

FOOT-AND-MOUTH DISEASE CONTROL: REVIEW OF THE SOUTH AMERICAN EXPERIENCE

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South America



Area: 17,840,000 km²

Human

Population: 410,013,492

Animal

population:

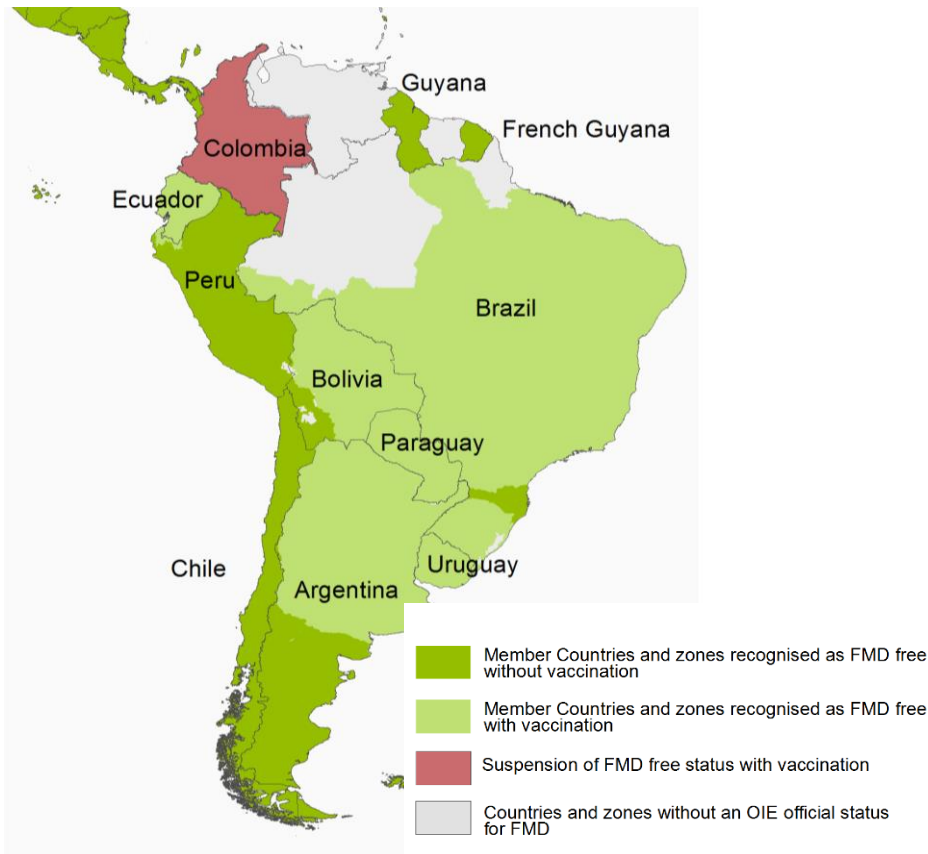
Cattle	351 850 974
Goats	20 651 432
Pigs	64 326 473
Sheep	68 019 357

Countries :

Argentina	
Bolivia	Guyana
Brazil	Paraguay
Chile	Peru
Colombia	Suriname
Ecuador	Uruguay
French	Venezuela
Guiana	

