

# Current status of bovine TB/zoonotic TB & Brucellosis, Vanuatu



Regional Workshop on Zoonotic TB and Brucellosis in the Asia Pacific Region Qingdao, 24-26 September 2024

Alick Donald Worworbu

## Bovine TB/Zoonotic TB

### CURRENT SITUATION

- Vanuatu has a favorable animal health status with no significant production limiting disease for cattle and freedom from most OIE- listed disease.
- Even though Bovine TB has been eradicated in Vanuatu, there are cases of tuberculosis in human which was found to be caused by, mycobacterium tuberculosis
- About one quarter of Vanuatu's population is infected with tuberculosis (TB) bacteria. Only a small proportion of those infected will become sick with TB. People with weakened immune systems have a much greater risk of falling ill from TB



The table below gives TB cases reported by year since 2020 to date:

Year	Number of TB Cases reported
2020	76
2021	69
2022	84
2023	101
2024	50 (as of Q2, 2024)

### DIAGNOSIS, SURVEILLANCE, CONTROL

- Blood sampling is currently done. Abattoir blood collection was done and sent to reference lab in NZ. Samples need to be shared with reference laboratories ( NZMPI) (NICs or/and WHO Collaborating Centers) for further analysis and confirmation.
- Microscope/ Xpert MTB/RIF assay (Gene Xpert)
- Active case findings – Officers actually goes out to carryout surveillance.
- Though Poor surveillance and monitoring, border authorities ( Biosecurity/ Customs) ensure strict regulations & measures in place for imported goods

### ONE HEALTH APPROACH

The strengthening of the 'One-Health' approach and sustainable development goals to link environment, animal and human health are crucial for the early prevention of health risks

- One health approach Vanuatu aims to improve health outcome, strengthen health systems, and foster a more resilient society.
- Public health involve livestock and biosecurity together with municipality to prevent zoonotic disease outbreaks, enhance disease surveillance, and promotes sustainable and holistic health practices across communities and food processing premises.

The most effective prevention strategy is the elimination of infection in animals, by ensuring strict border regulation on imported goods and animal product

A few public Health Interventions/Activities currently being implemented in Vanuatu:

- Active Case Finding, Contact Tracing & Refresher Training on TB Microscopy- Gene Xpert
- o ACSM/ Awareness Activities (Advocacy, Communication and Social Mobilization)

Human sector laboratories are encouraged to work more closely with animal health laboratories, as they could profit from their experience and knowledge in diagnosing zoonotic tuberculosis. This would guarantee a more efficient system, while increasing collaboration in a 'One-Health' framework.

### CHALLENGES AND WAY FORWARD

- Lack of funds for mobilization of officials to carryout the surveys
- Lack of equipment for collecting and processing samples, lack of staff knowledge on blood sampling, geographical difficulties, and security in accessing farms
- We need assistance in recording of cattle data in each of our six provinces.
- Vanuatu is free from Zoonotic Tuberculosis but due to wild reservoir, Movement permit of cattle from island to island . One way forward is livestock Officer has to give a movement permit to owner before shipment or movement of cattle.
- Absence of routine surveillance, which can result in re-emerging of the disease
- To better understand and address the issue, a multisectoral One Health approach is needed, where industry, public health, and animal health work together to better understand the epidemiology and identify preventive measures to protect human and animal health.
- Human sector laboratories are encouraged to work more closely with animal health laboratories, as they could profit from their experience and knowledge in diagnosing zoonotic tuberculosis. This would guarantee a more efficient system, while increasing collaboration in a 'One-Health' framework.

## Brucellosis

### CURRENT SITUATION

Vanuatu has a favorable animal health status with no significant production limiting disease for cattle and freedom from most OIE- listed disease.

- There has been very little literature published on B. abortus in the Pacific Island region over the last 20 years making it difficult to gauge the impact of the disease. Even though Bovine brucellosis has been present in PICTs for many years it may not be considered important as there is little information available and a lack of awareness on the disease.
- Sero-surveillance conducted for brucellosis on cattle herd detects a prevalence of 0% brucellosis. However its one of the zoonosis which we having a look out on due to its highest incidence worldwide.

### DIAGNOSIS, SURVEILLANCE, CONTROL

No recent diagnosis was carryout against Brucellosis due to the fact that Vanuatu is free from brucellosis

Key surveillance activities undertaken are;

Surveillance Unit, MOH

Syndromic Surveillance

Laboratory based Surveillance. (Public Health laboratory based surveillance)

- Blood sampling is currently done. Abattoir blood collection was done and sent to reference lab in New Zealand
- Though Poor surveillance and monitoring, border authorities ( Biosecurity/ Customs) ensure strict regulations & measures in place for imported goods

### ONE HEALTH APPROACH

Adopting the one health approach Vanuatu is joining ministries of Health, ministry of Agriculture, and other stakeholders in the region to strengthens prevention and control (if present) brucellosis

The main focus of this one health collaboration is to establish laboratory-based surveillance to help better detect brucellosis and be able to identify and address its risk factors

- Public health authorities to ensure hygienic and safe procedure and protocols in place inside food facilities (e.g butchers, abattoirs)
- Department of livestock and biosecurity under ministry of Agriculture ensure safe movement of healthy animals from farm to farm or island to island. Ensure slaughtered animal are disease free.

### CHALLENGES AND WAY FORWARD

- Lack of funds for mobilization of officials to carryout the surveys/surveillance & reporting
  - Lack of equipment for collecting and processing samples, lack of staff knowledge on blood sampling, geographical difficulties, and security in accessing farms
  - There is a very little community awareness on the disease at the moment and with limited and poor surveillance capacities, the risks of the disease re-emerging in Vanuatu is high
  - Joined ministries and stakeholders under the one health approach didn't invested heavily in strengthening serological and molecular testing within the region ( this investment proved to be a success in other regions)
  - To better understand and address the issue, a multisectoral One Health approach is needed, where industry, public health, and animal health work together to better understand the epidemiology and identify preventive measures to protect human and animal health.
  - there seems to be a shortage of veterinarians as well as a tendency for high official turnover within the various animal health organizations
- This could lead to poor reporting of diseases, which limits early detection and management of animal diseases, as in country official capacity to recognize diseases is limited and therefore they do not make reports

