



**FINAL REPORT
PRE COSALFA INTERNATIONAL SEMINAR 48**

**Eradication of Foot-and-Mouth Disease: the PHEFA Action Plan 2021-2025,
preparedness and transition to the status of free countries/zones without vaccination**

Virtual Seminar, Paraguay | 17 - 18 August 2021



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PANAFTOSA

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

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**Pan American
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OPENING SESSION

The opening session was chaired by Dr. José Carlos Martín Camperchioli, president of the National Service for Animal Quality and Health (SENACSA), Paraguay, and by Dr. Ottorino Cosivi, director of the Pan-American Center for Foot-and-Mouth Disease of the Pan-American Health Organization (PANAFTOSA/PAHO), who welcomed the participants.

Dr. Cosivi took the floor to say that in 2020 and 2021, while the world is experiencing a pandemic caused by the SARS-CoV-2, with a huge impact on humanity, the fight against foot-and-mouth disease in the Americas witnessed the end of the Action Plan 2011-2020 and the start of the Action Plan 2021-2025 of the Hemispheric Program for the Eradication of Foot-and-Mouth Disease (PHEFA) of the Americas. Thus, it became evident that all the countries of the South American region, except for Venezuela, are officially recognized as free of foot-and-mouth disease, with or without vaccination, by the World Organization for Animal Health (OIE), which is a remarkable achievement for the continent. Besides, he pointed out that all the territories of North America, Central America and the Caribbean have maintained their free status without vaccination. He reminded that the region has not experienced outbreaks for a long period of time -except for the occurrences in Colombia in 2017 and 2018 – which suggests the very likely extinction of the historically endemic virus types in a large part of the South American territory.

He emphasized that we should both prioritize the elimination of foot-and-mouth disease in those zones with remnants of infection without free status yet, such as Venezuela; and also complete the eradication process by making the transition to the free status without vaccination in free zones and free countries which still maintain systematic vaccination cycles in their bovine populations.

The topic of foot-and-mouth disease prevention and surveillance was addressed during the seminar, as well as some experiences of the countries in the process of deciding the transition to the free status without vaccination, the lessons learned from the past with the PHEFA Action Plan 2011-2020 and the objectives, strategies and guidelines for the current Plan 2021-2025. In addition, we shared updates on the latest diagnostic tools and methodologies and the capacities for rapid response to foot-and-mouth disease outbreaks in the region using the support tools in foot-and-mouth disease emergency preparedness.

Dr. Cosivi ended his exposition pointing out that in the fight against diseases it is essential to disseminate knowledge and, in this sense, requested that all shared their experiences and thoughts to contribute to the eradication of foot-and-mouth disease in the Americas.

Soon after, Dr. Camperchioli welcomed the participants from the official and private sectors of the connected countries. He said it was an honor to be the host country of the 48th COSALFA and thanked PANAFTOSA for conducting the two meetings in spite of the health situation the continent is going through. He greeted the involved sectors and thanked all for their efforts to guarantee the quality and the absence of diseases in Paraguay.

See Annex 1 for the agenda of the meeting.

OBJECTIVE

While in 2020 the international Seminar was not carried out prior to the 47th Ordinary Meeting of the South American Commission for the Fight Against Foot-and-Mouth Disease (COSALFA), which was conducted virtually, in 2021 the Pre-COSALFA International Seminar was promoted on the occasion of the 48th Ordinary Meeting of the COSALFA, held on 19 - 20 August 2021, with Paraguay as the host country.

The agenda of the International Seminar of the 48th Meeting of the COSALFA was prepared so that the participants could get acquainted with the health management of the National Service for Animal Quality and Health (SENACSA) of Paraguay in the field of foot-and-mouth disease prevention and surveillance and the experience in the process of decision making and the transition to the free status without vaccination. Likewise, the lessons learned from the previous Action Plan 2011-2020 of the PHEFA were presented as well as the objectives, strategies and guidelines for the current Plan 2021-2025, together with an update on the tools and methodologies for a timely and specific diagnosis of foot-and-mouth disease at national and regional level. Moreover, the capacities for rapid response to foot-and-mouth disease outbreaks in the region were addressed along with the support tools that can help in emergency preparedness.

The topics are covered by renowned specialists, as well as by representatives of the veterinary services in virtual thematic sessions, and complemented by a discussion to disseminate different opinions of the audience comprised of the main players and representatives of the public, private and academic sectors interested in the eradication of foot-and-mouth disease. The conclusions of each session are then presented in the 48th Meeting of the COSALFA.

SESSION 1: STRATEGIC-TECHNICAL AND POLITICAL VISION OF THE FOOT-AND-MOUTH DISEASE PREVENTION PROGRAM OF PARAGUAY

Moderator and Introduction to the topic: Alejandro Rivera, PANAFTOSA-PAHO/WHO

Dr. Rivera, acting as moderator, made a brief introduction and introduced the speakers of the three topics of this session.

He remarked the relevance of the content of the presentations and told the participants that, after each presentation, there would be a discussion session with questions and answers with the speakers.

1.1 The SENACSA and its strategic vision before the challenges to be faced

José Carlos Martin Camperchioli, president of SENACSA, Paraguay

Dr. Martin told the audience that Paraguay has a tradition of fighting against foot-and-mouth disease, from the development of the first legal bases of the program to the present organizational bases of the Service. He gave a brief description of the present structure of the SENACSA, including a detail of its functions, workforce, funding sources, and the reach of the Service actions within the context of the One Health approach. New times brought new challenges and a constant need of assessment and renewed objectives, structures and strategies to face a changing national and international setting. Nevertheless, the SENACSA is preparing for a structural and administrative reform to better cope with the challenges toward 2025. The project for the improvement and expansion of animal health services, which is ongoing, has different focuses such as the updating of the legal bases for the execution of veterinary practices, considering the new areas of action of the Service and the profession, the strengthening of laboratory support with the opening of a BSL4 laboratory, and the strengthening of surveillance, among others. The creation of the Animal Health Services Foundation (FUNDASSA) is an example of effective participation between partners.

Over the past decade, the health situation of the country has improved as a result of the actions taken by the Service and the private sector. This becomes evident in the recognition by the OIE as free from several diseases, resulting in positive impacts on the increased participation of the country in global agribusiness. Paraguay has recently been the first country to join the BANVACO, in association with PAHO/WHO, in preparing for the launching of the prevention program to advance to the status of free without vaccination.

The presentation is available at: https://www.paho.org/sites/default/files/seminarioprecosalfa48-sesion1.1-josecarlosmartin_0.pdf.