Current FMD Situation

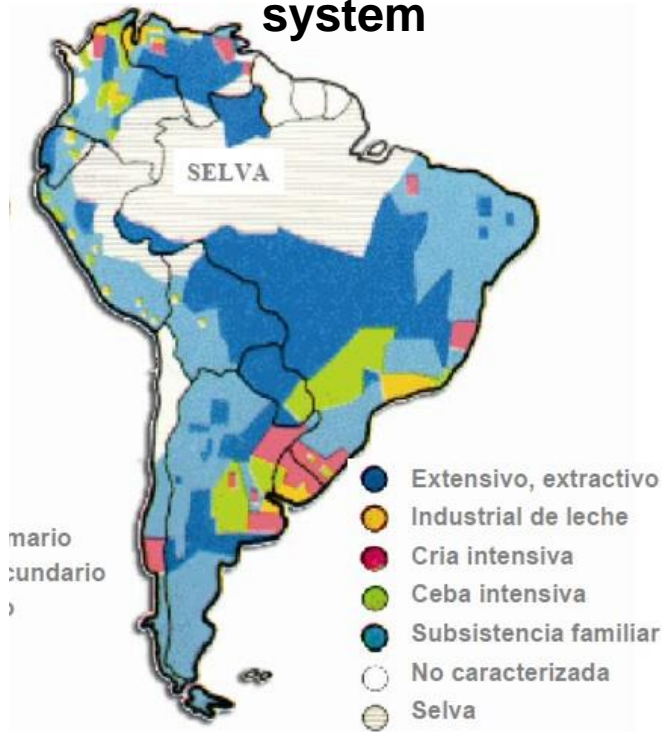
FMD Status officially recognised by OIE



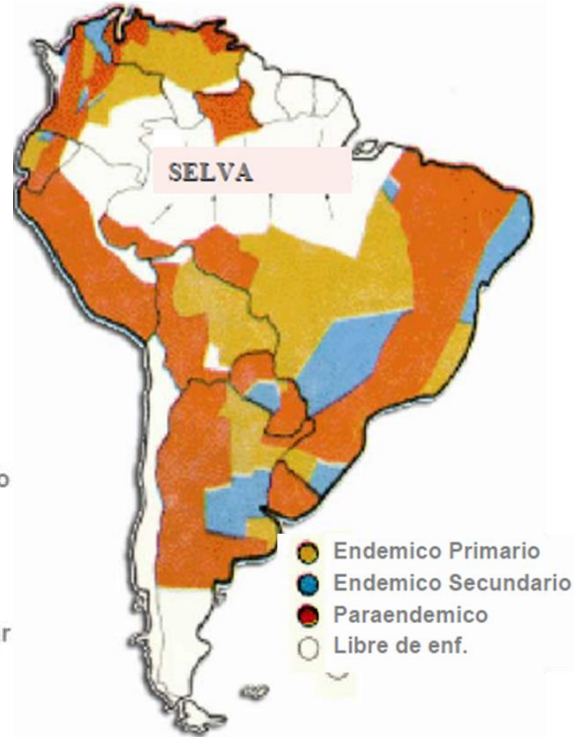
- 81 % Cattle population in FMD Free zones/countries using vaccination
- 4% Cattle population in FMD Free zones/countries without use of vaccines
- 8% Cattle population in a country with recently suspended FMD free status with vaccination
- 6% Cattle population in zones without OIE recognition

FMD in South America

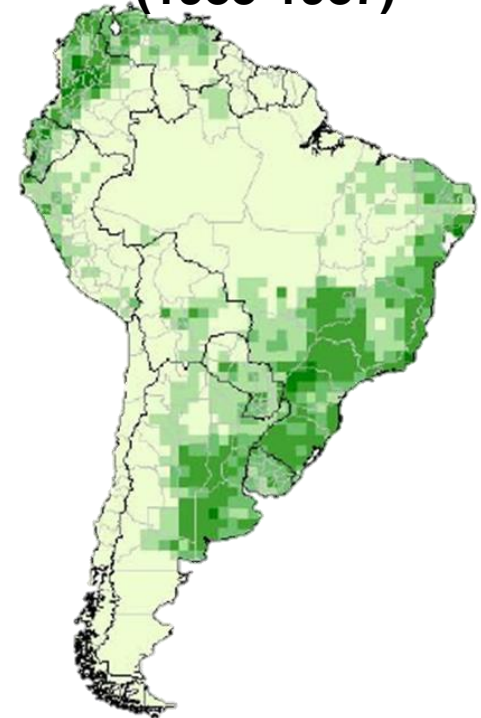
Bovine production system



FMD Epidemiological characterization



Vesicular disease cases/week (1983-1987)



