EUROPEAN COMMISSION
HEALTH AND FOOD SAFETY DIRECTORATE-GENERAL

Directorate D – Food chain stakeholder and international relations
Unit D4: Food safety programme, emergency funding

SANTE-2017-10658

REPORT OF THE

"African swine fever"
TASK FORCE SUB-GROUP

Meeting held in

Suceava

Romania (28 – 30 March 2017)

REPORT OF THE MEETING OF THE AFRICAN SWINE FEVER SUB-GROUP OF THE TASK FORCE FOR MONITORING DISEASE ERADICATION HELD IN SUCEAVA, Romania, 28-30 MARCH 2017

PARTICIPANTS: see AnnexI

AGENDA: see Annex II

Objectives of the EU-Task Force sub-group.

The scope of the visit is to share information and experience of the expert members with the hosting colleagues as well as to give technical support if needed or requested by the visited country. After the visit a report is issued by the experts, based on the information provided on the spot by the country and on the findings verified directly by the experts themselves during the visit.

The main goal of the Task Force is to share expertise to the visited country, in order to contribute, with an external independent technical assessment, to the evaluation of strengths and weaknesses of strategies and measures in place for the control and eradication of the disease concerned.

Conclusions and recommendations are formulated from a general point of view and are proposed in the report to serve as a basis for the Veterinary Services of the visited country to reflect on the possible improvement of the control and eradication programme for the disease concerned. The country visited may amend the programme according to what is suggested by the Task Force, or it may choose other approaches, also in consideration of social and economic factors that may influence the success of the measures adopted, and which are not in the remit of the Task Force.

Conclusions and recommendations are related to the observation of the situation during the visit, based on the information provided by the country visited on the spot. Further developments of the country's situation may be the subject of a following visit aimed to get updated information and new feedback from the Veterinary Services.

The reports of the TF are published on the following website: http://ec.europa.eu/dgs/health_food-safety/funding/cff/animal_health/vet_progs_en.htm

Report of the meeting of the ASF Task force held in Romania

(27 – 30 March 2017)

- The objective of the mission was to discuss with the Romanian Veterinary Authority the early warning system implemented in the country to prevent the spread of African swine fever (ASF) and to early detect the presence of the disease.
- The TF meetings and field activities have taken place in Suceava, which is one of the counties bordering Ukraine, therefore considered at high risk for ASF introduction (Figure 1).

General Information

With an area of 238,391 square kilometers, Romania is the largest country in Southeastern Europe and the twelfth largest in Europe, 47% of the country's land area is covered with natural and semi-natural ecosystems. It is bordering with Hungary, Serbia, Bulgaria, Ukraine and Moldova. Administratively, the country is divided into 41 counties and the municipality of Bucharest.

Currently, Romania is ASF free but considering the epidemiological situation in Ukraine and Moldova, it is one of the European countries at highest risk of ASF introduction. Indeed, ASF is spreading in the bordering countries and outbreaks have been detected very close to the Romanian borders. Therefore, given the epidemiological situation, Romanian Authorities have worked on "preparedness", to be able to react rapidly in case of ASF introduction.

In such light, they have focused their activities on:

a) Risk Assessment
b) Contingency plan
c) Surveillance (also in combination with CSF)
d) Simulation exercises
e) Biosecurity
f) Awareness and information campaigns, training course
g) Legislation (reinforcing/updating the national legislation)
h) Group of experts
i) Establishing collaboration with stakeholders
j) Establishing collaborations with other bordering national authorities involved in the management of ASF.

Pig census data for the whole country are reported in Table 1. Whilst in Suceava, which is the county visited by the TF Team, there are 6 commercial farms with 5.685 pigs and 8.309 backyards with about 20.000 pigs.

