African swine fever
in wild boars
in the Czech Republic

Petr Šatrán, GF TADs, Chisinau, Moldova 20. 9. 2017
Passive surveillance

From 2014 passive surveillance in wild boars is performed
- all wild boars find death are tested for ASF and CSF

<table>
<thead>
<tr>
<th>Year</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Czech Republic</td>
<td>243</td>
<td>0</td>
<td>348</td>
<td>0</td>
</tr>
</tbody>
</table>
First occurrence of ASF virus in wild board in the Czech Republic


Location of finding: Příluky u Zlína, GPS 49°13’44.303“N, 17°42’1.996“E
Possible ways of disease introduction

Introduction by:

- wild boars - not probable (nearest reported cases of AMP about 400-500 km)
- human activities – probable (most of the dead positive wild boars found in inhabited areas)
Demarcation of the infected area

In accordance with the Council Directive 2002/60/EC the whole District Zlín has been declared as an infected area (1 034 km$^2$), 37 municipalities, 89 hunting grounds.
Density of domestic pigs in the Czech Republic (per 100 km²)

CZ  
2 160 farms, 1 353 935 pigs

Region of Zlín  
83 farms, 74 088 pigs

Infected area (District Zlín)  
23 farms, 16 301 pigs
Hunting density of wild boars in the hunting year 2015 (per 100 km$^2$)

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of hunted WB</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>144 305</td>
</tr>
<tr>
<td>2011</td>
<td>109 563</td>
</tr>
<tr>
<td>2012</td>
<td>185 381</td>
</tr>
<tr>
<td>2013</td>
<td>152 468</td>
</tr>
<tr>
<td>2014</td>
<td>169 483</td>
</tr>
<tr>
<td>2015</td>
<td>186 148</td>
</tr>
<tr>
<td>2016</td>
<td>160 164</td>
</tr>
</tbody>
</table>
Modelled wild boar population density in Europe
(source: FAO/ASFORCE, May 2015)
Current epidemiological situation (15. 9. 2017)

In total **101** cases of African swine fever in wild boar population

**No outbreak in population of domestic pigs**

All cases confirmed in the NRL in the SVI Jihlava

All cases are from Region Zlín, District Zlín:

- Hvozdná: 32 cases
- Klečůvka: 11 cases
- Kostelec u Zlína: 7 cases
- Lužkovic: 40 cases
- Ostrata: 1 case
- Příluky: 8 cases
- Želechovice: 2 cases
Findings of dead found wild boars – daily incidence

- **numbers of dead found wild boars (in total 201)**
- **numbers of ASF positive wild boars (in total 101)**

*Dates:* 21/06/2017 to 11/09/2017
Findings of dead wild boars – cumulative incidence

- numbers of dead found wild boars (in total 201)
- numbers of ASF positive wild boars (in total 101)
Findings of dead wild boars - weekly incidence

numbers of dead found wild boars (in total 201)
numbers of ASF positive wild boars (in total 101)
Distribution of positive findings in months

June 2017

July 2017

August 2017

September 2017 (18. 9. 2017)
Veterinary measures have been taken in accordance with the Council Directive 2002/60/EC:

- **Infected area has been defined**
- Veterinary measures have been established, including **ban of hunting and a ban on feeding** wild boars
- Investigation of the epidemiological situation is carried out in the whole defined infected area
- The official list of all categories of domestic pigs in all holdings was ordered
- The area with **intensive hunting** has been determined around the infected area
- The **high-risk zone** for ASF has been defined in the infected area
- The **low-risk zone** for ASF has been defined in the infected area
Map of the Czech Republic with the infected area (red) and the area with intensive hunting (yellow)
Measures taken

1. Measures in the infected area in domestic pigs
2. Measures in the infected area in wild boars
   - in the high-risk zone
   - in the low-risk zone
3. Measures in the area with intensive hunting
4. Measures on the whole territory of the Czech Republic
Measures in the infected area in domestic pigs

1. **Official checks in domestic pig farms**
2. Monitoring of all sick or dead pigs
3. A list of pig farms in the infected area including backyards farms
4. **Movement control**
5. **Ban of feeding with fresh grass**
6. **Ban of straw using**
7. Testing of pigs from farms with negative result (total number of pigs farm: 23, total pigs: 16 301)
8. **Measures of biosecurity in backyard farm** (pigs for home slaughter)
Map of the high-risk zone with locations of positive and negative tested dead found wild boars to 15. 9. 2017
Measures in the infected area in the high-risk zone in wild boars

