

# CURRENT STATUS OF BOVINE TB/ZOONOTIC TB & BRUCELLOSIS [Malaysia]

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

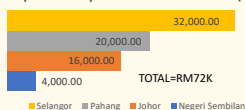
[Dr. Shahaza binti Othman / Department of Veterinary Services, Malaysia]

## Bovine TB/Zoonotic TB

### CURRENT SITUATION

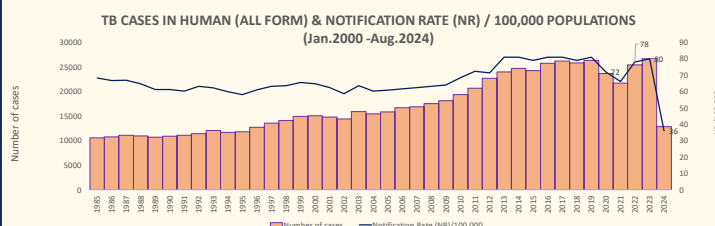
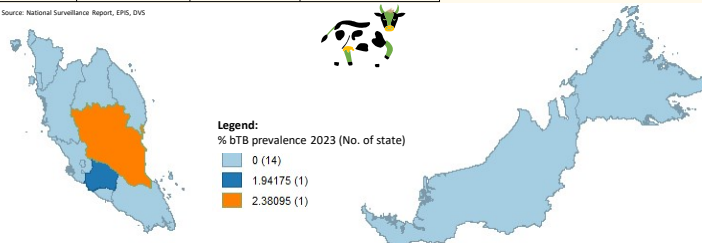
| Year | No. of serum +ve | No. of serum tested | Prevalence of Bovine TB (%) |
|------|------------------|---------------------|-----------------------------|
| 2021 | 0                | 1321                | 0.0                         |
| 2022 | 4                | 3025                | 0.1                         |
| 2023 | 5                | 2917                | 0.2                         |

Compensation paid to farmers in 2023 (RM)



Source: SKPHZ, DVS

Source: National Surveillance Report, EPIS, DVS



## DIAGNOSIS, SURVEILLANCE, CONTROL

| TEST METHOD                 | LABORATORIES |               |                 |               |                 |             |               |
|-----------------------------|--------------|---------------|-----------------|---------------|-----------------|-------------|---------------|
|                             | VRI (Perak)  | MVZU (Penang) | MVZT (Selangor) | MVZT (Pahang) | MVZT (Kelantan) | MDV (Sabah) | MDV (Sarawak) |
| Mycobacterium spp isolation | /            |               |                 |               |                 |             |               |
| Mycobacterium spp PCR       | /            |               |                 |               |                 |             |               |
| Gamma-Interferon (BOVIGAM®) |              | /             | /               | /             | /               |             |               |
| CFT+CCT                     |              |               |                 |               |                 | /           | /             |

Field: Caudal Fold Test, Comparative Cervical Test

| SURVEILLANCE  | CONTROL MEASURES  |
|---|---|
| <ul style="list-style-type: none"><li>Active surveillance (National Animal Disease Surveillance Programme)</li><li>Passive surveillance</li><li>Standard Protocol: APTVM Surveillance</li></ul> | <ul style="list-style-type: none"><li>Test &amp; culling policy with compensation</li><li>Movement control<ul style="list-style-type: none"><li>Farm registration (<a href="#">e-vetpermit</a>)</li><li>Movement permit (eVetpermit)</li><li>Traceability</li></ul></li><li>Disease Investigation (<a href="#">MADIC</a>, <a href="#">myVETLAB</a>)</li><li>Import protocol</li></ul> |

## ONE HEALTH APPROACH

Aug.2023: World Zoonosis Day (DVS, MOH, PERHILITAN, myOHUN, KPKT)

Nov.2023: Workshop on Applying LAWA Model Principles in Zoonotic Diseases (DVS, MOH)

June 2023: Awareness Campaign of Diseases with Economic & Zoonotic Impacts in Penang

May 2024: Awareness Campaign of Diseases with Economic & Zoonotic Impacts in Terengganu

## CHALLENGES AND WAY FORWARD

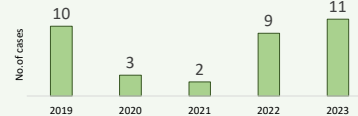
- Farmers are hesitant to cull livestock due to compensation being lower than the animal's value, which may threaten their ability to continue farming.
- Farmers awareness and cooperation during surveillance programme
- Caudal Fold Test & CCT: Knowledge-Attitude-Practice
- Strain identification and molecular epidemiology
- Researches/specific topics: wildlife, environment

