



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 **Moldova** **REPORT¹**

❖ **Period:** 12 – 14 October 2016.

❖ **SGE Experts:** Klaus Depner (team leader, Germany), Konstantine Gruzdev (Expert, Russian Federation)

❖ **Time scheduled and places visited during the mission:**

• 12 October:

Opening meeting at the National Food Safety Agency in Chisinau

Visit of the National Diagnostic Laboratory for African swine fever (ASF) in Chisinau

• 13 October:

Visit of the Border Inspection Point (BIP – Post Criva) in the north of Moldova at the border with Ukraine

Visit of the regional veterinary service in the district Donduseni

Visit of the villages Mosan and Ceornoleuca (district Donduseni) where the two ASF outbreaks were notified in September 2016

• 14 October: Closing meeting at the National Food Safety Agency in Chisinau.

❖ **Scope of the mission**

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

The experts should provide scientific, technical and managerial assistance on the development and refinement of the most suitable prevention and control measures for ASF under local conditions, especially as regarding movement restrictions, border controls, surveillance, diagnostic procedures and biosecurity. Proposed measures should be in line with the OIE International Standards.

The experts should work with the central and local Veterinary Services and should perform on the spot visits in order to gather data and be in a position to formulate recommendations on disease management.

The experts should report to the Standing Group of Experts on African swine fever in the Baltics and Eastern Europe under the OIE/FAO GF-TADs and to the Veterinary Services of the country being visited. A written report should be produced.

❖ **Background**

Pig sector

Moldova has about 600.000 domestic pigs of which about 200.000 are reared in 203 commercial farms and ca. 400.000 pigs are kept in about 70.000 backyard holdings (non-professional holdings). In average one to two pigs are kept in backyard holdings. The largest commercial farm breeds 60.000 pigs.

According to the national legislation all pig holdings have to be registered in a central database, either as an authorized commercial farm or as a backyard holding. Pigs to be moved from a holding have to be inspected by a private veterinarian who issues a health certificate. All movements and individual identification must be notified into the national database. Pigs in backyards are identified with an individual ear tag usually during the vaccination campaigns performed by the private veterinarians (e.g. CSF vaccination). The target is to have all pigs older than 20 days registered and identified. The pigs remain registered in the national database until they are slaughtered.

Rearing pigs in non-professional holdings is very common and tradition in the rural areas in Moldova. This type of rearing is still a significant part of the agricultural practices. It represents an important if not the only source of meat supplies for the population in the countryside and often generates a valuable cash income. Apart from that, backyard holdings play an integral role in recycling of food and kitchen waste as pigs on these holdings are fed amongst others with leftovers from the kitchen and fresh cereals and grass in summer period. Backyard pigs usually are not slaughtered in slaughterhouses (abattoirs), but are slaughtered at home. These home slaughtering are usually performed around Christmas time or whenever new meat supplies are needed.

However, meat of backyard pigs can enter the national market when the pigs are brought to a slaughterhouse.

Traditionally, backyard pigs are traded either on free markets or by direct contact of the owner with potential customers. Backyard farm visited confirmed however that occasionally meat of home slaughtered pigs is traded at domestic market.

Despite their average small size and pig density and therefore their apparent unimportance, backyard holdings can play an important role in the dynamics of a potential ASF epizootic.

About 2500 wild boar are estimated to live in the forest areas of Moldova. No data are available on wild boar living outside the forests. Outside forests wild boar hunting is forbidden but poaching is largely practiced also considering that agricultural damages are poorly compensated. There is no hunting tourism.

ASF situation

In the Republic of Moldova ASF has been notified for the first time during September 2016. Two outbreaks were reported in small back yard farms in the district Donduseni in the north of Moldova at the border with Ukraine. One outbreak occurred in a back yard holding with 10 pigs in the village Mosan, while the second outbreak was notified in the village Ceornoleuca in a holding with 3 pigs. In both cases the epidemiological situation was clear. The source of infection was most probably swill feeding containing leftovers from infected meat and meat products originating from Ukraine. Few days before the animals showed clinical symptoms the owners bought in Ukraine cheap pork and pig meat products of unknown source. In Ukraine pig meat products were at that time two to three times cheaper than in Moldova.

