

Selection of FMD Vaccines in Vietnam

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Outline

1. The use of FMD vaccines in Viet Nam
2. Criteria for vaccine selection
3. Difficulties encountered
4. Alternative approaches
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1. The use of FMD vaccines in Viet Nam

- The control of FMD is a national responsibility in Viet Nam.
- Routine vaccination against FMD is used: ~ 20 millions doses of FMD vaccines/year:
 - National FMD Control Programme (Phase 1: 2006-2010, Phase 2: 2011-2015, Phase 3: 2016-2020).
- Ring vaccination is used as an outbreak response measure (vaccines from the National Stockpile).

2. Criteria for vaccine selection

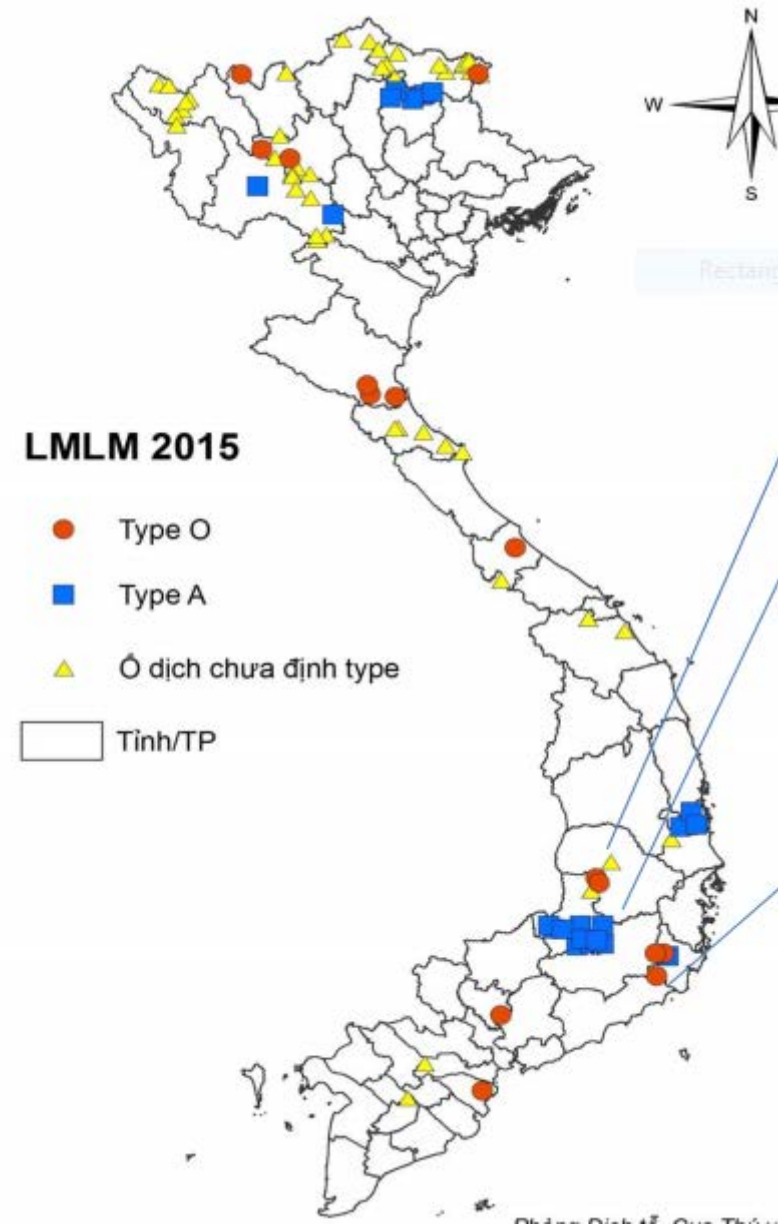
- The vaccine may be used only under the control of the Competent Authority.
- The choice of strains of FMD virus vaccines is based on antigenic matching, i.e. the matching of representative field isolates from outbreaks to available vaccine strains.
 - Chapter 2.1.8 Foot-and-Mouth Disease (infection with foot and mouth disease virus), OIE Terrestrial Manual.

2. Criteria for vaccine selection

- For the period from 2010-2015, viruses serotype O were found dominant in the country with viruses serotype A being detected time to time.
- With support given by the WRLFMD at the Pirbright Laboratory on vaccine matching, selection of FMD vaccines in Viet Nam has been done based on the r_1 values of virus neutralisation test (VNT).

3. Difficulties encountered

- In order to ensure that a field strain is **representative** for the country in a period of time, the surveillance capacity of the national Veterinary Services will be an issue.

