling of outbreak scenarios, ongoing training for SENASA staff. Finally, it is important to strengthen the laboratory network and join BANVACO.

The presentation is available at the following link:
https://www.paho.org/sites/default/files/5.4_peru_-_eglinton_ruben_villacaqui_ayllon_0.pdf

5.5 Suriname

Faizel Sergio Wilnis, APHVS, Delegate to COSALFA

Dr. Faizel Sergio Wilnis, from APHVS and delegate to COSALFA, emphasized that Suriname had different Veterinary Services structures before and after its independence in 1975. Numerous important diseases such as brucellosis (in the 70s and 80s) and rabies (in the 50s, 70s, and 80s) have been reported in cattle. However, foot-and-mouth disease has never been reported in the country, which is 'historically free'. According to the Hemispheric Foot-and-Mouth Disease Eradication Program (PHEFA), Suriname is considered a vaccination-free country and, in addition, was officially recognized by the OIE in 2018.

The OVS facilitates the appropriate design and implementation of the epidemiological framework for the prevention and control of zoonotic diseases and maintains a legal framework to organize and establish the "rules of the game" for the numerous actors and people involved in the Animal Production and Health System for prevention and control of zoonotic diseases.

The country is divided into four veterinary regions: east, west, center and south, and in each there is a responsible veterinarian who acts based on a legal basis that describes the functions, responsibilities and authority of the Veterinary Services within the system, which, together with private veterinarians, provide support to producers with routine animal health issues as well as early detection of foot-and-mouth disease outbreaks. VS maintains regular contact with the private sector and performs surveillance in slaughterhouses for compatible lesions. In Suriname, it is prohibited to use and import vaccines against foot-and-mouth disease. All veterinary medicines, as well as vaccines, are subject to import restrictions and therefore can only be imported with a veterinary permit. The country is building a new diagnostic laboratory, which should be completed by the end of 2024 and, through training opportunities provided by PANAFTOSA/PAHO and other foreign institutions, laboratory technicians are trained in ELISA and PCR methods for the diagnosis of recent infections and foot-and-mouth disease.

Suriname is seeking to increase the sensitivity of the surveillance system through training and awareness campaigns. The surveillance plan prioritizes foot-and-mouth disease. The country carries out serological surveillance, with samples concentrated in areas at the highest risk. There are also physical checkpoints for health inspections at the border. For extensive borders, points between districts were created.

The presentation is available at the following link:
https://www.paho.org/sites/default/files/5.5_surinam_-_faizel_sergio_wilnis_0.pdf

Session 5 Discussion

At the end of the session, Dr. Sánchez reported that there would be no question-and-answer session due to lack of time. He commented on the importance of international surveillance in preventing foot-and-mouth disease, as well as preparing for emergencies, updating contingency plans, and ensuring access to a vaccine bank.

SESSION 5 CONCLUSIONS

- Achieving vaccination-free status is important, but maintaining this status also requires efforts, especially with prevention and response preparedness.
- Chile, Guyana, Panama, Peru, and Suriname are free countries without vaccination, working on prevention and response preparedness actions.
- Unfortunately, none of the 5 countries have access to a vaccine bank, if needed, as an additional tool to use in cases of outbreaks.
- It is important to include metrics for surveillance and reinforce early detection, correcting weaknesses in reporting or service.

PRESENTATION OF THE THREE BEST-SELECTED POSTER WORKS

Introduction to the topic: Diego Viali dos Santos, PANAFTOSA/PAHO

Work 1 - Modeling control strategies in the face of the reintroduction of foot-and-mouth disease in Bolivia

Javier Suárez, SENASAG, Bolivia

The objective of the work was to improve understanding of the spread and management strategies in the face of a reintroduction of the foot-and-mouth disease virus. Also, the work aimed to help structure and improve the quality of data needed to deal with an outbreak. The model's general conditions involved more than 211 thousand properties with susceptible animals, with 385 samples (95% confidence level, 50% prevalence, 5% margin of error). Four different scenarios were used, through the use of three different zones (3, 7, and 15 km radius). A controlled situation was compared with an uncontrolled one. The results demonstrated that, in uncontrolled situations, more than 100 days of work may be required, while in controlled situations this can be reduced to less than 80 days. The model made it possible to evaluate the quality of the country's data, generate the virus propagation dynamics, and verify the sector's structure. The next step is the economic assessment of a possible reintroduction of foot-and-mouth disease in Bolivia.