ASF is present in the neighbouring country Ukraine, and outbreaks have been reported in different parts of the country. Based on the unfavourable epidemiological situation in Ukraine and the unknown situation in Transnistria there is a continuous real threat that ASF may be introduced to Moldova.

The state veterinary service has on regional level private veterinarians under contract which are engaged in certain national strategic activities like compulsory vaccination campaigns (e.g for CSF) or sampling activities. During such activities the private veterinarians have to contact the regional veterinary office in case they suspect a notifiable disease. In case of suspicion the requested diagnostic samples are taken by the official veterinarians.

❖ Findings

Border Inspection Post

During the mission the Criva border inspection point (BIP) in the Bricani district has been visited. The district borders with Chernivtsi Province in the Ukraine and the distance of the Criva-BIP to Chisinau is about 280 km. The BIP was recently setup according to the standard requirements and funded by the EU. Its official commissioning will take place by the end of 2016. The daily throughput of the border crossing point is 50-80 (100 at peaks) cars and about 50 trucks. The vehicles are not sprayed with disinfecting solutions and there are no disinfecting pads. About 50 to 100 people are crossing by foot the border daily, a more intensive crossing is recorded on Fridays and Saturdays. People are travelling from Moldova to Ukraine for purchasing cheaper pork meat and pork products. However, transport flow has reduced in 2016 vs. previous years.

Four veterinarians and eight technicians are working at the BIP. All of them work in shifts under adequate working conditions. The veterinarians are familiar with the corresponding

key regulations and have an operational manual. All the documents are in Rumanian language. They also get regularly updated information on the ASF situation in Ukraine. ASF posters aimed at raising public awareness and concern about the disease are displayed visible at the BIP. There are designated bins for collecting confiscated pork and meat products. Chlorinated lime stocks are also available.

Customs Service officers inspect hand luggage of the people crossing the border. According to the national regulation, a person can bring in up to 20kg of meat, fish products and eggs. When detecting suspicious products (of pork origin) customs officers call the border veterinarians and the products are confiscated and a confiscation statement is issued. The confiscated products are placed into plastic bags inside designated containers. An officer from the local veterinary station is collecting regularly with a special vehicle the containers with confiscated products for further disposal. In average 25 to 50 kg of pork meat and meat products are confiscated daily.

After Moldova has notified ASF (27 September) the veterinary inspections at the BIP have been intensified. However, so far only meat products which are labelled and where it is evident that they contain pork are confiscated. Unlabelled products are not confiscated.

According to the veterinary post officers, no wild boar has been detected in the border area. There are no forests around.

The veterinarians from the BIP breed pigs in their private backyards for own consumption.

ASF National Diagnostic Laboratory

Diagnosis of ASF is not performed on a routine basis due to the lack of reagents and test kits. Laboratory facilities and most equipment are present with the minimum requested biosafety measures. Four laboratory veterinarians are working in the unit in charge for ASF diagnosis. One laboratory veterinarian has been recently trained in Spain at the CRL for ASF and is familiar with the diagnosis of ASF.

However no laboratory technicians are working in the unit. As a consequence the laboratory veterinarians do perform also the duties of laboratory technicians.

The most critical point is the lack of specific reagents and general consumables for a reliable ASF diagnosis. At the time of the mission the laboratory would not have been in the position to perform PCR tests for ASF. So far diagnostic kits (e.g. for PCR diagnosis) have been received from the CRL in Spain, but these reagents have been used already. New ASF kits from Spain were awaited to arrive in due course.

Disease management and control

The EU legislation for ASF has been transposed into the national legislation; however implementation in many fields of action is still needed. Implementation of the legislation is essential for all concerned parties (ministries, agencies, associations) which should close collaborate. After the outbreaks in September a closer collaboration started between the ministries in charge of ASF disease management and control.

