

## Current status of bovine Tuberculosis & Brucellosis

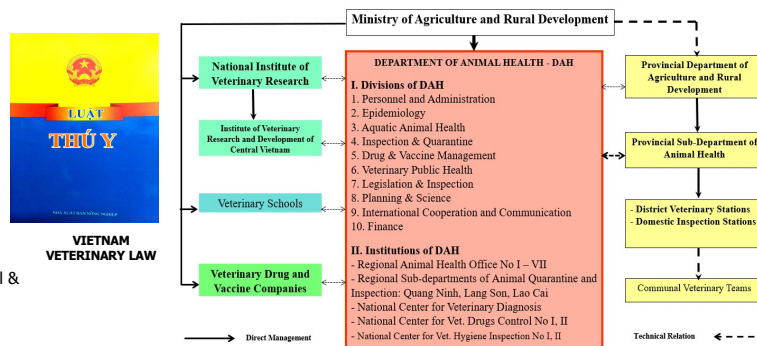
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### 1. Background

- Viet Nam with an area of about 332,000 km<sup>2</sup> is located in the South-East Asia and shares a border line of more than 4,630 km with China, Laos and Cambodia.
- As of 2023, the livestock population included about 30 million pigs, 6,3 million cattle and 2,1 million buffaloes.
- According our current regulations, the Department of Animal Health (DAH) takes a major responsibility for bovine Tuberculosis & Brucellosis control in animals to protect both human health and animal health of the country.

### 2. Legal basics for terrestrial disease control & prevention

- Veterinary Law was approved by the National Assembly in 2015
- Circular No. 07 dated 31 May 2016 of MARD regulating terrestrial animal disease control & prevention
- Joint Circular No. 16 dated 27 May 2013 of MOH and MARD regulating zoonotic disease control



### 3. Current situation, diagnosis, surveillance, control

#### TUBERCULOSIS

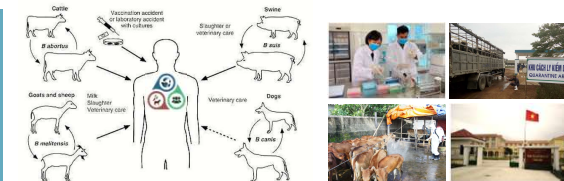
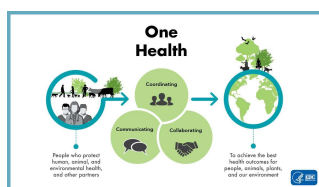
- Guideline for prevention and control of bTB is specified in Appendix No. 19 of the Circular No. 07/2016/TT-BNNPTNT dated 31 May 2016 of MARD
- Few cases of bovine Tuberculosis (bTB) were reported from 1980s to 1990s; after this period, no case of bTB has been reported for decades.
- At present, there is no national action plan for bTB Preparedness and Control
- bTB surveillance: Annual surveillance activities for bTB is compulsory for all breeding and dairy cattle.
  - Clinical surveillance through observation, detection of clinical symptoms, typical lesions of sick and dead cattle and epidemiological characteristics of bTB.
  - Disease detection surveillance: Periodically check for bTB by intradermal injection reaction (Tuberculin Skin Test) for 100% of breeding and dairy cattle.
- Diagnosis of disease: Follow the bovine tuberculosis diagnosis process specified in Vietnamese Standard TCVN 8400-10:2010. Testing by TST or laboratory tests (*Bacteriological examinations, ELISA for serum antibodies or Bovigam-Gama interferon test and DNA techniques*) for tissues or lesions, sputum, serum and anticoagulated blood, etc.
- In the past 5 years from 2019-2023, the intradermal injection reactions were performed in 438,670 breeding and dairy cattle, and 2779 samples were tested for tuberculosis by Realtime PCR. Result: **All were negative**

#### BRUCELLOSIS

- Guideline for prevention and control of Brucellosis is specified in Appendix No. 20 of the Circular No. 07/2016/TT-BNNPTNT dated 31 May 2016 of MARD
- No national action plan for Brucellosis Preparedness and Control
- Annual surveillance activities is compulsory for all breeding and dairy cattle.
  - Clinical surveillance through observation and detection of clinical symptoms, typical lesions of sick and dead cattle and epidemiological characteristics.
  - Surveillance for disease detection: Periodically check for Brucellosis disease by milk test (MRT) or serum antibody test (RBT, CFT, ...)
- Diagnosis of disease: Follow the diagnostic process for Brucellosis specified in Vietnamese Standard TCVN 8400-13: 2011. Species and biovars can be identified by cultural, biochemical and serological tests. PCR can provide the basis of complementary identification and typing methods based on specific genomic sequences
- During last 5 years from 2019 - 2024, 318,768 samples were tested by ELISA, 2,090 samples by RBT and 2,923 samples by Realtime PCR. Results: **All were negative**

#### ONE HEALTH APPROACH

- Prevent outbreaks of zoonotic diseases in animals and human.
- Improve food safety and security
- Reduce antimicrobial-resistance
- Protect global health security
- Protect biodiversity and conservation
- By promoting collaboration across sectors, One Health approach can achieve the best health outcomes for people, animals, and plants in a shared environment.



## CHALLENGES AND WAY FORWARD

### Challenges/gaps

- These diseases are often highly contagious and difficult to control, requiring effective prevention and treatment measures; **Lack of awareness about Brucellosis, bTB among farmer;**
- Epidemiological studies including surveillance and herd prevalence are limited on the two diseases;
- Vietnam shares a long land border with 3 countries Laos, Cambodia and China, creating conditions for the illegal animals' movement to Vietnam;
- Small-scale livestock farming: Most livestock farming activities in Vietnam are still small-scale and scattered;
- Small-scale slaughterhouses: Many small-scale slaughterhouses are prone to the risk of spreading diseases and reducing quality

### Way forward

- Improvement the capacity in confirmative diagnosis and proficiency tests
- Seek resources, especially funding, to develop and implement an active surveillance program for bTB and Brucellosis.
- Training on disease determinants **both animal and human sector**
- Sharing the current status of the disease in a network
- Promote public-private partnerships for resource sharing, disease reporting, policy development and compliance with disease control
- Establishing Disease-Free Zones



**VIETNAM VETERINARY WORKFORCE ALWAYS AVAILABLE  
TO PREVENT AND MANAGE EMERGENCIES**