Work 2 - United States Department of Agriculture's Historical Contributions and Future Collaborations to Foot- and-mouth Disease Eradication in South America

Shelley Mehlenbacher, USDA, USA.

APHIS is responsible for protecting US agriculture and livestock. To this end, it has offices in several countries, including South America. APHIS's collaboration with the countries of the Southern Cone included the response to outbreaks of Highly Pathogenic Avian Influenza (HPAI) from 2023. Numerous countries received support from APHIS in combating foot-and-mouth disease, with actions complementary to PHEFA. The key strategy is long-term investment in human resources, working hand in hand with the country's veterinary services. A pilot program for the control and surveillance of foot-and-mouth disease was implemented in the *Chaco* region, between Paraguay, Bolivia, and Brazil. Checkpoints and offices have been established in the region, resulting in a reduction in viral transmission, helping these countries advance to a new status regarding FMD. APHIS's efforts to combat foot-and-mouth disease in South America have already been involved for 30 years and 30 million dollars have been invested.

Work 3 - Risk-Based Surveillance Program for foot-and-mouth disease in Brazil: a new path ahead

Ana Carolina Fanhani de Arruda Botelho, MAPA, Brazil

Brazil is currently monitoring risk factors for the reintroduction of the foot-and-mouth disease virus; developing a system that allows access to strategic information in a quick and timely manner; identifying and monitoring risk factors for foot-and-mouth disease; communicating risks effectively; and promoting prevention. Surveillance protocols must be simple and replicable, with data-driven surveillance. BI (Business Intelligence) panels were developed to monitor data. The program was implemented in the second half of 2023. The Risk-Based Surveillance Program (RBSP) cycles are being applied in states with zones free of foot-and-mouth disease without vaccination and the Federal District. The RBSP active surveillance sampling cycles are taking place in the Federal District (DF) and the six free states without vaccination: Amazonas (AM), Acre (AC), Rondônia (RO), Paraná (PR), Santa Catarina (SC) and Rio Grande do Sul (RS). In the first cycle, 15,959 rural properties were inspected.

Through systematic data collection and recording of information obtained during inspections, the RBSP form allowed the generation of a risk index that supports decision-making about intervention strategies and the prioritization of properties that require greater attention by the surveillance system. Finally, it was emphasized that RBSP offers a proactive solution to prevent livestock diseases by combining business intelligence, effective communication, and risk management; anticipates threats, promotes collaboration, and ensures maintenance of free status without vaccination.

CLOSURE

The closing ceremony was led by Dr. Ottorino Cosivi, director of PANAFTOSA/PAHO, and Dr. Marcelo de Andrade Motta, director of the Department of Animal Health of the Ministry of Agriculture and Livestock of Brazil. Dr. Ottorino Cosivi recognized the advances made in the region in recent years, highlighting that PANAFTOSA/PAHO is proud to have been a partner in this process. He emphasized that this process has a clear direction to follow. Finally, he thanked the PANAFTOSA/PAHO team, PAHO for the event, and the Brazilian government for the trust placed in the organization.

Dr. Marcelo Motta thanked everyone present at the seminar, highlighting the advances presented, and congratulated Dr. Ottorino Cosivi for the event, recognizing the historic success of the partnership with PANAFTOSA/PAHO.

On this occasion, around 216 participants from 17 countries were present, including observers, delegates of COSALFA, and representatives of international and regional organizations.