The structure of the veterinary services appears appropriate; however major lack of financial resources is evident (e.g. for diagnostic reagents and kits for ASF diagnosis).

Many veterinarians from the districts have participated to ASF training courses (e.g. BTSF courses organised by the EU) being now familiar with the disease and the epidemiology of ASF. In the district Donduseni where the two outbreaks occurred, the regional district veterinarians were very well updated regarding ASF epidemiology. As well as the epidemiological investigations conducted by the district veterinarians and the measures performed by the veterinary service to manage and eradicate the disease in that two affected villages have been very professional, appropriate and proportional.

On national level a clear strategy to fight and manage an ASF crisis was not so evident. A major weak point has to be seen in the national surveillance strategy. So far no regular inspections are foreseen in order to monitor the animal population for ASF. In commercial holdings official inspections are carried out only when the morbidity or mortality rises above the normal value. A systematic monitoring of backyard holdings is not foreseen, the private veterinarians are only visiting a backyard holding to treat sick animal, or to perform the national strategic activities.

However, after the two outbreaks in the district Donduseni appropriate disease control measures were taken on local level, all back yard holdings in the two affected villages were inspected by local veterinarians and no further outbreaks were detected.

❖ **Conclusions and recommendations**

So far, the Moldavian veterinary service was able to manage the two ASF outbreaks. No further secondary outbreaks were recorded indicating that ASF did not spread in Moldova. The actual situation can be regarded as uncritical. However, if larger holdings would be affected or several simultaneous ASF virus introductions would occur, the capability of the veterinary service to fight the disease would reach its limits.

The bottle neck in Moldova concerning ASF disease management is at present the national diagnostic laboratory. Due to the lack of reagents and diagnostic kits the lab is not in a position to perform routine ASF diagnosis, although trained personnel, a reasonable laboratory setup and equipment are available. A sustainable solution regarding the purchase of sufficient test kits is urgently needed. A stock of sufficient test kits is vital so that the lab should be able to perform at any time tests to ensure quick ASF diagnosis.

The veterinary inspections at the BIP have to be intensified. So far only meat products which are labelled and where it is evident that they contain pork are confiscated. Unlabelled products are not confiscated. It is strongly recommended that meat and meat products which are unlabelled should also be confiscated. The risk of ASF virus introduction with products of unknown origin is much higher than with commercial (labelled) products.

The Moldavian Veterinary service is lacking an epidemiological team which could be able to conduct epidemiological investigations in case of outbreaks. It is highly recommended that on central level at least one person should be trained to perform epidemiological investigations and risk assessments.

It is strongly recommended that a scientifically based ASF risk assessment following OIE guidelines should be performed. The risk assessment should focus on: (i) possible risks of ASF virus introduction and further spread, (ii) the best management options for domestic pigs (and wild boar), both in low risk and high risk areas, (iii) the suitability, effectiveness and the practical aspects of implementation of the main measures.

The national surveillance activities are not based on scientific grounds and do not take into considerations the biology of ASF. The national surveillance plan implemented at present (5-10 samples per district to be tested serologically) is one of the weakest points in the Moldavian strategy for ASF. Under such premises ASF virus cannot be detected early. It is strongly recommended that an expert group should be established to assist the Central and Regional Veterinary Authorities in the design of the relevant surveillance activities.

Surveillance in domestic pigs should be focused on ASF early detection and thus considering sick/dead animals avoiding planning in advance the number of animals to be tested. The present level of active surveillance is so low that early detected of ASF will fail. It would be more profitable if active surveillance could be replaced by passive surveillance triggered by the report of dead animals (wild boar and backyard sector) and evident changes in the health status of pigs on commercial farms.

Continuation of ASF training courses for veterinary inspectors at regional level is recommended. In particular the epidemiological aspects of the disease should be discussed and elaborated, focussing on early detection and prevention.