1.2 The biosafety laboratory and its role in the One Health approach

Dulma Segovia, Laboratory Technical Coordinator, SENACSA, Paraguay and Graciela Riera, Ex-coordinator of COVID 19 Diagnosis, MSP-SENACSA

Dr. Segovia started her speech by informing that Paraguay has a network of diagnostic laboratories for animal and human diseases and that the SENACSA has invested in improving the support to laboratory diagnosis. The new laboratory has the highest safety level of the entire laboratory structure and was developed under the technical orientation and coordination of PANAFTOSA/PAHO. The laboratory has the capacity to offer laboratory diagnosis

of transboundary diseases, such as vesicular diseases, CSF, BSE, AI, TB, among others, and it also provides support to the National Program for Food Residues Control. In order to establish the connection with the human network, it was integrated under the One Health approach, providing support through the high safety laboratory for the diagnosis of SARS-CoV-2 during the pandemic.

The pre-recorded presentation is available at: https://www.youtube.com/watch?v=dZgRd_zfXAc.

Next, Dr. Riera talked about her involvement in the national effort to face the COVID pandemic since the beginning of the emergency in Paraguay, coordinating the diagnosis of SARS-CoV-2 as of April 12, 2020. The workforce included a total of 78 professionals, 43 of whom were volunteers of the health system and of the SENACSA. The laboratory participated in the processing of 76,660 samples, only surpassed by the Central Public Health laboratory, with an average flow of 500-600 samples per day. Based on this experience, the SENACSA faced a challenge and went beyond its usual efforts, processing 30% of total human samples during that period. This collaborative exercise in times of significant challenges showed the role of the laboratory of the SENACSA under the One Health approach.

The pre-recorded presentation is available at: <https://www.youtube.com/watch?v=I9ggJORUQ8c>.

1.3 Foot-and-mouth disease prevention program in Paraguay, guidelines and transition to the objectives of the new PHEFA

Victor Darío Maldonado Cáceres, SENACSA, Paraguay and Daniel Prieto Davey, president of the Animal Health Services Foundation (FUNDASSA), Paraguay

Dr. Maldonado spoke about the historical process of the fight against foot-and-mouth disease over the past decade in Paraguay, considering the development of a modern legislation, the improvement of the structure and the accomplishment of the PHEFA guidelines. The country has not recorded outbreaks since 2012 and is internationally recognized as free with vaccination since 2013. Long-term sustainability of the program has been achieved, establishing public-private partnerships, maintaining and strengthening epidemiology surveillance activities, with the concept of syndromic surveillance increasing system sensitivity and biosafety, with a view to the future suspension of vaccination. National serological studies, performed annually since 2015, showed the expansion of the free area with vaccination, as well as the levels of immunization coverage. The georeferencing process, the description of the connection networks and the characterization of production and risk systems are useful to support the transition to the status of free without vaccination, based on the three pillars of the process: active surveillance, the vaccine bank, and adaptation of the structures to face the new reality. The pre-recorded presentation is available at: <https://www.youtube.com/watch?v=V-CQ-0VOQAK>.

Dr. Prieto started his speech talking about the FUNDASSA, a producers' association formed through the Rural Association of Paraguay (ARP) with the aim of coordinating and executing actions for animal defense, as an auxiliary organism of the SENACSA. The association started with the creation of the Animal Health Commission and its functions included the support to the fight against foot-and-mouth disease and brucellosis. The structure of the foundation on the field is comprised of 21 local commissions and 13 local offices, including over 3000 individuals for vaccination campaigns, conducted by vaccinators and vaccination certifiers. The coverage achieved and the operation statistics of the foundation show the success of the public-private co-management in the conduction of the campaign.

The pre-recorded presentation is available at: <https://www.youtube.com/watch?v=JmZpaiFvPeg>.

Discussion

At the end of the session, the room was opened for discussion and the following questions and answers from participants and speakers, respectively, were received:

1. Could the SENACSA process suspected samples in case of bioterrorism?
Yes, our laboratory is a BSL4 laboratory and can process highly dangerous samples.
2. What is the situation of Paraguay regarding the BANVACO?
Paraguay was the first country to join the BANVACO and will look for others to complete the scheme. The SENACSA is managing seed contributions from multilateral organisms to fund the BANVACO.
3. According to the SENACSA's strategic viewpoint, when does it expect to suspend vaccination?
We are in the process of implementing the strategic plan, whose main activities are: strengthening surveillance, adapting structures, creating an antigen/vaccine bank, and elaborating an action plan for the transition, before cessation of vaccination, which is likely to occur by the end of 2025.
4. What is the difference between vaccinators and certifiers at the FUNDASSA?
Certifiers accompany the vaccination conducted by large farmers, while vaccinators vaccinate small herds.
5. How are internships managed in the area of human resources?
We have a master training plan in place, with several courses in effect; several officials supporting vaccination are students of veterinary medicine or related careers who make the most of the opportunity. We are looking for a legal framework to have certain control over private professional activity, mainly regarding the responsible use of antimicrobials. Likewise, we are searching to establish links with universities for the elaboration of training plans.

CONCLUSIONS OF SESSION 1

- The SENACSA has strengthened its organization, consolidated the advance in the foot-and-mouth disease program and has reached a mature level in the approach of health problems in a changing and dynamic world. This enabled to create a path toward 2025 where the free status without vaccination is the goal to achieve.
- The expression of the One Health approach, with the cooperation between human and animal health sectors, became evident in the synergism of actions for the diagnosis of SARS-CoV-2, conducted by the Biosafety Laboratory of the SENACSA.
- The public-private cooperation was an efficient approach in bringing together forces for health management, as also was the vaccination process in the foot-and-mouth disease program.
- Seroepidemiological studies performed to know the level of protection and to detect virus transmission show consistent results with the absence of infection and transmission in the whole bovine population of Paraguay. This allows to define a roadmap to start the transition to the free status without vaccination.

SESSION 2: THE ACTION PLAN 2021-2025 OF THE PHEFA

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

Dr. Sánchez, acting as moderator, made a brief introduction to the topic and called Dr. Rivera to talk about the two themes of this session. He reminded that, at the end of the speech, there would be a discussion session with questions and answers with the speaker.

