

Report on the Review of Poland's Animal Health Statuses for Swine Diseases

Veterinary Services
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Executive Summary

The United States Department of Agriculture's Animal and Plant Health Inspection Service (APHIS), in collaboration with the Canadian Food Inspection Agency (CFIA), has conducted a review of the European Union (EU) animal health statuses for four swine foreign animal diseases – foot-and-mouth disease (FMD), swine vesicular disease (SVD), classical swine fever (CSF), and African Swine Fever (ASF). APHIS currently recognizes Poland as free from FMD and SVD, and as low risk for CSF. ASF is present in Poland in domestic and wild boar since 2014 and implementation of EU regionalization strategies to control the disease are ongoing. APHIS has selected Poland as a representative Member State for the EU and conducted this review to determine whether or not conditions in Poland justify maintaining the EU's animal health statuses for the above diseases.

The objective of this review is to determine whether or not conditions in Poland justify maintaining its animal health statuses and that of all EU Member States for the above diseases. The review consisted of a document review and a site visit in Poland from September 9 to 12, 2019 to verify and complement all information APHIS has collected and analyzed information relevant to the factors used to conduct evaluations to establish initial animal health statuses. All information was collected from records of Poland's Veterinary Inspectorate (VI), the European Commission's (EC) Food Safety Authority, the World Organization for Animal Health (OIE), and other publicly available information. Information and data gathered during the site visit, along with observations by the site visit team are incorporated into this review report.

APHIS concluded that the likelihood that the disease agents for FMD, CSF, and SVD are present in Poland is negligible, and that sufficient import measures exist to prevent their entry into the country. On the other hand, the ASF virus is present in Poland and is circulating in wild boar and has been detected in multiple domestic swine farms. APHIS further concludes that detections of ASF particularly in wild boar are expected to continue to occur, and that detections in domestic swine appear to be declining consistent with the trend of the disease in other affected Member States. Review of the veterinary infrastructure information provided by Poland demonstrated an adequate infrastructure for rapidly detecting all of the diseases under review, disease surveillance, control and eradication, and certification of exports to the United States. In addition, Poland has demonstrated a history of prompt reporting of disease events and taking appropriate measures to prevent their export to the United States.

The information provided by Poland support continuation of the current APHIS-granted animal health statuses for FMD, CSF, ASF, and SVD and related import requirements. Recognition of these statuses will be maintained until the next APHIS review or until a change in Poland's animal health status is reported.

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Acronyms

ADNS	Animal Disease Notification System
APHIS	Animal and Plant Health Inspection Service
ARiMR	Agency for Restructuring and Modernization of Agriculture
ASF	African swine fever
AV	Authorized Veterinarian
BIP	Border Inspection Post
BVI	Border Veterinary Inspectorate
BVO	Border Veterinary Officer
CBD-SIRZ	Register of Farm Animals
CCP	Critical Control Point
CFIA	Canadian Food Inspection Agency
CFR	U.S. Code of Federal Regulations
CSF	Classical swine fever
CVED	Common Veterinary Entry Document
CVO	Chief Veterinary Officer
DVI	District Veterinary Inspectorate
DVO	District Veterinary Officer
EC	European Commission
EFSA	European Commission's Food Safety Authority
ELISA	Enzyme-Linked Immunosorbent Assay
EU	European Union
FBO	Food Business Operator
FMD	Foot-and-mouth Disease
VI	Veterinary Inspectorate
HACCP	Hazard Analysis and Critical Control Point
IPT	Indirect Immuno-peroxidase Test
MARD	Ministry for Agriculture and Rural Development
NRL	National Reference Laboratory
NVRI	National Veterinary Research Institute
OIE	World Organization for Animal Health

OV	Official Veterinarian
PCR	Polymerase Chain Reaction Test
QMS	Quality Management System
RASFF	Rapid Alert System for Food and Feed
RVO	Regional Veterinary Officer
SVD	Swine vesicular disease
TRACES	Trade Control and Expert System
WAMTA	Wider Area for Medium Term Actions

Report on the Review of Poland's Animal Health Statuses for Swine Diseases

Introduction

Consistent with regulations in title 9 of the *Code of Federal Regulations* (9 CFR 92) [1], the Animal and Plant Health Inspection Service (APHIS) has conducted a review of the European Union's (EU) animal health statuses for four swine foreign animal diseases, namely, foot-and-mouth disease (FMD), classical swine fever (CSF), swine vesicular disease (SVD), and African swine fever (ASF)¹. As part of this EU review, APHIS has selected Poland (officially, the Republic of Poland) as one of 13 representative Member States included in the review.

Poland is a country situated in Eastern Europe along the southeastern shore of the Baltic Sea. Poland borders the Baltic Sea to the north, the Kaliningrad region of Russia and Lithuania to the northeast, Belarus and Ukraine to the east, Slovakia to the south, and the Czech Republic and Germany to the west. Administratively, Poland is divided into 16 voivodships (Provinces), 379 poviats (including 65 cities with poviats status) which are similar to counties or districts, and 2,478 gminas (communities or municipalities). The voivodship is the highest-level administrative subdivision of Poland, corresponding to a "province" in many other countries. The second-level unit of local government and administration in Poland equivalent to a county or district is the powiat which is usually subdivided into gminas ("communes" or "municipalities"). Major towns and cities, however, function as separate counties in their own right, without subdivision into gminas and are termed "city counties" [2].

APHIS currently recognizes Poland as free from FMD and SVD, and as low risk for CSF [3]. ASF is present in Poland and implementation of EU regionalization strategies to combat ASF is ongoing. APHIS conducted this review of Poland to determine whether or not conditions justify maintaining its animal health statuses and that of all EU Member States for the above four diseases. The review consisted of a document review and a site visit conducted in Poland from September 13 to 20, 2019. The purpose of the site visit was to verify and complement information APHIS collected and analyzed relevant to the factors used to establish initial animal health statuses as described in 9 CFR Section 92.2 [4]. APHIS collected all information from records of Poland's Veterinary Inspectorate (VI), the European Commission's (EC) Food Safety Authority (EFSA), the World Organization for Animal Health (OIE), and other publicly available information. All information and data gathered during the site visit, along with observations by the site visit team are incorporated into this review report.

This review report presents a comprehensive representation of Poland's veterinary infrastructure, livestock demographics, livestock movement controls, surveillance programs, disease control capabilities, import and export requirements, and emergency response systems. For FMD, CSF, and SVD, APHIS aimed to determine that: 1) the hazards are not present in Poland; 2) the hazards are unlikely to be introduced into Poland and ultimately infect or contaminate the commodity being exported to the United States due to measures taken by VI; and, 3) if Poland has an incursion, it will be rapidly detected and eradicated, and exports to the United States will be promptly stopped to prevent the introduction of the hazards into the United States. Since ASF is present in Poland, APHIS has reviewed its implementation of EU's and its own ASF regulations, control and regionalization strategies in domestic and wild boar populations, animal

¹ Lists of APHIS-recognized animal health statuses of regions regarding specific animal diseases or pests, or acceptable commodities are available at: [APHIS Animal Health Status of Regions](#).

identification systems, trade restrictions and traceability, and the ability to control export procedures and certify its exports in accordance to APHIS import requirements [5]. The above information is followed by APHIS' conclusions and recommendations regarding the animal health statuses for swine diseases in Poland.

1 Veterinary authority and infrastructure

1.1 Legal authority

The main animal health authority responsible for implementing and enforcing all animal health, food safety and quality, and welfare policies and regulations in Poland reside with Veterinary Inspection bodies (VI). The main laws for animal health activities of the official veterinary services in Poland are the Act of 29 January 2004 on the Veterinary Inspection (Journal of Laws of 2004 position 1557) and the Act of 11 March 2004 on protection of animal health and combating animal infectious diseases [6]. The two laws regulate the main tasks and responsibilities of the veterinary inspection bodies, ensure access by government officials to private property, and provide the legal powers of inspection and enforcement, including the power to impose administrative penalties, lays down basic import, trade, and movement controls, stipulates the requirements for herd registration and animal identification, and describes general disease control and eradication measures.

The Act of March 11, 2004 (the Act), stipulates the obligations of veterinary officials, private veterinarians, and animal keepers with regard to reporting animal infectious diseases. In addition, the Act prohibits the feeding of kitchen waste to pigs. Kitchen waste is defined as leftovers from meals prepared for people and left after meals, especially from holdings, restaurants, hospitals and mass transportation centers, and other centers for mass nutrition. The Act stipulates the inspection at least 10% of farms annually for compliance with waste feeding prohibition; however, veterinary officials indicated that some local units have difficulty reaching this level of enforcement [6]. Other important Acts include [2]:

- (1) Act of 27 August 2003 on veterinary border control;
- (2) Act of 10 December 2003 on veterinary controls in trade;
- (3) Act of 29 January 2004 on veterinary inspection;
- (4) Act of 2 April 2004 on livestock identification and registration system and implementing regulations; and,
- (5) Act of 29 January 2004 on requirements for animal products.

Various additional Regulations of the Minister of Agriculture and Rural Development (MARD) prohibit vaccination of swine against CSF; regulate the handling, processing, and marketing of animal waste; and specify surveillance measures for CSF, SVD, FMD, and other contagious animal diseases. Other MARD regulations prohibit the preventive vaccination of animals for certain transmissible diseases, designate border checkpoints for inspection, and specify surveillance measures for infectious animal diseases.

The primary EC legislation pertaining to control of FMD, CSF, SVD, and ASF are listed in Figure 1 with the corresponding transposition into Polish legislations. Commission Decisions and Regulations are directly applicable in all Member States without the need for national implementing legislation (although some Member States choose to do so), whereas Council Directives bind Member States to the objectives to be achieved within a certain timeframe and leave the means to the national authorities. Council Directives must be implemented in national legislation.

Figure 1: EC legislation pertaining to FMD, VSF, SVD, and ASF [2]

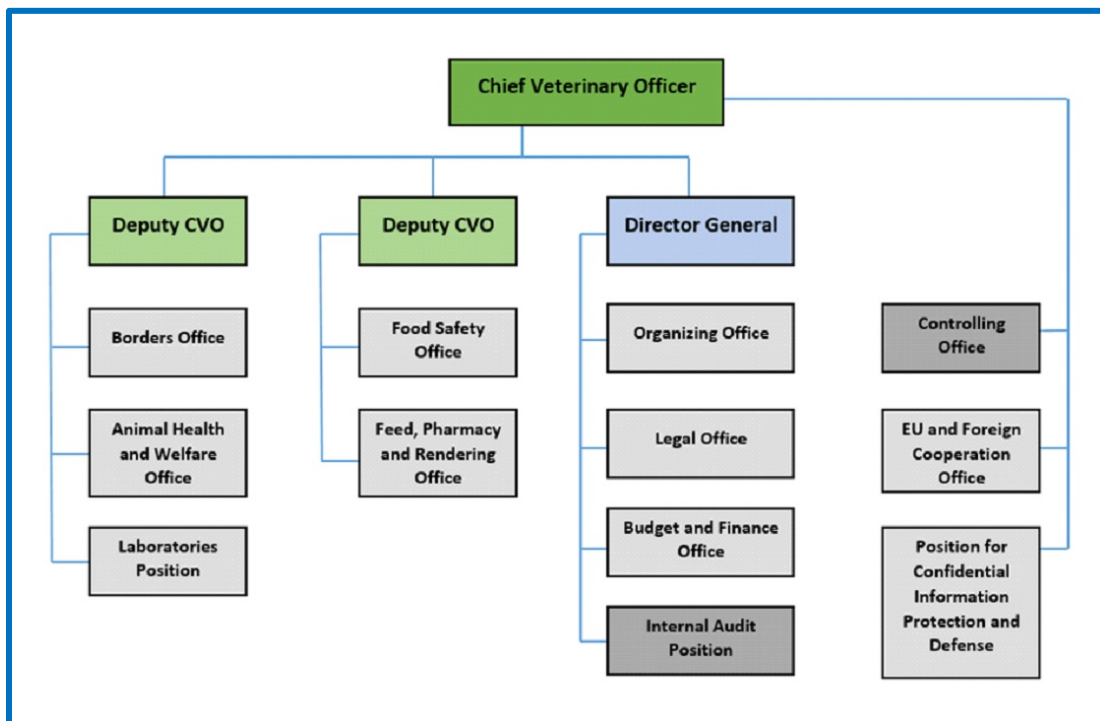
Disease	EC legislation	Polish legislations
CSF	Council Directive 2001/89/EC on Community measures for CSF control (as last amended)	(1) The Act (2) MARD regulation of 18 December 2006 on combating CSF (4) MARD regulation of 18 December 2017, on introduction of a program for early detection of CSF for 2018-2020 (5) MARD regulation of 17 December 2004, on disease units, controls, and scope of examination of diseases
	Commission Decision 2002/106/EC Diagnostic Manual for CSF testing and confirmation (as last amended)	Directly applicable to Member States
SVD	Council Directive 92/119/EEC on control of certain animal diseases and specific SVD measures (as last amended)	(1) The Act (2) MARD regulation of 26 February 2008 on the manner and mode of elimination of SVD (4) MARD regulation of 17 December 2004, on disease units, controls, and scope of examination of diseases
	Commission Decision 2000/428/EC diagnostic procedures for SVD testing, confirmation & differential diagnosis	Directly applicable to Member States
FMD	Council Directive 2003/85/EC on Community measures for the control of FMD	(1) The Act (2) MARD regulation of 10 February 2006, on manner and mode of elimination of FMD (3) MARD regulation of 17 December 2004, on disease units, controls, and scope of examination of diseases
	Commission Decision 91/42/EEC criteria applied for drafting FMD contingency plans	Directly applicable to Member States
ASF	Council Directive 2002/60/EC on specific provisions for the control of ASF (The overarching piece of legislation providing the tool for the control of ASF)	(1) The Act (2) MARD regulations of 06 May 2015 on combating ASF (3) MARD regulation of 15 November 2018 on introduction of an early detection program for ASF (4) MARD regulation of 17 December 2004, on disease units, controls, and scope of examination of diseases
	Commission Decision 2014/709/EU concerning ASF control measures in certain Member States (as latest amended)	Directly applicable to Member States
	SANTE/7112/2015 Laying down the principles and criteria for geographically and temporally defining ASF regionalization	(1) The Act (2) MARD regulations of 06 May 2015 on combating ASF (3) MARD regulation of 17 December 2004, on disease units, controls, and scope of examination of diseases

1.2 Organizational structure and functions

The VI organizational structure is defined by a statute issued in form of an ordinance of the Ministry of Agriculture. As shown in Figure 2, the VI is managed by the Chief Veterinary Officer (CVO), who is responsible for administering all VI policies and activities and is assisted by two deputies; one for Animal Health and Welfare and EU and Foreign Cooperation, and the other deputy is responsible for food and feed safety and laboratories. The CVO and his two deputies are responsible for all veterinary inspection activities in Poland [2, 7].

