

GF-TADs

GLOBAL FRAMEWORK FOR THE
PROGRESSIVE CONTROL OF
TRANSBOUNDARY ANIMAL DISEASES



Food and Agriculture
Organization of the
United Nations



**Standing Group of Experts on African swine fever in the Baltics and Eastern Europe Region
under the GFTADs**

Expert mission on African swine fever in **Latvia** **REPORT¹**

❖ **Period: from 18 to 21 May 2015**

❖ **SGE Experts:** Silvia Bellini (IZSLER, Italy) Team Leader, Klaus Depner (FLI, Germany), Konstantine Gruzdev (FGBI ARRIAH, Russia), Vittorio Guberti (ISPRA, Italy) and Sergei Khomenko (FAO).

❖ **Places visited during the mission:**

- a) *Riga*: Central Veterinary Office: opening and closing meetings with the Central Veterinary Authority.
- b) *Valmiera District (Vidzeme Region)*: the area belongs to the north part of Latvia, at the border with Estonia. In the Region African swine fever (ASF) has been detected in domestic pigs and in the wild boar population. Part of the district is currently listed in Part II of the Annex to CD 2015/558/EU, the remaining in Part III.

In the Region the Team visited:

- The Regional Veterinary Office, located in the city of Valmiera to discuss, at local level, the epidemiological situation, the measure in place and the activities carried out against African swine fever (ASF).
- A small size commercial pig holding.
- A Hunting Ground to discuss preventive and eradication measures adopted to control ASF in the wild boar.
- The forest in Burtnieku county.

¹ Disclaimer: The views and recommendations expressed in this document are those of the independent experts and may not in any circumstances be construed as the official position of their organisation, nor of the EC, OIE or FAO

- **Terms of reference**

1. The experts should perform on the spot visits in order to gather data and be in a position to formulate recommendations on disease management.
2. The experts should work with the Veterinary Services in order to determine the following aspects:
 - a. If African swine fever (ASF) is occurring in domestic pigs (both in commercial sector and the so called back yard sector) and extent of the areas of occurrence.
 - b. If ASF is occurring in wild boar and geographical distribution of ASF in wild boar.
 - c. Formulate hypothesis on the drivers of ASF occurrence for domestic pigs and back yards.
3. Propose measures intended for the control and eradication of ASF under local conditions, in line with the OIE International Standards.

Epidemiological background: ASF in Latvia

On 26 of June 2014 ASF has been detected for the first time in Latvia, almost simultaneously in domestic pigs and in the wild boar. The first reports were in Kraslava region, at the border with Belarus and based on the characteristics of the ASF virus (ASFV) isolates, the introduction of the ASFV in Latvia was most probably from Belarus. Since then, ASF spreads also to the Northeast part of the country and currently it is possible to recognize 4 main clusters of infection: Latgale Nord, Latgale South, Madona, Vidzeme.

In total, 32 ASF outbreaks have been detected in domestic pig and 367 cases have been reported in wild boar: 217 in 2014 and 150 in 2015 (at the time of the visit). Last outbreak in domestic pig was on 17 September 2014. Eradication activities have been carried out and surveillance is ongoing. Currently, in Latvia there is no evidence of infection in domestic pigs.

As regards the wild boar in 2015 cases are occurring mainly in previously infected areas. However, a limited number of cases have been detected also in bordering hunting grounds, which were previously ASF free.