2.1 Lessons learned from the Action Plan 2011-2020 of the PHEFA

Alejandro Rivera, PANAFTOSA-PAHO/WHO

Dr. Rivera started his presentation explaining that he would present the new Action Plan 2021-2025 of the PHEFA, approved by the Hemispheric Committee for the Eradication of Foot-and-Mouth Disease (COHEFA) in its 3rd Extraordinary Meeting, held on 15 December 2020 and that, to that end, he would divide the topic in two parts. The first highlights the results of the Action Plan 2011-2020, which showed that the plan was successful regarding health and bioproductive indicators, with positive results on international trade. The period was characterized by a dramatic reduction of the number of outbreaks and the absence of disease for three years and, later, the disease was reported in Colombia. On the other hand, when the virus O, lineage 4, was introduced in Ecuador, a change in the surveillance strategy and selective vaccination led to the recognition of the country as free with vaccination in 2015. At the same time, the sporadic occurrence in the Southern Cone, particularly in Paraguay, allowed to establish a regional strategy targeted to the affected population that resulted in the elimination of the disease. Regarding virus C, after an extensive epidemiological study on the absence of this serotype, it was removed from the vaccine and it is only being used in Argentina. The persistence of lineage 6 of virus O in the bordering region between Colombia and Venezuela, never identified in other regions, led to the loss of the status in Colombia and to the elaboration of a containment zone strategy. This enabled to regain the lost status based on prevention measures and risk reduction, and the implementation of emergency and contingency plans in order to strengthen the response to threats. The following presentation described the new Action Plan of the PHEFA. The pre-recorded presentation is available at: <https://www.youtube.com/watch?v=pkWt8QJ0o3M>.

2.2 Objectives, strategies and orientations of the Action Plan 2021-2025 of the PHEFA

Alejandro Rivera, PANAFTOSA- PAHO/WHO

In his second presentation, Dr. Rivera detailed the chronology of the elaboration and approval process of the Action Plan 2021-2025 of the PHEFA. The PHEFA 2011-2020 was really successful, showing a significant change in disease occurrence parameters. Besides, it showed differences that led to the development of specific strategies, with advances reflected in the almost complete absence of disease and the eradication of virus C from the continent, resulting in the removal of the serotype from the vaccine, except in Argentina. The condition of free with vaccination in almost the whole continent, in addition to the traditionally free areas, made it clear that a new strategic line was necessary for the advance of the Plan. Consequently, the Action Plan 2021-2025 is aimed at completing eradication in the free areas with vaccination and strengthening the prevention and the emergency response capacity in the continent, including the following goals: eradicating the disease from Venezuela, supporting the countries that are still vaccinating in their transition, and protecting those countries that are already free from disease. The objectives and the strategies by subregion are in agreement with the epidemiological situation and the risk analysis used as the basis for the plan. Likewise, Venezuela created a private organ called FUNDESA which will be in charge of the vaccination campaigns.

The plan also addresses two chapters to support the free countries with vaccination and which are prepared for the transition to free without vaccination. The first one, carried out by the University of Brasilia, addresses the economic perspective: a methodological proposal is submitted for an economic analysis in terms of cost effectiveness and cost-benefit, with positive results. The second refers to the future challenges the veterinary services of the countries will have to face regarding the structure and participation of the private sector, the vision of international organisms in terms of delegating authority, and explores its relationship with future industrial revolutions. The pre-recorded presentation is available at: <https://www.youtube.com/watch?v=tEskGf-UDc8>

Discussion

At the end of the session, the room was opened for questions and answers.

1. How could the reporting of cases be improved in Venezuela?
One of the most important points to be improved: they have a tradition of information but, unfortunately, they also have structural problems at field and laboratory level which have hampered the strengthening of the surveillance to improve its capacity to cover the reporting of vesicular diseases.
2. What is the level of implementation of eradication actions in Venezuela?
We are working and we have improved in the creation of an organization to be in charge of the vaccination process. It is in the process of formalization at the FUNDESA, with the commitment of recognition by the INSAI, for the establishment of a public-private collaboration. It will be responsible of vaccination and its action is expected to meet the desired levels. We have the example of Ecuador that, by changing the strategy and with the strong cooperation of the private sector, reached success since 2011, achieving the recognition in 2013.
3. Could you tell us whether Colombia has officialized bovine vaccination cycles according to the new risk-based strategy?
The ICA is implementing the change process for a localized risk schedule, which is expected to start next year.
4. What would the major strength of the region be?
The regional and cooperative work that the countries are committed to under the technical coordination of the PHEFA was the major example, together with the availability of good-quality vaccines.
5. What would the major risk be for the success of the new plan?
Remaining the same; that those countries that have been free for a while do not address the hazards of the continent; and the lack of union among the countries. On the other hand, we must complete the eradication in Venezuela, with a regional perspective. A good example of risk is the reintroduction of the ASF in the American continent.

CONCLUSIONS OF SESSION 2

- The Action Plan 2011-2020 of the PHEFA ended with a significant progress in the fight against foot-and-mouth disease and solved unfinished tasks of the previous plan, leaving important lessons for the region.
- The current risk profile of the Americas is different from the one outlined at the beginning of the decade of 2010.
- The Action Plan 2021-2025 of the PHEFA is a reference framework to complete the eradication process in South America and to preserve the free status in all the countries of the Americas.

SESSION 3: DECISIONS AND EXPERIENCES IN THE TRANSITION TO THE FREE STATUS WITHOUT VACCINATION

Moderator and Introduction to the topic: Alejandro Rivera, PANAFTOSA-PAHO/WHO

Dr. Rivera made a brief introduction, highlighting the importance of the topic.

3.1 Experience and lessons learned in the process of transition to the free status without vaccination in Brazil

Ana Carla Martins Vidor, Ministry of Agriculture, Livestock and Supply (MAPA), Brazil

Dr. Ana Carla made a brief summary of the experience of Brazil, a country with a long history in the fight against foot-and-mouth disease. In 1995, a new perspective started with the National Plan for the Eradication of Foot-and-Mouth Disease -PNEFA-, with a strategy that divided the country in big livestock cycles. The first free area is achieved in 1998. The plan was reedited in 2018 to include other variables that influence the maintenance and the dissemination of the disease, and continued until 2021, when new free areas without vaccination were recognized. The strategic lines of the plan were based on the guidelines of the PHEFA.

This process continued with the edition of the PNEFA 2011-2026, characterized by the strengthening of the relationships with other players, the strengthening of the attention and surveillance structure, and the preparedness for the transition to free without vaccination, including an antigen and vaccine bank.

The spatial structure of the Plan was based on the studies of animal mobilization networks that show the dependency of the production processes between states. Thus, five independent regional blocks were created, run by local coordination units and evaluated on an ongoing basis.

Some of the lessons learned over this process are: a realistic schedule of actions; effective communication with all involved parties; staff training; participation of the private sector and shared management with the private sector. The pre-recorded presentation is available at: <https://www.youtube.com/watch?v=uol9bDfM-7c>.