1. Passive surveillance in dead wild boars
2. Payment is 4000 CZK (153 EUR) for one dead found wild boar
3. Ban of hunting
4. Ban of feeding
5. Smell and electric fences around the high-risk zone
6. Sampling of all dead found wild boars and testing in the NRL
7. Disposal of all dead found wild boars under official supervision in accordance with Regulation (EC) No 1069/2009
8. The ban on entering to the high-risk zone
Smell fence installed around the high-risk zone

Luděk Ovesný, MAFRA
Electric fence installed around the high-risk zone

http://www.africkymorprasat.cz
Map of the high-risk zone with the location of the smell fences and electric fences
Setting up high and low risk zone in the framework of infected zone in relation to wild boar hunting

Hunting

Home range – 100% one year

Legend:
- Výskyty AMP
- Průměrný odsíl (2013-2015, ks/1000ha)
- 0.00 - 5.00
- 5.01 - 10.00
- 10.01 - 20.00
- 20.01 - 30.00
- 30.01 - 40.00
- 40.01 - 60.00
- 60.01 - 78.00

Km

Celoroční home range

Zamřená oblast - červená zóna (ohradníky)

Oblastní 4 x 6 km

Kruh de 5,5 km
High and low risk zone for hunting rules
Measures in the infected area in the high-risk zone in wild boars

— RED zone - area around the outbreak has been set as “off-limit area”. (18 hunting areas – 16 000 hectares). **Wild boar hunting activities have been banned.**

— Some agriculture fields have been left unharvested to provide food and shelter for wild boar in order to keep them in the area.

— **Public is not allowed to enter this area** apart from farmers, hunters and police.

— Wild boar will be soon available for hunting by trapping. All collective hunts (even for other hoofed game) have been banned. Motivation fee for **finding dead wild boar is 4 000 CZK**. As soon as the trapping is allowed, motivation fee for trapping will also be 4 000 CZK.
Trapping of wild boar

Trapping (plan to use 31 in high risk zone)
Measures in the infected area in the low-risk zone in wild boars

— GREEN zone – area of Zlin district (green zone is contaminated area reported to EC), were hunting of wild boar is allowed and motivated by financial reward (3 000 CZK/ each shot wild boar) but all shot and found wild boar must be disposed in the rendering plant.

— With to the “hunting reward” the hunters are also compensated for the loss of venison (piglet 37 EUR, one-year old 74 EUR, adult saw 120 EUR).

— All collective hunts (even for other hoofed game) are banned.

— Motivation fee for finding of dead wild boar is also 3 000 CZK.

— Some prohibited methods of hunting have been allowed - hunting all age classes, and both sexes, hunting from cars and other vehicles, hunting at night using night vision and other artificial lights, hunting during crop harvest, hunting near the hunting area borders, using firearms (short and long with energy more than 300 J) for shooting wild boar in traps.
Hunted wild boars in the low-risk zone within the period 2nd August – 15th September

The total number 494

All hunted wild boars are tested for ASF (virologically and serologically) in the NRL. All of them have been negative.
Disposal of hunted wild boars from infected area in rendering plant
Measures in the area with intensive hunting

1. YELLOW zone (‘‘buffer zone’’) – area of intensive hunting, where hunters are motivated by 1 000 CZK (40 €) for each shot wild boar.

2. The shot wild boar can be used for consumption.

3. Some prohibited methods of hunting have been allowed - hunting all age classes, and both sexes, hunting from cars and other vehicles, hunting at night using night vision and other artificial lights, hunting during crop harvest, hunting near the hunting area borders, using firearms (short and long with energy more than 300 J) for shooting wild boar in traps.
Results of testing of hunted wild boars in area with intensive hunting to 15. 9. 2017

The total number of wild boars hunted: 3 607
All with negative result for ASF
Overview of results of virology testing of samples taken from hunted wild boars in the area with an intensive hunting (15 September 2017)

<table>
<thead>
<tr>
<th>Region</th>
<th>District</th>
<th>No of tested hunted wild boars</th>
<th>No of positive result</th>
<th>Testing is not possible</th>
</tr>
</thead>
<tbody>
<tr>
<td>Region Pardubice</td>
<td>Ústí nad Orlicí</td>
<td>1</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>South Moravian Region</td>
<td>Brno-město</td>
<td>4</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>South Moravian Region</td>
<td>Brno-venkov</td>
<td>24</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>South Moravian Region</td>
<td>Břeclav</td>
<td>128</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>South Moravian Region</td>
<td>Hodonín</td>
<td>463</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>South Moravian Region</td>
<td>Vyškov</td>
<td>237</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>South Moravian Region</td>
<td>Znojmo</td>
<td>2</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Region Olomouc</td>
<td>Olomouc</td>
<td>44</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Region Olomouc</td>
<td>Prostějov</td>
<td>7</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Region Olomouc</td>
<td>Přerov</td>
<td>223</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Region Olomouc</td>
<td>Šumperk</td>
<td>5</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Region Olomouc</td>
<td>Kroměříž</td>
<td>776</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Region Zlín</td>
<td>Uherské Hradiště</td>
<td>748</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Region Zlín</td>
<td>Vsetín</td>
<td>510</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Moravian-Silesian Region</td>
<td>Frýdek-Místek</td>
<td>291</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Moravian-Silesian Region</td>
<td>Karviná</td>
<td>19</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Moravian-Silesian Region</td>
<td>Nový Jičín</td>
<td>92</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Moravian-Silesian Region</td>
<td>Ostrava-město</td>
<td>33</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>In total</td>
<td></td>
<td>3607</td>
<td>0</td>
<td>2</td>
</tr>
</tbody>
</table>
Measures on the whole territory of the Czech Republic

