Update on FMD and Avian Influenza

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The numbers of FMD outbreaks are listed below by serotype A, O, Asia-1 for the period between from 2000 to 2018

- **Serotype A - FMD outbreak.** In 2013, 2016 the outbreak was occur 3 provinces (6 sub provinces) in western and eastern region of Mongolia.

- **Serotype Asia-1 - FMD outbreak:** Only one case of Asia-1 serotype was reported in 2005 which were occurred in Dornod province (1 sub province) in eastern region.

- **Serotype O - FMD outbreak:** In 2018 totally 21 outbreaks have occurred in 7 provinces (22 sub provinces) in eastern region of Mongolia wherein bordering with neighboring countries
Key activities on FMD control

• Share information on animal diseases
• Movement control
• Emergency vaccination
• Risk-based vaccination
• Surveillance
• control over access to livestock by people and equipment;
• control the introduction of new animals to existing stock;
• maintain sanitation of livestock pens, buildings, vehicles, and equipment;
• monitor and report illness;
• appropriate disposal of manure and dead carcasses.
General strategy

- National control strategy with timeline:
  1. Surveillance
  2. Monitoring and evaluation
  3. Mongolia can be participated in activities of control FMD and shared The information in regional areas
  4. Protection of FMD free countries, areas or zones is enhanced with stringent import and cross-border animal movement controls.
Contingency planning and outbreak response

Contingency planning for potential outbreaks will identify the elements included in a response effort to eradicate the disease, such as:
– appropriate disposal of carcasses and all animal products (OIE Terrestrial Animal Health Code);
– surveillance and tracing of potentially infected or exposed livestock;
– strict quarantine and controls on movement of livestock, equipment, vehicles, and;
– thorough disinfection of premises and all infected material (implements, cars, clothes, etc.).
Diagnostics that are currently being used

In SCVL diagnostic and technical capacity have been improved to OIE manual:

Identification of the agent:
   a) Virus Isolation (BHK-21, IBRS, LFBK cell culture for TADS) VNT for only FMD
   b) Immunological methods:
      • Ag, Ab detection ELISA for FMD NSP-ELISA, SPCE,
      • Complement fixation test-CFT for FMD
   c) Nucleic acid recognition methods:
      • Agarosegel-based PCR assay
      • RT-PCR
      • Real-Time PCR
   d) Molecular epidemiology
      • Gene Sequencing for TADS

The laboratory diagnosis and serotype identification of the virus should be done in a BSL III level laboratory
FMD surveillance design in Mongolia

3 regions: Western, Central, Eastern

1. Demonstration of freedom in the Western region
2. Vaccine monitoring in the vaccination area
FMD Surveillance

1. FMD surveillance in the western
   • Demonstrate of freedom

2. FMD surveillance in the central
   • Demonstrate of freedom

3. FMD surveillance in the eastern
   • Estimation of prevalence
   • Post-vaccination
   • Demonstrate freedom in some zone
Sample size in the 3 zones /2010-2017/

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</tr>
</thead>
<tbody>
<tr>
<td>Western</td>
<td>6,384</td>
<td>9,517</td>
<td>9,289</td>
<td>26,960</td>
<td>11,425</td>
<td>8955</td>
<td>9163</td>
<td>3985</td>
</tr>
<tr>
<td>Central</td>
<td>7,248</td>
<td>9,300</td>
<td>7,170</td>
<td>269</td>
<td>1,124</td>
<td>6000</td>
<td>6000</td>
<td>4586</td>
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<tr>
<td>Eastern</td>
<td>3,572</td>
<td>300</td>
<td>930</td>
<td>930</td>
<td>900</td>
<td>6580</td>
<td>6000</td>
<td>2251</td>
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<tr>
<td>Total</td>
<td>17,204</td>
<td>19,117</td>
<td>17,389</td>
<td>28,159</td>
<td>13,450</td>
<td>21535</td>
<td>21163</td>
<td>10822</td>
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Survey toolbox, Epi_info and ProMesa, two stage sampling

FMD surveillance in Mongolia in 2017
## Update of FMD Roadmap

<table>
<thead>
<tr>
<th>Tools/Suggested Activities</th>
<th>Progress/status</th>
<th>Actions to be taken</th>
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<tbody>
<tr>
<td><strong>Component 5: Funding and Resource arrangement</strong></td>
<td></td>
<td>In the future, the action needs to be</td>
</tr>
<tr>
<td>● National funding</td>
<td>no clear</td>
<td>clearing clarified</td>
</tr>
<tr>
<td>● Regional and international support</td>
<td>no clear</td>
<td></td>
</tr>
<tr>
<td>● OIE Twinning Programs for laboratories and veterinary education</td>
<td>no clear</td>
<td></td>
</tr>
<tr>
<td>● Resource mobilization within the region to support FMD control in some strategic areas should be encouraged.</td>
<td>no clear</td>
<td></td>
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## Regional and Global collaborations on FMD

<table>
<thead>
<tr>
<th>Member’s Approach</th>
<th>Current collaborations</th>
<th>Desired future collaborations</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>1. OIE twinning project for advanced diagnosis of FMD and to obtain basic pathological and anatomy techniques for TADS - to start in January 2016 until June 2018</td>
<td>Short-term training</td>
</tr>
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# Transboundary Animal Disease Status in Mongolia

<table>
<thead>
<tr>
<th>Disease</th>
<th>Last case</th>
<th>Status</th>
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<tbody>
<tr>
<td>PPR</td>
<td>2018</td>
<td>infected</td>
</tr>
<tr>
<td>AI</td>
<td>2010</td>
<td>infected</td>
</tr>
<tr>
<td>Rinderpest</td>
<td>Dec. 1991</td>
<td>Infection free May 2005</td>
</tr>
<tr>
<td>Sheep pox</td>
<td>2015 to 2016,2017</td>
<td>infected</td>
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</table>
Control of PPR in Mongolia

➢ Accurate diagnosis
   • Clinical Signs
   • Specimens for Virus Nucleic Acid (PCR) or Antigens detection (ELISA)
   • Serum samples (Competitive ELISA)

➢ Control of movement of livestock

➢ Disinfection of PPRV-contaminated areas and disposal of dead animal carcasses

➢ Vaccination
THANK YOU FOR YOUR ATTENTION

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