There is also a huge need of theoretical and practical training by simulation exercises, both for veterinary inspectors and private veterinarians. The implementation of the Council Directive 2002/60/EC, the contingency plan and the operational manual for disease control might fail without previous experience, having regard that the EU legislation is transposed in the national legislation, but not fully implemented yet.

The backyard sector represents a huge challenge and special efforts should be made to implement biosecurity and awareness to early detect ASF. Inspection schedule covering all holdings should be enforced. Farmers in risk area should be encouraged to enhance biosecurity practices in their holdings in order to prevent the introduction of ASF. In domestic pigs and wild boar the most effective routes of infection are through ingestion of infected material and direct contact.

There are no operators in the field of animal by-products disposal in the Republic of Moldova. Therefore alternative solutions in case of larger ASF outbreaks should be elaborated (e.g. burning or burying). Appropriate preparedness and training is needed.

The EU strategy on basic strategic measures for controlling ASF in the EU Eastern countries, based on the EC Working (Document: SANTE/7113/2015 - Rev 4)² could be used for guidance by the Moldavian competent authorities to refine their national strategy.

² http://ec.europa.eu/food/animal/diseases/controlmeasures/docs/asf-strategy-revised-2015-7113-v%204_en.pdf

More details on biosecurity and surveillance are found in Annex 1.

Final remark: *The working atmosphere during the mission was very good. The colleagues from Moldova gave all their support and assistance to facilitate a fruitful mission. The GF-TADs team wishes to thank all colleagues from Moldova for their support and help given. All requested information and explanations were promptly received by the team.*

Furthermore the support given by the two interpreters was excellent and very professional.

Annex 1

Basic strategical measures for controlling ASF

The document is based on the EC Working Document: SANTE/7113/2015 - Rev 4 (http://ec.europa.eu/food/animal/diseases/controlmeasures/docs/asf-strategy-revised-2015-7113-v%204_en.pdf)

Introduction

The ASF Strategy is aimed to the Member States recently affected by the disease or with a higher risk of introduction of the disease and is intended to prevent the spread of the disease and eventually its eradication from the affected territories. This aim should be achieved by the introduction of harmonised measures concerning wild boar and pig herds.

2. ASF measures to be applied for domestic pigs

2.1.1. Pig farms are classified in three categories:

- A. *Non- commercial farms (NCF):* farms where pigs are kept only for fattening for own consumption and neither pigs nor any of their products leave the holding.
- B. *Commercial farms (CF):* farms which sell pigs, send pigs to a slaughterhouse or move pig products off the holding.
- C. *Outdoor farms:* pigs are kept temporarily or permanently outdoor.

2.1.2. Minimum biosecurity requirements for each category are defined:

I - Biosecurity criteria for non-commercial farms:

- a) No swill feeding and removal of animal by-products in accordance with Regulation (EC) No 1069/2009.
- b) No contact between the pig(s) of the NCF and susceptible animals (indoor keeping in a way that ensures that there is no direct, nor indirect, contact with other pigs and wild boar).
- c) No contact to any part of feral pigs (including hunted or dead wild boar/meat/by-products).

- d) The owner (respectively the person in charge of the pigs) should change clothes and boots on entering the stable and leaving the stable. Disinfection should be performed at the entrance of the holding and the stable.
- e) No unauthorized persons/transport are allowed to enter the pig holding (stable).
- f) Home slaughtering only under veterinary supervision.
- g) No sows and/or boar for reproduction are allowed on the holding (this does not apply to commercial farms).
- h) Ban of feeding grass or grains¹ to pigs unless treated to inactivate ASF virus or stored (out of reach of wild boar) for at least 30 days before feeding.
- i) Ban on using straw² for bedding of pigs unless treated to inactivate ASF virus or stored (out of reach of wild boar) for at least 90 days before use.

II - Biosecurity criteria for commercial farms:

- Same criteria as for NCF with, in addition, the following criteria:
- Stock-proof fencing of holdings.
- Biosecurity plan approved/recommended by veterinary services according to the profile of farm and national legislation. This biosecurity plan should include detailed procedures on disinfection and personnel hygiene.