1. **Information for public, pig farmers, hunters, veterinarians** etc.
   - Official letters
   - Daily SVA web site updates
   - Biosecurity guide for farmers
   - List of disinfectants
   - Guide for dead WB finding

2. **Established an expert group (NDCC)** including veterinarians, hunters, wildlife biologists and epidemiologists with expert from the CVET participation
   - Clarifying of the situation
   - Request for data for the preparation of the eradication plan
   - Studying the epidemiological situation and implementation of the measures

3. Ban of feeding of domestic pigs with kitchen and catering waste was emphasized

4. **A surveillance programme and preventive measures have been applied at holdings with domestic pigs.** Sick or dead pigs, for which ASF cannot be excluded on clinical grounds, have been tested for ASF in accordance with the provisions set up in the Diagnostic Manual

5. **The passive surveillance of dead found wild boars continues**
Hunting in the rest area of the Czech Republic

— Hunting is also intensified.

— Some prohibited methods of hunting have been allowed - hunting all age classes, and both sexes, hunting at night using night vision and other artificial lights, hunting during crop harvest, hunting near the hunting area borders, using firearms (short and long with energy more than 300 J) for shooting wild boar in traps.

— Motivation for finding dead wild boar is 1 000 CZK (40 €).
CZ Results of the monitoring of dead wild boars from 1 January to 15 September 2017

<table>
<thead>
<tr>
<th>Region</th>
<th>Number of tested animals</th>
<th>Number of positive animals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prague, the Capital</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Central Bohemian Region</td>
<td>57</td>
<td>0</td>
</tr>
<tr>
<td>South Bohemian Region</td>
<td>56</td>
<td>0</td>
</tr>
<tr>
<td>Region Pilsen</td>
<td>70</td>
<td>0</td>
</tr>
<tr>
<td>Region Karlovy Vary</td>
<td>43</td>
<td>0</td>
</tr>
<tr>
<td>Region Ústí nad Labem</td>
<td>102</td>
<td>0</td>
</tr>
<tr>
<td>Region Liberec</td>
<td>29</td>
<td>0</td>
</tr>
<tr>
<td>Region Hradec Králové</td>
<td>15</td>
<td>0</td>
</tr>
<tr>
<td>Region Pardubice</td>
<td>39</td>
<td>0</td>
</tr>
<tr>
<td>Region Vysočina</td>
<td>60</td>
<td>0</td>
</tr>
<tr>
<td>South Moravian Region</td>
<td>107</td>
<td>0</td>
</tr>
<tr>
<td>Region Olomouc</td>
<td>45</td>
<td>0</td>
</tr>
<tr>
<td>Region Zlín</td>
<td>201</td>
<td>101</td>
</tr>
<tr>
<td>Moravian-Silesian Region</td>
<td>28</td>
<td>0</td>
</tr>
<tr>
<td>In total</td>
<td>855</td>
<td>101</td>
</tr>
</tbody>
</table>
Probably source of infection: contaminated food bring by the Ukraine workers in laundry in Hospital.

In Russia bacon is called “SALO” and people eat it raw, less meat and more fat is better. The raw bacon is keep in the fridge. It is usually raw with spicy or smoked.
Summary

— Isolated occurrence on a very small territory 56 km² over a long period
— Incidence is decreasing
— No spreading to other territory
— Intensive hunting and surveillance in neighbouring regions, including serological testing
— No positive serological test yet
— No outbreak in domestic pigs
Summary

— ASF can be spread through long distances by human factors (Russia 2009, Czechia 2017)

— Passive surveillance is necessary for fast and effective response

— Passive surveillance should be done not only in regions neighbouring infected regions

— Only veterinary services are not able to prevent spread of the disease

— Collaboration is necessary among many sectors

— Recommendations for eradication in wild boar should be revised

— Research project for ASF epidemiology, ethology of WB, possible preventive measures etc. should be done
Thank you for your attention