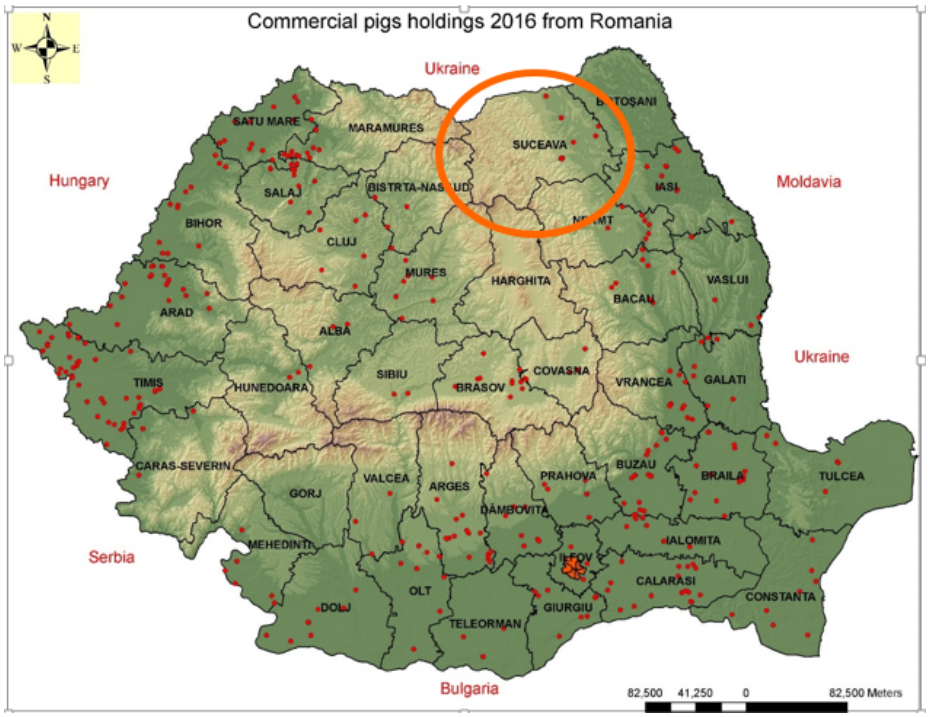
Wild boar data: in Romania, the size of the pre-reproductive wild boar population is estimated in about 90.000 individuals (March 2016) 30.000 of them are included in the planned hunting bag. Based on the information reported, wild boar population density is low and ranges from 0,11 to 0,77 wild boar/Km2. Recent data on the main demographic features of the Romanian wild boar population are lacking and the management is based on consolidated demographic parameters. The wild boar population is considered to double each year but it was reported that losses due to predations and hunting maintain relatively stable the population with a slight increase observed during the past 10 years.

Definition of the Risk Area

All the territory of Romania is at risk of ASF introduction. However, the area at the border with Ukraine and Moldova is considered at higher risk.

The high risk area is a band, at least 20-30 km deep, along the borders with Ukrainia and Moldova. It includes 8 counties: Satu Mare, Maramures, Suceava, Botosani, Iasi, Vaslui, Galati and Tulcea (Figure 1).

Figure 1. Map of Romania



ASF Surveillance Strategy

In Romania, the national ASF surveillance strategy is based on passive surveillance, in domestic pigs and wild boar. In the wild boar of the high-risk area, passive surveillance is integrated with active surveillance, using the CSF program as framework for ASF surveillance. However, the present level of active surveillance is so low that ASF early detected will fail. It would be more profitable if active surveillance would be replaced by passive surveillance triggered by the report of dead animals, especially wild boar and pigs in the backyard sector. In fact, given the epidemiological background, the backyard sector represents a huge risk (particularly in the risk area) and, to early detect the presence of ASF, a special effort should be made to maintain this part of the population under strict control.

The results of the national surveillance activities related to ASF are reported in Table 1.

Suceava - passive surveillance data in domestic pigs:

- In 2015: 24 samples (16 blood and 8 organs) were tested for ASF
- In 2016: 126 samples (115 blood and 11 organs) were tested for ASF
- In 2017: 8 samples (6 blood and 2 organs) were tested for ASF

The current level of passive surveillance in the county is low, and it should increase. Furthermore, as regards as the collection of samples, in case of dead animals, blood samples are not sufficient to rule out the presence of ASF and organs should be also tested (see 2003/422/EC for reference).

Worth remembering that in case of CSF suspect, a differential diagnosis should be carried out to rule out also the presence of ASF.