III - Outdoor keeping of pigs is banned.

2.1.3. Inspection and investigation regime

Inspection and investigation have to be performed by state veterinarians or contracted/designated veterinarians of the veterinary services. These are to be supported by awareness campaigns addressed to farmers.

Inspections of holdings should take place minimum twice a year. Inspection means that the veterinarian at task performs a veterinary interview with the farmer, observes and examines the pigs. In case of suspicion samples for laboratory investigations are taken. During the inspection the veterinarians are checking the biosecurity of the farm and perform a census of the pigs. Investigation will be performed in the whole country. The principle of investigation will be based on an enhanced passive surveillance (examination of pig plus sampling for ASF if appropriate).

2.1.4. Continuous awareness campaigns to target farmers (mainly from NCF) should be foreseen for informing about the strategy, the role of the farmer so to encourage their full involvement in implantation of biosecurity rules and participating in surveillance.

2.1.5. Sampling for laboratory investigations shall be performed

- in case of clinical signs (such as fever or haemorrhagic lesions).
- Increased mortality and mortality due to suspected infectious disease.
- Ante-and post-mortem signs raising suspicion at home slaughtering

2.1.6. Laboratory tests for screening

- qRT-PCR from blood or organs has to be performed always for early detection and confirmation of ASF.

- Ab-ELISA: facultative if epidemiologically relevant (e.g. in case of positive PCR result or suspicion of convalescence).

3. ASF measures to be applied for wild boar

3.1.1. Relevant terms and definitions.

Baiting: (non-sustaining feeding of wild boar): Attracting of wild boar with limited food (e.g. maize) only for the purpose of hunting. The maximum amount of food should not exceed 10kg/km²/month. Baiting should not, in any case, represent a source of feeding wild boar for sustaining the population during winter.

Feeding places/devises for other species: (e.g. wild ruminants): Such feeding places for wild ruminants should not be accessible for wild boar. If possible only food should be used which is not attractive for wild boar (e.g. hay).

Wider Area for Medium Term Actions (WAMTA): based on EFSA opinion of June 2015, this area surrounds the areas under restriction with a width up to 200Km. This area should be established, following a risk analysis, around currently restricted areas and areas bordering with third countries where ASF is considered to be present. This area should, in addition, take into account the anticipated annual spread of the disease for the period of the actions (2 to 4 years). This area should as well take into account the existing wild boar population distribution and densities.

3.1.2. Main strategic points

The following points for controlling and eradicating ASF in the wild boar population are to be applied at least to the areas under restriction and to WAMTA:

- a) Baiting is allowed (non-sustained feeding, limited food only for attracting wild boar for hunting, not exceed 10kg/km²/month).
- b) Sustained feeding is to be avoided.
- c) Targeted hunting is encouraged in order to target adult and sub-adult females. Based on recent experience from some Member States, reaching a wild boar density of 0,5 wild boar/km² or lower is expected to reduce the spread of ASF.
- d) The overall hunting bag should be balanced between male and females (50% each). Priority should be given to adult and sub-adult females.

3.1.3. Sampling of wild boar as follows:

- Principle of sampling in the whole country should be based on enhanced passive surveillance: all found dead and sick wild boar have to be tested for ASF using qRT-PCR.
- From hunted animals only blood samples are requested (no organs).

3.1.4. Removal of wild boar carcasses:

Carcass finding and safe disposal to be carried out in the risk areas

To be based on the enhanced passive surveillance already in place. In case of detection of ASF in precedent unaffected areas, the passive finding of carcasses should be supplemented by active search by professionals in hotspots established by the competent authority.

The disposal of carcasses to be carried out by burial, bringing to the rendering plant or burning (under supervision of the competent veterinary authorities). Possible use of appropriate chemicals for local disinfection.

3.1.5. Continuous awareness campaigns should be foreseen for hunters for informing about the new strategy and the intended goals so to encourage the participation of hunters in the strategy.