Classical Swine Fever in wild boar in the Republic of Latvia

SCOFAH
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On 15th October, 2012 - one wild boar shot 5 km west from the border with Belarus, in the Šķaune parish, Dagda county were diagnosed seropositive for CSF. The examinations were performed in the frame of the annual surveillance programme to monitor the disease situation.

Epidemiological investigation of wild boar population started according to Commission Decision 2002/106/EC Chapter IV section H.

Samples (serum and organs) were sent to EU Reference laboratory in Hannover and 2 wild boars were detected positive by CSF qRT-PCR on 16th November, 2012.

On 20th November 2012 Latvia notified two primary cases of classical swine fever (CSF) in wild boar close to the border with Russia and Belarus, in Dagda and Zilupe Counties.
Based on the genotyping performed at the EU Reference Laboratory for CSF in Hannover, the Latvian CSF isolates were assigned to the genotype 2.3, showing its closest genetic relationship with isolates from Russian Federation.

Due to the close vicinity of the infected area to Belarus and Russian Federation and based on the genotyping results it is hypothesized that the infection might have crossed the border with infected wild boar.

However, primary source of the CSF cases in Latvia remains unclear.

On the basis of the antibodies profile of the positive wild boars, most probably the infection started in mid-August 2012.
An infected area along the border with Russian Federation and Belarus has been established. The area is about 20 - 50 km wide, about 460 km long and has a surface of about 9 000 km².

The area was defined based on the geographical distribution of the disease in this part of Latvia and the unknown epidemiological CSF situation in wild boar and domestic pigs on the other side of the border.
As a consequence of the positive findings in the wild boar population:

- Intensive hunting was started since November within and outside the infected area

  Hunting of wild boar is the sole practical system to obtain samples for laboratory investigations and to reduce the susceptible population

- Veterinary teams performed visits in all pig holdings (including backyard holdings)

  The inspection of the holdings includes the census of animals, clinical examinations and blood sampling for laboratory examinations
On 27 November, 2012 three backyard holdings located in the infected area were found CSF positive:

• Outbreak 1: Backyard holding with 2 pigs in the Svarinu parish, Dagda county

• Outbreak 2: Backyard holding with 5 pigs in the Piedrujas parish, Kraslavas county.

• Outbreak 3: Backyard holding with 9 pigs in the Piedrujas parish, Kraslavas county.

Protection and surveillance zones around the infected holdings were established on 27th November, 2012 and measures according to Council Directive 2001/89/EC were implemented immediately.
Protection and surveillance zones within former provisionally infected area
All pigs in the affected holdings were killed and destroyed within two days after confirmation of outbreaks.

Census of holdings and pigs and clinical investigations as well as sampling was carried out in protection and surveillance zones according to CSF Diagnostic manual (Commission Decision 2002/106/EC).

<table>
<thead>
<tr>
<th>Inspection</th>
<th>No.of holdings with pigs inspected</th>
<th>No.of pigs clinically investigated</th>
<th>No.of samples taken</th>
<th>Positive laboratory results</th>
</tr>
</thead>
<tbody>
<tr>
<td>First</td>
<td>231</td>
<td>999</td>
<td>521</td>
<td>0</td>
</tr>
<tr>
<td>Second</td>
<td>215</td>
<td>1037</td>
<td>502</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>446</td>
<td>1539</td>
<td>1023</td>
<td>0</td>
</tr>
</tbody>
</table>

All measures in protection and surveillance zones were finalized and zones were lifted on 10th January, 2013, according to Council Directive 2001/89/EC.
The results of the epidemiological investigation concerning the three outbreaks in domestic pigs revealed that the source of infection might have been possible kitchen waste feeding from infected wild boar since hunters were involved in backyard pig husbandry.
Surveillance of holdings within the infected area (1):

Regarding domestic pig population, the infected area is typical backyard type belonging to a remote region with a low animal density not being involved in industrialized animal production.

In the infected area about 20 400 pigs in 3 204 holdings (97% backyards).

On 11th January, 2013 the following number of holdings and pigs are inspected:

<table>
<thead>
<tr>
<th>No.of holdings with pigs inspected</th>
<th>No.of pigs clinically investigated</th>
<th>No.of holdings samples</th>
<th>No.of samples taken</th>
<th>No of outbreaks confirmed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1889</td>
<td>7248</td>
<td>1707</td>
<td>3931</td>
<td>3</td>
</tr>
</tbody>
</table>

Summary of activities carried out in domestic pig holdings (mostly backyards):
- activities completed in 40 parishes;
- activities on-going in 41 parish.
Surveillance of holdings within the infected area (2):

In a systematic approach FVS will start categorization of all holdings located in the infected area according to the number of pigs and the risk of spreading the disease.

For each category of holdings an appropriate surveillance scheme for clinical and laboratory examinations will be implemented.
**Surveillance of wild boar within the infected area (1):**

<table>
<thead>
<tr>
<th>No.of wild boars tested</th>
<th>No.of seropositive wild boars</th>
<th>No.of RT-PCR positive wild boars</th>
</tr>
</thead>
<tbody>
<tr>
<td>784</td>
<td>75 (9.5%)</td>
<td>32 (4.1%)</td>
</tr>
</tbody>
</table>
Surveillance of wild boar within the infected area (2):

Points for consideration:
- All CSF seropositive wild boars are found within infected area;
- Seropositive wild boars are found only in 19 parishes (infected area consists of 81 parish)
Surveillance of wild boar within the infected area (3):

The wild boar population in the infected area is estimated to be about 8,000 animals, which leads to a density of more than two animals per square kilometre of the forest area.

The proportion of forest within the areas is relatively high (approximately 48%, representing an excellent biotope for wild boar). There are no major natural or artificial obstacles to stop movements of wild boar.

Oral vaccination with CSF live attenuated vaccine will be started this spring within the territory of infected area (vaccination area is the same as infected area).
According to Article 16 and 20 of Council Directive 2001/89/EC Classical Swine Fever (CSF) eradication and emergency vaccinations plans has been submitted to European Commission:

- of the measures taken to eradicate the disease in the area defined as infected and
- of the measures applied on the holdings in that area.

The main steps:
- vaccination of wild boar;
- continuous active and passive surveillance of wild boar;
- evaluation of vaccination efficiency;
- categorization of domestic pig holdings;
- continuous active and passive surveillance of domestic pigs.
In addition to the infected area a **risk area** has been defined for monitoring the wild boar population. The risk area is at least 10 km wide and is neighbouring the infected area.

The infected and risk areas form a buffer to avoid spreading of CSF to other parts of Latvia and to other Member States.
Thank you for your attention