Cattle and buffaloes (*B. bubalis*): sole reservoir of FMD virus in South America
Only species under systematic vaccination

Wildlife does not act as reservoir of FMDV

Small ruminants have no role in the maintenance of the FMD virus . Not under systematic vaccination

Occasional outbreaks in pigs. No important role in the maintenance of the virus circulation. Not under systematic vaccination

FMD CONTROL in South America (1)

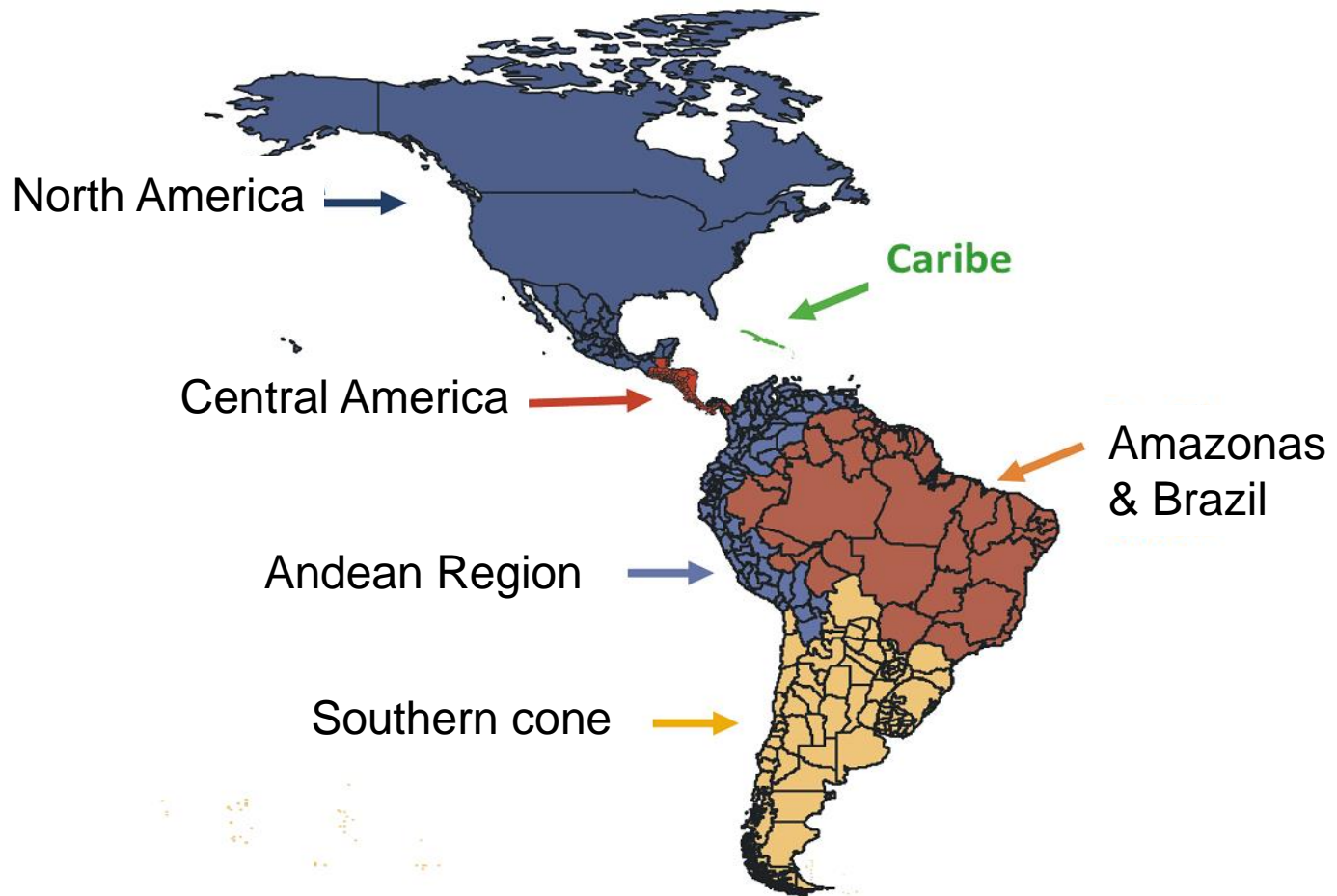
- **1951:** PANAFTOSA established as a technical cooperation program in Rio Janeiro
- **Period 1950 – 1970:** Establishment of Diagnostic Lab and vaccine production plan. Research on virus characterization, epidemiology, pathogenesis, diagnosis.
- **Period 1970 – 1990:** Establishment of country FMD control programs, development oil-adjuvant vaccine, FMD ecosystem approach and capacity building programs.
 - 1972 South American Commission for the fight of FMD. COSALFA
 - 1987 Hemispheric Committee for the Eradication of FMD *COHEFA.
 - 1988. Hemispheric FMD Eradication Program PHEFA- Plan of Action 1988-2009.