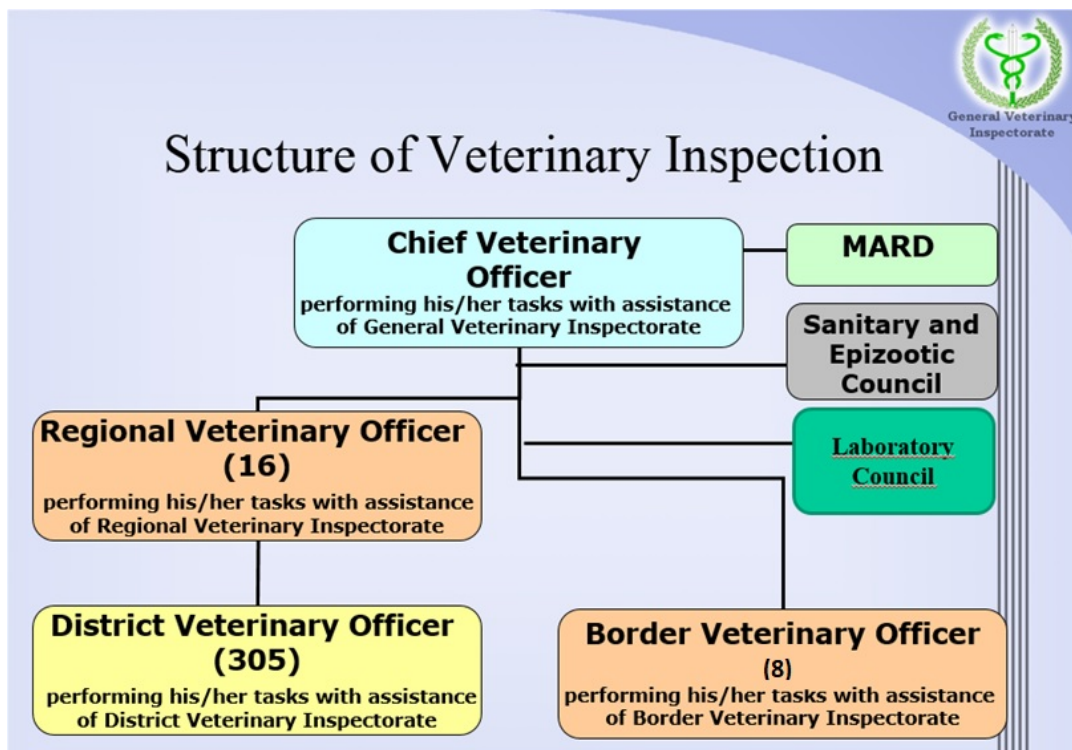
The CVO through VI central offices establishes the national animal health policies and is responsible for defining VI's direction, issuance of orders, procedures, and instructions for implementing such policies at the regional and district levels. The CVO is also responsible for drawing up and implementing national and foreign animal disease control, response, and eradication programs, surveillance and monitoring programs, food safety inspections and control programs, and import and export control and certification programs. In addition, the CVO and the VI central office establish annual training programs for veterinarians.

Figure 2: Management structure of VI



The VI is organized into three main levels; the VI headquarters in Warsaw is the central level. The second level consists of 16 regional veterinary inspectorates (RVI), each is headed by a regional veterinary officer (RVO), plus 8 border veterinary officers (BVO) who are responsible for border veterinary inspection activities in their respective border veterinary inspectorates (BVI). At the local level, there are 305 district veterinary officers (DVO) who act as heads of the district veterinary inspectorate (DVI) and are responsible for all veterinary inspection activities in their district. Figure 3 presents the three main levels of VI organizational structure including the regional and local levels [2].

Figure 3: Structure of VI



At the regional level, each RVO is responsible for managing all animal health programs in his/her region: 1) determines the line of animal health activities in his/her region; 2) issues instructions to DVOs to undertake specific tasks and controls the manner in which they perform the Inspection tasks; 3) assesses epizootic situation, safety of animal-origin products, animal nutrition and veterinary requirements at their production within the area of region; 4) prepares plans for implementing animal health programs; and, 5) organizes training courses for official and authorized veterinarians. At the district level, the DVO is responsible for implementing all veterinary inspection tasks as directed by the tasks of Veterinary Inspection. Each of the 8 BVO's is responsible directing all inspections and control operations at various BIPs in Poland (see section 6.8.4). The importance of BVI's activities are connected directly with Poland's accession to the EU and the fact that Poland's borders became EU borders, which are managed directly by the European Commission [2, 7].

The National Veterinary Research Institute (NVRI) in Puławy is the national reference laboratory for the diseases under review. CSF diagnostic testing and research is carried out in the Swine Diseases Department. The NVRI branch laboratory in Zduńska Wola is dedicated to vesicular diseases and is the national reference laboratory for SVD. Each province has a diagnostic laboratory, most of which are EC accredited. The provincial laboratories report to the NVRI, and the Director of the NVRI reports directly to the Minister of Agriculture and Rural Development [2].

1.3 Human resources

The VI has 88 employees at the central level, 779 employees at the regional level, and 2,363 employees at the district level. The Border Service employs 116 people and the NVRI employs 133 veterinarians and 9 technicians. The VI employs 2,166 veterinarians at all levels; 50 are at the central service, 377 at the

regional service, 1,548 at the local service, 73 at border controls, and 118 at the laboratory service. The VI appear to be fully staffed at all levels with no vacancies listed in any of VI service offices [2, 7].

Table 1: VI staffing levels

Service	Veterinarians	Veterinary technicians, other animal health professionals**	Administrative staff
Central service	50	0	36
Regional service	377	102	373
Local service	1548	113	686
Border controls	73	4	34
Laboratory service	118	9	-
Total	2166	228	1129

In accordance with the Act, the DVO may appoint private veterinarians and other auxiliary non-veterinarians to conduct specific official activities including monitoring of animal health and welfare status on farms and collecting samples for disease monitoring as well as conducting ante-mortem and post – mortem activities at slaughterhouses. To become an authorized veterinarian (AV), he/she must sign a contract specifying the scope, dates, and place of performing official activities and the amount and dates of payment and the contracts are renewed annually. AVs report their activities to the DVO on a monthly basis who must regularly evaluate their performance. The DVOs also provide AVs with regular trainings related to ASF, CSF, FMD, and SVD activities. The site visit team reviewed sample contracts and interviewed several VI officials and AVs and found out that VI can issue heavy fines on AVs who do not perform their official duties. In addition, the VI can recommend suspending the license to practice of a particular AV if he/she are found to be falsifying records, claims, or expenses. As of December 31, 2018, the total number of appointed veterinarians was 5,867 [2, 7].

1.4 Training

All official and private veterinarians must be graduates of an accredited college of veterinary medicine and must be licensed members of the Polish Veterinary Chamber. Under the Veterinary Law, the CVO, RVOs, DVOs, and BVOs must be licensed veterinarians. The CVO, RVOs, and their deputies must also have at least 5 years of experience in veterinary administration, and the DVOs, BVOs, and their deputies must have at least 3 years of experience in veterinary administration. The RVOs, DVOs, and BVOs must hold a specialist title in epidemiology, veterinary administration, or food hygiene [2, 7].

Ongoing training is provided by the VI for RVOs who in turn train district officials. RVOs may also receive additional training abroad that is funded by the EC. RVOs organize seminars on a regular basis with district officials to facilitate knowledge exchange and understanding of new regulations. A RVO may organize additional subject matter training at the request of a DVO. The DVOs provide continuing education to AVs, and in some instances to other private veterinarians, to update them on legislative changes and to review new information on reportable diseases. In addition, AVs receive additional training on the diseases under review including what samples to take in case of suspicion of these diseases. All BVOs has received practical training prior to being appointed with BVI both at the Polish BIPs and at other checkpoints in the EU.

1.5 Financial resources

The budget for the VI activities including surveillance and emergency response comes from MARD. As shown in Table 2, during 2016 to 2018, the annual VI budget has slowly increased ranging between 957 million złoty to 983 million złoty; the majority of which was allocated to surveillance and monitoring of endemic and exotic diseases including response, control, and eradication. The budget at the provincial and district levels is established in a budgetary law approved each year by the Polish parliament. Limited cost recovery occurs through fees for services such as issuing health certificates and permits; however, this money goes to the national budget, not directly to the VI. Poland finances all CSF and SVD surveillance within the country but receives financial support from the EC for monitoring of other diseases like bovine tuberculosis and brucellosis. The EC also provides partial indemnity in case of outbreak of ASF response and control of ASF outbreaks [2].

Table 2: VI budget, 2016 – 2018

Specification	2016	2017	2018
VI and BVI	24.4	24.7	23.6
Budgets for RVI including:	660.9	666.2	666.9
1. Control of diseases & residue monitoring	26.9	26.3	26.3
2. RVI – operational funds	131.4	132.7	133.5
3. DVI – operational funds	257.5	257.2	257.1
4. DVI – remunerations funds for AV	245.0	250.0	250.0
Reserve for disease control	272.3	272.3	292.3
TOTAL	957.6	963.3	982.9

1.6 Internal and external audits

The VI General Director who reports to the CVO, is responsible for managing the internal audits of VI's civil service and financial operations of the VI. The Controlling Office carries out control of authority tasks at the regional and district level and conduct selected scope audits of the RVIs and the BVIs [2].

Commission Decision 98/139/EC provides the authority for post-accession auditing actions necessary to ensure that the provisions of Community legislation are complied with in a uniform manner. The scope of auditing of a Member State includes the provisions of any of the agreements on sanitary measures applicable to trade in live animals and animal products with third countries. Under Commission Decision 98/139/EC, the audited Member State must investigate and correct any identified sources of non-compliance within a given timeframe or may face sanctions applied by the EC. The Food and Veterinary Office (FVO), which is part of the EC's Health and Consumer Protection Directorate-General, conducts several animal health, animal welfare, and food safety inspections in Poland prior to accession. These reports are publicly available online at this [link](#). Polish officials indicated that corrective actions were taken as recommended by FVO auditors [2, 7].

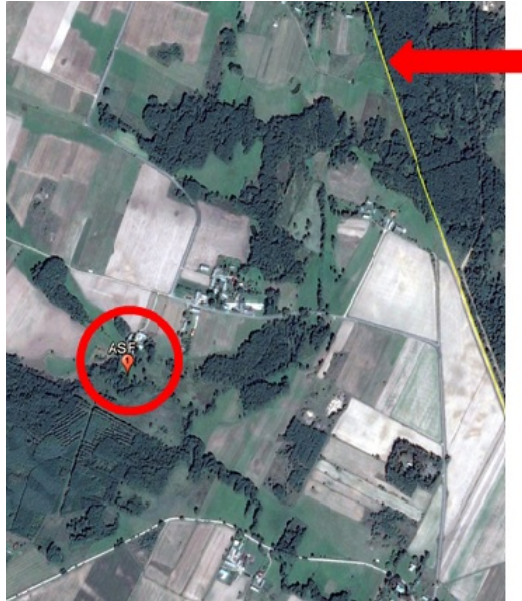
2 Status of the hazards in Poland

FMD was eradicated from Poland in 1971 and the OIE lists Poland as an FMD free country where vaccination is not practiced. The last outbreaks of CSF in domestic swine in Poland occurred in 1994 (8 outbreaks), and Poland is listed on the OIE's list of CSF free countries. The last SVD outbreak occurred in 1972. The only wild species present in Poland with epidemiological importance for FMD, CSF, ASF, and

SVD, is the central European wild boar (*sus scrofa scrofa*). Wild boar is an invasive species which is widely distributed in Poland. FMD has never been reported in susceptible wild species. Similarly, there have been no reported occurrences of CSF and SVD in wild species [2].

ASF has been present in domestic swine and wild boars in Poland since 2014. VI officials stated that the disease was likely introduced from Belarus following its detection in that country in 2013. First case of ASF in Poland occurred on February 17, 2014 in wild boar carcass found dead approximately 900 meters from the border with Belarus as shown in Figure 4 [2].

Figure 4: Location of first wild boar cases detected in 2014



ASF is circulating in wild boar in Poland since 2014; the disease was detected for the first time in wild boar. Since then, the disease has rapidly spread in wild boar populations and in domestic swine. As of November 21, 2019, there have been 5,312 cases of ASF in wild boar and 261 outbreaks in domestic swine. By 2018, VI recognized that there is a need to concentrate on biosecurity on the farms. As a result, outbreaks in domestic swine started declining from 109 outbreaks in 2018 to 48 outbreaks in 2019. Similarly, ASF cases in wild boar declined from 2443 cases in 2018 to 1,965 cases in 2019. The numbers per year of ASF cases and outbreaks in domestic swine since the start of the epidemic up to November 21, 2019 are listed in Table 3 [7, 8].

Table 3: Number of WB cases and outbreaks in domestic swine, 2014 – 2019

Year	WB cases	Outbreaks (domestic swine)
2014	30	2
2015	53	1
2016	80	20
2017	741	81
2018	2,443	109
2019	2019*	48*

The virus appears to be persisting in areas where infected wild boar has been detected as well as in areas where the disease has spread due to the human-mediated factors. The size and dynamics of the wild boar population play an important role in the intensity of occurrence and spread of ASF. The wild boar population size in Poland is influenced by a relatively high population growth rate which is estimated to be at least 200%. However, during the 2018-2019 hunting year (from 1 April 2018 to 30 March 2019) the number of hunted wild boar was approximately 249,000 which amounts to 312% of the estimated population size prior to commencement of the hunting year. This demonstrates that implementation of strategies to manage the wild boar population is extremely important to control the disease, and that estimation of the population size more accurately is vital to the success of such strategies [2, 7].

During the site visit in September 2019, VI officials stated that the rapid spread of ASF from the Eastern part of Poland in 2014 all the way to Warsaw was primarily because of human factors not animal migration [2]. However, since then, ASF has been detected in wild boar in free areas in western Poland. The current situation map is shown in figure 5 under section 7.1 of this report.

3 Vaccination

Vaccination against FMD, SVD and CSF is prohibited in Poland. Currently, there are no commercially available vaccines for ASF; therefore, vaccination against the disease has never been used in Poland [2].

Vaccines used to vaccinate animals Poland must meet the requirements set out for vaccines in the OIE Terrestrial Manual. Animal vaccines are authorized in accordance with the provisions of Pharmaceutical Law and Regulation (EC) No 726/2004 of the European Parliament and of the Council laying down Community procedures for the authorization and supervision of medicinal products for human and veterinary use and establishing a European Medicines Agency.

Vaccines intended for use in animals are manufactured in accordance with Good Manufacturing Practice procedures by approved entities. Supervision over the conditions of manufacture and import of veterinary medicinal products, including vaccines, is exercised by the Main Pharmaceutical Inspector who, in the event of finding violations, notifies the CVO. The production of veterinary vaccines and drugs requires a production authorization or an import permit from the Main Pharmaceutical Inspector. The marketing authorization for vaccines and veterinary drugs is issued at the request of the purchaser upon a decision by the President of the Office for Registration of Medicinal Products, Medical Devices and Biocidal Products. The authorization is issued for 5 years. All vaccines and medicines used in Poland can be available and administered only by from a veterinarian or a veterinary technician under the direct supervision of a veterinarian [2].

Supervision over the turnover and the quantity and quality of the used veterinary medicinal products is exercised by the CVO and RVOs. The RVOs with the help of veterinary pharmaceutical inspectors, carry out an annual plan of control of animal treatment facilities which use veterinary medicinal products including vaccines. The inspection evaluates e.g. the correctness of application of the medicine or vaccine and keeping medical and veterinary documentation. Each veterinarian using such products is required to document its use and keep the records for 5 years [2, 9].

