BRUCELLOSIS DIAGNOSTIC AND CONTROL IN INDONESIA

Siswani

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Ministry of Agriculture
The Republic of Indonesia

Presented at:
The 4th FAO-APHCA/OIE/DLD Regional Workshop on Brucellosis Diagnostic and Control in Asia Pasific Region
Chiang Mai 18-21 March 2014
17.508 ISLAND
5.193.250 KM2
1.919.440 KM2 (BIOSPHER)
THE 15 TH WIDEST
COUNTRY IN THE WORLD

The 4 th FAO-APHCA/OIE/DLD
Regional workshop on *brucellosis* diagnostic and control in Asia Pasific Region
Population of Ruminant in Indonesia from 2009 to 2013

- Sapi Potong/Beef Cattle
- Kerbau/Buffalo
- Sapi Perah/Dairy Cattle
- Kambing/Goat
- Domba/Sheep

<table>
<thead>
<tr>
<th>Year</th>
<th>Sapi Potong/Beef Cattle</th>
<th>Kerbau/Buffalo</th>
<th>Sapi Perah/Dairy Cattle</th>
<th>Kambing/Goat</th>
<th>Domba/Sheep</th>
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</thead>
<tbody>
<tr>
<td>2009</td>
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<td>2010</td>
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<td>2012</td>
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<td>2013</td>
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*) Indicates provisional data.
Population of Ruminant in Indonesia During 2009 until 2013

<table>
<thead>
<tr>
<th>JENIS</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
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</thead>
<tbody>
<tr>
<td>Dairy Cattle</td>
<td>475</td>
<td>488</td>
<td>597</td>
<td>612</td>
<td>636</td>
</tr>
<tr>
<td>Buffalo</td>
<td>1.933</td>
<td>2.000</td>
<td>1.305</td>
<td>1.438</td>
<td>1.484</td>
</tr>
</tbody>
</table>
## Total Samples Tested for Bovine Brucellosis at DIC Maros 2011-2013

<table>
<thead>
<tr>
<th>YEAR</th>
<th>SAMPLES</th>
<th>POSITIVE</th>
<th>NEGATIVE</th>
</tr>
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<tbody>
<tr>
<td>2011</td>
<td>3.524</td>
<td>1.097</td>
<td>2.427</td>
</tr>
<tr>
<td>2012</td>
<td>5.794</td>
<td>942</td>
<td>4.852</td>
</tr>
<tr>
<td>2013</td>
<td>5.099</td>
<td>697</td>
<td>4.425</td>
</tr>
<tr>
<td>TOTAL</td>
<td>14.417</td>
<td>2.686</td>
<td>11.704</td>
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</tbody>
</table>
BRUCELLOSIS

- One of important animal diseases which become national priority for control and eradication programs
- First case discovered in dairy cattle in Bandung before war world II
- Currently spread over in most parts of Indonesia
- Strategy involving continues activities, routine and planning which covered all aspect in animal management
1. SURVEILANCE
2. TEST AND SLAUGHTER
3. COMPENSATION
4. VACCINATION
5. LIVESTOCK MANAGEMENT
6. QUARANTINE AND CONTROL OF ANIMAL MOVEMENTS
7. PUBLIC AWARENESS
BRUCELLOSIS SURVEILLANCE PROGRAMS AND CONTROL

SURVEILLANCE PROGRAM

Active Surveillance

Pasive Surveillance

Sample identification

Diagnosis

Data base and Disease Map

STRATEGY AND PROGRAM
LABORATORY NETWORK IN INDONESIA

PROVINCIAL TYPE B LABORATORIES (30 Lab)
DISTRICT TYPE C LABORATORIES
UNIVERSITY LABORATORIES

1. NVRL (National Veterinary Research Laboratory)
2. VDAL (National Veterinary Drugs Assay Laboratory)
3. QCLVP (Quality Control Laboratory for Livestock Products)
4. CVB (National Center for Vet Biological)
5. DIC (Disease Investigation Centres)
6. FQCL (Feed Quality Control Laboratory)

The 4th FAO-APHCA/OIE/DLD Regional workshop on *brucellosis* diagnostic and control in Asia Pacific Region
REGIONAL DISEASE INVESTIGATION CENTRE, MAROS

- One of 8 Regional Disease Investigation Centres in Indonesia
- The main functions include:
  - As National Reference Laboratory for brucellosis and BVD;
  - Disease Diagnosis;
  - Disease Investigation;
  - Regional Disease Mapping;
  - Disease Surveillance and Monitoring;
  - Post Vaccination Monitoring;
  - Applied Research
NATIONAL REFERENCE LABORATORY IN INDONESIA

DiC Wates: Anthrax, Avian Influenza, BSE, Salmonella
DiC Denpasar: Jembrana Disease, Hemorrhagic Septicemia
DiC Maros: Bovine Viral Diarhea, Brucellosis
DiC Medan: Classical Swine Fever, PRRS
DiC Bukittinggi: Rabies
DiC Lampung: New Castle Disease, Infectious Bursal Disease
DiC Banjarbaru: Surra, Infectious Bovine Rhinotracheitis
DiC Subang: Avian Influenza
• Maintain a network with other Reference Laboratories (AAHL-Australia)

• Propose or develop methods and procedures that facilitate harmonisation of international standards and guidelines applicable to the other laboratory in Indonesia

• Distribute to all laboratories in Indonesia biological reference products and any other reagents used in the diagnosis (ex: IBASS)

• Organize laboratory proficiency testing with other laboratories
**Brucellosis Diagnostic Strategy**

- IBASS is Indonesian Brucella Abortus Serum Standard

- DIC Maros as National Brucellosis Reference Diagnostic Laboratory should provide reference control and other reagents for diagnostic

- National Reference has been compared with International Serum Standard (OIE/WHO)
Serology – RBPT, ELISA or CFT
PCR – for further test or research purposes
Bacterial Isolation and identification
DIC Maros is becoming a National Reference Laboratory for Brucellosis in Indonesia complying with OIE TOR for reference laboratory

- Improving the surveillance, technical support and supply of diagnostic kits supporting the brucellosis diagnosis and control system in Indonesia

- Proposing collaboration (twinning program) with OIE Reference Laboratories for brucellosis.

- Participating in scientific meetings and other activities on behalf of the FAO-APHCA/OIE/DLD
THANK YOU