Foot and Mouth Disease in Southeast Asia

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Foot and Mouth Disease

- caused by a virus of the genus Aphthovirus, family Picornaviridae.
- seven serotypes of FMD virus
  - O, A, C, SAT 1, SAT 2, SAT 3, and Asia 1,
- Disease of cloven-footed animals
- No public health importance
Species affected

• Domestic animals - Cattle, pigs, sheep, goats and buffalo
• many species of cloven-hoofed wildlife, such as African buffalo, deer, antelope and wild pigs may become infected
• apart from the African buffalo wildlife involvement in the epidemiology of FMD in the domesticated species is not certain
• strains of FMD virus that infect cattle have been isolated from wild pigs and deer
Clinical signs

- Vesicular diseases
- vesicles(blisters) and erosions of the epithelium of the mouth, nares, muzzle, feet, and teats
- fever, lameness, inappetence
- Highly contagious
- High Morbidity, low mortality
Impact on Farmer’s livelihood

- Loss draft power
- Low productivity
- Added cost on treatment
- Reduced value of their livestock
- Reduced farmer’s income
Countries recognised by the OIE as free from foot and mouth disease without vaccination
(According to the provisions of Chapter 2.1.1 of the OIE Terrestrial Animal Health Code)
Conjectured Status of FMD 2003

- **Endemic**
- **Intermediate, sporadic**
- **Free with vaccination**
- **Free. Virus present in game parks**
- **Free**
Countries in which FMD was reported, 2003

43 countries reported FMDV outbreaks

Argentina Bolivia Ecuador Paraguay Venezuela

Benin, Botswana, Burkina Faso, Burundi, Chad, Eritrea, Ethiopia, Ghana, Kenya, Libya, Malawi, Mali, Mozambique, Niger, Nigeria, South Africa, Tanzania, Togo, Uganda, Zimbabwe

Afghanistan Bangladesh Bhutan India Iran Nepal Pakistan Tajikistan Turkey UEA

Cambodia (?) Hong Kong (O) Laos PDR (O) Malaysia (A&O) Myanmar (O) Philippines (O) Thailand (A&O) Vietnam (O)

10 FEBRUARY 2004
Distribution of FMD type O 2003

24 countries

Countries in which FMD was reported
15 countries which submitted FMD type O isolates to the OIE/FAO World Reference Laboratory in 2003
Distribution of FMD type A 2003

12 countries

Countries in which FMD was reported
6 countries which submitted FMD type A isolates to the OIE/FAO World Reference Laboratory in 2003
Distribution of FMD type Asia 1  2003

3 countries

Countries in which FMD was reported
1 countries which submitted FMD type Asia 1 isolates to the OIE/FAO World Reference Laboratory in 2003
Distribution of FMD type SAT 1 2003

2 countries

Countries in which FMD was reported
Distribution of FMD type SAT 2 2003

7 countries

Countries in which FMD was reported
2 countries which submitted FMD type SAT isolates to the
OIE/FAO World Reference Laboratory in 2003
2 countries which submitted SVD isolates to the OIE/FAO World Reference Laboratory in 2003
January 2004

- FMD Type O
- FMD Type A
- Clinical Diagnosis
March 2004

- FMD Type O
- FMD Type A
- Clinical Diagnosis
April 2004

- FMD Type O
- FMD Type A
- Clinical Diagnosis
May 2004

- FMD Type O
- FMD Type A
- Clinical Diagnosis
July 2004

- **FMD Type O**
- **FMD Type A**
- **Clinical Diagnosis**
August 2004

[Map showing the distribution of FMD Type O and Type A across different countries in Asia.]

- Red: FMD Type O
- Green: FMD Type A
- Blue: Clinical Diagnosis
OIE SEAFMD Campaign

Office International des Epizootes (OIE) Southeast Asia Foot and Mouth Disease (SEAFMD) Campaign
OIE SEAFMD Campaign

- 1994 - OIE Sub-Commission for FMD Control in Southeast Asia
- 1995 - 1st Meeting
- 1997 - OIE Regional Coordinating Unit (RCU) for SEAFMD was established in Bangkok
OIE SEAFMD Campaign

- Phase I (1997 to 2000)
- Funding from Sweden, Australia, OIE Tokyo,
- Support from Thailand and member countries (in Kind)
OIE SEAFMD Campaign

• Phase II (2001 to 2004)
• Funding mainly from Australia
• Support from OIE Tokyo and kind contribution from Thailand and member countries
OIE SEAFMD Campaign

- Goal
  - to increase food security and alleviate poverty amongst the rural small holder producers of livestock.

- Purpose
  - to increase the productivity and economic output of the livestock sector by controlling and eradicating FMD.

- Objective
  - to add value to the regional control program through SEAFMDC by employing a series of integrated and harmonised approaches to disease control
Components of SEAFMD

- International Coordination and Support
- Program management, resources and funding
- Public Awareness and Communication
- Disease surveillance, diagnosis, reporting and control
- Policy, legislation and standards to support disease control and zone establishment
- Regional research and technology transfer
- Livestock sector development including private sector integration
- Monitoring and evaluation
Southeast Asia FMD Status

- **OIE FMD Free Zone**
- **FMD Infected Areas**
Southeast Asia FMD Progressive Zoning

- Infected Areas
- Progressive Zoning
- OIE FMD Free zone
Southeast Asia FMD Progressive Zoning

- Infected Areas
- Progressive Zoning
- OIE FMD Free zone
Progressive Zoning

- Focus on zoning and animal movement management
- Study the feasibility – technical and economic
- Epidemiological and economic studies
- Leadership by the countries
- Support by RCU and other agencies
- Participation and practical training
- Proposal for members and international donors
Cattle Movement 2004
Pig Movement 2004
Zoning for Lower Mekong
Southeast Asia FMD Progressive Zoning

- Infected Areas
- Progressive Zoning
- OIE FMD Free zone
Southeast Asia FMD Campaign

Onward to an FMD Free Southeast Asia