4 Livestock demographics

In Poland, domestic swine and cattle are distributed throughout the country. The number of domestic swine in 2018 ranged between 12 - 12.5 million head while the number of cattle was 6.0 million head. VI officials estimate the number of sheep and goats in Poland to be very low. The largest share in the domestic swine belonged to the following voivodships: Wielkopolskie, Kujawsko – Pomorskie, Łódzkie, and Mazowieckie. On the other hand, the smallest share of swine belonged to: Lubuskie, Podkarpackie, Małopolskie, and Dolnośląskie voivodships. According to Polish legislations, there is no differentiation between commercial and non-commercial swine farms; all farms (even with just 1 animal) must fulfil all VI and MARD regulations for identification of animals, registration of farms, movement controls, and all on the measures undertaken in connection with ASF outbreaks [2].

There are four main systems for raising swine or producing swine meat and products: small farms, medium size farms, large farms, and hunted wild boars (wild boar meat is for personal consumption by hunters). Medium and large size farms that breed swine, sell swine, send swine to a slaughterhouse, and/or move pig products off the holding are distributed throughout Poland. In 2017, pigs and bovine for slaughter represented 35.4% and 15.9% respectively of the total production of animals for slaughter. In the past 10 years, the number of pig farms has declined in Poland due to economic reasons, aging farmers, and strict biosecurity requirements which are difficult and costly for small farms to comply with – for example in the Piaseczno district, the DVO informed the site visit team that the number of farms dropped from 100 to six farms [7].

The site visit team visited 2 large commercial swine farms during this review. The team reviewed movement records, purchases, identification records, farm register, biosecurity inspection records, and other production records. The first farm is located in Part II area approximately 500 meters from the border with the Kaliningrad region of Russia. This farm supplies animals to the Animex Foods slaughterhouse in ELK which is an approved establishment for export of treated products to the U.S. The owners purchased pigs from Spain to first stock the farm. The owners follow Danish biosecurity practices with highest hygienic status with documented high biosecurity practices, regular disease testing and other practices that ensure health status of pigs. The farm does not introduce pigs, they import semen and use artificial insemination. At the time of the visit there were 670 sows on the farm which are inseminated on a weekly basis- 34 sows at a time. There were 2000 weaners; 1600 marketed per month for slaughter or fattening at another farm. The average mortality is 1.5 - 2% from weaning to fattening and 7% for piglets. There are no swine farms within a 6 km radius of this farm. All buildings are interconnected to keep pigs inside. The farm is fenced, employees have designated gate for entry/exit. There is a disinfection vat for tires at the truck entrance. The owner produces feed at another family-owned farm and uses a fully automated wet feeding system to prevent need for any additional contact with feed [7].

The second farm was a swine fattening farm in Sokołów Podlaski with 1,947 pigs (100 kilos each). At the time of planning for the site visit, the farm was located in Part II and used to ship pigs to the establishment in Sokołów which is an approved establishment for the U.S. However, shortly before the visit, the area was changed to Part III and the farm no longer supplies the establishment. Weaners are purchased from Denmark at around 30 kilos and there are 3 all in/out fattening cycle (3.5-4 months each) with mortality around 1-1.5% per cycle. The farm is fenced (1.5 meters) and the fence is installed on a foundation wall underground. Cleaning and disinfection is carried out between cycles, followed by a 1-2 weeks down time. The farm is inspected 2 times per year. Animals are sent to slaughter in batches depending on the

slaughter plant needs; the owner stated that it may take up to 8 weeks to send all animals to slaughter. The animals are tested within 7 days before being shipped to slaughter [7].

Ownership of swine for personal consumption in small farms is quite common in Poland. The majority of swine farms in Poland are small farms which are basically households keeping 1, 2, or few pigs for fattening and personal consumption [2]. The site visit team visited a small swine farm in a Part II areas in gmina Kurów in Lubelskie. There were 19 pigs in the farm including a sow and gilt. When an animal is sick, the owner calls a private veterinarian to examine the animal who treats the animal or collect samples and notify the DVO if ASF or another infectious disease is suspected. To send pigs to slaughter, the owner contacts the AV who issues a slaughter permit allowing the animals to move to the slaughterhouse. The team observed use of disinfection mats, boot covers, hand sanitization, nets on the pigs housings, and disinfection sprayers [7].

There are 75 assembly centers for aggregating livestock in Poland which are approved by the EU for intra-Community trade, of which 30 centers are approved for swine. In addition, there are small swine collection centers that are used by small farm owners to send few animals to slaughter at designated slaughter plants. The site visit team visited an animal collection point located in a Part I area in Opole district of Lubelskie. The capacity of the collection point is 1-50 pigs. Animals are shipped to a couple of local slaughter plants. Collection of animals is held once per week under the supervision of an AV who checks the slaughter permit accompanying each shipment, farm registration number, animal identification, along with a declaration by owner of all treatments the animals receives. The animals do not stay at the collection center, they are moved to slaughter immediately. Animals are transported by authorized transport companies. The team observed disinfection mats, boot covers, disinfection sprayers for tires. VI officials stated that there are no collection points in Parts II and III [7].

5 Identification and registration

All swine, cattle including buffalo, sheep, and goats must be identified and all farm keeping these species in Poland must be registered on accordance with the following regulations [2, 7, 10]:

- Act of 2 April 2004 on the animal identification and registration system (as amended);
- Commission Regulation (EC) No. 494/98 of 27 February 1998 laying down detailed rules for the implementation of Council Regulation (EC) No. 820/97 as regards the application of minimum administrative sanctions in the framework of the system for the identification and registration of bovine animals;
- Regulation (EC) No. 1760/2000 of the European Parliament and of the Council of 17 July 2000 establishing a system for the identification and registration of bovine animals and regarding the labelling of beef and beef products; and,
- Commission Regulation (EC) No. 911/2004 of 29 April 2004 implementing Regulation (EC) No 1760/2000 of the European Parliament and of the Council as regards eartags, passports and holding registers.
- Commission Regulation (EC) 2000/678/EC: Commission Decision of 23 October 2000 laying down detailed rules for registration of holdings in national databases for porcine animals as foreseen by Council Directive 64/432/EEC.
- Council Directive 2008/71/EC of 15 July 2008 on the identification and registration of pigs.

The identification and registration system is used to determine the location and movements of animals. It includes the following elements: 1) the central register of tagged animals and farms; 2) animal identification; 3) identification documents; and, 4) the herd registration book [2, 7, 10].

5.1 Farm registration

The Central Database of Animal Identification and Registration System (CBD-SIRZ), is one of the key registers administered by the Agency for Restructuring and Modernization of Agriculture (ARiMR). The database was established to attain more efficient organization and coordination of agricultural information system and the system of administration supporting national agriculture. The CBD-SIRZ conforms to EU requirements and has been evaluated and approved by the EC. The main objectives of the CBD-SIRZ are: prevention of infectious animal diseases, control of animal diseases by detecting the source of the disease and contacts with other animals, control of human and animal health, keeping records of animal breeding, and providing support to the agricultural sector. The CBD-SIRZ contains the animal identification number, date of birth, sex, identification number of the holding of origin, identification numbers of the farms where the animal stayed and the dates of these events, the date of slaughter or death, the current farm identification number and the name and address of the holder, and the epizootic status of farms. The VI has direct access to the data contained in the register [2, 7, 10].

Any owner of a farm animal is obligated to report the herd's location to the head of the district office of ARiMR via a standardized form no later than on the day the first animal is introduced on the farm. ARiMR issues the farm a unique 14-digit identification number for the herd's headquarters. This registration number consists of the letters PL, nine digits denoting the animal owner's identification number (producer's number), and three digits denoting the next number of the herd's headquarters (ex. PL 012345678-001) [7].

Owners are required to report all events concerning their animals such as births, movement (e.g. purchase/sale, export), slaughter or fall within 7 days of the event by completing the system prints available in the district offices of ARiMR or by electronic means through a special application. If the animal is moved, both the owner and the receiver have the obligation report the event.

Additionally, owners must keep a separate registration book (either a book or electronic file) for each species at the farm. The book must contain the following information[2, 7, 10]:

- herd number;
- initial number of animals and changes to this number including event date, number of animals and identification numbers of animals which are left in the herd, event code, data on the previous keeper, and details on the new animal holder; and,
- information on inspections carried out at the herd.

Entries in the farm registration book must be made within 7 days from the event, and the registration book must be kept at the farm for 3 years after the animals leave the farm.

During the team's visit to the DVI office in the Piaseczno district in Mazowieckie voivodship, the team received a demonstration of the CBD-SIRZ system. The database can be accessed by VI officials and they are the only ones allowed to make changes to database upon application of the farmer. AVs can also access the database provided that the DVO applies for access for them. The DVO confirms all information when preparing health certificates and he/she has the authority to block movement in/out of a given farm [7].

In the user interface of the database, one column lists “Events” which will have information such as introduction of pigs into a farm. A different column has the registration number of the farm of origin, as well as an indicator to identify whether it is a rendering (R) or slaughter (S) facility. For example, Event column and the next column can help determine that collapsed/fallen animals have gone to rendering. Imported animals are noted in eartag number by the first 2 letters representing the country of origin. Reconciling of data is the responsibility of local DVO who goes to farm if needed to verify information. DVI officials follow up on inconsistencies in database – example given was an inconsistency with date of movement versus the date of registration. This inconsistency triggered a biosecurity inspection and DVO was able to present the report on the biosecurity audit to the team. The DVO stated that no serious inconsistencies have occurred in this area [7].

The team found out that the database cannot be queried by OVs for generating custom reports; they can only print each farm record which significantly reduces their abilities to target specific issues. In addition, the database does show notification of identification; OVs have to crosscheck with farm registers which is a missed opportunity for data collection. Test results are also not reported in the database; crosschecks must be made with lab reports. Additionally, the VI do not have the capability to make changes to the structure of the database, but they can request changes from ARiMR. Team members were not able to ascertain whether that situation has occurred before. Officials stated that the VI is in the process of developing a more comprehensive and user friendly database [7].

DVI has close links with stakeholders when it comes to ASF. DVO organized several meetings in the region, prepared leaflet which is mailed to every farmer and distributed via organization with contact with farmers. Also developed brochures for distribution.

5.2 Individual animal identification

All swine must be identified within 30 days of birth or prior to leaving the holding of birth by placing an ear tag with the number of the herd headquarters or by tattooing this number before this animal leaves the herd. The owner must report identification of the animals to ARiMR within 7 days from the day of application. If the pig has been moved from the herd of birth and stays in the new herd for more than 30 days, the owner is obligated to additionally mark the pig with a tattoo or with an eartag with the number of that herd. The additional marking must be made no later than before the animal leaves the herd. In addition, owners must provide ARiMR with updated animal inventories of their herds annually (no later than December 31st of each year) and must also log this information in the farm registration book. If there is an animal disease risk, inventory changes must be reported within 2 days. However, for the past 1 to 2 years, births have to be reported within 24 hours in Parts II and III areas [2, 10].

Cattle must be identified by with an individual identification number placing ear tags on both ears. The identification number consists of 14 characters starting with PL followed by 12 digits of which: 1) the first two digits denote the tag series number; 2) the next nine digits denote the number of the animal; and, 3) the last digit is a check digit. The cattle owner is obligated to report to ARiMR the fact that the animal has been tagged before it leaves the herd of birth, but no later than 7 days from the date of birth of the animal. In addition, each cattle must have a passport issued by ARiMR during the transport of the animal. The passport contains data regarding the individual identification number and the headquarters of the herd, its gender and breed, the identification number of the mother of the animal, and the date and place of birth of the animal [7].

Sheep and goats must be identified by placing ear tags on both ears with the individual identification number of the animal. In case of sheep and goats are destined for intra-EU trade, an ear tag set up on the right ear must contain an electronic identifier. The owner is required to report identification of the animals to ARiMR before the animal leaves the herd, no later than within 180 days from the date of birth of the animal. An annual inventory with the number of animals must be carried out no later than December 31, and must be recorded in the farm registration book [2, 10].

5.3 Compliance with identification requirements

VI has authority under the identification and registration regulation to monitor and enforce compliance with identification. The VI officials conduct on-the-spot checks on farms including crosschecks comparing information in the farm registration and CBD-SIRZ. In accordance with EC and Poland's regulations, the VI carries out these checks on a minimum of 3% of cattle herds and sheep and goat flocks and 5% of the animal population which are subject to identification and registration. There is no mandated minimum percentage for checks on the identification of pigs. The identification and movement information captured in the CBD-SIRZ makes it possible to trace movements of individually tagged animals. For group identification as in the case of swine, identifying an animal at each herd's headquarters where it remains for more than 30 days allows tracing of the animal's movements [2, 7].

Generally, when a noncompliance is detected, the OV must register a noncompliance infraction against the owner of the animals. Depending on the nature of violation, the OV must order correction of the violation in a specified timeframe, suspend any activities until violation is removed, or prohibits the marketing of certain animals, placing certain products on the market, or trade for certain products produced under that activity. Sanctions are imposed on the basis of criminal laws laid down in national laws. The Act of veterinary law includes penal sanctions which include fines and imprisonment. In the scope of imposing penal sanctions, the VI cooperates with law enforcement authorities by forwarding them information obtained during official activities which may be the basis for commencing prosecution [2, 7].

6 Disease detection

6.1 Passive surveillance and reporting

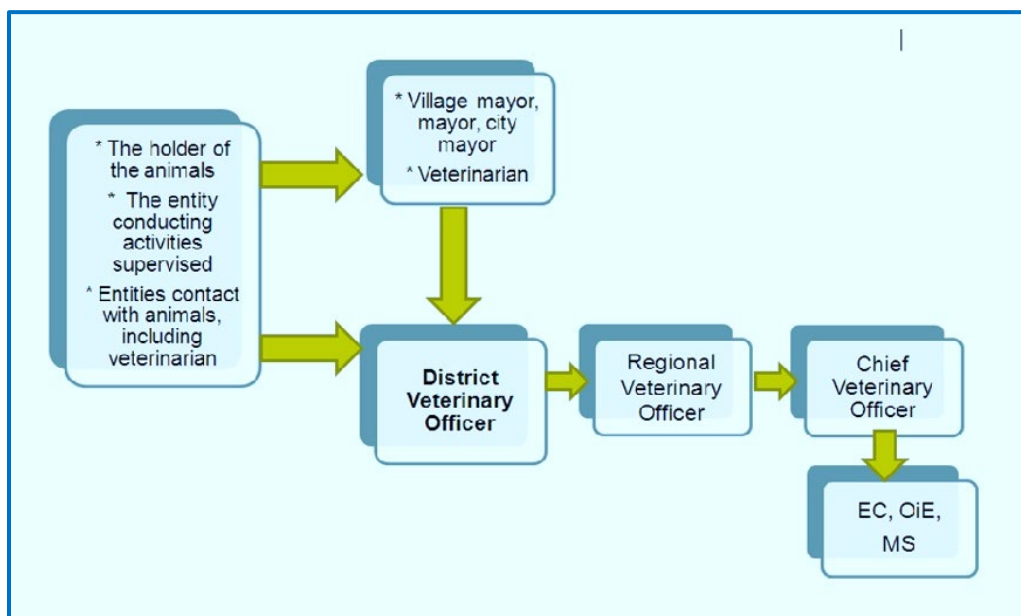
Passive surveillance is conducted through VI's nationwide mandatory notification program for reportable diseases. The rules on notification of animal infectious diseases are included in the Act which categorizes animal infectious diseases into two categories: (1) diseases that are subject to eradication, and (2) disease subject to registration. All of the four diseases under review are subject to eradication; as such, these diseases must have contingency plans which specify the emergency response measures to be taken [2].