FMD CONTROL in South America (2)

- **Period 1990 – 2010:**
 - Consolidation of National Control Programs
 - Wide use of oil-adjuvant vaccine, Quality standards for vaccine,
 - Dramatic decrease of incidence,
 - Development of 3ABC/EITB. Differentiate vaccination from virus circulation,
 - Recognition of zones/country free status with/without vaccination,
 - 2000-2001 epidemic in Southern cone - controlled
 - Virus O sporadic outbreaks Southern Cone.
 - 85% population in free zones
- **2011 to date.**
 - Plan of Action 2011-2020 PHEFA
 - 95% cattle population in free zones
 - 3 years without new outbreaks in the region.
 - Entrance to the Final stage of PHEFA.

PHEFA

Hemispheric programme for FMD eradication



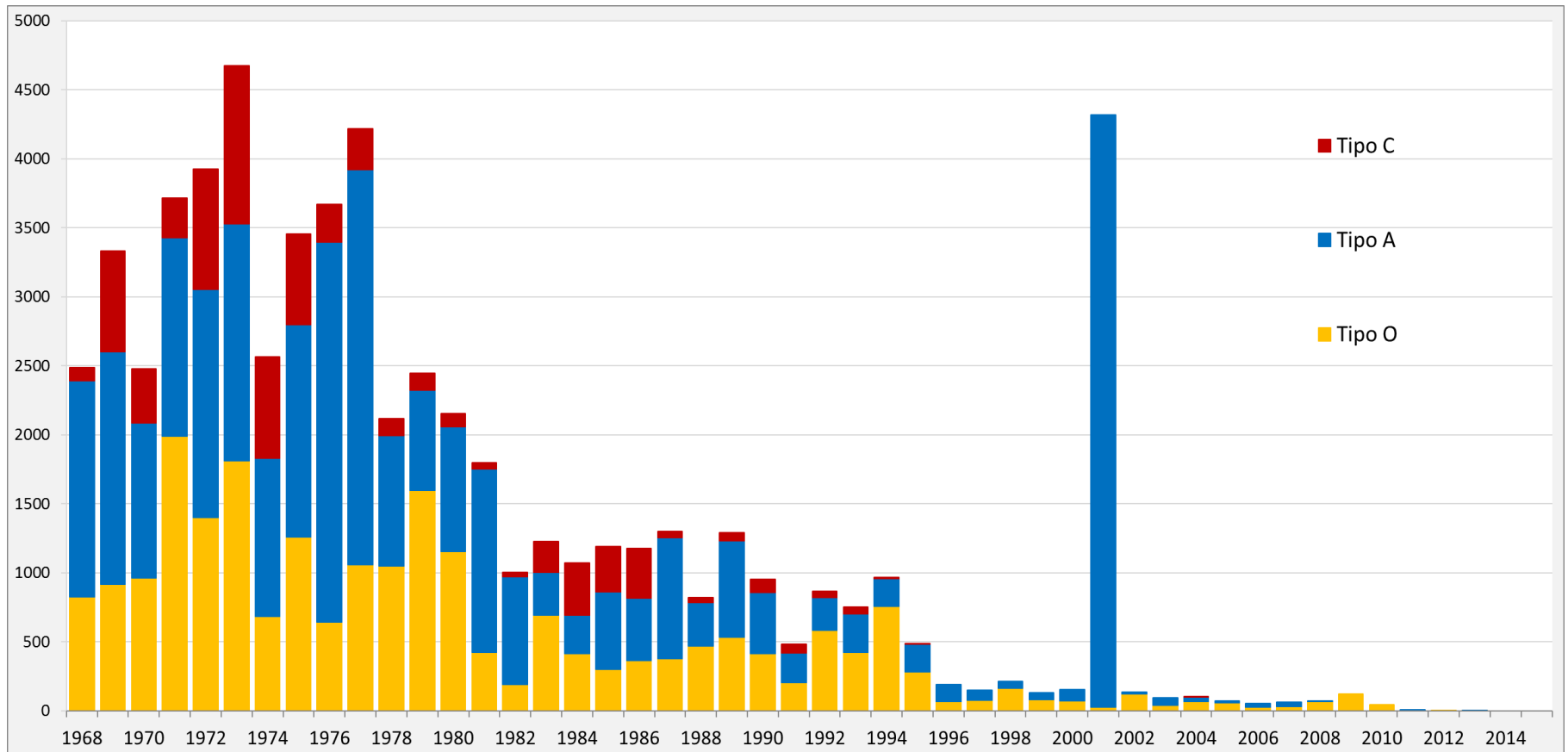
PHEFA – FUNDAMENTALS (1)