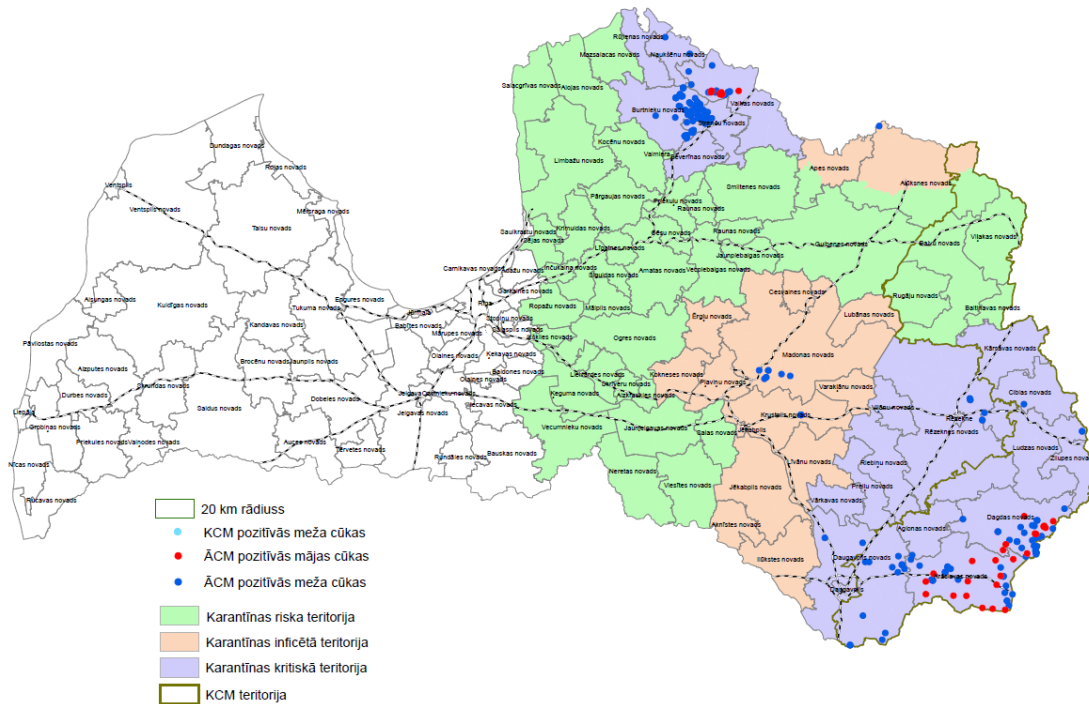


Figure 1: ASF in Latvia 2014 - domestic pig and wild boar

General Information

Domestic Pigs population in Latvia:

- 328.857 pigs
- 7039 pig holdings, 5714 of which (81,2 %) contains from 1 to 9 pigs

Regarding biosecurity requirements, pig holdings have been categorized in 3 main groups:

- Commercial farms
- Non-commercial farms (including backyards)
- Outdoor keeping farms

Wild Boar: Latvia has an estimated wild boar population of about 50.000 animals. The Country is divided in Wildlife Management Units (WMU) of about 15.000 ha each. In each WMU, 2-3 or more hunting grounds are present. In general, wild boar population density in Latvia ranges between 0.3 – 2.2 animals/ km² and it increases towards the west part of the country. Wild boar density is reportedly lowest in the eastern part, which is the part of the country currently affected by ASF.

Surveillance activities:

➤ Domestic pigs

- Passive surveillance. All sick or dead pigs, for which ASF cannot be excluded on clinical ground, are inspected by official veterinarians and examined for ASF, in accordance with the provisions laid down in ASF Diagnostic Manual (Commission Decision 2003/422/EC of 26 May 2003 approving an African swine fever diagnostic manual). This type of control applies to all Latvia.

- Farm inspection: 1-2 checks year/farm (since 2015). Holdings located in part II and III of the Annex to CD 2015/558/EU are checked by official veterinarians at least twice a year. Whilst holdings located in Part I of the Annex or in free areas are inspected once a year.

➤ Wild boar

- Latvia: passive surveillance has been strengthened and enforced in all territory of Latvia.
- Risk Area (part I of the Annex to CD 2015/558/EU) all wild boar discovered sick, dead and killed in road accidents are tested for the presence of ASF antibodies (ELISA) and genome (RT-PCR).
- Infected area (part II and III) - all wild boars hunted and discovered dead are examined and tested for the presence of ASF antibodies (ELISA) and genome (RT-PCR).

Biosecurity

Biosecurity requirements have been established in Latvia in 2013, after the occurrence of classical swine fever in the Southeast part of the county, at the border with Belarus. Requirements have been revised in 2014, immediately after the introduction of ASF and basic measures were made compulsory for backyard holdings too. Holdings located in the infected areas not meeting the basic bio-security requirements were requested to close their pig farming activity and to slaughter pigs. The owners were compensated.