3.2 The experience of the state of Paraná in the conquer of the international certification of Foot-and-Mouth Disease Free Without Vaccination

Norberto Ortigara, Secretary of Agriculture and Supply of the state of Parana, Brazil

The Secretary of Agriculture of the state of Paraná, Dr. Ortigara, explained the process of the state and the PNEFA. Paraná was part of Block 5 together with Rio Grande do Sul (RS), Santa Catarina (SC), Mato Grosso (MT) and Mato Grosso do Sul (MS), but due to periodic positive evaluations the recognition process could be expedited, together with RS and SC, already free without vaccination. Regarding livestock production, considering bovine, swine and poultry meat together, Parana is Brazil's largest producer.

Dr. Ortigara also explained that regarding structure, since 2011 Paraná has an agency with technical and administrative autonomy and develops a risk reduction program based on strong epidemiological surveillance.

Its leading role in international trade was the driver to make the decision to expedite the schedule and develop a strategy based on compulsory targeted vaccination, surveillance and monitoring of properties, restructuring of

the official service, staff hiring and training, the creation of a resource fund to guarantee actions, and the strengthening of public-private partnerships. With all this, the state was internationally recognized as free without vaccination this year.

The pre-recorded presentation is available at: https://www.youtube.com/watch?v=T3DL4_x4sa8

3.3 Key elements for decision making for a change of status: the country approach

Manuel Sánchez Vázquez, PANAFTOSA-PAHO/WHO

Dr. Sánchez talked about the decision-making process to change the status, which is based on a context that includes the organizational structures and culture of each country, the absence of risk perceived as a result of successful vaccination campaigns with a good quality immunogen, bringing certain calm. He said that this is a temporary stage and that we should complete eradication. The situation includes several players and it becomes necessary to establish a formal mechanism for decision making. Also, he explained that PANAFTOSA/PAHO has recently designed and conducted a study with the participation of Argentina, Bolivia, Brazil, Ecuador, Paraguay and Uruguay, through an opinion survey in the countries. In this way, the situation and the expectations of each country regarding vaccine withdrawal, the situation of their veterinary healthcare systems, the regional hazards and the fear of reintroduction could be evaluated. Another concern was the need of a vaccine bank and the existence of a revolving fund. The study resulted in a proposal for an intervention targeted to the main negative points. In general, the position is positive while some items are modified. The only region which generates fear is the North of South America, where the situation is still rather unclear.

The study was aimed at identifying the most important players in the process, recognizing conflicting interests between the members of the productive sector, such as manufacturing laboratories, which should try to diversify their commercial efforts to other products. The perspective of the countries regarding the leading role of PANAFTOSA/PAHO in the technical conduction of the process was confirmed.

The decision-making process is not just technical; it includes other components such as surveillance and early response, prevention at borders, the creation of an emergency fund, and formalization of an antigen and vaccine bank. Finally, Dr. Sánchez said that the change of status is a complex decision due to the large differences between the countries. Nevertheless, the effort should be made at regional level rather than at national level. The pre-recorded presentation is available at: <https://www.youtube.com/watch?v=fFAHSR9TFio>

Discussion

At the end of the session, the room was opened for questions and answers.

1. Considering this new reality, how does the Brazilian private sector support transit control?
They are working jointly and in harmony. For instance, they have created control posts, financed through the fund, and they are working in updating animal register.
2. How do you manage the stock update of small producers?
There are regulations requiring reporting to be made within a defined period of time or fines may be imposed. This is aimed at improving the farming sector and it is in the best interest of the producer, who does not longer spend money in vaccines and declare their stock through the internet.

3. Besides validating the strength of the official veterinary service, is the participation of other involved organs considered?
The national plan was based on the guidelines of the PHEFA and, therefore, all involved parties are clear about their role. Control mechanisms can be seen in the document.
4. What is the stage of the project's dissemination process?
For some years now, PANAFTOSA has been communicating the criteria for vaccine cessation. In view of the increasing process of vaccine suspension, we have discussed with the laboratories the possibility of restructuring their markets to other products.
5. What level of autonomy did you have to move to eradication and what fund supported it?
In the plan Brazil, Paraná was located in block 5, which we considered a contradiction since our situation allowed for an advance. We have requested a license to the MAPA in order to continue with the process. The resources for the project were derived from the overprice of the vaccine and the contribution of the agricultural sector.
6. In the cost-benefit studies as a tool to discontinue vaccination, did you consider that international markets reduce the price when the offer from free countries without vaccination is enough and they start to create other restrictions not connected with vaccinating or not?
The cost-benefit studies used many variables, not only the impact on the markets or their restrictions. They considered other components such as: surveillance and early response, prevention at borders, the creation of an emergency fund and formalization of an antigen and vaccine bank, in addition to the impact on other commercial animal populations.
7. What is the policy of the MAPA concerning the vaccine industry in terms of contributing to a vaccine bank and the possibility of producing vaccines with exotic strains?
We have discussed these topics with the industry at national level; however, among other things, an update of regulations would be necessary.
8. What would the losses be in case of reintroduction in the free area?
We have used a simulation study of the costs in the process of eradication and status recovery, including compensations. If the veterinary service takes 20 days to respond to the occurrence, depending on the situations, the cost may range from USD 4 to 40 million.
9. What is the regional strategy for the countries in case of introduction?
Among its goals, the plan includes the creation or strengthening of contingency plans and attention to emergencies, besides active surveillance.
10. When will vaccination be suspended in the state of Mato Grosso do Sul, in Brazil?
According to what is set forth in the strategic plan, this will depend on continuous evaluations and the compliance with the guidelines. However, it has been foreseen for 2023.
11. How can surveillance be guaranteed?
Paraná is a small state and agricultural productive chains cover the whole state. Due to the level of their awareness, producers conduct their own surveillance. Besides, the passive surveillance network is active. The state regulations foresee penalties for those who do not report disease.

12. What level of autonomy did you have, as state, to advance in order to achieve OIE's recognition and which is the financial support for the contingency fund?

We work in harmony with the Ministry of Agriculture, according to the Plan for the Eradication of Foot-and-Mouth Disease in Brazil. Nevertheless, due to our relevance, we requested to expedite the schedule, which was evaluated and accepted. The contingency plan was created with the contribution of bovine owners during the 4 vaccination campaigns of 1998/99.

13. Considering that with the status of free from foot-and-mouth disease without vaccination the surveillance component, including passive surveillance, becomes essential, and that the involvement of all cattle owners plays a key role for rapid detection and notification of a potential event, what is the attitude and the commitment of producers for reporting diseases to the Official Service in the state of Paraná?

The structure of surveillance relies on local or regional advice on animal health. Besides, we have health units in all the regions and in several municipalities. We have built an atmosphere of trust with farmers. It is difficult for someone to hide a suspected disease because it is eventually discovered. Collective responsibility is implanted in the society in favor of producers' businesses.