Table 1: General data and results of the surveillance activities related to ASF - data provided to Directorate F, DG Health and Food Safety

	Whole country		Area at risk	
	2016 (until 21 of December)	2015	2016 (until 21 of December)	2015
Number of pigs	4411700	4606532	624644	657789
Number of holdings	575471	611848	114484	121027
Number of on-farm slaughters notified to the veterinary services	**The all pigs are slaughtered in the slaughterhouses authorized for intra-Community trade**			
Number of post-mortem performed on on-farm slaughter				

Number of non-commercial farms/pigs*				
of which subject to official controls for identification	575106	611497	114424	120967
of which subject to official controls for biosecurity	0	0	0	0
of which subject to active surveillance	0	0	0	0
Number of commercial farms/pigs*				
of which subject to official controls for identification	365	351	60	60
of which subject to official controls for biosecurity	1180	1199	73	16
of which subject to active surveillance	0	0	0	0
Number of pigs on outdoor farms*	0	0	0	0
of which subject to official controls for identification	0	0	0	0
of which subject to official controls for biosecurity	0	0	0	0
of which subject to active surveillance	0	0	0	0
Number of wild boars (spring census)				
Hunting bag	37733	33262	6214	4889
Number of pigs hunted (***males ?***)	4485	5243	748	730
Number of hunted wild boars tested for ASF (PCR)	2782	2896	2448	2427
Number of hunted wild boars tested for ASF (serology)	2977	2394	2646	1942
Number of dead wild boars reported	120	43	32	8
Number of wild boars killed on the road reported	42	7	10	2
Number of dead wild boars tested for ASF (PCR)	97	18	29	8
Number of wild boars killed on the road tested for ASF (PCR)	30	7	10	2
Number of dead wild boars tested for ASF (serology)	44	1	18	1
Number of wild boars killed on the road tested for ASF (serology)	11	1	6	1
Number of hunting grounds				
Number of hunting grounds which have:	**76 Collecting centres for wild game**			
dedicated storage access for carcasses				
equipment for the safe disposal of offals / carcasses				

contracts for the disposal of carcasses				
dedicated dressing area				
been subject to official controls on biosecurity				
been subject to official controls on surveillance				

*as defined in SANTE/7113/2015-Rev.

Bio-security at Farm Level

In Suceava, the TF Team visited a pig commercial holding and two backyard farms.

The commercial holding was a fattening farm of about 2000 pigs, operating under the "all in – all out system". The holding is double fenced and the Team did not pass the inner fence. The Team met with the personnel of the holding in the Administration building. The holding was well conducted and the level of bio-security adequate for the type of production. The farm veterinarian reported that in 2017 only 1 pig died and it was not tested for ASF.

In one of the backyard visited it was evident that feed for piglets was integrated with kitchen waste. The owner reported that the piglets were bought from one of the neighbour. The backyard of the neighbor was visited too and indeed he was keeping 3 piglets for family consumption and 1 sow for breeding purpose, part of the piglets were kept for the use of the family, the others were sold in the village.

In both the backyards, the animals were well kept and pigs were enclosed in stables.

Clear biosecurity requirements are essential for commercial and non-commercial pig holdings. Romanian Veterinary Authority has established minimum bio-security requirements for the backyard sector but they are going to be applied in the field only in case of ASF introduction and this may represent a serious risk, in case of emergency.

The implementation of the bio-security requirements has to be controlled by veterinary authority also in the backyards, at least in the area considered at higher risk.

Wild Boar Management

The data presented by competent authorities in Suceava County are not aligned with the data presented for the entire Country where the annual growth is considered at 100%.

Indeed in the County, the annual wild boar growth is set by the local authority at 15% in mountain areas, 25% in hilly areas and 40% in flat areas. The hunting quota is low, rarely exceeding 20%, since the hunting quota refers to the pre-reproductive population, when it is applied to the post-reproductive population (hunting season) it is well below the claimed 20% of the population. Considering that about 60% of adult females deliver 3-4 piglets as average, the population growth should be higher (70-100% of the pre-reproductive estimated population).

Due to the limited hunting quota, the absence of the expected post reproduction growth is explained by predation and cannibalism. However it must be underlined that cannibalism has never been reported in wild boar (not even in fenced areas) and the abundance of predator species is regulated by the prey population size (wild boar) and not vice versa. Wild boar natural mortality is considered irrelevant, and in line with that, the number of wild boar found dead is low or null. Consequently, passive surveillance is weak and this represents a serious shortcoming for the early detection of the disease.