VALMIERA

● **ASF in DOMESTIC PIGS**

On July 16 2014 the first case of ASF in the wild boar was detected in Valmiera County and after two days, on July 18, the disease was reported also in domestic pig. The first outbreak in domestic pig occurred in a holding of 55 pigs and the distance from the index case was about 2 Km. Afterwards, in the period July – September 2014, 6 further outbreaks in domestic pigs were notified. All the outbreaks occurred in “backyard type” holdings, ranging from 2 to 55 pigs. Indeed, the area of the outbreaks is a backyards area, the size of the holdings normally ranges from 1 to 10 pigs. At the time of the outbreaks, about 18.000 pigs were present in the region. Currently, the number of holdings is slightly decreased, mainly due to the adoption of bio-security requirements that in the infected areas were made compulsory also for backyard holdings.

Four of the infected farms have been identified by passive surveillance as pig owners contacted the veterinarians to report the presence of sick or dead pigs. Three farms have been detected by active surveillance conducted by the Food and Veterinary Service during the eradication activities. Indeed, these last three farms were epidemiologically linked to the first outbreak and due to that, they were classified as secondary outbreaks. In the majority of the outbreaks of the area, the suspect of disease was raised when only one or a few affected animals were present in the holding, and animals in

contact with the affected ones very often were still negative at the time of testing, even though located in the same stable. All these elements provide with a clear indication of the following: 1) ASF was early detected, 2) passive surveillance was effective in identifying the presence of the disease, 3) the existence of a good level of awareness amongst farmers.

Epidemiological investigations were carefully conducted (and documented) by the official veterinarians and biosecurity shortcomings were the overall common finding and the most serious factor responsible for virus introduction in domestic pig holdings, either via the link to infected wild boar or via swill feeding. However, infected farms were early detected and appropriate measures were taken, avoiding further spread of the disease.

Veterinary Authority reacted rapidly to the presence ASF. In fact, biosecurity measures were promptly reviewed and made compulsory in the infected area. Holdings not complying with the requirements had to slaughter pigs, ceasing pig farming activity. Additionally, given the epidemiological situation, the Veterinary Service conducted public awareness campaigns informing the farmers about the epidemiological situation and biosecurity. After the introduction of the new biosecurity rules, no further ASF outbreak was detected in the area.

Conclusions - After the eradication of the outbreaks, surveillance activities have been carried in the surveillance protection zones and no further outbreak was detected. Almost simultaneously, preventive measures, such as biosecurity were adopted and awareness campaign was carried out. Surveillance is still ongoing in the area and there is no evidence of ASF in domestic pigs.

- **DOMESTIC PIG HOLDING**
(Stendes, Valmiera district)

The Team visited a small open cycle breeding holding of about 40 pigs (sows and fatteners) which was used to be commercially active on the local market. The holding is currently under restriction given that the area is located in Part III of the Annex to CD 2015/558/EU.

The Team did not enter the premise, the owner and the official veterinarian joined the Team at the entrance of the property, where the interview was conducted.

The owner is directly managing the holding and his grandmother is helping him in the daily activities. Live animals were introduced for the last time in the establishment in 2012. Fields around the holding (5 hectares) are owned by the property and regarding feed, a local commercial company supplies feed for animals.

The holding is applying minimum bio-security measures, which are considered appropriate for the type of holding.

The owner is informed about the ASF epidemiological situation in the area and he is aware of the risk posed by the presence of the disease in the neighboring area.

The owner has recently contacted the local veterinary authority because he suspected the presence of ASF in his holding. The suspect cases were followed by the official veterinarians and resulted

negative for ASF. The attitude of the owner is a further confirmation of the good level of awareness amongst farmers.

- **ASF in WILD BOAR**

Latvia has an estimated wild boar population of about 50.000 animals. In the Country 21.000 hunters are engaged in 2095 hunting grounds encompassing a surface of 4,59 million of hectares (ha). The Country is divided in Wildlife Management Units (WMU) of about 15.000 ha each; within each WMU, 2-3 or more hunting grounds are present. The official wild boar density is given at WMU level in order to minimize the doubling counting that could occur when wild boar are estimated at hunting ground level. In general, wild boar population density in Latvia ranges between 0.3 – 2.2 heads per km² and it increases towards the west. It is reportedly lowest in the eastern part of the country, which is currently affected by ASF. Thirteen thousands wild boars are estimated to live in the area currently under restriction for ASF and about 6500 animals are hunted per year.