- PHEFA as a regional political agreement which provides strategic and technical guidance to FMD eradication
 - Action Plan 1988 – 2009
 - Action Plan 2011 – 2020
- Based on knowledge of the natural history of FMD disease, and its relation with livestock production systems and livestock movement and trade patterns.
- Characterization of risk of FMDv in different sub-regions and ecosystems.

PHEFA – FUNDAMENTALS (2)

- Veterinary service delivery models incorporating producer, private veterinarians and other private sector stakeholders
- Regional coordination of the technical and managerial aspects of FMD national programs,
- Monitoring & evaluation of Plan of Action of PHEFA.

Reported FMD outbreaks to the Continental Epidemiological Surveillance and Information System (SIVCON)



Jun 2017 – Reoccurrence in Colombia

Date of previous occurrence: 04/08/2009



Key Facts

- 7 outbreaks in three events.
- Date of start of the event: 01/06/2017
- Date of confirmation of the event: 10/07/2017
- Date event resolved: 15/08/2017
- Measures Applied:
 - Movement control & Traceability
 - Zoning & Surveillance
 - Stamping out, destruction of carcasses, products, by-products and waste
 - Vaccination

Source: OIE WAHIS

Diagnosis: Virus “O” Euro SA, endogenous from the sub-region

Phylogenetic Analysis:

- Not related to vaccine strains, so not link to vaccine production laboratories;
- Close to strains isolated in Colombia in 2008 and Vanezuela in 2009.

Source: PANAFTOSA

PHEFA - Plan of Action 2011-2020



Technical and Epidemiological Guidance

- Areas of intervention according to current OIE Sanitary status
 - Free without vaccination
 - Free with vaccination
 - Not free:
 - Areas with endemic viral circulation
 - Areas with sporadic FMD
 - Areas with no evidence of virus circulation

FMD Free
with
Vaccination



FMD Free
without
Vaccination

Lesson learnt

- FMD eradication requires sustained political and technical commitment with regional vision, scientific evidence and coordinated approaches
- FMD can be eradicated by vaccination
- Public and private sectors must be aligned toward same objectives
- Surveillance control and eradication strategies must follow changes of the livestock production systems.
- FMD programs have been contributing at the development and strengthening of the Veterinary Services.



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www.senasa.gov.ar