The Team visited a fenced hunting ground managed by a public company that is also in charge of the management of 41% of the hunting areas of the County. In the area managed by the company, about 1000 wild boar are estimated and 20% of them shot (210 in 2016). In the fenced area 320 wild boar are estimated and 60 are shot each year. The fenced population is gender unbalanced (22,5% adult females; 11,4% adult males) as well the hunting bag (only 10% adult females are shot). Despite the presence of 79 adult females the annual growth of the population is estimated in 60 animals (all included in the hunting bag) whereas an undefined number of animals (representing the exact difference between the expect growth and the counted animals) is predated or cannibalized by conspecifics. Based on the information reported, cannibalism occurs despite more than 30 tons of feed is supplied (approximately 100 kg/individual).

Shot wild boar are dressed locally, sample are taken and delivered to the local veterinary service. Dressed animals are transported in a plastic bag to a Game Collection Center, which is about 35 km from the hunting ground. Animals from 21 different hunting grounds (the furthest one is 54 km) are collected in the same center where they are frozen while waiting to be sold. Animals can be sold only if tested negative for both CSF and ASF. The game Collection Center is well equipped but

lacking of the minimal biosecurity measures to avoid ASF spread and environmental contamination. Wild boar carcasses are individually identified and the main hunting data are locally available. A defined procedure to safely disposed infected and possibly contaminated carcasses is not available.

Wild boar trophies (mandible) are prepared separately by a unique person, apparently without following any official sanitary rule.

Laboratory

The National Reference Laboratory (NRL) for ASF/CSF is the Institute for Diagnosis and Animal Health (IDHA), located in Bucharest. Since 2014 the NRL has been involved in the establishment of a network of county laboratories that can act in the primary identification of the disease throughout the PCR test. These laboratories are located at the Satu-Mare, Suceava, Iasii, Tulcea and Braila Counties. During the mission the TF Team visited at the Suceava regional laboratory, designated by the National Sanitary Veterinary and Food Safety Authority as accredited laboratory to perform the ASFV genome detection since the summer of 2015. During the visit it was assessed the regional laboratory capabilities for diagnosing ASF throughout the review of the; i) infrastructure and personal resources, ii) the ASF diagnostic techniques available at the regional laboratory, and iii) the structure of the ASF diagnostic workflow at regional and national level. The main findings are summarized below.

- Infrastructure and personal resources; the diagnosis for ASF is carried out within the Molecular Biology laboratory, a biosafety level (BSL) 2 laboratory belonging to the Animal Health Department, which has five qualified laboratory technologists/technicians and assistants directly involved in the diagnosis of ASF. The laboratory is supported by the Pathological Anatomy division involved in the tissue sampling preparation and distribution to the different sections according to the diagnostic requested. The Molecular Biology laboratory contains the appropriated facilities with pre- and post-PCR areas physically separated, the suitable equipment (automated systems) and material to conduct routine PCR assays (conventional and real time).
- ASF diagnosis; the ASFV genome detection is currently performed by the OIE-conventional PCR, accredited by the Romania National Accreditation Body (RENAR). Overall, the sampling processing, nucleic acid extraction and PCR amplification steps are in agreement with the international standards and follow the validated standard operating procedures (SOPs). The laboratory competence is assessed by;

- Internal quality control (IQC) performed in the day-to-day running of the diagnostic laboratory referred to the internal measures taken to ensure that laboratory results are reliable and correct, by including the positive and negative controls for each test.
- External quality control (EQA) performed throughout the participation in the ASF inter-laboratory Comparison Tests (ILCTs) organized by the NRL in 2016.

However, the **major critical point**, as it was observed in the CVET mission conducted in Bucharest on January 2016, **is the use of the OIE conventional PCR technique, since this test is not recommended in the current epidemiological situation, due to the lack of sensitivity for detecting the p72 genotype II ASFV isolates** currently circulating in the Eastern European countries. In this context, and according the information provided by the laboratory staff, the OIE real time PCR test has been already transferred by the NRL to the Suceava regional laboratory and is under the accreditation process.