ANNEX 1

INTERNATIONAL SEMINAR PRE-COSALFA 50

Getting Close to Regional Eradication: Half a Century of Progress

April 22 and 23, 2024

AGENDA

INTRODUCTION

Welcome to the International Seminar of the 50th Ordinary Meeting of COSALFA, a meeting that not only marks a significant chapter in our collective fight against foot-and-mouth disease but also serves as a contemporary echo of the historic Seminar on Foot-and-Mouth Disease Control and Eradication Programs in South America, held in 1971, at the Hotel Glória in Rio de Janeiro, Brazil, which recommended to PAHO the creation of the South American Commission for the Fight against Foot and Mouth Disease - COSALFA.

Today, following the same model, we come together again to serve as inspiration and guidance for our present and future work. To this end, each COSALFA member country brings a brief history, the current scenario, and the challenges it faces to maintain and advance its health status regarding foot-and-mouth disease, under the current context and the definition of different strategies to prosper in each situation.

Additionally, the agenda was divided into 5 thematic sessions. The first is dedicated to updating the situation of foot-and-mouth disease in the world, as well as in the region of the Americas, within the objectives, strategies, and guidelines of the 2021-2025 Action Plan of the Hemispheric Foot-and-Mouth Disease Eradication Program (PHEFA).

The following 4 sessions will be led by representatives of the veterinary services of COSALFA countries, according to the foot-and-mouth disease status awarded by the World Organization for Animal Health (WOAH). On this occasion, present and future challenges for maintaining vaccination-free areas will also be presented for discussion.

The sessions will be accompanied by a debate between speakers and plenary discussions to learn about the different points of view of the audience, composed by the main actors and representatives from both the public, private, and academic sectors, with an interest in preventing and eradicating the disease in the Americas.

The conclusions of each session will be presented at the 50th Ordinary Meeting of COSALFA.

Monday, 22 April 2024 | 08:30 - 17:30h (Brasilia time, Brazil)	
SHERATON GRAND RIO HOTEL & RESORT Av. Niemeyer, 121 - Leblon, Rio de Janeiro - Salon Gávea AB	
08:00 - 08:30	Registration
08:30 - 08:50	Opening of the International Seminar Pre-COSALFA 50 Director of the Animal Health Department, DSA/MAPA, Brazil, Marcelo de Andrade Mota Representing the Secretary of Agriculture, Livestock, Fisheries, and Supply of the State of Janeiro, *Paulo Henrique Moraes* Director of PANAFTOSA-PAHO/WHO, *Ottorino Cosivi*
08:50 - 09:00	SESSION 1. FOOT-AND-MOUTH DISEASE: SITUATION IN THE WORLD AND THE AMERICAS Moderator and Introduction to the topic: Manuel José Sánchez Vazquez, PANAFTOSA-PAHO/WHO
09:00 - 09:30	1.1 Global Foot-and-Mouth Disease Situation *David James Paton*, Pirbright Institute, UK
09:30 - 09:50	1.2 Hemispheric Foot-and-Mouth Disease Eradication Program (PHEFA) *Diego Viali dos Santos*, PANAFTOSA-PAHO/WHO
09:50 - 10:10	Session 1 Discussion
10:10 - 10:30	Break
10:30 - 10:40	SESSION 2. COSALFA COUNTRIES ACCORDING TO STATUS: WITHOUT RECOGNITION Moderator and Introduction to the topic*: Guilherme H. Figueiredo Marques*, PANAFTOSA-PAHO/WHO
10:40 - 11:00	2.1 Venezuela *Wilmer José Alcázar Guerra*, INSAI, Delegate of COSALFA
11:00 - 11:10	Session 2 Discussion
11:10 - 11:25	SESSION 3. COSALFA COUNTRIES ACCORDING TO STATUS: FREE WITH VACCINATION Moderator and Introduction to the topic: *Rodrigo Miguel García Muñoz,* PANAFTOSA-PAHO/WHO
11:25 - 11:45	Paraguay *Víctor Dario Maldonado Cáceres,* SENACSA
11:45-12:05	Uruguay *Enrique Diego de Freitas Netto,* MGAP, Delegate to COSALFA
12:05 - 12:30	Session 3 Discussion
12:30 - 14:00	Lunch - *Espaço Carioca*
14:00 - 14:10	SESSION 4. COSALFA COUNTRIES ACCORDING TO STATUS: FREE WITH VACCINATION AND FREE TERRITORIES WITHOUT VACCINATION Moderator and Introduction to the topic: *Diego Viali dos Santos*, PANAFTOSA-PAHO/WHO
14:10 - 14:30	4.1 Argentina *Horacio Angelico,* SENASA
14:30 - 14:50	4.2 Bolivia *Javier Ernesto Suárez Hurtado, SENASAG, Delegate to COSALFA*
14:50 - 15:10	4.3 Brazil *Ana Carolina Fanhani de Arruda Botelho,* MAPA
15:10 - 15:30	Break
15:30 - 15:50	4.4 Colombia *Edilberto Brito Sierra,* ICA
15:50 - 16:10	4.5 Ecuador *Christian Antonio Zambrano Pesantez,* AGROCALIDAD, Delegate to COSALFA
16:10 - 17:00	Session 4 Discussion
17:00 - 17:15	Closure of Day 1 of the Seminar Director of PANAFTOSA-PAHO/WHO, *Ottorino Cosivi*
18:00 - 20:00	Cocktail - *Espaço Carioca*