CONCLUSIONS OF SESSION 3

- The result of establishing a course to advance toward the status of free without vaccination will be better if it is accompanied by fluid communication and interaction with the livestock sector, sharing responsibilities over the process.
- The vision and the articulation capacity of regional, state and local governments are important for ensuring political support and providing the necessary resources for a successful transition.
- The result of a series of interviews with OVSs of free countries with vaccination was presented to know the condition of the transition process toward the free without vaccination status, identifying those elements affecting decision making.

SESSION 4: CONTRIBUTION OF REFERENCE LABORATORIES FOR FOOT-AND-MOUTH DISEASE CONTROL AND SURVEILLANCE

Moderator and Introduction to the topic: Alejandro Rivera, PANAFTOSA-PAHO/WHO

Dr. Rivera made an introduction to the topic, making emphasis on the importance of laboratory support in the process of bringing areas and countries to the free status.

4.1 Proficiency tests for the diagnosis of Foot-and-Mouth Disease and Vesicular Stomatitis

Maristela Pituco, Reference Laboratory, PANAFTOSA-PAHO/WHO

Dr. Pituco talked about the importance of the standardization process of diagnostic tests and vaccines quality control regulated by the ISO/IEC 17025 Standard. The proficiency test is an exercise performed every two years, organized and coordinated by the reference laboratory, the test provider, and conducted by the network laboratories. There are a few providers and all laboratories have access to comparative results, which are confidential. The process seeks to determine the effectiveness and comparability of the tests, to identify differences between laboratories and, finally, to assess the performance of participating laboratories.

This process is essential in laboratory accreditation, which is a formal recognition of competence. PANAFTOSA is a laboratory accredited by the OIE and complies with the ISO/IEC 17025 Standard. The program has organized and conducted assays in vesicular diagnostic tests and vaccine quality control since 1980. It was restructured in 2010 and reformulated in 2019. The 2021 round will have the participation of 22 countries. The pre-recorded presentation is available at: <https://www.youtube.com/watch?v=cgt74BanfDA>

4.2 Performance evaluation of the Elisa FMD gIII kit for use in foot-and-mouth disease surveillance

Anna Paula Alvim and *Daniel Magalhaes*, PANAFTOSA-PAHO/WHO

Dr. Alvim provided a brief introduction on the foot-and-mouth disease virus, the 3ABC protein and a description and the process of the 3ABC indirect ELISA-based diagnostic method. Then, she described the development of the blocking ELISA gIII assay, conducted by PANAFTOSA/PAHO as a new diagnostic tool to be used for foot-and-mouth disease surveillance to support the PHEFA.

Then, Dr. Daniel complemented the information by presenting the validation study of the new blocking ELISA gIII assay, the estimated sensitivity and diagnostic specificity of the test compared to competitive ELISA assay, even with comparative advantages in sensitivity. He explained the study performed in different settings. The pre-recorded presentation is available at: <https://www.youtube.com/watch?v=quyduFyRG9g>

4.3 Inactivation of the foot-and-mouth disease virus with commercially available lysis buffers

Britta Wood, Pirbright Institute, UK

Dr. Wood presented the results of a collaborative project between WRL-Pirbright and the Friedrich Loeffler Institute. It is generally known that commercially available nucleic acid extraction buffers could be used as virus inactivators. However, questions still remain about their effectiveness in relation to the type of virus, the type of

sample, the composition of the buffer and the temperature. The previous experience with these inactivators was conducted in Africa with samples of the Ebola virus. The validation of this method is strategically relevant, mainly in situations where handling of the infectious virus could jeopardize the status of a region. Their use could help surveillance due to the possibility that laboratories with lower biosecurity levels may manipulate samples. On the other hand, the high cost of buffers and their viricidal effect are the negative characteristics of the technique. Samples may only be subjected to PCR assays or sequencing, and they should be sent as hazardous chemical material. The pre-recorded presentation is available at: <https://www.youtube.com/watch?v=21k54GsiBZQ>

Discussion

At the end of the session, the room was opened for questions and answers.

1. What techniques have been accredited by PANAFTOSA as per ISO 17025 Standard?
Accredited techniques are ELISA3ABC; EITB; ELISA CFL for foot-and-mouth disease; viral neutralization for foot-and-mouth disease, vesicular stomatitis and Seneca virus. For performance assays, the tests in the process of accreditation are: homogeneity and stability, conducted with our partners.
2. Between the two ELISA assays presented, blocking and competitive, which one offers more stability, sensitivity and specificity in warm and humid weather?
The blocking ELISA yields better results, regardless of the weather or temperature. However, it is important to remember that climate within the laboratory is always controlled.
3. What are the economic advantages of the new ELISA assay compared to the previous one?
There was no formal evaluation of this aspect; nevertheless, the fact of having less false positives and that the confirmation process requires less work on the field will bring about savings.
4. Considering the importance of false negatives, which was the history of these sera (have they been vaccinated? when after the infection?, etc.) and how was the state of the infection confirmed at the time of collection? Do you have results of the assay with international panels?
False-positive samples were collected after the infection, but with little time for seroconversion. The samples provided by Pirbright came from unvaccinated and experimentally infected animals.
5. Is the use of Trizol a technique already established for DNA or RNA extraction? Then, what would the advantages of using these extraction buffers be and what do you think of the use of these reagents in field samples? Is there any risk for veterinarians handling Trizol fractions on the field?
Yes, Trizol is an established method; however, many laboratories have a high-performance routine and the use of lysis buffers/kits is an option when the extraction is performed by robots; finally, kits can be used on the field, but veterinarians should pay attention to chemical hazards.
6. Will the new kit replace the Elisa 3ABC system/EITB, or just the 3ABC Elisa? Was the new Elisa tested against the EITB? What is the estimated specificity of the new kit in conditions of systematic vaccination?
The new kit will only replace the indirect ELISA kit, the EITB assay will remain being a confirmatory test, the validation process included vaccinated and infected animals with a specificity level of 98%.

7. Due to the lack of biosafety in laboratories of certain regions, is it important to have alternatives to send inactivated suspected samples to BSL-2 laboratories? All this considered, we need to evaluate products for sample inactivation on the field. In your experience, what high-performance products should be considered in an experiment for RNA extraction?

We have not performed a validation; however, it would be interesting to see what commercial products are available in your region, refer to the literature and see which one would be better. In our experience, the three kits were efficient for RNA recovery.

8. Regarding Multispecies ELISA, why was swine species not included in this kit?

We have not included it because there were no samples for data validation of this species.