Any animals that show clinical signs compatible with any of the diseases under review must be immediately notified to the DVO responsible for that area. If a private veterinarian is called to treat a sick animal and he/she suspects any of the diseases under review, they must notify the owner of their obligations and supervise the situation until the DVO or a person authorized by the DVO arrives. The DVO must notify the RVO who in turn moves the information up VI's management. There were no suspect cases of CSF, FMD, and SVD that were notified in the past 3 years [2].

All notifications are subject to investigation and emergency response measures in accordance with the Act. Notification to the EU and other Member States is required via the Animal Disease Notification

System (ADNS) within 24 hours of (1) confirmation of an outbreak, and (2) removal of restrictions after eradication of the outbreak. As an active member of the OIE, Poland has promptly reported all incidents of the diseases under review to the OIE as well as its trading partners [9]. Poland has also promptly reported all ASF outbreaks as expected. Wildlife species susceptible to the diseases under review are also subject to passive surveillance and notification and failure to report will result in heavy fines [2]. A flowchart for notification of suspect and confirmed ASF cases is presented in Figure 5.

Figure 5: Notification flowchart for suspect and confirmed animal disease



VI also uses other animal health program activities as opportunities to enhance its passive surveillance and disease detection capabilities such as: during inspections for animal movement controls; export certification; activities related to disease control and eradication programs; slaughterhouse inspections; and response to disease reports [2].

6.2 Active surveillance

VI implements both active and passive surveillance strategies for rapid detection of incursions of the diseases under review. Because Poland is considered free of FMD, CSF, and SVD, surveillance strategies are mainly directed at monitoring its free status rather than demonstrating freedom of these diseases.

Active surveillance for FMD consists of collection and testing of blood samples from 10 live pigs or bovine from at least 5 farms or herds in each district annually. During 2015 to 2017, a total of 799 samples from live swine in 574 herds and 9,738 samples from bovine in 8,963 herds were tested for FMD; all results were negative for FMD. Active surveillance for SVD includes collection and testing of blood samples from 10 live pigs from each district on an annual basis. From 2015 to 2017, a total of 11,022 samples collected from 9,882 swine herds were tested for SVD; all samples tested negative for SVD. During January to April of 2019, a total of 1,793 samples collected from 1,711 herds tested negative for SVD [2, 11].

6.2.1 Active surveillance for CSF

For CSF, detailed rules for active monitoring are included in the Instruction of the CVO (No. GIWz.400/CSF-2/2011) concerning principles of control tests for CSF in pigs and wild boars. Active surveillance for CSF consists of annual collection and testing of a relevant number of blood samples from pigs and wild boar that were shot in every poviát (district) depending the risk of occurrence of the disease in the district. In domestic pigs, the following sample collection scheme applies [2, 7]:

- From 59 pigs in each district that: 1) borders a country in which CSF has been present during the last 5 years; 2) borders a country with a unknown CSF status; 3) had positive CSF results in the last 6 years; 3) has a population density of at least 200 animals per square kilometer; and, 4) has international airports or marine ports.
- From 29 pigs in each district that: 1) borders a country in which CSF has been present during the last 5 years; 2) borders a country with an unknown CSF status; and, 3) borders a district that has international airports or marine ports.
- From 15 pigs in each of the remaining districts.

For CSF in wild boar, samples of blood or blood clots, tonsils, or lymph nodes are collected in accordance with the following scheme [2, 7]:

- 10 % of wild boar shot within a district that: 1) had positive CSF serological test results in wild boar within the last 5 years; 2) had positive CSF serological test results in domestic pigs within the last 6 years; 3) has a wild boar population density of at least 2 animals per square kilometer; 4) has a domestic pigs population density of at least 200 animals per square kilometer; and, 5) borders a country in which CSF has been present during the last 5 years or in which the status of CSF is unknown; has international airports or marine ports.
- 5 % of wild boar shot within a district in which the wild boar population density does not exceed 2 animals per square kilometer.

The number of active surveillance samples collected and tested for CSF between 2015 to 2017 and from January to April of 2019 is presented in Table 4; all blood and tissue samples tested negative for CSF.

Table 4: Active surveillance for CSF 2015 –2019 (January to April of 2019) *

Type	2015	2016	2017	2019
No. of blood samples from domestic swine	8,409 (from 6,368 herds)	9,149 (from 6,793 herds)	8,573 (from 6,719 herds)	4,082 (from 3,221 herds)
No. of blood samples from wild boar	14,814	17,207	18,126	8,038
No. of tissue samples from wild boar	2,051	2,160	2,649	**

* Data for 2018 were not provided.

** Data not provided.

In 2018, the VI has implemented a special program for early detection of CSF. The program delimited 2 zones depending on CSF occurrence risk as follows [11]:

- Zone 1 – classified as an increased risk of occurrence of CSF which includes eastern voivodships bordering third countries in which the status of CSF is unknown: Lubelskie, Mazowieckie, Podkarpackie, Podlaskie and Warmińsko-mazurskie.

- Zone 2 – classified as low risk of occurrence of CSF covering the remaining voivodships in Poland.

Following notification of suspect cases to the DVO in both zones, he/she must conduct a clinical examination of health condition of all pigs in the herd and takes samples for CSF testing from pigs: 1) found dead and in which CSF may not be ruled out; 2) showing clinical signs of CSF or other atypical signs where CSF cannot be excluded such fever with increased morbidity and mortality, fever and signs hemorrhagic syndrome, or fever and neurological signs. Additionally, in Zone 1, the DVO must sample every wild boar found dead, including those killed in a traffic collision and carcasses found with significant autolysis, or sick wild boar that were shot. In Zone 2, every wild boar found dead is sampled with exception of wild boar killed in traffic accidents or autolyzed carcasses. In the first half of 2019, a total of 3,506 wild boars and 62 pigs were tested by PCR; all samples tested negative for CSF.

6.2.2 Active surveillance for ASF

All ASF suspect cases and dead pigs are sampled and tested for ASF by the Enzyme Linked Immunosorbent Assay (ELISA) and real-time polymerase chain reaction (PCR) tests. Domestic swine moving out ASF-restricted areas must be tested depending on the purpose of movement (slaughter or another farm) and the destination (e.g. within restricted areas, free areas, and intra-Community). Specific testing requirements for movement of domestic swine are discussed below in section 8.5 on movement controls. In areas of Poland located outside of restricted areas, samples are collected and tested from domestic swine following the notification of a suspect ASF case and from every wild boar found dead including from carcasses undergoing autolysis, wild boars killed in traffic accidents, and hunted wild boar showing clinical signs of ASF prior to being shot [2, 7, 11].

All wild boar that are hunted, found dead, or killed in road accidents in ASF-restricted areas are sampled and tested. In addition, every wild boar found dead including carcasses undergoing significant autolysis; killed in traffic accidents; hunted within a protection zone enforced because of ASF and taken to a point of collection, a game handling establishment, or other plant supervised by the VI must be tested. Table 5 provides data on the number of samples collected from domestic swine and wild boar from 2014 through August 2019. The numbers per year of ASF cases and outbreaks in domestic swine since the start of the epidemic up to November 21, 2019 were listed earlier in Table 3 [2, 11].

Table 5: Surveillance testing numbers from 2014 through August 2019

Year	2014	2015	2016	2017	2018	2019	Total
Wild boar	15,881	13,356	14,965	24,698	43,911	43,795	169,669
Domestic swine	23,629	15,092	85,580	179,139	537,301	403,241	1,246,106

During a visit to the DVI in Opole Lubelskie, the site visit team discussed wild boar surveillance conducted in the district. All 7 municipalities of this district are listed as Part II areas. The DVO stated that all dead and hunted wild boar are tested for ASF. In 2019, a total of 297 wild boar were shot and 16 wild boars were found dead; only 1 wild boar killed in a road accident was found positive on August 7th of 2019. Only 5 farms were sampled for moving pigs in the district – there is a total of 179 herds with 3031 pigs. The team reviewed notification and movement records for 2018 and 2019 and confirmed the information [7].

6.3 Laboratory Support

Laboratories are responsible for veterinary diagnostics and actively participate in ensuring appropriate level of protection for animal and public health. The national reference laboratory (NRL) in Poland is the National Veterinary Research Institute in Puławy which provides veterinary diagnostic services and microbiological testing of food for human consumption and animal feed. All laboratories performing official tests in Poland are accredited by the Polish Centre of Accreditation in accordance with the requirements of ISO 17025 and must have a quality management system. The accreditation cycle lasts 4 years. As part of the laboratory quality management system, quality policies, procedures, programs and instructions that ensure the quality of laboratory tests performed and the results obtained must be implemented. The system must be documented in a laboratory quality book which includes the division of competences and responsibilities of the technical management and the quality manager. During the period of validity of the accreditation certificate, the accreditation center monitors the activity of the laboratories in order to ensure that constant monitoring of the accreditation criteria [2].

Diagnostic and confirmatory testing for ASF and CSF is performed by the Swine Diseases Institute PIWet-PIB Puławy which is part of the NRL. Laboratories authorized to conduct ASF testing are the NRL, the Foot-and-Mouth Disease Institute PIWet-PIB Zduńska Wola, the ZHW Krosno laboratory, the ZHW Gdańsk laboratory, the ZHW Warsaw Regional Branch in Ostrołęka, and the ZHW Warsaw Regional Branch in Siedlce. All laboratories use the real-time PCR (molecular testing) and ELISA (serological test) for ASF. Confirmatory testing for ASF is carried out using the IPT and immunoblot tests. The average time to issue ASF results from the moment of accepting the sample is 2 working days at the NRL and 1 day for the other laboratories. The average time from sampling to delivery to the laboratory by the DVI is 2 working days. On average, confirmatory testing takes up to 2 working days from the receipt of the sample and the average time from sampling, delivery to the laboratory, and transfer to the confirmatory test can take up to 5 business days [2, 7].

Ten laboratories are authorized to perform diagnostic tests for CSF: ZHW in Bydgoszcz; ZHW in Krosno; ZHW in Gdańsk; ZHW in Kielce; ZHW in Olsztyn; ZHW in Poznań; ZHW in Szczecin; ZHW in Wrocław (Serology Laboratory in Legnica); ZHW in Gorzów (Laboratory of Serological Research in Zielona Góra); and, the Laboratory of Serological Research PIWet-PIB in Puławy. The ELISA test is used as a screening test. Confirmatory testing is conducted at the NRL which is also an OIE reference laboratory for CSF. In case of positive ELISA tests, the virus neutralization test is used to detect the presence of CSF virus neutralizing antibodies in serum/blood samples. In case of clinical symptoms or suspicion of CSF, samples are sent directly to the NRL for testing via real-time RT-PCR. The immunoperoxidase test (IPT) and the virus isolation tests are used as confirmatory tests of a positive real-time PCR. The average for obtaining confirmatory test results is about 3 to 4 days. Samples from suspect cases are submitted for urgent testing using the real-time RT-PCR test and results are obtained within 24 hours of sample delivery to NRL [2].

The State Veterinary Institute of the State Research Institute in Puławy, foot-and-mouth disease laboratory of Institute in Zduńska Wola is the only laboratory authorized to conduct diagnostic and confirmatory testing for FMD and SVD. Tests used for detection of FMD virus antigen include ELISA (indirect sandwich ELISA), and tests used for detecting antibodies include liquid-phase blocking ELISA, solid-phase competitive ELISA, commercially available diagnostic kits (PrioCHECK FMDV type O and type A for detection of antibodies to non-structural proteins (NSP) of the FMD virus. Samples that test “doubtful” on ELISA are retested with serum neutralization (SN) the result of which is considered decisive. The laboratory routinely uses real-time PCR for detecting genetic material and IB-RS-2 and BHK-21 cell

lines for virus isolation. Tests used for SVD include indirect sandwich ELISA, ELISA using MAb 5B7 monoclonal antibodies (MAC-ELISA), and PrioCHECK SVDV diagnostic kit. Doubtful results in the ELISA test are verified using SN and the real-time PCR test is used for detecting genetic material of the SVD virus. The average time between sampling and reporting of test results for FMD and SVD is 24 hours [2].

7 Disease response

All legislations in Poland regarding response and control of ASF in domestic pigs and wild boar are in line with relevant EC legislations. Certain EC regulations are directly applicable to all Member States while other ones are transposed into Polish legislations. Currently, Poland has formal contingency plans for FMD, SVD, ASF, and CSF all of which provide detailed procedures to combat the disease. Each contingency plan must include [12-15]:

- A list of legal acts related to the eradication of animal infectious diseases;
- A description of an animal infectious disease;
- The method and sources of financing for the eradication of the disease;
- Definition of the structure and organization of emergency teams (DVOs, RVOs and the CVO);
- Definition of the eradication and organizational units and other entities responsible for implementation of these tasks;
- A training plan for VI staff and other units and entities; and,
- A description of the method and scope of the development and provision of information.

As mentioned previously, disease reporting is required in accordance with EU and Polish laws. All animals demonstrating clinical signs suggestive of foreign animal diseases must be immediately reported to the DVO who in turn passes the information up VI's management lines.

Suspect cases are investigated immediately by the DVO in order to detect or rule out an animal infectious disease subject to eradication, in particular the DVO: orders the owner to draw up and update an inventory of all animals or carcasses; determines the quantity of products, in particular milk, meat, feed, natural fertilizers present in the place where the disease has occurred; carries out clinical examination of the animals and an epizootic investigation; and takes samples and sent it to the appropriate laboratory.

In addition, the DVO prohibits any movement of animals, feed, and means of transport into or out of a holding until results of laboratory results are received and the presence of the disease is either confirmed or ruled out. The owner must comply with his/her obligations as follows [2, 7, 12-15]:

In case of suspicion of the infectious disease of animals, the owner of an animal shall:

- Immediately notify VI or the closest subject delivering services in the scope of veterinary or administrator of the group of villages (village, mayor, or city president);
- Leave animals in their place of residence and from introducing other animals;
- Prevent any third persons from access to rooms or places where suspect animals or carcasses are kept;
- Refrain from moving, removing or sale of products, in particular meat, carcasses, animal feed, water, bedding materials, natural fertilizers, and other objects located in proximity to suspect cases or pens;
- Make all animals and carcasses available for sampling, testing, and inspection performed by VI staff and aid in these procedures; and,

- Provide VI staff and other authorized persons with explanations and information that could be important for the investigation, determination of sources of infection and prevention of further spread.