– Structure of the ASF diagnostic workflow at regional and national level;
  - *ASF active surveillance*→ all hunted wild boar found in the 8 Romanian counties at risk are **tested by:**
    - **PCR at the regional laboratories** according the following scheme;
      - Satumare, regional laboratory has been designated to test samples collected from Satumare County using the OIE-conventional PCR test.
      - Suceava, regional laboratory has been designated to test samples collected from Botosani and Suceava County using the OIE-conventional PCR test.
      - Iasii regional laboratory has been designated to test samples collected from Iasii County using the OIE-real time PCR test.
      - Tulcea regional laboratory has been designated to test samples collected from Tulcea and Maramuree Counties using the OIE-real time PCR test.
      - Braila regional laboratory has been designated to test samples collected from Galati and Vaslui Counties using the OIE-real time PCR test.

    All samples with positive and/or inconclusive results must be sent to the NRL for confirmation.

    - **ELISA at the NRL**
  - *ASF passive surveillance*→ all sick or found dead domestic pigs and wild boar found dead from all 8 Romanian counties found at risk **are tested by PCR at the NRL in Bucharest**. However it is important to point out that firstly the samples are received at the regional laboratories to exclude the presence of CSF, and then they are sent to

the NRL for ASF diagnosis. This scheme **originates a delay on testing the samples and therefore affects to the early detection of the ASFV.**

CONCLUSIONS AND RECOMMENDATIONS

Currently, Romania is ASF free and given the epidemiological situation, the actions should be addressed to:

- Early detection (passive surveillance); and
- Prevention, focused mainly on the implementation of strict biosecurity measures. Worth considering that to be effective preventive measures, such as biosecurity, have to be immediately implemented, without further delay.

1. **Risk areas**

   In the Romanian, the counties considered at risk for ASF in the veterinary programme and where the level of surveillance is increased, is considered as fit for purpose.

2. **Surveillance**

   Passive surveillance is the main component to early detect ASF and needs to be properly enforced.

   - Surveillance in domestic populations
     - At least in the counties of the risk area, passive surveillance should be reinforced. Every dead animal both in commercial and backyard farms, should be checked for ASF.
     - In the diagnostic strategy and as crucial component for early detection, ASF testing should be performed also in the samples collected to rule out CSF.
   - Surveillance in wild boar
     - Passive surveillance should be reinforced specially in the at risk area. The number of samples taken in the last years demonstrates rather low activity.
     - Increased number of samples should be taken from found dead wild boar. Every dead wild boar found or even parts (bones) of predated or decomposed wild boar should be reported to the veterinary authorities and samples taken. Samples taken from decomposed carcasses are still suitable for ASF diagnosis.
     - Veterinarians in hunting grounds or hunters should report each dead wild boar leaving to the Competent Authorities the decision to test them or not. Actually, dead wild boars are reported only when some disease is suspected by the hunting ground management. As a result very few dead animals are reported.

- In order to increase the collection of samples sourced from dead wild boar, financial support is available from the Commission side.
- Management of dead wild boar in the at risk areas
    - Samples should be taken in the hunting ground and carcasses should be disposed of properly in the same area.
    - The transport of whole carcasses to the laboratory for sampling should be avoided.
- Management of hunted animals in the at risk areas
    - Animals should not leave the hunting ground or the adjacent area before ruling out ASF.

– The indications reported in Working Document SANTE/7113/2015 should be used as guidance by the competent authorities to refine their national strategy against ASF.

3. Biosecurity

Biosecurity in backyards should be improved and the requirements that have been established for backyard holdings need to be immediately implemented. The implementation of requirements has to be controlled by veterinary authority, at least in the area considered at higher risk.

4. Management of wild boar populations

– Veterinary services need to be involved in wild boar population management strategy, at all levels.

– Wild boar data provided by the local competent authority are unrealistic when population size is compared to the demographic data reported.

– Currently, the estimates of the wild boar population size are aimed at supporting hunting management. However, estimates are based on traditional and un-standardized methods that could lead to underestimation of the population size. Methodology to estimate the population should be validated through *ad hoc* studies conducted in selected areas and inferred to the whole wild boar population.