CONCLUSIONS OF SESSION 4

- The critical steps for the organization of performance tests were presented together with the external control of analysis for validation of results and the importance of these assays for maintaining a high performance diagnostic network.
- The new assay developed at PANAFTOSA/PAHO, Elisa FMD gIII, yielded excellent sensitivity and specificity results in all the settings evaluated, better than those of the Indirect Elisa, and it can be used in other species, what makes its use attractive in the region.
- Results were presented for the performance of buffers for the inactivation of the foot-and-mouth disease virus, which can be used in the treatment of FMD-suspected field samples, thus reducing the time and the distance for their processing in a diagnostic laboratory with a lower level of biocontainment.

SESSION 5: PREPAREDNESS FOR FOOT-AND-MOUTH DISEASE EMERGENCIES

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

The moderator, Dr. Sánchez, introduced the topic, calling the attention to the importance of several preparedness models to address emergencies in this new context of eradication.

5.1 The response to health emergencies due to foot-and-mouth disease in the Southern Cone –BID/PVC Project

Alejandro Rivera, PANAFTOSA-PAHO/WHO

Dr. Rivera explained that this work was developed within the context of the BID Project for the countries of the PVC, a program to support professionals of the Southern Cone services, in order to face the last stage of the PHEFA, executed between 2017 and 2019. This project included four components, one of which was aimed at verifying risk management in terms of virus introduction and outbreak containment capacity.

During the project, the training workshop for rapid response, conducted in 2018, was targeted to the need of elaborating emergency preparedness guidelines and the elaboration of a contingency plan. Based on these two documents, national workshops were delivered in the six countries of the PVC in order to evaluate the preparedness level of each country.

During the development of the project, the lack of emergency preparedness became clear and a methodology was given to the countries for the elaboration of contingency plans, including all the stages from plan elaboration to execution. The pre-recorded presentation is available at: <https://www.youtube.com/watch?v=WCS53Oq5iVU>.

5.2 Approach of emergency preparedness for foot-and-mouth disease in Brazil

Nilton de Moraes, Ministry of Agriculture, Livestock and Supply (MAPA), Brazil

Dr. Moraes explained that Brazil has faced some emergency situations during its fight against the disease, which encouraged the development of containment plans. Since 1963, when the national program was launched, the possibility of coordinating with other players for disease eradication has been considered. As of 1992, the National Foot-and-Mouth Disease Eradication Plan – PNEFA – was launched, based on the PHEFA, which included the possibility of animal slaughter to contain the disease. As from 1996, local groups for emergency situations were created, trained and audited by the central level, and supported by private funds to compensate producers.

As from 2012, a national contingency plan is prepared; in 2016 the national emergency coordination is created, and in 2018, the SINEAGRO – a set of rules that regulate the attention to emergencies – was established. Due to the pandemic, as of 2020 virtual simulations have been developed.

The pre-recorded presentation is available at: : https://www.youtube.com/watch?v=L_nqWcCBjHQ

5.3 Approach of emergency preparedness for foot-and-mouth disease in EuFMD member countries

María De La Puente Arévalo, European Commission for the Control of Foot-and-Mouth Disease

Dr. De la Puente started her presentation talking about the Commission's work with different areas. The mission of the European Commission for the Control of Foot-and-Mouth Disease – EuFMD-FAO, is to gather efforts and actions to protect member countries from the reintroduction of the disease. It was created in 1954, provided support for FMD eradication in the continent, and receives resources from DG SANTE of the European Commission and its member states. The Commission's work methodology regarding emergency preparedness includes different support tools, training, simulation exercises, and having a diagnostic reagent bank. Its work is based on three pillars: improving emergency preparedness for FMD and other transboundary diseases, reducing the risk of reintroduction, and supporting the global strategy for foot-and-mouth disease eradication-GF-TADS.

Emergency preparedness is based on having a “toolbox” describing the steps for decision making, from hazard identification to eradication and the return to the previous status. Currently, training is basically online, with contents defined according to the needs of member countries. A diagnostic reagent bank is necessary, created to provide rapid support to the countries, mainly in the Balkans, in case of suspected disease, and also to evaluate the quality of its laboratory services

Lastly, it is thought that this experience as well as those developed in the Americas could be replicated in other continents. The pre-recorded presentation is available at: <https://www.youtube.com/watch?v=WTqqjqfIVj4>

5.4 Approach of emergency preparedness for foot-and-mouth disease in the USA

Lindsey Holmstrom, National Preparedness and Incident Coordination Center, APHIS/USDA

Dr. Holmstrom's presentation started by pointing out that the United States have a long experience in the preparedness and execution of contingency plans to address emergencies. At present, it is the responsibility of the National Preparedness and Incident Coordination Center, which reports to Veterinary Services, USDA-APHIS.

The activities of preparedness and response to animal exotic diseases are focused on the FAD-PREP activity and include the participation in simulations within the country, as well as the development of contingency plans and international activities to support FMD eradication and strengthening of their emergency response capacity. The system was tested on the occasion of the recent outbreaks of the highly pathogenic avian influenza. Due to the restrictions of the pandemic, trainings have been mostly delivered virtually.

Emergency response falls within a national framework of incident management, whose key components are: resource management, command and coordination, communication and information management, and includes the participation of all governmental agencies, the industry and the private sector. Its federal and state laboratory network consists of 59 units, 47 of which can handle FMD suspected samples.

Finally, she emphasized that the strategy for the eradication and control of transboundary diseases is based on scientific principles, internationally accepted practices and is evaluated against the impacts on industry and trade. The pre-recorded presentation is available at: <https://www.youtube.com/watch?v=5Jx8DhzXnEg>

Discussion

Al término de la sesión, se abrió el espacio para las preguntas y respuestas.

1. Does Brazil have an emergency group at national level at the MAPA? Do state services have one as well? How is leadership articulated between the MAPA and state services in case of an emergency? Is the training of both groups given jointly or separately?

Yes, there is a group with federal responsible officers in each state, in addition to the state emergency groups trained to attend to emergencies with specialists in foot-and-mouth disease, classic and African swine fever, and poultry diseases such as avian influenza. Training is coordinated at central level and executed jointly with all states.
2. How did you manage virtual trainings in the EuFMD region since it covers a large number of countries? What works well and what does not?

It has advantages and disadvantages, but is the only option in this situation; nevertheless, we have been able to reach many more participants. On the other hand, interest is difficult to maintain from afar. The courses are available on the EuFMD page.
3. Regarding the exercises for emergency preparedness at different levels: cabinets for procedures, functional simulation, is there a guideline for their elaboration? What is the recommended frequency of the exercises? And, if a Veterinary Service would like to implement these exercises, could the technical advice of PANAFTOSA or other experienced service be requested?