Upon confirmation of ASF, control measures in accordance with Council Directive 2002/60/EC are implemented [16]. A 3-km protection and 7-km surveillance zones (10-km in total) are established and VI conducts inspections and a census of all pig keepers in the two zones. Low risk commodities such as heat-treated products may be traded under certain additional risk mitigations and enhanced surveillance inside and outside the infected region is conducted as mentioned above. Specific response measures applied following confirmation of ASF include [7, 11, 13]:

1. Sufficient number of samples are randomly taken from the pigs to attempt to determine the source of the virus and the time elapsed from the virus entering the holding until it was confirmed. The number of samples for virological testing must take into account the range of tests that may be performed, the sensitivity of the laboratory tests that will be used, and the epidemiological situation.
2. An epidemiological investigation is launched to identify the possible sources and means of introduction of the virus, the time lapse between introduction till confirmation, and the potential for spread beyond the infected holding, and movement of persons, vehicles, pigs, carcasses, semen, meat or any material which could have carried the virus to or from the holdings.
3. Meat of pigs slaughtered during the period between the probable introduction of the ASF into the holding and start of official measures must be traced and destroyed. Similarly, semen, ova or embryos collected from the holding during the same period are traced and destroyed.
4. All swine in the infected holding are depopulated immediately under supervision of VI staff. Depopulation must be carried out in such a way as to avoid the risk of spreading the virus during transport and putting the animals down. Captive bolt pistols are most frequently used to stun animals. Medicinal injections (e.g. barbiturates) may be used afterwards. In case of emergency, rifles may be used to shoot the animals with VI permission and by assigned persons to ensure safety. Electric tongs and CO₂ may be also used. VI provides special depopulation and work safety to individuals performing these activities.
5. Carcass disposal must be carried out in such a way as to prevent spread of the virus, considering risks of groundwater contamination (burial), spread of fires (burning on location), etc. If possible, carcasses may be transported to specific disposal sites using designated means of transportation, taking into account the distances between the location of the disease outbreak and the disposal methods. Transport is allowed only after an assessment of the risk of transporting materials contaminated with the virus from the location of the disease outbreak.
6. Carcasses are transported in covered, sealed trucks which are disinfected prior to or after loading and immediately following the transport. VI must collect samples to determine the efficacy of disinfection. Trucks are allowed to leave the holding provided a thorough inspection is carried out and leakage is prevented. All disposal trucks entering or leaving the infected farm are registered in a logbook of the holding.
7. Person(s) in charge of disposal operations are assigned by the district VI office and is/are on call a constant basis to control all disposal activities, control and registration of incoming and outgoing,

and disinfection operations. A cleansing and disinfection plan must be approved by the district VI office.

8. Once depopulation is complete, all materials and waste likely to be contaminated such as feeding stuffs, bedding, manure and slurry or collected during depopulation must be processed (such as by heat treatment) to ensure the destruction of the ASF virus. All buildings used for housing the pigs, vehicles used for transport of carcasses, and equipment, likely to be contaminated are cleaned and disinfected.
9. In cases where an outbreak has been confirmed in a laboratory, a zoo, a wild life park or a fenced area where pigs are kept for scientific purposes or purposes related to conservation of species or conservation of rare breeds, the VI may decide to derogate from certain measures. VI shall immediately notify the EU Commission of such decision.

Measures carried in protection and surveillance zones include [7, 11]:

- Conducting a census of all swine holdings within the zone and informing all owners of their obligation to notify the DVO of all sick or dead pigs.
- Prohibiting movement of live pigs, swine genetics, and swine products and by-products into/out of the infected holding.
- In every district or part of a district that fall within an ASF protection area, an OV must collect samples for ASF testing from pigs: 1) found dead where an infection with the ASF virus may not be ruled out, showing atypical ASF clinical signs, or having fever and showing signs of ASF or fever and signs of haemorrhagic syndrome; and, 2) pigs slaughtered for own consumption on a farm or when ASF is suspected.
- Following a period of 40 days in the protection zone and 30 days in surveillance zone starting from the date that cleaning and disinfection was completed (movement restriction time period may be decreased to 30 days and 21 days respectively depending on the nature of the epizootic and laboratory test results), the DVO may authorize direct movement of pigs from holdings in trucks sealed by a VI official to:
 - a slaughterhouse designated by the competent authority, preferably within the protection or surveillance zone for the purpose of immediate slaughter,
 - a processing plant or a suitable place where the pigs are immediately killed and their carcasses are processed under official supervision (fresh meat from these pigs must either be processed or marked with a special oval mark), and
 - in exceptional circumstances, the DVO may allow movement of pigs to other premises located within the protection zone.

Several emergency response simulations and field exercises are conducted. In 2015, 2 FMD exercises and 5 ASF exercises were conducted at the district and regional levels. In 2016, 2 FMD exercises, 6 ASF exercises, and 1 ASF/CSF exercise were conducted. In 2017, 15 ASF exercises performed on regional/district levels [2].

8 ASF control

In 2014, the EU adopted prevention and control strategies to be applied when ASF is suspected or confirmed either in holdings or in wild boars which are designed to prevent the spread of ASF and to eradicate it from affected regions (Council Directive 2002/60/EC). Poland follows these strategies which

include: criteria for geographically defining ASF regions; enhanced biosecurity measures; active and passive surveillance; movement controls; wild boar management; education and outreach campaigns; and import and export controls [16].

8.1 Regionalization

Regionalization is applied in Poland as set up based on Commission Decision 2014/709/EU to ensure the best possible disease control strategies to minimize the negative impact of ASF outbreaks on the EU single market (intra-EU trade) and on exports to third countries without lowering the level of safety of the commodities that are exported [8]. The criteria for establishing ASF regions are harmonized across the EU and tailored to the Member States, considering local factors such as domestic swine and wild boar demographics, and are amended as the epidemiologic situation changes. Commission Decision 2014/709/EU specify clearly defined roles for the EC and Member States, with emphasis on urgent adoption of emergency response measures and rapid flow of information [8, 17].

Restricted areas are implemented in consultation with the EC and they are listed by groups (Parts I – IV) based on the epidemiological situation of ASF in the region and the defined level of risk in the Annex to as follows [8]:

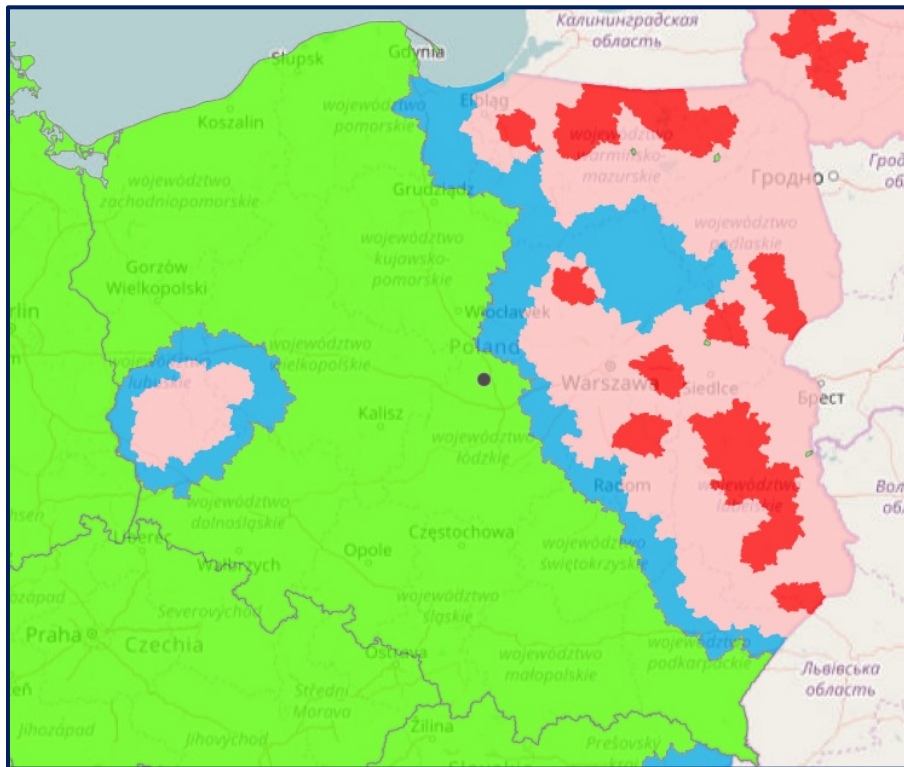
- (1) Part I – no disease and higher risk due to proximity with ASF infection;
- (2) Part II – presence of ASF only in wild boar;
- (3) Part III – presence of ASF in domestic pigs and wild boar; and,
- (4) Part IV – long standing persistence of ASF in pigs and wild boar.

However, the classification of Member States' territories or parts thereof as Parts I, II, III and IV according to the swine population concerned may need to be adapted by taking into account additional risk factors such as the local epidemiological situation and its evolution, especially in newly infected areas where less information is available about the disease epidemiology under various ecological systems. Larger areas can be restricted based on administrative and/or geographical borders. Decisions are published in the Official Journal of the European Union in 23 languages [8].

VI establishes restricted areas based on epidemiological situation (area is appropriate for surveillance, eradication, wildlife control, movement control). Other practical factors such as the size of the area; the lay of land and presence of forests and natural or artificial boundaries (roads, mountains, rivers, lakes); existence of administration boundaries; and trade patterns (location of breeding holdings that supply a large number of farmers; and location of slaughterhouses and/or presence of meat processing plants) [2, 11].

Poland does not follow the EU's color coding for ASF-restricted zone since their zone designation preceded EU legislation. Instead, Poland has maintained the original color scheme of Yellow for Part I, Red for Part II and Blue for Part III color to avoid confusing farmers [2, 7, 11]. As shown in Figure 6, as of January 13, 2020, the eastern part of Poland has been regionalized as Part II (pink) with presence of two Part III areas (red) in the north and south of that part and an adjacent Part I are (blue). Most of the western part of Poland is free with the exception of an area regionalized as Part II and Part I bordering Germany (Figure 5) [18]. Poland has not established any Part IV zones. An interactive map of ASF-restricted areas of the EU is available on the EC's website at this [link](#).

Figure 6: ASF-restricted regions in Poland



The whole ASF regionalization system will only work if the overall EU management of animal diseases (identification and traceability, movement certification and checks, disease reporting, compensation mechanism, etc.) are implemented. Our evaluation indicates that Poland's processes meet these standards. The cornerstone of the system is the origin of the pigs and the set of measures applied in the holdings of origin, built around whether adequate risk mitigating measures can be implemented while at the same time allowing derogations to trade/movement prohibitions specific to each ASF-restricted part [2].

8.2 Exclusion of grey zones

The VI can exclude small zones (termed "grey" zones) within ASF-restricted areas from being listed in the Annex to Commission Implementing Decision 2014/709/EU (i.e. become free areas). VI officials stated that the extent of grey zones is not an artificially created structure but results from the possibility of such a separation based on national law provisions that divides Poland into communes (municipalities), poviats (districts), and voivodships (regions). Communes are subdivided into municipalities, urban-rural communes and rural communes. The exclusion of grey zones applies only to municipalities which have the status of a city and the excluded area must fall within the city's administrative boundaries. The VI assesses the possibility of excluding grey zones based on lack of presence of pig holdings in the area and no ASF detections in wild boar. At the time of the site visit, the VI had 2 grey zones, namely, the municipalities of Elk and Sokołów Podlaski, which were accepted by the EC and other Member States.

The VI stated that establishing a grey zone requires a risk analysis to be conducted taking into account possible changes regarding the disease situation and swine movements. If the situation prevents further

maintenance of a grey zone because of failure to meet the above criteria, the VI will inform the EC and the other Member States. For example, the VI instituted as grey zone covering the municipality of Łuków where an establishment approved for export to the U.S. market is located. Later, the VI excluded the municipality due to presence of several holdings keeping pigs in the municipality and the unfavorable development of the epizootic situation in wild boar near the town of Łuków. The VI submitted a proposal to the EC to add this municipality to the list of Part II areas in the Annex to Commission Implementing Decision 2014/709/EU [7, 10, 11, 19].

The site visit team had lengthy discussions with VI officials regarding establishing these zones and also visited all three slaughter and processing establishments located there. It appears that determination of exclusion of such zones was primarily based on “practical” factors such as the presence of a large slaughter/processing facility being supplied by many large commercial farms in the area. In addition, the team requested copies of the proposals sent to the EC, VI officials could only produce 1 of the 3 proposals; VI officials stated that the second proposal was communicated to the EC via back and forth email messages and the third one was discussed over the phone. The team concluded that there was no established procedure for this process and recommended that the process be more streamlined and well documented. We communicated our concern to the EU. However, there is no risk issue, as APHIS does not recognize grey or micro zones. Additionally, Poland reacted appropriately when there were changes to the areas. The fact that VI reacted immediately when the circumstances changed in Łuków provides assurance that VI carefully monitors the situation in grey zones [7].

8.3 Biosecurity

VI has enforced strict biosecurity requirements on pig holdings since 2014. All swine farms regardless of size and number of animals present must comply with minimum biosecurity requirements established in MARD Regulation of 6 May 2015 on measures associated with the occurrence of ASF. The main objectives of the biosecurity requirements are to mitigate risk of introduction of pathogens of infectious diseases related to: introduction of new animals; farm staff and visitors; transport vehicles; sourcing of feed and water; use of farm equipment; contact with wild boars; dead pigs, byproducts, and waste; poor disinfection; and, pests such as rodents, insects, etc. Minimum biosecurity requirements for farms include [2, 7, 11]:

1. Protection of swine housings to prevent access of wild animals and other domestic animals;
2. Swine must be kept in separate buildings with separate entrances and no direct access to other premises where other ungulates are kept;
3. Feed should be protected against access of wild animals;
4. A register of all vehicles that arrive to the holding and a register of persons entering the swine buildings must be kept;
5. A census of pigs in the holding, divided into piglets, weaners, fatteners, sows, gilts, boars, young boars must be kept and updated;
6. Swine buildings can only be accessed by persons authorized to perform activities using protective clothing and protective footwear used only for the purposes of handling pigs in the holding;
7. Practicing hygienic measures necessary to reduce the risk of spread of ASF, including disinfection of hands and footwear;
8. Regular cleaning and disinfection of equipment used for handling the pigs.
9. The holding where pigs are kept in an open system should be secured with double fencing, at least 1.5 meters in height (open swine production is not popular in Poland);

10. Place disinfection mats in front of entries to premises where pigs are kept as well at the exits. The width of the mats should not be smaller than the width of entrance or exit and the length is not less than 1 meter;
11. In Parts I, II, and III areas disinfection mats should be also at the entrances/exits of the farm and no unauthorized entry to the buildings where pigs are kept is allowed. Farms must also use a rodent monitoring program; and,
12. The following prohibitions also apply:
 - Bringing into the pig holding any dead wild boar, carcasses of wild boar, parts of carcasses of wild boar and animal by-products, and any materials or items which may be contaminated with the ASF virus.
 - Carrying out any activities related to the handling of pigs by persons who have participated in hunting game or trapping within 72 hours.
 - Feeding pigs with grain and green grass originating from Part II and III areas unless that feed has been treated to destroy the ASF virus or stored in a place without access of wild boar for at least 30 days.
 - Using straw originated from the areas listed in Part II and Part III of the Annex to CID 2014/709 unless this straw has been treated to destroy ASFV or stored without access of wild boars for at least 90 days.