Tuesday, 23 April 2024 | 08:30 - 12:30h (Brasilia time, Brazil)	
SHERATON GRAND RIO HOTEL & RESORT Av. Niemeyer, 121 - Leblon, Rio de Janeiro - Salon Gávea AB	
08:30 - 08:50	PRESENT AND FUTURE CHALLENGES FOR MAINTAINING FREE AREAS WITHOUT VACCINATION Moderator and Introduction to the topic: *Manuel José Sánchez Vazquez*, PANAFTOSA-PAHO/WHO *Wilna Vosloo,* Australian Animal Health Laboratory, CSIRO, Australia
08:50 - 09:05	Plenary discussion
09:05 - 09:15	SESSION 5. COSALFA COUNTRIES ACCORDING TO STATUS: FREE WITHOUT VACCINATION Moderator and Introduction to the topic: *Manuel José Sánchez Vazquez,* PANAFTOSA PAHO/WHO
09:15 - 09:30	5.1 Chile *Carlos Hérnan Orellana Vaquero,* SAG, Delegate to COSALFA
09:30 - 09:45	5.2 Guyana *Praimnauth Tihul*, GLDA, Delegate to COSALFA
09:45 - 10:00	5.3 Panama *Concepción Santos Sanjur*, MIDA, Delegate to COSALFA
10:00 - 10:30	Break
10:30 - 10:45	5.4 Peru *Eglinton Rubén Villacaqui Ayllón,* SENASA, Delegate to COSALFA
10:45 - 11:00	5.5 Suriname *Faizel Sergio Wilnis,* APHVS, Delegate to COSALFA
11:00 - 11:20	Session 5 Discussion
11:20 - 11:30	PRESENTATION OF THE THREE BEST-SELECTED POSTER WORKS Introduction to the topic: Diego Viali dos Santos, PANAFTOSA-PAHO/WHO
11:30 - 11:45	Work 1 - Modeling for control strategies in the face of a reintroduction of foot-and-mouth disease in Bolivia *Javier Ernesto Suárez Hurtado,* SENASAG, Bolivia
11:45 - 12:00	Work 2 - United States Department of Agriculture's Historical Contributions and Future Collaborations to Foot-and-mouth Disease Eradication in South America *Shelley Mehlenbacher, USDA, USA.*
12:00 - 12:15	Work 3 - Risk-Based Surveillance Program for foot-and-mouth disease in Brazil: a new path ahead *Ana Carolina Fanhani de Arruda Botelho, MAPA, Brazil*
12:15 - 12:30	Plenary discussion
12:30 - 12:45	Closure of the Seminar Director of PANAFTOSA-PAHO/WHO, *Ottorino Cosivi* Director of the Animal Health Department, DSA/MAPA, Brazil, *Marcelo de Andrade Mota*
13:00 - 14:30	Lunch - *Espaço Carioca*

Use of the Sli.do app for questions and answers during the Pre-Cosalfa seminar.