## Brucellosis

### CURRENT SITUATION

| Year | No. of serum +ve | No. of serum tested | Brucellosis seroprevalence % (Large Ruminant) |
|------|------------------|---------------------|---|
| 2021 | 30               | 2426                | 1.2   |
| 2022 | 63               | 4867                | 1.3   |
| 2023 | 33               | 6324                | 0.5   |

Human Brucellosis from 2019-2023

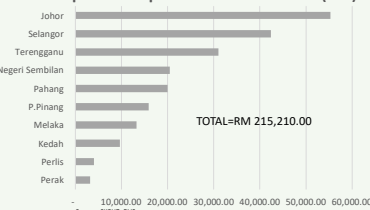


Source: Brucellosis Rapid Risk Analysis Report

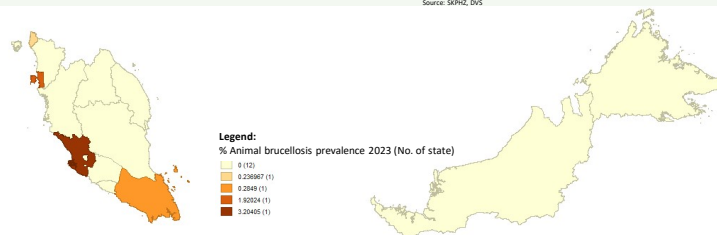
| Year | No. of serum +ve | No. of serum tested | Brucellosis seroprevalence % (Small Ruminant) |
|------|------------------|---------------------|---|
| 2021 | 6                | 2555                | 0.23  |
| 2022 | 12               | 3738                | 0.32  |
| 2023 | 3                | 7463                | 0.04  |

Source: National Surveillance Report, EPIS, DVS

Compensation paid to farmers in 2023 (RM)



Source: SKPHZ, DVS



## DIAGNOSIS, SURVEILLANCE, CONTROL

| TEST METHOD            | LABORATORIES |               |                 |               |                 |             |               |
|------------------------|--------------|---------------|-----------------|---------------|-----------------|-------------|---------------|
|                        | VRI (Perak)  | MVZU (Penang) | MVZT (Selangor) | MVZT (Pahang) | MVZT (Kelantan) | MDV (Sabah) | MDV (Sarawak) |
| Brucella spp isolation | /            |               |                 |               |                 |             |               |
| Brucella spp PCR       | /            | /             |                 |               |                 |             |               |
| RBPT                   | /            | /             | /               | /             | /               | /           | /             |
| CFT                    | /            |               |                 |               |                 |             |               |
| iELISA                 |              | /             | /               | /             | /               |             |               |
| Milk Ring Test         | /            |               |                 |               |                 |             |               |

Field: Rose Bengal Plate Test (RBPT)

| SURVEILLANCE  | CONTROL MEASURES   |
|---|--|
| <ul style="list-style-type: none"><li>Active surveillance (National Animal Disease Surveillance Programme)</li><li>Passive surveillance</li><li>Standard protocol: <a href="#">APTVM Surveillance</a></li></ul> | <ul style="list-style-type: none"><li>Vaccination (<a href="#">Brucella abortus</a>, RB51)</li><li>Test &amp; culling policy with compensation</li><li>Movement control<ul style="list-style-type: none"><li>Farm registration (<a href="#">e-vetpermit</a>)</li><li>Movement permit (eVetpermit)</li><li>Traceability</li></ul></li><li>Disease Investigation (<a href="#">MADIC</a>, <a href="#">myVETLAB</a>)</li><li>Import protocol</li></ul> |

## ONE HEALTH APPROACH

Aug. 2023: Tabletop Joint Investigation Simulation for Brucellosis Outbreak (DVS, MOH)

Feb. 2024: Workshop on Rapid Risk Analysis – Brucellosis (DVS, MOH, UPM)

## CHALLENGES AND WAY FORWARD

- Farmers awareness and cooperation during surveillance program
- Uncertain efficacy of vaccination program for brucellosis control
- Lack of current information on the risk of transmission (transmission rate, infection rate, R0)
- Strain identification and molecular epidemiology
- Unauthorized live animal movement
- RBPT in field: Knowledge-Attitude-Practice
- Researches/specific topics: wildlife, environment