The VI conducts farm inspections to monitor compliance with biosecurity requirements using a standard checklist/form. From 2014 to 2017, biosecurity inspections of swine farms were carried out in ASF-restricted areas only. Since April 2018, the inspections are being carried out in all of Poland. When non-compliances are detected, the DVO issues a decision to remedy the non-compliances within a certain time frame. In addition, the DVO may immediately order killing or slaughter of all pigs kept on the farm and ban keeping pigs when the owner is found to have not remedied previous non-compliances [2, 7, 11].

In 2018, a total of 38,475 farms were inspected in Parts I, II and III by DVIs to confirm compliance with biosecurity requirements. Owners were ordered to remedy non-compliance in 4,561 farms and 4,148 farms were suspended. From January through June 2019, a total 8,533 farms were inspected – 748 farms had corrective actions required and 590 farms were suspended. A similar number of inspections were also conducted in the free areas (37,118 farms) and 8,147 farms were found non-compliant with 217 farm suspensions. From January through June 2019, 11,273 farms were inspected in the free area with 961 farms found to be non-compliant and 87 farms suspended [2, 11].

The site visit team reviewed biosecurity inspection records during visits to 2 large farms and 1 small farm and confirmed that inspections are carried out at least once per year. The team observed and confirmed that the farms complied with the requirements. At the 2 large farms, the biosecurity measures used included [7]:

- Farms were fenced and access by vehicle and people was limited; a registry of entry/exit of vehicles and visitor is kept.
- Truck disinfection is carried out before entry to the farm and use of disinfection mats.
- Single entry point for employees, changing area, dedicated clothing which stays on farm. Employees who leave here cannot return on the same day.

- Employees must wait 72 hours after hunting before coming to farm – one farm requires that their employees do not hunt. Employees cannot bring in game, and more recently, farm also restricted employees from bringing in pig meats.
- No hay/straw bedding used, and manure is disposed of in a central installation outside the farm.
- Disinfecting agents must be approved and applied appropriate according to use manuals.
- Monitoring for disease is done by all employees who were familiar with diseases of concern. Disease signs are reported directly to the farm manager who reports to the DVO if an infectious disease is suspected.
- All dead pigs must be reported to DVO. Dead animals are transported to a designated location with limited access in closed container and the container is placed on the road outside of the farm for pick up by the disposal company. Empty containers are taken to separate location for cleaning and disinfection.
- Transport requirements include registering truck routes (each driver has log of routes) and cleaning and disinfection of trucks.
- Regular daily checks of rodent control at end of an individual's shift.
- Records are maintained for 5 years and registration books are kept for 3 years.

During the visit to the small farm in gmina Kurów, Lubelskie, the site visit team was requested to sanitize hands and wear shoe covers before they were allowed to enter the premises. The owner follows the biosecurity measures as required by VI such as: use of special clothing, boots, and disinfectant mats at the entry of the pig house and limiting the number of visitors to the household and the pig house. The owner informed the team that an OV visited the farm at least once per year, and sometimes 2-3 times per year. During these visits, the OV checks all biosecurity related items such as disinfectant mats, fencing, doors, locks, etc. The owner confirmed that he does not feed his pigs with food waste because it is risky and prohibited, nor feed them fresh grass or fresh grain. In addition, he slaughters pigs at the farm for personal consumption, and no pigs are sent to the slaughter plant. The team reviewed farm biosecurity inspection and movement records and confirmed the owner's statements [7].

8.4 Carcass disposal

Disposal of fallen domestic swine and wild boar or depopulated pigs due to ASF follows EC Regulations 1069/2009 and 142/2011. These animals are considered as Category 1 material and must be sent to Category 1 rendering plants or to an incineration plant for disposal under stringent conditions. In Poland, there are 11 Category 1 plants located in areas with the largest pig populations, 1 incineration plant and no Category 2 plants; therefore, in most cases, carcasses are only sent to Category 1 rendering plants or the incineration plant [2, 7].

During ASF outbreaks, carcasses must be placed in leak-proof containers that have undergone required cleaning and disinfection and the container is sealed before transporting the carcasses to the plants. Transporting carcasses originating from the outbreak to the place of their disposal must take place via designated routes escorted by police, and only authorized and dedicated trucks are used for such transport (driver cannot exit the truck during loading of dead pigs). Trucks must be accompanied by a transport document issued by the DVO at origin consisting of 3 copies (1 remains at place of origin or hunting association, 1 copy stays with the transport company, and 1 remains with the Category 1 plant). The transport document is returned to the DVO to confirm delivery and crosschecks with other copies at

the plant and at place of origin. The DVO at the destination district must be notified in advance of arrival at the rendering or incineration plant and the truck is met at the plant by an OV [7].

Burial or burning plus burial is also allowed and would be an available option in cases of very rapid disease spread. This option has not been used for ASF disposal to date but has been used for downed/collapsed wild boar. First option for dead wild boar is to render or incinerate the carcass. It can also be buried onsite with use of disinfectant [7].

8.5 Movement controls and derogations

As mentioned previously, when pigs move from one farm to another, each pig must be identified by an eartag with the herd number in one ear. In case the pigs move directly to the slaughterhouse, they can be identified by a tattoo of the herd number in the hind leg. For domestic movement to another farm or to a slaughterhouse in general, an OV or AV must issue a health certificate which accompany the consignments. Domestic swine in free areas must be accompanied by a health certificate issued by an OV or AV when moved to another farm or slaughterhouse within free areas. If restrictions are applied on the farm or area because of ASF, the health certificate can only be issued by an OV [2, 7, 11].

All information regarding movement of pigs must be reported to the CDB within 7 days by both sellers and buyers (double notification). In Part I, II and III areas, all movements must be reported to the CDB within 2 days, also by both sellers and buyers. A standard notification form is used to declare movements of animals. There is no requirement to keep records of transport documents; however, movement of animal must be recorded in the farm register as well as be notified to the CDB. Movement data are recorded in the database at the moment of their first declaration even if the other part of the movement is not transmitted to the database [2, 7, 10, 19].

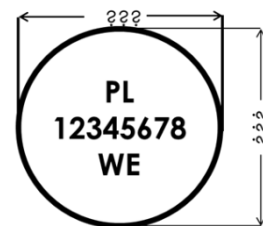
Domestic swine transported outside of an ASF-restricted area (Parts II and III), sent to slaughter in these areas or if the meat from such animals is sent outside the area, or slaughtered for own consumption (Part III) must be sampled by an OV and tested for ASF. Pigs that are transported outside of Poland from a Part I area must also be sampled and tested [10, 19].

8.5.1 Part I

Movements of pigs from holdings located within the borders of a Part I area and to unrestricted areas in the rest of the Poland can occur following clinical examination of pigs by an OV within 24 hours prior to the movement and the issuance of a health certificate by the OV confirming that no pigs show ASF signs [2, 7, 10, 11, 19].

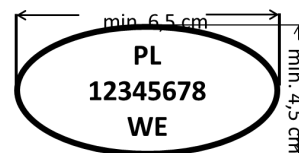
8.5.2 Part II

Movement of pigs outside of areas listed in Part II is prohibited. However, pigs may move directly to a slaughterhouse within the area under a slaughter permit issued by the DVO. A clinical examination must be conducted by an OV within 24 hours prior to the movement who issues health certificate (valid for 48 hours) confirming that no pigs show ASF signs. Fresh pork, raw meat preparations, mechanically separated meat, minced meat and meat product are marked with a round health mark and distribution is limited to Poland only [2, 7, 10, 19].



Derogations:

1. Movements of pigs from holdings within the area directly to another holding or the slaughterhouse in the same area can occur only when authorized by the DVO, clinical examination of pigs by an OV within 24 hours before the movement, and issuance of a health certificate by the OV confirming that no pigs show ASF clinical signs.
2. Movement of pigs from holdings in a Part II area to the rest of Poland may occur under the following conditions:
 - a) The pigs have been uninterruptedly resident on the holding for a period of at least 30 days prior to the date of the dispatch or since birth and no live pigs have been introduced into that holding from Part II, III and IV areas during a period of at least 30 days prior to the date of the dispatch;
 - b) Laboratory testing for the presence of ASF virus genetic material conducted – 7 days prior to the date of the dispatch with negative ASF results, or, the pigs come from a holding which has been inspected at least twice a year with an interval of at least 4 months between inspections by an OV including clinical examination, sampling, confirmation that the holdings implements biosecurity requirements, and first 2 dead pigs over 60 days old per week per production unit are tested for ASF; and,
 - c) Clinical examination by an OV within the 24-hour prior to movement with issuance of a health certificate. In this case, fresh pork, raw meat preparations, mechanically separated meat, minced meat and meat products are marked with an oval health mark (shown). Distribution of such marked products to other EU Member States and certain third countries is allowed.
3. Fresh pork, raw meat preparations, mechanically separated meat, minced meat and meat product that would otherwise be marked with a round health mark and distributed only in Poland, can be processed with one of the following treatments found as effective to eliminate the ASFV at a processing plant designated by the DVO:
 - a) Heat treatment in a hermetically sealed container with an F0 value of 3.00 or more in order for the coldest point in the product to be heated sufficiently to achieve the same killing effect as 121°C (250 °F) in 3 minutes with instantaneous heating and chilling;
 - b) Heat treatment at a minimum temperature of 80 °C which must be reached throughout the meat;
 - c) Heat treatment in a hermetically sealed container to at least 60 °C for a minimum of 4 hours, during which time the core temperature must be at least 70 °C for 30 minutes;
 - d) Natural fermentation and maturation of not less than nine months for boneless meat, resulting in the following characteristics: Aw value of not more than 0.93 or a pH value of not more than 6.0; and,
 - e) Hams and loins: treatment involving natural fermentation and maturation during at least 190 days for hams and 140 days for loins.



Such meat products are found to be ASF safe and are marked with an oval veterinary mark in accordance with article 13 of Commission Implementing Decision 2014/709/EU. The meat products must be accompanied by the appropriate intra-Union trade health certificate as set out in the Annex to Regulation (EC) No 599/2004 and of which Part II shall be completed by adding the following: 'Products in accordance with Commission Implementing Decision 2014/709/EU of 9 October 2014 concerning animal health control measures relating to African swine fever in certain Member States'.

8.5.3 Part III

Movement of pigs out of Part III areas is prohibited. However, pigs may move directly to slaughter at a designated slaughterhouse within the area under a slaughter permit issued by a DVO. A clinical examination must be conducted by an OV within 24 hours prior to the movement who issues health certificate (valid for 48 hours) confirming that no pigs show ASF signs. Fresh pork, raw meat preparations, mechanically separated meat, minced meat and meat product are marked with a pentagonal health mark signifying that distribution limited to the area listed in Part III.



Derogations:

1. Movement from a holding located in Part III area to a place located in Part II area:
 - a) The pigs originate from a holding which meets all biosecurity requirements and all holdings in the 3-km radius area comply with these requirements;
 - b) The pigs must have resided in the holding at least 30 days prior to movement or since birth;
 - c) Laboratory testing have been carried out 7 days prior to movement with negative ASF results;
 - d) Clinical examination of pigs by an OV within than 24 hours prior to the movement (valid for 48 hours) confirming that no pigs show ASF signs;
 - e) Issuance of a health certificate by the OV confirming that the pigs do not show ASF signs;
 - f) The DVO of the holding of dispatch must inform the DVO of the holding of destination of the intention to send the pigs who must confirm arrival of the pigs;
 - g) Exchange of information about the movement (number of animals, health certificates, transport route, etc.) between the DVOs in areas of origin and destination; and,
 - h) Transport through areas outside of Part III areas must be carried out along predefined transport routes;
 - i) Trucks used for transporting the pigs must be cleaned and disinfected as soon as possible after unloading.
 - j) Fresh pork, raw meat preparations, mechanically separated meat, minced meat and meat product are marked with a round health mark and distribution is limited to Poland only;
2. ASF movement restrictions are particularly stringent for Part III restricted areas which may lead to logistic and animal welfare problems in case there are no slaughterhouses available in the respective area or there are limitations on slaughtering capacity. SFVS considers that movement of live pigs for immediate slaughter poses less risk than other types of movements of live pigs provided that risk mitigation measures are in place. When such circumstances occur, exceptional derogations may be granted for the dispatch of live pigs from holdings in Part III areas only for immediate slaughter at a slaughterhouse specifically designated by the CVO for that purpose and the CVO must inform the EC about the designated slaughterhouse. The following requirements must be met:
 - a) Pigs must have resided in the holding at least 30 days prior to movement or since birth, and no pigs from Part II or Part III area have been introduced for at least 30 days prior to movement;
 - b) Laboratory testing have been carried out 7 days prior to movement with negative ASF results;
 - c) Clinical examination of pigs by an OV within than 24 hours before the movement; and,
 - d) Issuance of health certificate by the OV confirming that the pigs do not show ASF signs.
 - e) Transport requirements:
 - (i) Pigs are transported directly, without stops or unloading to the designated slaughterhouse on a designated and sealed means of transport;

- (ii) If the pigs are transported outside the surveillance zone – only by designated transport routes;
 - (iii) Vehicles must be cleaned and disinfected immediately after unloading; and,
 - f) The DVO responsible for the location of the slaughterhouse must be informed of the planned date of arrival of pigs and he/she must send confirmation of arrival at the slaughterhouse to the DVO at the place of departure.
 - g) The pigs are slaughtered separately from other pigs and are slaughtered on a specific day in which only these pigs from Part III areas are slaughtered or at the end of a slaughter day. In this case, the fresh pork, raw meat preparations, mechanically separated meat, minced meat and meat product are marked with a round health mark which limits distribution to Poland only.
4. Fresh pork, raw meat preparations, mechanically separated meat, minced meat and meat product that would otherwise be marked with a hexagonal mark and distributed only the same Part III area, can be processed with one of the following treatments found as effective to eliminate the ASFV at a processing plant designated by the DVO:
- f) Heat treatment in a hermetically sealed container with an F0 value of 3.00 or more in order for the coldest point in the product to be heated sufficiently to achieve the same killing effect as 121°C (250 °F) in 3 minutes with instantaneous heating and chilling;
 - g) Heat treatment at a minimum temperature of 80 °C which must be reached throughout the meat;
 - h) Heat treatment in a hermetically sealed container to at least 60 °C for a minimum of 4 hours, during which time the core temperature must be at least 70 °C for 30 minutes;
 - i) Natural fermentation and maturation of not less than nine months for boneless meat, resulting in the following characteristics: Aw value of not more than 0.93 or a pH value of not more than 6.0; and,
 - j) Hams and loins: treatment involving natural fermentation and maturation during at least 190 days for hams and 140 days for loins.

Such meat products are found to be ASF safe and are marked with an oval veterinary mark in accordance with article 13 of Commission Implementing Decision 2014/709/EU. The meat products must be accompanied by the appropriate intra-Union trade health certificate as set out in the Annex to Regulation (EC) No 599/2004 and of which Part II shall be completed by adding the following: ‘Products in accordance with Commission Implementing Decision 2014/709/EU of 9 October 2014 concerning animal health control measures relating to African swine fever in certain Member States’.

Verification of compliance with movement requirements is carried out by OVs. In addition, when moved to the slaughterhouse, the animals and documentation must be checked by an AV stationed at the slaughterhouse [2, 19]. In case of noncompliance, penalties are applied in accordance with the Code of Administrative Measures. The APHIS site visit team confirmed that movement requirements are implemented appropriately at the visited farms [7].

