African Swine Fever Diagnosis and Sampling

A review
1. Why are we concerned?

2. Disease Recognition – Clinical and Pathological presentation.

3. ASF Diagnostic Sampling – What samples to take and how many?
Quick history of ASF

- First identified in Kenya in the 1920s;
- Spread to Europe in the middle of the last century, and later to South America and the Caribbean;
- Disease eradicated from America in the 1980’s and from Europe (except of Sardinia) in the 1990’s;
- In 2007, the disease spread again out of Africa, into the Caucasus (Georgia) and spread to other European countries;
- In August 2018 first occurrence in China.
Global Situation 2016 - 2018

43/198 countries or territories
Spatial distribution of outbreaks in Europe
2007 -2018 vs 2017 - 2018

**2007-2018**
- 6,700 outbreaks
  - Wild boars
- 1,400 outbreaks
  - Backyard pigs
- 400 outbreaks
  - Commercial pigs

**2017-2018**
- 4,000 outbreaks
  - Wild boars
- 1,000 outbreaks
  - Backyard pigs
- 250 outbreaks
  - Commercial pigs
Distribution of ASF in Members of the OIE Regional Commission for Europe in 2017 and 2018

- First occurrence in Czech Rep. in June 2017
- Recurrence in Belgium in September 2018
- First occurrence in Hungary in April 2018
- First occurrence in Romania in July 2017
- First occurrence in Bulgaria in August 2018

13/53 countries
Role of Wild Boar

Outbreaks in wild boar 2018
(Reported from January the 1st to October 4, 2018)
ASF in China (01/08/2018 – 04/10/2018)

<table>
<thead>
<tr>
<th>Provinces</th>
<th>N. outbreaks</th>
<th>Susceptible</th>
<th>Cases</th>
<th>Deaths</th>
<th>Destroyed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anhui</td>
<td>8</td>
<td>2,679</td>
<td>706</td>
<td>380</td>
<td>2,299</td>
</tr>
<tr>
<td>Heilongjiang</td>
<td>2</td>
<td>290</td>
<td>65</td>
<td>22</td>
<td>268</td>
</tr>
<tr>
<td>Henan</td>
<td>2</td>
<td>3,893</td>
<td>178</td>
<td>94</td>
<td>3,799</td>
</tr>
<tr>
<td>Inner Mongolia</td>
<td>4</td>
<td>922</td>
<td>57</td>
<td>48</td>
<td>874</td>
</tr>
<tr>
<td>Jiangsu</td>
<td>2</td>
<td>14,783</td>
<td>627</td>
<td>97</td>
<td>14,686</td>
</tr>
<tr>
<td>Jilin</td>
<td>2</td>
<td>528</td>
<td>64</td>
<td>59</td>
<td>469</td>
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<tr>
<td>Liaoning</td>
<td>13</td>
<td>35,908</td>
<td>670</td>
<td>413</td>
<td>35,545</td>
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<tr>
<td>Zhejiang</td>
<td>1</td>
<td>1,864</td>
<td>430</td>
<td>340</td>
<td>1,524</td>
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<td>Grand Total</td>
<td>34</td>
<td>60,867</td>
<td>2,797</td>
<td>1,453</td>
<td>59,464</td>
</tr>
</tbody>
</table>

First Occurrence
August 1 2018
Why are we concerned?

- Deteriorating ASF situation global has increased the risk to Canadian Swine sector.
- In Europe most of the outbreaks have been reported in wildlife. Outbreaks in domestic animals for the most part have been in backyard pigs and smaller commercial herds.
- In Asia no wildlife cases have been notified and most outbreaks have occurred in Commercial farms.
- Disease spread has been significantly different in Europe and Asia (Europe 30 km/ bi-week vs China 771 km/bi-week)
- This likely indicates the method of spread and the low level of biosecurity on farms in China.