As regards as the interpretation of the wild boar data, it is worth to take into account that the WMU borders adopted by the Forest Service mismatches the administrative borders adopted by the Veterinary Service. As result, wild boar data need to be “adjusted” according to the Veterinary Service administrative borders; this could lead to uncertainties and over-simplification of the real spatial structure of the infected wild boar population.

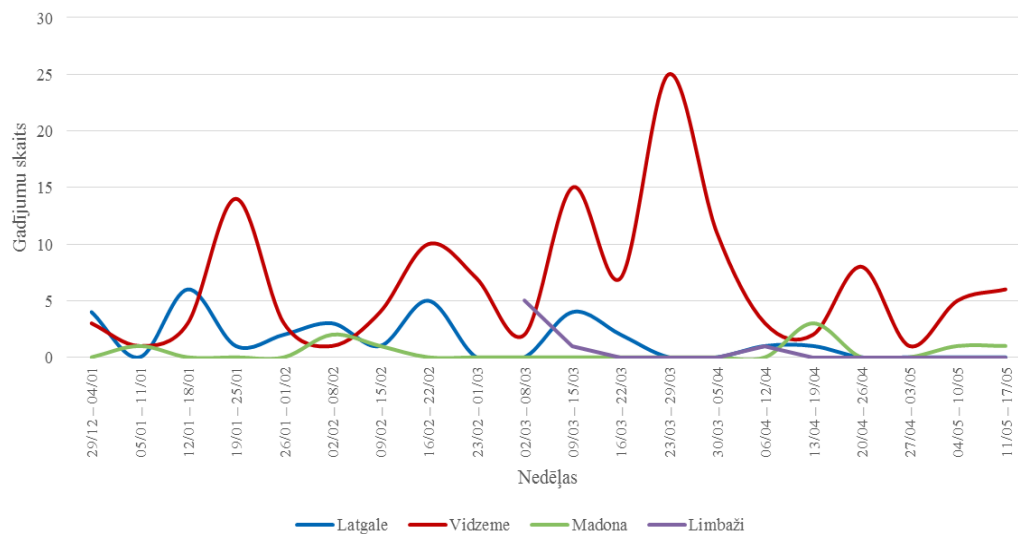
The wild boar pre-reproductive estimate is set at 1 April each year, the population doubles (approximately) after the reproductive season (April-May). In order to reduce the whole population, Central Authority recommends hunting 130% of the wild boar pre-reproductive size. In reality, the total hunting bag achieves 80-90% of the recommended target. As a result, during the past years, the wild boar population size slightly increased. However, based on the information provided, in some hunting grounds the number of wild boars decreased substantially due to hunting pressure and the mortality induced by ASF.

In 2014, ASF cases in wild boars were detected in three different regions: Vidzeme, Madona and Latgale. A single case was reported in Aluksne area but it is likely to belong to a cluster occurring in the neighbouring Estonia. Whilst, in the first months of 2015 (1st January- 7th May) ASF has been confirmed in all the three previously infected areas and in Limbazi county; the place is about 40 Km west from Vidzeme.

In 2015, 140 ASF cases have been detected out of 202 wild boar found dead (69,6%); whilst 10 ASF cases have been detected out of 1890 hunted animals (0,053%). As regards the hunted animals, 17 out of 1861 wild boars were positive for antibodies and antigen negative (0,91%).

The virus was detected mainly in previously infected hunting grounds but a limited number of cases were identified in bordering – previously free - hunting grounds. It seems that the virus persist locally and slowly moves outside the 2014 infected hunting grounds.

Figure 2: 2015 weekly ASF cases in wild boar by infected regions



Vidzeme Region

Wild boars:

The surface of the Veterinary administrative region is 787.500 Km², divided in 36 WMUs. On 1 April 2014, the population density ranged from 12,82 to 4,2 wild boars/10 km². However, the total number of animals is not fully available for the region, since the Regional Forest Office uses a different “geographic region” compared to the one used by Veterinary Service. They reported that in January 2015 a brisk decrease in the wild boar population density was observed in previously infected WMUs. The maximum decreasing was observed in Burtnieku county where the animals decreased from 11,35 to 0,6 wild boars/10 km². However, despite the relevant decrease, ASF cases are still occurring in that Unit.