8.6 Lifting of restrictions and repopulation

Certain conditions apply for lifting of restricted areas (Parts I – IV) [2, 7, 8, 16, 19]:

- Part 1: based on full consideration of the risks based on the whole set of epidemiological data in a wider geographical and temporal context.

- Lifting of Part II regionalization and reverting to Part I: no ASF cases in wild boar in the past 12 months. Reduction of the 12 months period might be allowed in specific situations depending on the overall epidemiological situation of ASF of the country and justifications provided by relevant veterinary authority.
- Lifting Part III regionalization and reverting to Part II or Part I:
 - (a) there have been no ASF outbreak in domestic pigs during the past 12 months or,
 - (b) in case of total depopulation of all non-commercial farms with low biosecurity conditions, the period without any outbreaks can be reduced to 3 months or,
 - (c) in case of outbreak (in an area with no ASF outbreaks in domestic pigs for the past 12 months) – 3 months after the disinfection of infected holding (in accordance with Article 10.4 (a) of Directive 2002/60/EC) and provided that measures referred in Article 10.4 (b) (clinical and laboratory examinations) or in Article 10.5 (intensive sampling and testing program of Directive 2002/60/EC are implemented,
 - (d) in the event of limited outbreaks clustered in space and in time (during a period of 30 days from the first outbreak) of ASF in non-commercial pig holdings in a sufficiently large and previously free area – 3 months after the disinfection of last infected holding (in accordance with Article 10.4 (a) of Directive 2002/60/EC) and provided that measures referred in Article 10.4 (b) (clinical and laboratory examinations) or in Article 10.5 (intensive sampling and testing program of Directive 2002/60/EC have been implemented. In addition, an overall epidemiological situation of ASF of the country and justifications provided by relevant veterinary authority should be considered.

Prior to repopulation, owners must fulfill all of the required biosecurity measures. The farmer must send an official repopulation request to the district VI office and an OV is sent to the farm to inspect the farm. If the inspection is satisfactory, VI will give the permission to repopulate.

8.7 Wild boar population management

Poland has established a buffer area around ASF-restricted areas called the Wider Area for Medium Term Actions (WAMTA). Until November 2018, the WAMTA consisted of a 50 km strip along the borders of Poland with Belarus, Ukraine and Kaliningrad; currently, the area was expanded to 100 km from the borders. The main goal of the WAMTA is the programmed reduction of wild boar population density in Poland to a maximum of 0.1 wild boar/km². These measures include [2, 7, 11]:

- Baiting is allowed (non-sustained feeding, limited food only for attracting wild boar for hunting, not to exceed 10 kg/km²/month);
- Prohibition of sustained feeding of wild boar;
- Targeted hunting to target adult and sub-adult females;
- The overall hunting bag should be balanced between male and females (50% each). Priority in reaching the quotas should be given to adult and sub-adult females; and,
- The principle of sampling should be based on enhanced passive surveillance via testing of all found dead and sick wild boar for ASF using RT-PCR. Active patrolling to find carcasses (by trained staff) can be carried out to reinforce surveillance.

Since November 2018, VI has increased the payment for finding dead wild boar to 200 złoty (~50€) in ASF-restricted areas and 100 złoty (~25€) in other areas. The VI has also increased payment for hunting and sanitary shooting of wild boar to 650 złoty (~160€) for adult wild boar female and young female more than

35 kg, and 300 złoty for other wild boar in ASF-restricted areas and the WMATA and sanitary shooting on the whole territory of Poland [10].

Biosecurity requirements for hunters are included in the CVO's guidelines of 18 July 2018. The guidelines allow gutting of hunted wild boar on the hunting grounds located in free areas; the offal is buried in the hunting ground after dousing with a disinfectant. Wild boar hunted in Part II and Part III areas can only be gutted at the carcass storage point (not on the hunting grounds). Viscera should be marked in such way to connect with the carcass. Vehicles used to transport carcasses should be appropriately equipped in order to prevent blood leakage [2, 7].

The APHIS team visited a wild boar processing and cold storage facility belonging to the hunting association in Chojnów (located in a Part II area) and interviewed the manager and toured the facilities. The manager stated that this hunting ground has very few wild boar. There are 2 chillers in the facilities. When carcasses arrive at the hunting association, they are put into a chiller equipped with disinfectant mats and devices for cleaning and disinfection. Each carcass must be uniquely identified by a special mark on the right ankle consisting of a unique number containing code of voivodship and powiat and a given number. Training of hunters is carried out by OV's on a monthly basis. Samples for ASF testing are collected by the hunters, who are well trained in recognizing ASF clinical sign in wild boar, including in dead animals; the kind of samples to take and how to take them; notification processes; and biosecurity and hunting hygiene. The DVI provides sampling equipment (tubes, containers, and freezers) to the hunters. After the hunters collect the samples, the samples are sealed and attached to the carcass in the chiller. The hunter calls the DVO, who receives the samples and seals the chiller until the laboratory results have been reported. After receiving negative test results for every wild boar carcass present in the chiller, carcasses can be used for owner consumption or sold. Meat from wild boar hunted in the Part I area is marked with a round health mark to be distributed only in the local Polish market, while meat obtained from wild boar hunted Part II or III areas is marked with a pentagonal shaped health mark and is distributed only in Part II or III areas. If a positive test result is received even from 1 carcass in the chiller, all carcasses are condemned and are sent for disposal under the DVO's supervision. The DVO also supervises the cleaning and disinfection of the chillers [7].

For disposal, the carcasses are collected by an authorized rendering companies and are considered as Category 1 material (only for incineration/rendering, no burial). The rendering facility used by this district is in another region, so, the DVO must inform his/her counterpart of the destination district. Only 1 company is authorized to collect carcasses for rendering in this region. Transport documents must accompany the load. There is no requirement to seal the transport trucks, and trucks can go to other collection points to collect additional material destined for the rendering company. At the rendering company, an OV from the destination district is assigned to be present when the shipment arrives to check the paperwork. The rendering plant must keep a register of each truck entering its establishment and must record the weight and number of the carcasses. Transport documents accompany truck, renderer confirms truck contents against transport documents [7].

During the visit to DVI offices, the team reviewed transport documents and requested clarification on how the DVO at origin verifies that wild boar carcasses sent to the rendering plant were actually processed. VI officials stated that the Category 1 plant and transport company must first be preapproved prior to being allowed to transport and process carcasses. The DVOs are required to inspect Category 1 rendering and incineration plants twice per year using a checklist to verify maintenance of required standards. During these inspections, the DVO reviews all documents to check if they were properly filled and verifies the

number of carcasses and total weight of the shipment. No discrepancies in number of carcasses or weights in the last 3-5 years were identified at that office. In addition, use of global positioning system (GPS) that produces detailed map of route, stops, travel times, loading and unloading times is required in all transport trucks. GPS logs are also reviewed [7].

8.8 Training and outreach

Veterinarians from central VI offices train official veterinarians in various fields of competence, e.g. animal disease surveillance programs, biosecurity rules, ASF controls, etc. and on any new legislation. These trainings are performed at least once per year. VI conducts frequent and periodic training session to district OVs, owners, hunters, private veterinarians, animal owners, and other industry members. The trainings cover the epidemiological situation of ASF in Poland, trade restrictions required by the EU and third countries, and ASF surveillance and control measures. Training sessions are conducted by the OVs from the regional offices as well as from the district offices and the emergency response department. Training sessions are tailored to the audience, e.g. hunters are trained about the ASF in wild boar and biosecurity rules to be applied during hunting and skinning of animal. Owners are trained on biosecurity rules, recognition of ASF clinical signs and, if they keep pigs for commercial purposes, on movement restrictions and requirements [2, 7].

Outreach campaigns are ongoing and include distribution of pamphlets, brochures, calendars, etc. with ASF information which are distributed via the internet, TV, radio, newspapers and during inspections of farms by OVs official vets deliver special leaflets for farmer [2, 7, 10]. In January 2018, the CVO ordered all district offices to conduct regional periodical (at least once a month) informational sessions concerning ASF using the mass media (e.g. through participation in radio and TV programs, in regional radios, articles in regional newspapers) [2]. The information should include: recognizing ASF signs, the manner of spreading of the disease, the obligation for notifying the suspicions of occurrence of ASF, actions to follow when a dead pig or wild boar, and compensation for pigs slaughtered, killed or found dead as a result of depopulation. In 2018, the number of training course/sessions conducted were [10]:

- | | |
|--|---------------------------------|
| • Training courses for veterinarians – | 80 |
| • Training for farmers/holding owners/hunters/etc. – | 555 |
| • Conferences and meetings – | 363 |
| • Interviews/TV/radio programs – | 128 |
| • Press releases – | 183 |
| • Dissemination of leaflets/brochures, etc. – | 216 (20,523 pieces distributed) |
| • Publications on webpages – | 124 |

9 Import controls

9.1 Imports from third countries

Live animals, meat, meat products, and genetic materials are harmonized commodities under EC legislations, which means that the requirements for importation from third countries are standardized across all Member States. EC certification requirements for import of live animals and animal products from third countries are generally comprehensive with respect to OIE guidelines and must be signed by an OV of the country of origin. The specific certificate used depends on the commodity for export, the exporting country, the disease status in the exporting country, and, in the case of live animals, the purpose

for which they are exported (breeding, production, or direct slaughter) [2, 7, 10, 11]. Commission regulation (EU) No 206/2010 of 12 March 2010 lists third countries from which live animals and their fresh meat may be imported into the EU and for which there is a model veterinary certificate specifying the certification requirements. The OV of the third country must certify and confirms that the animal conditions and tests provided for in the relevant health template have been met. Pertinent EC legislations for model certificates and importation of live swine and their products are listed below in Figure 7 [20].

Figure 7: Additional EC legislations governing imports of animal commodities

Commodity	EC legislation	Description
Live animals	Council Directive 91/496/EEC	Principles governing the organization of veterinary checks on animals entering the EU from third countries
	Council Directive 92/65/EEC	Requirements for trade in and imports into the EU of animals, semen, ova and embryos not subject to health requirements
	Council Directive 2004/68/EC	Rules for the importation into and transit through the EU of certain live ungulate animals
	Council Regulation (EC) 1/2005	Requirements for protection of animals during transport
Genetics	Commission Decision 2011/630/EU	Specifies certification requirements and lists third countries from which bovine semen is allowed
	Council Directive 88/407/EEC	Specifies requirements for approval by the EC of bovine semen collection centers
	Commission Decision 2006/168/EC	Specifies certification requirements for imports of bovine embryos and specifies list of allowed third countries
	Council Directive 90/429/EEC	Specifies requirements for intra-Union trade in and imports of porcine semen and approval of semen collection centers
	Commission Decision 2012/137/EU	Lists third countries allowed to export porcine semen to EU
Products	Commission Decision 2008/636/EC	List of third countries authorized for imports of porcine ova and embryos into the EU
	Council Directive 97/78/EC	Principles governing organization of veterinary checks on products entering the Community from third countries
	Commission Decision 2007/777/EC	Conditions and certification for imports of certain meat products and treated stomachs, bladders and intestines
	Commission Decision 2000/572/EC	Health conditions and certification for imports of minced meat and meat preparations
	Council Directive 2002/99/EC	Rules for production, processing, distribution and introduction of products of animal origin for human consumption
	Commission Decision 2003/779/EC	Requirements for importation of animal casings
	Commission Implementing Regulation 2016/759/EU	Requirements for gelatin, collagen and raw materials for production of gelatin and collagen
Regulation (EC) No 882/2004	Official controls to ensure verification of compliance with feed and food law, animal health and animal welfare rules	
Regulation (EC) No 1069/2009	Specifies health rules as regards animal by-products and derived products not intended for human consumption	

9.2 Control of intra-Community trade

9.2.1 General requirements

Trade in live animals and animal products within the EU is primarily governed by a series of Council Directives that were transposed into Polish legislations. As an EU Member State, Poland is free to engage in intra-Community trade with any other Member State as governed by the transposed Directives. All live animals and animal products, including semen and embryos, must be accompanied by the appropriate certificate as specified in EC legislations. The EC emphasizes traceability as a key component of animal health control. Hence animals must be appropriately identified to ensure that when animals are presented for dispatch to another Member State; they can be subsequently accounted for on arrival at the place of destination [2, 20].

The animal health requirements for intra-Community trade in live swine are laid down in Council Directive 64/432/EC which harmonizes the rules for in pigs to ensure that the same requirements are applied for trade among all Member States thereby ensuring the safe and free circulation of animals in the European Union territory. In addition, there are rules regarding the health status in relation to animal diseases (e.g. CSF, ASF, and SVD). Prior to intra-Union trade, an official veterinarian issues and endorses the health certificate and supervises the loading and unloading of animals for welfare reasons. The shipment is entered into the Trade Control and Expert System (TRACES) and the server informs the point of destination as well as any border crossing points and an OV at the point of destination confirms its arrival [21]. Council Directive 90/425/EEC allows for spot checks to be carried out at the point of origin and the destination to ensure that consignments are in compliance with conditions in the health certificates [20].

Slaughterhouses, cutting plants, cold storage units, milk processing plants, and semen collection centers must be approved by the Member State in which they reside according to criteria equivalent to those for exporting establishments in third countries. The veterinary services of the pertinent Member State and the EC's Food and Veterinary Office conduct periodic audits to monitor compliance with approval criteria and certification requirements [20].