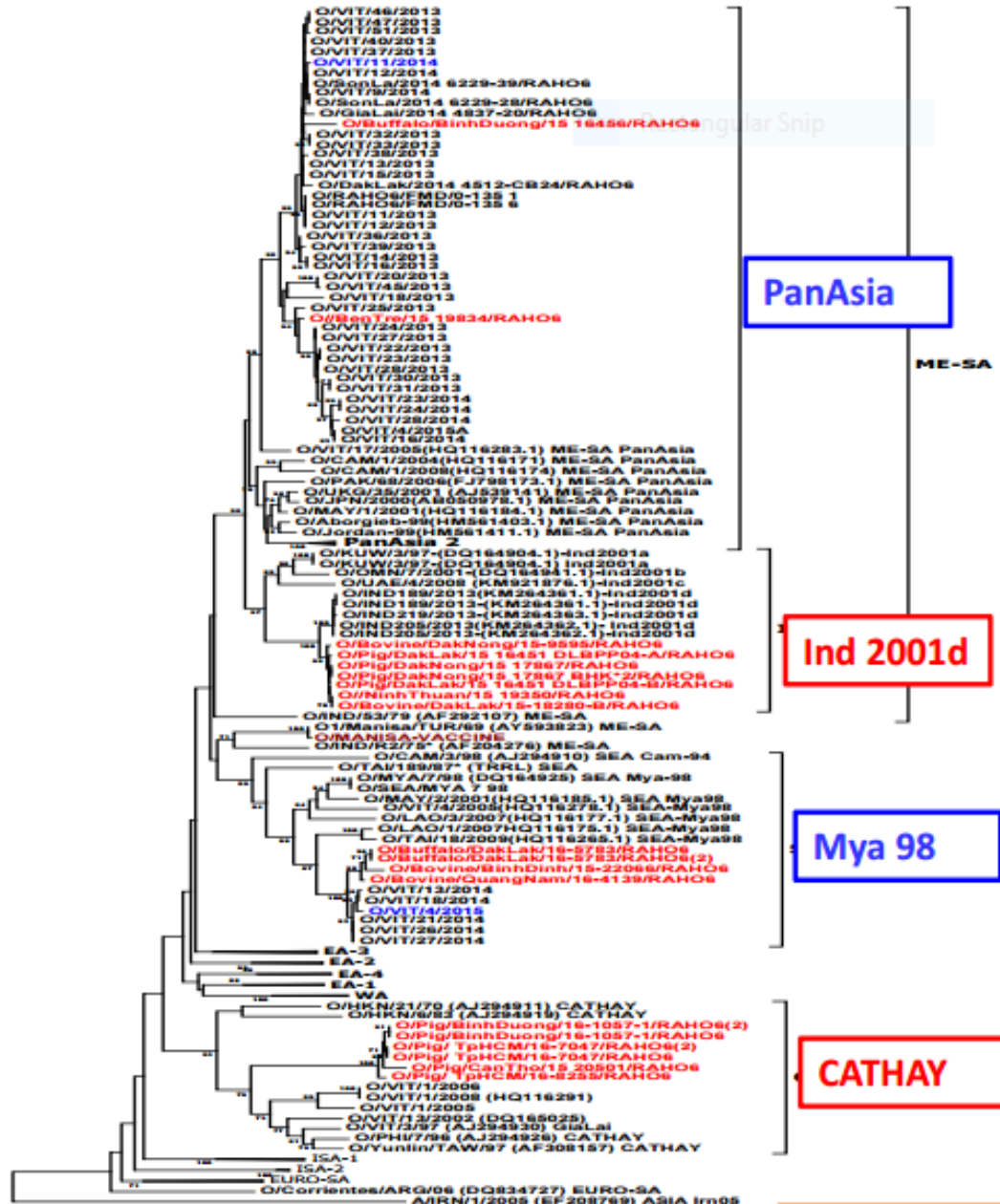


3. Difficulties encountered

- Secondly, commercial vaccine manufacturers are often not willing to change the vaccine antigen should the strain is not widely spread. In case, the country would like to speed up the vaccine matching test by doing it with their national laboratories, they will ***not be able to access to the vaccine strains*** on order to conduct VNT.

4. Alternative approaches

- Alternative approaches for vaccine matching are needed, especially for countries in endemic setting;
 - Some novel approaches are tested (Capsid sequencing and protein structure modelling based approach; Antigenic Cartography), but none included into the OIE Terrestrial Manual (Chapter 2.1.8) yet.
- In an effort to overcome these constrains, Viet Nam is developing its own vaccines for FMD.
 - Challenge: introduction of new stains, e.g., O/ME-SA/Ind2001d.



5. Acknowledgement

- Department of Animal Health, Ministry of Agriculture and Rural Development
- WRL/EURL FMD
- Plum Island Animal Disease Center

Thank you for your attention!