Yes, there are comprehensive guidelines, such as that from the WHO. There is one guide from the OIE focused on animal diseases; there are national guidelines such as that of Australia. You need to choose the type of exercise better suited to your needs. PANAFTOSA can provide support and it has already done it.
4. Are compensation funds in case of animal slaughter during a zoosanitary crisis in Brazil currently covered by state or federal resources? Must all states have these resources?

Payment is due if the herd is affected by the foot-and-mouth disease, in the case of slaughter. Fifty percent of the commercial value of the animal is covered by federal and state resources, in a proportion of 2/3 and 1/3, the remaining 50% is covered by the funds. However, in the case of destocking of properties without the disease, to avoid dissemination, 100% is paid by official resources, in the same abovementioned proportion.
5. How can the private sector contribute to epidemiological surveillance in aid of the OVS?

It is responsible for the notification of suspected disease, accounting for two thirds of all reports, jointly with private veterinarians that help to characterize suspected cases.
6. How does the US APHIS visualize the scenarios of large-scale stamping-out regarding the guidelines of the OIE Code, the aspects of animal welfare and environmental stewardship?

Infected animals or their epidemiological contacts should be slaughtered: we have guidelines for humanitarian slaughter and disposal of dead animals that comply with international regulations and our legislation. A way to minimize the impact of slaughter is efficient surveillance and tracking.
7. What is the APHIS strategy regarding the use of vaccines in case of emergency control? ¿How does it intend to articulate the use of the two vaccine banks?

We have access to the vaccine bank of the North American Foot-and-Mouth Vaccine Bank with Canada and through the funds of the American Congress we have established a National Bank of Vaccines and Response Measures, which does not only deal with foot-and-mouth disease, but it also helps in diagnosis and provides vaccines for other diseases of interest, such as classic swine fever. The mobilization of banks will respond to the needs of the country, after virus identification and characterization. The emergency attention system is clear that vaccines will not be fully available at the beginning and, therefore, a series of risk-based actions is ready to be taken until all the necessary immunogen is available.

8. What is the name of the technological tool you use for virtual simulations?
We use the Zoom platform and commercial software to recreate the setting of an outbreak, which is not disease-specific, and is called Conductor Team Speed.
9. What is the best way to validate whether a country is prepared to face an emergency?
Each country must find its way. The countries of the region do not start from scratch, all of them have their plans. Still, it is important that they know the level of current preparedness. The country should have a routine for updating its plans and must provide training for each action to the responsible people. The OIE Code offers control strategies, with tools applicable to each reality that should be used in a changing and uncertain setting, although experience can help us to be prepared for potential scenarios in an emergency.

CONCLUSIONS OF SESSION 5

- A summary was presented of the level of emergency preparedness of the PVC countries and the different components of contingency plans were analyzed, identifying gaps that should be addressed for the strengthening of response capacities in the OVSs of the Southern Cone.
- Brazil's approach shows the progressive learning from recent emergencies which resulted in the establishment of a systematic and integrated program for health emergency preparedness in the OVS.
- The EuFMD approach is based on a Platform with multiple tools available for member states, which include modelling for outbreak simulation, training adapted to the virtual modality, reagent banks for laboratories and a complete set of training units for the stepped preparation of the technical staff of the OVSs.
- The approach of the USA is entirely integrated to the Emergency Response System of the country, with a sound command and coordination structure, together with strategies for outbreak containment, preparedness for critical activities, an extensive network of laboratory diagnosis and sophisticated systems for information management.

CLOSURE

Dr. Ottorino Cosivi and Dr. José Carlos Martín Camperchioli, president of the SENACSA, Paraguay, proceeded to the closure of the International Seminar.

Dr. Cosivi thanked all the participants of the countries of the region, the speakers, and public and private institutions of Paraguay, particularly the organization teams of SENACSA, PANAFOSA and PAHO in Washington, for their strong support for the development of the event. He informed that the Seminar conclusions will be submitted for consideration at the COSALFA 48.

PARTICIPANTS

The Seminar was held on 17 - 18 August, 2021, in a virtual modality through the Zoom platform and PAHO's YouTube channel, and on the first day nearly 458 persons from 18 countries of the region and outside the continent participated and 910 views were received in the YouTube Channel: 1st day <https://youtu.be/MRoVt6kxhGI> and 2nd day <https://youtu.be/ggYd98onFNo>

ANNEX 1

AGENDA

(version 16/08/2021)

INTRODUCTION

In 2020 and 2021, while the world is experiencing a pandemic caused by SARS-CoV-2, with a massive impact for mankind and which is still uncertain and far from over, the fight against the foot-and-mouth disease in the Americas has witnessed the end of the Plan of Action 2011-2020 and the beginning of the Plan of Action 2021-2025 of the Hemispheric Program for the Eradication of Foot-and-Mouth Disease (PHEFA) for the Americas.

Although in 2020 the Foot-and-Mouth Disease Seminar was not held previous to the 47th Ordinary Meeting of the South American Commission for the Fight Against Foot-and-Mouth Disease (COSALFA), which was conducted virtually, this year, the Pre-COSALFA Seminar will be held on the occasion of the next 48th Ordinary Meeting of the COSALFA to take place on 19 and 20 August 2021.

Evidence shows that, at the end of the last decade, all the countries of the South American region, except for Venezuela, have the official health status of free of foot-and-mouth disease, with or without vaccination, recognized by the World Organization for Animal Health (OIE), which represents a significant continental achievement due to the addition of the territories of North America, Central America and the Caribbean, all of them free without vaccination. Besides, the region has experienced a long period without new outbreaks, with the exception of the occurrence observed in the north of the Andean Subregion in 2017 and 2018, suggesting the highly probable elimination of the historically endemic virus types in a large part of the South American territory. Consequently, the region of the Americas will have to, on the one hand, prioritize its efforts toward the elimination of foot-and-mouth disease in zones where the infection remains and, on the other, complete the eradication process, making the transition toward the status of free without vaccination in free areas and countries that still maintain systematic vaccination cycles in their bovine populations.

The agenda of the International Seminar of the 48th Meeting of the COSALFA was prepared for the participants to be informed of the health management developed by the National Service of Quality and Animal Health (SENACSA) of Paraguay, (host to the 48th Meeting of the COSALFA) in the field of foot-and-mouth disease prevention and surveillance and the experience in the process of decision-making and transition toward the status of free without vaccination. Likewise, the lessons learned from the last PHEFA 2011-2020 will be presented, as well as the goals, strategies and guidelines for the current plan 2021-2025, together with an update on the tools and methodologies to keep a timely and specific diagnosis of foot-and-mouth disease at national and regional level. Besides, the capacities for a rapid response to foot-and-mouth disease outbreaks in the region and the tools that may help for emergency preparedness will be addressed.

