Current situation and control measures of ASF in China

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2019.04.30
122 outbreaks in 30 provinces (as of 8th April)

First outbreak Shenyang, Liaoning
122 outbreaks in 30 provinces (as of 8th April)
3 different strains

IGR/TRS 序列比对分析

中国

2019年3月7日

广西贵港市家猪

分型

I

广西贵港市家猪

I

2018年8月3日

辽宁省沈阳家猪

I

2018年11月16日

吉林省白山市野猪

II

格鲁吉亚

Georgia 2007/1

1

俄罗斯

I

I

I

II

II

II

II

欧洲

Ukr12/Zap

II

II

II

非洲

ZAM/2017/Mbala/1

ZAM/13/Mbala

无序列信息
## Identify transmission patterns and risk factors

<table>
<thead>
<tr>
<th>Transmission routes of outbreaks</th>
<th>(n=110, domestic pig)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Swill feeding</td>
<td>Live pig and pig product movement</td>
</tr>
<tr>
<td>Number of outbreaks</td>
<td>48</td>
</tr>
<tr>
<td>Proportion</td>
<td>43.6%</td>
</tr>
</tbody>
</table>
Part I

The introduction of ASF
Smuggling

Hundreds of thousands of tons of risk offal smuggled to China
Passengers carry-on

Found 2,650 person-time, 4,510 kg pig product from countries with ASF outbreaks (Since Aug. 2018)
Wild boars
Part II

Complex live pig trade and movement networks
Risk Management Actions: Movement control

- **8 Aug** — Restrict movement of live pigs and risk products for the province having ASF outbreaks
- **11 Sep** — Restrict movement of live pigs for the province having ASF outbreaks
  
  Closing live pig markets of province with ASF outbreaks
- **18 Oct** — Suspend the policy of free toll fee for transport of live pigs
- **27 Dec** — Direct trade and transport between qualified farms and slaughterhouse

35.3% ↓ 15%
Risk Management Actions: Management of vehicles

No. 79 Notice MARA (31 Oct. 2018)

- Proper condition during the transportation (e.g. anti-leakage, adequate space, enough drinking water)
- GPS in the vehicle for cross-province movement tracing
- Strict cleaning and disinfection before and after loading
Risk Management Actions: In-depth reform in animal health management

- Animal health inspection certificates based on lab test
- Implementing zoning approach
- Strengthening the broker management
**Part III**

Virus circulation along the value chain

- Virus survival period: > 3 months
- Contaminated slaughterhouses: 32/84 = 38%
- Contaminated live pig products in markets: 23/54 = 43%
Risk of swill feeding

Field investigation:
Swill feeding OR = 7.653 (95% CI: 2.24, 26.14)

30 Aug. 2018 – Stop swill feeding in provinces having outbreaks and their neighboring provinces
18 Oct. 2018 – Ban swill feeding at national wide
Risk Management Actions: Strengthening inspection in slaughtering

18 Dec, 2018: Enforcement on stopping illegal slaughtering

1st Feb. 2019: Test of ASF in slaughterhouse required
• Test every batch of live pigs arrived
• Issue animal health certificates for products based on lab test
• Thoroughly cleansing and disinfection required

13 Mar, 2019: Subsidies for safe disposal of contaminated products
Part IV

Biosecurity

loopholes in large intensive farms

<table>
<thead>
<tr>
<th>Scale</th>
<th>Output of each scale</th>
<th>Proportion of farms in each scales</th>
<th>Outbreak proportion of each scale</th>
<th>OR</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-99</td>
<td>37.0%</td>
<td>97.3113%</td>
<td>30.1%</td>
<td>0.81</td>
</tr>
<tr>
<td>100-499</td>
<td>18.1%</td>
<td>1.6865%</td>
<td>40.7%</td>
<td>24.1</td>
</tr>
<tr>
<td>500-999</td>
<td>12.3%</td>
<td>0.3925%</td>
<td>8%</td>
<td>20.4</td>
</tr>
<tr>
<td>1000-4999</td>
<td>16.8%</td>
<td>0.1824%</td>
<td>10.6%</td>
<td>58.1</td>
</tr>
<tr>
<td>5000-9999</td>
<td>5.1%</td>
<td>0.0166%</td>
<td>6.2%</td>
<td>373.5</td>
</tr>
<tr>
<td>≥10000</td>
<td>10.7%</td>
<td>0.0107%</td>
<td>4.4%</td>
<td>411.2</td>
</tr>
</tbody>
</table>
Similar transmission process for all outbreaks in large intensive farms

- No construction or operation of exit channel for culling sows is the cause
- Lack of strict cleansing and disinfection system for vehicles
- Culling pigs
- Confusion of diseases with similar symptoms.
- Internal transfer vehicles
- Growers and veterinarians

Stricter the management and the better facilities, the slower spread
MARA notification (22 Oct. 2018)

Improving biosecurity management in breeding farms and large intensive farms

- Personnel: Truck drivers, Insurance agents, Para Vet

- Transportation: Loading area in farm, vehicles

- Flies/ Mouse:
Long-term and sustainable solutions with joint-efforts

Upgrading the industry and value chain

- Growing
- Biosecurity
- Trade & Transportation
- Slaughtering
- Zoning & Compartmentalization approaches
Promoting Multi-sector collaboration & Public awareness

_Interest-based stakeholders coordination mechanism_
- Strengthen multi-sector collaboration
- Unify same objectives among stakeholders
- Minimize obstacles

_Public awareness:_
- Raise the awareness of pig growers and other stakeholders
- Mobilize the support from the public
Enhancing international collaboration

• With FAO, OIE and other countries
  • Sharing experience in ASF prevention and control
  • Providing technical assistant for neighboring countries
• Collaboration on ASF research
THANK YOU