From the geographical point of view, until the end of 2014 ASF was not detected outside the area enclosed between the two main roads of the region, which connects Valmiera respectively with Strenci (north-east) and Matisi (north-west). However, in 2015 few cases were detected also outside the above-mentioned area, reflecting the small increase in the geographical distribution of ASF that can be explained with the continuity of the wild boar distribution range.

Results of the surveillance activities carried out in the region:

- 2015 (period: 1 January - 12 May 2015): 119 animals have been found dead and 98 were virus positive (82,4%) for ASF; 487 shot animals have been tested and 3 of them were virus positive (0,62%); 477 sera sample were tested with ELISA Ab detection test and 12 were positive for antibodies and PCR negative (2,51%).
- 2014 (period: July - December 2014): the prevalence of Abs positive and PCR negative wild boar was 1,7% (10/604) while virus prevalence was 1,9% (15/760).

The difference in sero-prevalence observed in the region was tested not significant for the above mentioned periods (chi square test, α set at 0,05). Therefore, the observed sero-prevalences are fully in line with the endemic evolution of the infection in the wild boar in the area. The finding seems to confirm that the virus retains its high lethality rate and that the population immunity is still at a very low level and probably it is not affecting the epidemiology of the infection, as noticed up to now.

➤ Hunting Ground: Rencēni (Butnieki County)

The hunting ground has a surface of about 6000 ha. In 2014 about 200 wild boars were present in the area, whilst only 60 wild boars have been estimated at the date of 1st April 2015. The brisk decrease in wild boar density seems due to the presence of ASF, even though only 39 carcasses were retrieved in the area. During the past hunting season, 2 out of 84 hunted wild boars have been found ASFV positive.

➤ “Wild boar dressing” house.

Hunted wild boars are transported in the dressing house using a car trailer. Then, the animals are dressed and samples taken. Whilst waiting for the laboratory results, carcasses are tagged and stored in the fridge. All the documentation is held by the President of the hunting club who is also responsible for the whole hunting activity. Hunters transport offal to a disposal container which is located 3 km apart from the hunting house. Afterwards, offal stored in the container is disposed under the supervision of the Veterinary Service. The same applies to the positive animals. Disinfectants and equipment for the disinfection of the dressing area, cars, boots etc. are available on the spot.

➤ Forest in Burtnieku county

The Forest was visited by the Team because a high number of infected wild boar has been detected during the past months. The forest consists of a mixing of broad-leaved and pines trees (oaks, birches, lindens, scots pines and Norway spruces) with a thick undergrowth that strongly limits visibility. This type of forest represents a good habitat for the wild boar.

During the visit, two old wild boar carcasses were found by the Team, one of them was more recent as shown by the burying beetles still eating on it.

CONCLUSIONS

In general, surveillance for ASF in wild boar is quite effective and well documented, allowing Veterinary Authorities to understand the evolution of the situation and to react properly to new cases.

As regards as ASF surveillance activities and the implementation of control measures, there is good understanding and collaboration between the Forest Service, Veterinary Authorities and hunting communities (clubs). Importantly, Latvian Veterinary Authority pays a fee of 50 Euro for each discovered and appropriately disposed wild boar carcass and of course, the economic incentive facilitates the positive outcome of passive surveillance.

RECOMMENDATIONS

Veterinary Services

- The team was positively impressed by the competence and the level of organization of the Central Veterinary Authority.
- Regional Veterinary Services are efficient and well equipped. ASF was early detected in the area and Veterinary Service reacted properly to the presence of the infection.
- During the visit it was evident the good level of understanding and collaboration between Veterinary Authorities (at central and local level), Forest Service, farmers and hunting communities (clubs).

Wild boar

- Surveillance activities in wild boar was properly carried out and well documented, allowing Veterinary Authorities to understand the evolution of the situation and to react properly to new cases.
- An improvement in wildlife management is advisable. As an example, the administrative boundaries used by veterinary service and wildlife management units used by Forest Service mismatched causing problems in the management of diseases and wildlife.
- In the Hunting Grounds hunters are well aware of the procedures which are properly carried out. However, offal of shot wild boar should be properly stored on the spot.

Final Remarks

The working atmosphere during the mission was very good. The Latvian colleagues gave all their support and assistance to facilitate the mission.