The topics will be presented by well-known specialists as well as by representatives of the veterinary services in virtual thematic sessions, together with a discussion session aimed at knowing the different points of view of the audience composed of the main players and representatives of the public and private sectors and the academia, interested in the eradication of foot-and-mouth disease. The conclusions of each session will be presented at the 48th Meeting of the COSALFA.

TUESDAY, 17 August 2021 10:00 A.M. – 02:30 P.M. (São Paulo time, Brazil)	
09:15 - 10:00	Hands-on session for Seminar panelists - Pre-COSALFA: Audio and video check 07:30: COL - ECU - PE - PAN 08:30: BOL - CHI - PRY - VEN - GUY 09:30: BRA - ARG - URU - SUR
10:00 - 10:15	Opening of the Pre COSALFA 48 International Seminar Director of PANAFTOSA-PAHO/WHO, <i>Ottorino Cosivi</i> President of SENACSA, <i>José Carlos Martín Camperchioli</i>
10:15 - 10:40	SESSION 1. STRATEGIC-TECHNICAL AND POLITICAL VISION OF THE FOOT-AND-MOUTH DISEASE PREVENTION PROGRAM OF PARAGUAY Moderator and Introduction to the topic: <i>Alejandro Rivera</i> , PANAFTOSA-PAHO/WHO 1.1 SENACSA and its strategic vision in the face of new challenges <i>Jose Carlos Martin Camperchioli</i> , President of SENACSA, Paraguay
10:40 - 11:00	1.2 The biosafety laboratory and its role within the <i>One Health</i> concept <i>Dulma Segovia</i> , Technical Laboratory Coordinator, SENACSA, Paraguay <i>Graciela Riera</i> , Former Coordinator of COVID 19 Diagnosis MSP-SENACSA
11:00 - 11:20	1.3 Foot-and-Mouth Disease Prevention Program in Paraguay, guidelines and transition to the goals of the new PHEFA <i>Victor Dario Maldonado Cáceres</i> , SENACSA, Paraguay <i>Daniel Prieto Davey</i> , President of Animal Health Services Foundation, FUNDASSA, Paraguay
11:20 - 11:35	Discussion of Session 1
11:35 - 11:50	SESSION 2. THE PHEFA ACTION PLAN 2021-2025 Moderator and Introduction to the topic: <i>Manuel Sánchez Vázquez</i> , PANAFTOSA-PAHO/WHO 2.1 Lessons learned from the PHEFA Action Plan 2011-2020 <i>Alejandro Rivera</i> , PANAFTOSA-PAHO/WHO
11:50 - 12:05	2.2 Goals, strategies and guidance of the PHEFA Action Plan 2021-2025 <i>Alejandro Rivera</i> , PANAFTOSA-PAHO/WHO
12:05 - 12:20	Discussion of Session 2
12:20 - 13:15	Break
13:15 - 13:40	SESSION 3. DECISIONS AND EXPERIENCES IN THE TRANSITION TO THE STATUS OF FREE WITHOUT VACCINATION Moderator and Introduction to the topic: <i>Alejandro Rivera</i> , PANAFTOSA-PAHO/WHO 3.1 Experience and lessons learned in the process of transition to the status of free without vaccination in Brazil <i>Ana Carla Martins Vidor</i> , Ministry of Agriculture, Livestock and Supply (MAPA), Brazil
13:40 - 13:55	3.2 The experience of the state of Paraná in obtaining the international certification of Free of Foot-and-Mouth Disease Without Vaccination <i>Norberto Ortigara</i> , Secretary of Agriculture and Supply of the State of Paraná, Brazil
13:55 - 14:10	3.3 Key elements for decision making regarding a change of status: approach adopted by the countries <i>Manuel Sánchez Vázquez</i> , PANAFTOSA-PAHO/WHO
14:10 - 14:30	Discussion of Session 3
14:30	Closure of day 1

WEDNESDAY, 18 August 2021 | 10:00 A.M. – 12:45 P.M. (São Paulo time, Brazil)

09:30 - 10:00	Hands-on session for Seminar panelists - Pre-COSALFA: Audio and video check 07:30: COL - ECU - PE - PAN 08:30: BOL - CHI - PRY - VEN - GUY 09:30: BRA - ARG - URU - SUR
10:00 - 10:20	SESSION 4. CONTRIBUTION OF REFERENCE LABORATORIES TO THE CONTROL AND SURVEILLANCE OF FOOT-AND-MOUTH DISEASE Moderator and Introduction to the topic: <i>Alejandro Rivera</i> , PANAFTOSA-PAHO/WHO 4.1 Tests of proficiency in the diagnosis of Foot-and-Mouth Disease and Vesicular Stomatitis <i>Maristela Pituco</i> , Reference Laboratory PANAFTOSA-PAHO/WHO
10:20 - 10:35	4.2 Assessing the performance of the Kit Elisa FMD gIII for use in Foot-and-Mouth Disease surveillance <i>Anna Paula Alvim</i> , PANAFTOSA-PAHO/WHO <i>Daniel Magalhães</i> , PANAFTOSA-PAHO/WHO
10:35 - 10:50	4.3 Inactivation of the Foot-and-Mouth Disease virus with commercially available lysis buffers <i>Britta Wood</i> , Pirbright Institute, UK
10:50 - 11:05	Discussion of Session 4
11:05 - 11:25	SESSION 5. FOOT-AND-MOUTH DISEASE EMERGENCY PREPAREDNESS Moderator and Introduction to the topic: <i>Manuel Sánchez Vázquez</i> , PANAFTOSA-PAHO/WHO 5.1 Response to health emergencies caused by Foot-and-Mouth Disease in the Southern Cone - Project BID/CVP <i>Alejandro Rivera</i> , PANAFTOSA-PAHO/WHO
11:25 - 11:40	5.2 Approach for Foot-and-Mouth Disease emergency preparedness in Brazil <i>Nilton Antonio de Moraes</i> , Ministry of Agriculture, Livestock and Supply (MAPA), Brazil
11:40 - 11:55	5.3 Approach for Foot-and-Mouth Disease emergency preparedness in EuFMD member countries <i>Maria De La Puente Arevalo</i> , European Commission for the Control of Foot-and-Mouth Disease
11:55 - 12:10	5.4 Approach for Foot-and-Mouth Disease emergency preparedness in the USA <i>Lindsey Holmstrom</i> , Veterinary Medical Officer, National Preparedness and Incident Coordination Center, APHIS/USDA
12:10 - 12:30	Discussion of Session 5
12:30 - 12:45	Closure of the Seminar Director of PANAFTOSA-PAHO/WHO President of SENACSA