– At County level, the wild boar demographic parameter values (fecundity, fertility) and the population structure (gender and age) mismatch the official wild boar population dynamic and size. The evident mismatch is justified by the local authority through intraspecific cannibalism and predation.

– They consider cannibalism as one of the main drivers for wild population dynamics and, in association with hunting and predation it maintains stable the wild boar

population size. However, in the scientific literature cannibalism in wild boar has never been recognized, while predation can hardly explain the disappearance of about 20-30% of the expected wild boar population.

- Feeding of wild boar population is highly practiced, it should be regulated and strongly decreased.
- At present, the structure of the hunting bag is not aimed at effectively reducing wild boar density but at maximizing adult female proportion and thus wild boar abundance.

5. Laboratory

- To avoid delay in the diagnosis, samples taken from both active and passive surveillance should be tested at regional laboratories . This diagnosis should only be performed in laboratories in which the real time-PCR test has already been implemented and validated.
- Conventional PCR is not recommended for ASF diagnosis in this epidemiological situation.

Final Remark

The working atmosphere during the mission was very positive. The Romanian Veterinary Authority gave all their support and assistance to facilitate the mission. The Team wishes to thank the interpreters, their support was excellent and very professional.

Annex I

PARTICIPANTS

Task Force African swine fever Sub-Group - members

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Romanian competent authority

▪ Dr. Laszlo Nagy	Deputy CVO
▪ Dr. Marius Grigore	ANSVSA
▪ Dr. Laura Sighinas	ANSVSA
▪ Dr. Ioana Lupu	Suceava veterinary services
▪ Dr. Danut Corneanu	Suceava veterinary services
▪ Dr. Ioan Corduceanu	Suceava veterinary services
▪ Dr. Adrian Balaban	Pig industry
▪ Dr. Eugen Damean	Pig industry
▪ Dr. Dan Lungu	Suceava veterinary services
▪ Dr. Mireca Atilipoatie	Suceava veterinary services
▪ Dr. Catalin Bruja	Suceava veterinary services
▪ Dr. Sabina Bruja	Suceava veterinary services
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▪ Ing. Melinte Mihai	Suceava Silvic Directorate (local “Romsilva “)
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- Ing. Gasparel Mihai — Forestry Guard Suceava

National Central Laboratory

Dr. Razvan Moiu

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Annex II

AGENDA

TASK FORCE FOR THE MONITORING OF ANIMAL DISEASE ERADICATION: AFRICAN SWINE FEVER SUB-GROUP:

Suceava, Romania

(27-30.03.2017)

№	Object	Time	
	27-03.2017		
Arrival of TF experts and EU representatives to Bucharest and domestic flights to Suceava			
	28.03.2017		
1	**Suceava.** Welcome by the ROM CA. Introduction by EU representative on the role of the TF and scope of the meeting	09:00-09:30	
2	Presentation by ROM (central, regional and local CA) on the ASF situation, on the measures implemented-under implementation (as CVET follow up) to prevent ASF introduction in domestic pigs. Provide data. Special attention should be devoted to the measures implemented at the border with UA. Presence of regional CA from other ROM bordering counties (EG: Botosani) is recommended in order to better understand co-ordination work amongst regions bordering UA. Presence of farmer association is recommended in order to discuss also their specific involvement.	09:30-12.30	
3	Lunch	12.30-13.30	
4	Presentation by ROM (central, regional and local CA) on the ASF situation, on the measures implemented-under implementation to prevent ASF in wildlife. Data and maps to be provided. Presence of hunting association representatives/forestry services is recommended in order to discuss also their specific involvement.	13:30-17:30	
	29.03.2017		
	Suceava. Experts divided in two groups: **Group 1**: visit of the Regional laboratory. Explanation from their side on how the diagnosis	09:00-18.00	

	is organized (central-regional level) and explanation of their needs **Group 2**: visit to commercial farms, backyards and hunting grounds in Suceava county (travel distance 1 hour maximum)		
30.03.2017			
1	**Suceava.** Meeting of the TF experts (only) to prepare conclusions and recommendations of the meeting to be presented to ROM CA.	09:00-12.00	
2	Lunch	12:00-13:30	
3	Presentation of the main conclusions and recommendations of the meeting to the ROM CA Discussion and end of the meeting.	13.30-17.30	