9.2.2 Requirements specific for ASF

Poland as well as other EU Member States prohibit imports of live swine and fresh meat and swine products from third countries affected with ASF. Processed products may be imported if subjected to a treatment that ensures the destruction of the ASF virus. In general, intra-Community trade in live swine, swine genetics, fresh pork and pork products is prohibited from ASF-restricted areas listed in the Annex to Commission Implementing Decision 2014/709/EU (as last amended). However, certain derogations to this prohibition are allowed for shipping live swine, swine genetics, fresh pork and processed products from ASF-restricted areas in an affected Member State under certain conditions. The main derogations for intra-Community trade are [8]:

1. Member States may authorize dispatch of live pigs from a holding located in the areas listed in Part I of the Annex to other Member States provided that those live pigs comply with the following conditions:
 - a) animals have continuously resided on the holding for at least 30 days prior to date of dispatch or since birth and no live pigs were introduced into that holding from restricted areas for at least 30 days prior to date of dispatch;

- b) animals come from a holding which implements bio-security requirements for ASF as established by the competent authority and ensures that at least the first two dead pigs over the age of 60 days in each production unit each week have been subjected to a test for ASF;
 - c) animals have been subjected to test for ASF with negative results within a period of 7 days prior to the date of the movement and clinically by an official veterinarian within the 24-hour period prior to the movement of the live pigs; or,
 - d) animals come from a holding subjected at least twice a year, with an interval of at least 4 months, to inspections by the competent veterinary authority, which:
 - (i) followed the guidelines and procedures for sampling and checking;
 - (ii) included a clinical examination of the pigs in the holding in accordance with the checking and sampling procedures;
 - (iii) checked the effective application of the measures provided for in the second indent and in the fourth to seventh indents of Article 15(2)(b) of Directive 2002/60/EC.
2. Dispatch of pigs from holdings in a Part II area to a Part II or III area in another Member State may occur under the following requirements:
- a) pigs have been uninterruptedly resident on the holding for a period of at least 30 days prior to the date of the dispatch or since birth and no live pigs have been introduced into that holding from Part II, III and IV areas during a period of at least 30 days prior to the date of the dispatch;
 - b) Laboratory testing for the presence of ASF virus genetic material conducted – 7 days prior to the date of the dispatch with negative ASF results; OR,
 - c) Pigs come from a holding which has been inspected at least twice a year with an interval of at least 4 months between inspections by an OV including clinical examination, sampling, confirmation that the holdings implements biosecurity requirements, and first 2 dead pigs over 60 days old per week per production unit are tested for ASF
 - d) the Member State of the place of origin immediately informs the Commission and the other Member States of the animal health guarantees (however, that information from the Member State of origin shall not be required when the places of origin, transit and destination of the pigs are all listed areas in the Annex and are continuous);
 - e) the channeling procedure complies with the following requirements:
 - each vehicle used for the transport of live pigs have been individually registered and sealed by an OV after loading,
 - the transport takes place directly without stopping by a route authorized by a VI official,
 - after unloading the vehicle and any other equipment which have been used in the transport of these pigs, are cleaned and disinfected,
 - f) if the consignment complies with the above conditions, the following wording must be added to the health certificate: “Pigs in compliance with Article 3 of Commission Implementing Decision 2014/709/EU”.
3. Movement of pigs from a holding located in Part III area to a Part II or III area in another Member State may occur under the following requirements:
- a) A slaughter permit has been issued by the DVO;
 - b) A clinical examination must be conducted by an OV within 24 hours prior to the movement who issues health certificate (valid for 48 hours) confirming that no pigs show ASF signs;

- c) The pigs originate from a holding which meets all biosecurity requirements and all holdings in the 3-km radius area comply with these requirements;
 - d) The DVO of the holding of dispatch must inform the DVO of the holding of destination of the intention to send the pigs who must confirm arrival of the pigs; and,
 - e) Transport through areas outside of Part III areas must be carried out along predefined transport routes;
 - f) Trucks used for transporting the pigs must be cleaned and disinfected as soon as possible after unloading.
 - g) the Member State of origin immediately informs the EC and other Member States of the animal health guarantees and the approval by the competent authorities for transit and destination; and,
 - h) if the consignment complies with the above conditions, the following wording must be added to the health certificate: "Pigs in compliance with Article 3a of Commission Implementing Decision 2014/709/EU".
4. A Member State may authorize the dispatch of fresh pig meat and pig meat preparations and pig meat products consisting of, or containing such pig meat from areas listed in Parts II, III or IV of the Annex, to other Member States provided that those pig meat preparations and pig meat products are derived from pigs which have been kept since birth in holdings located outside the areas listed in Parts II, III and IV of the Annex and the fresh pig meat, pig meat preparations and pig meat products are produced, stored and processed in approved establishments.
5. Member States may authorize the dispatch of fresh pig meat and pig meat preparations and pig meat products consisting of, or containing such pig meat, to other Member States from areas listed in Part II of the Annex provided that those pig meat preparations and pig meat products are derived from pigs that:
- a) have been resident for a period of at least 30 days or since birth on the holding and no live pigs have been introduced into that holding from the areas listed in Parts II, III and IV of the Annex during a period of at least 30 days prior to the date of the movement, and,
 - b) have been subjected to laboratory testing for ASF with negative results on samples taken in accordance with the sampling procedures within a period of 15 days prior to the date of the movement and a clinical examination for ASF has been carried out by an official veterinarian on the date of dispatch, or
 - c) the pigs come from a holding:
 - (1) that has been subjected at least twice a year, with an interval of at least 4 months, to inspections by the competent veterinary authority, which:
 - i. followed the guidelines and procedures laid down in Chapter IV of the Annex to Decision 2003/422/EC;
 - ii. included a clinical examination and sampling in which pigs over the age of 60 days have been subjected to the laboratory testing in accordance with the checking and sampling procedures;
 - iii. checked the effective application of the measures provided for in the second indent and in the fourth to seventh indents of Article 15(2)(b) of Directive 2002/60/EC;
 - (2) that implements biosecurity requirements for ASF as established by the competent authority.

6. Member States may authorize the dispatch of derived products obtained from animal by-products from porcine animals from the areas listed in Parts II, III and IV of the Annex to other Member States and third countries provided that: a) the by-products have been subjected to a treatment which ensures that the derived product obtained from porcine animals poses no risks as regards to ASF; and, (b) the consignments of derived products are accompanied by a commercial document issued as referred to in EU regulations.

9.3 Import markets

Poland prohibits imports of animals or animal products from third countries affected with the diseases under evaluation. Poland imports animals and animal products susceptible for the diseases under review from other EU Member States [2, 7, 10, 22]. According to data published by the World's Trade Organization, International Trade Center in 2018, the top 5 Member States from which Poland imported live animals, fresh meat and meat products were [23]:

- Live bovines – Lithuania (top market), followed by Slovakia, Latvia, the Netherlands, and Estonia.
- Live swine – Denmark (top market), Germany, Lithuania, the Netherlands, and Czech Republic.
- Bovine meat, fresh, chilled or frozen – Italy, Romania, United Kingdom, Czech Republic, and Germany.
- Swine meat, fresh, chilled, or frozen – Germany, Belgium, Denmark, Netherlands, and Spain.
- Edible offal (large animals) – United Kingdom, Netherlands, Germany, Ireland, and Lithuania.
- Meat and offal, salted, in brine, etc. – Germany, Italy, Spain, Netherlands, and France.
- Guts, bladders and stomachs of animals, fresh whole and pieces – Germany, China, Ireland, Spain, and Netherlands.

Table 6 lists the number of imported live animals and the total volume in tons of fresh meat, and meat products from 2016 to 2018.

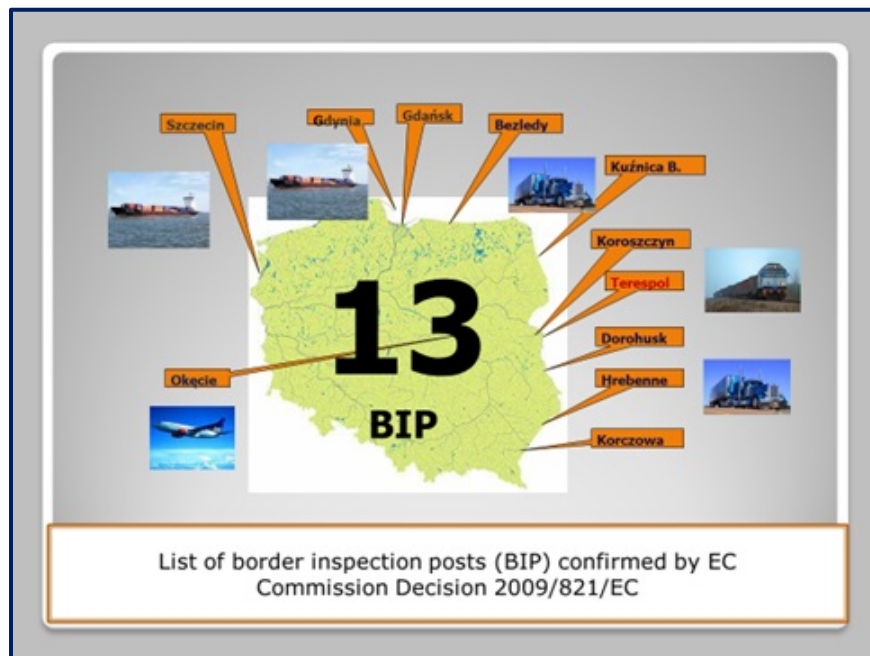
Table 6: Imports of live animals, fresh meat, and meat products, 2016-2018

Name of commodity	2016	2017	2018
Live horses	1,348	805	929
Live cattle	40,762	41,316	43,707
Live swine	214,601	225,926	234,888
Live sheep and goats	12	1	0
Fresh or chilled beef	21,869	17,275	17,052
Frozen beef	5,184	6,178	5,349
Fresh, chilled or Frozen pork	689,327	717,123	763,432
Fresh, chilled or frozen sheep and goat meat	1,175	1,220	1,031
Edible cattle, pig, sheep, goat offal	13,880	13,512	15,528
Other meat and edible offal, fresh and chilled	2,152	1,505	1,491
Pork and poultry fat	6,444	9,713	9,975
Meat and edible offal, salted, brined, dried	2,777	2,926	3,818
Cold meats and products made of meat, offal or blood;	5,568	4,897	4,714
Other meat, offal or blood, processed or preserved	19,918	23,486	24,084

9.4 Border inspection

As mentioned previously, the BVI is responsible for all border inspection activities. As of 2019, Poland has 13 BIPs that are EC approved as shown below in Figure 8. In addition, Poland has 1 feed inspection crossings that are EC approved. There are no BIPs in the southern border with the Czech Republic, Slovakia, and Germany because these are Member State [2, 7, 22].

Figure 8: EC-approved BIPs in Poland



Border inspections almost doubled between 2012 and 2018. All shipments of animals and/or animal products must be imported into the EU through approved BIPs. The BVI has an established procedure for the inspection and control of animals and animal products at BIPs and all inspections and laboratory testing protocols follow EC requirements. In general, live animals and products undergo four stages of controls at the BIP [22]:

1. Prior to physical arrival of the consignment on Community territory the person responsible for the load must at least one working day prior to entry, submit by fax or email all veterinary documents including animal health certificates and the common veterinary entry document (CVED) required by EC legislation to the BIP using TRACES.
2. Upon arrival, the BIP veterinarian checks all documents accompanying the consignment to confirm that the health certificate is correct according to EC requirements and that it has been signed by an official veterinarian of the exporting country;
3. An identity check or visual confirmation of correct ear tags, chips, tattoos, or codes for live animals and visual inspection of the products consignment to ensure that the veterinary certificates matches with the consignment; and,
4. A physical check with a percentage of the shipment singled out for more thorough examination.

Visits to Koroszczyn BIP

Koroszczyn BIP is located 5 km from the border with Belarus. There is a total of 4 BIPs in this region which are manned by 1 BIV team and share the same IT system. The Koroszczyn BIP operates 24 hours/7 days; Hrubieszow BIP operates 12 hours/7 days; Hrebenne operates 12 hours Monday thru Saturday; and Kobylany operates by appointment but otherwise trucks are sent to Koroszczyn. The Koroszczyn BIP is a main travel route into Poland from the east. The total staff for the 4 BIPs consists of 18 veterinarians (17 fulltime), 5 admin, 2 budget, 3 techs totaling 28 personnel. Products going through BIP include food for human consumption (HC); meat and meat products (prior to Russian embargo); products not for human consumption (NHC) such as straw/hay; EU (UEO) – primarily horses; and, feed with no animal origin ingredients. Most common products from Belarus include game trophies, stomach, bladder and casings (unable to ask species). Feed exports are not handled at this BIP. The BVI uses a nationwide electronic web based system called GLWeWeb which was developed in 1993. As of 2018, 48,405 inspections were carried out and entered into the system as in the system. The system also lists all approved establishments by country. Koroszczyn inspections increased from 14,563 in 2012 to 23,419 in 2018 [7, 22].

All trucks must go through inspection – first veterinary then Customs. Trucks pass through X-ray machines for inspection. There is close collaboration between Customs and BVI at this BIP and both agencies share a joint IT system and database. Trucks cannot enter Poland or travel on any EU roads until it is released by BVI and Customs. Meat and dairy products are confiscated at this BIP and they are sent for Category 1 rendering. Prohibitions on meat and dairy entry started before ASF but heightened security has been in place since ASF outbreak first started in 2014. Other activities include conducting welfare checks, disinfection control of export trucks re-entering Poland. Small ruminants and swine are not allowed in from Belarus.

The team received an overview of the import procedures which follows the same outline discussed above. All documents are reviewed for all shipments and identity control is also conducted on all shipments including shipment of non-harmonized goods. When a truck arrives at the facility, the driver receives a magnetic card that allows the truck to enter the facility. Shipments that require veterinary inspection are logged into the electronic system. A document check is carried out by staff in the document control office and the truck is directed to a certain area for identity inspection. The BVI official Document control goes with Customs to break the seal on the truck to conduct the identity check. After that, a physical check is conducted which follows EU 360/1994. BVI uses a paper based random selection using a printout of an Excel spreadsheet with random black and white cells. The number of containers are entered sequentially on the sheet and if a number falls on a black that container will undergo random inspection. Information on country of origin and history of establishment as well as any past issues are also taken into consideration. Harmonized goods receive reduced control depending on which group of product the goods belong to (50%, 30% or 1-10% inspected). BIP has facilities for cold storage for holding different types of products pending test results [2, 7, 22].

If the veterinary inspection is satisfactory, the OV who conducted the inspection signs and stamps the CVED; log the information into the TRACES information system and passes the CVED to the Customs Service. The original of the CVED accompanies the shipment to the point of destination and shipments must follow an approved route plan to their destination.

If a shipment failed inspection, the consignor can choose to return shipment or have it destroyed. The BIP does not wait to receive supplementary documents or corrected ones – goods are just returned to

point of origin. The BIP staff log the information on rejected shipments/containers into a spreadsheet which lists the year, type of shipment, and the decision on disposition. The DVO is notified as needed with any issues such as irregularities in the transport paperwork. The EU is also informed through TRACES and as needed, the EU recommends necessary changes to the inspection system [2, 7, 22].

Shipments that are re-imported into Poland (rejected by the receiving country) must be accompanied by a veterinary certificate or the certificate by which it entered Belarus. A rejection document is also required with information on the reasons for rejection. Rejections must also be accompanied by a statement from the consignor saying the shipment will be accepted back. Trucks crossing the border should have a seal as evidence that the load was not tampered with. If the seal is broken, a statement from the Belarus competent authority is required stating the reason for breaking the seal. Re-imports must be returned to the establishment of origin and require a document check, an identity check, and a veterinary seal. "Channeling" is done in TRACES – shipment returns to establishment and the OV at the establishment must confirm receipt of goods in TRACES. There were no problems in this regard with Poland but the BIP staff stated that they had issues with receiving confirmation of return from Spain and some other EU countries [2, 10, 22].

Re-importing a live animal shipment depends on the disease status of the other country. No re-imports of live animal shipments from Russia or Belarus are accepted into Poland, so they have to be destroyed. The CVO can make an exception and designate a shipment for immediate slaughter. For re-imports that cannot be allowed back in, the BIP has a contract with a local veterinarian to stun and euthanize the animals. Effluent goes to a tank for disinfection if needed and hay bedding is bagged and incinerated offsite. Dead animals are rendered into MBM then incinerated. If there is any suspicion of disease, the area is sealed off and other procedures apply. Vehicles are checked to ensure proper cleaning and disinfection which is carried out at the place of offloading or at the BIP if only slight cleaning is needed [7, 22].

Visit to Terespol BIP

The Terespol rail BIP has 2 sections – for edible and inedible products. No live animals go through the BIP. Following the 2014 embargo, inspections have decreased. Shipments arriving from China into Terespol have increased over 100% from 2004 to 2018, and officials expect the rise to continue due to the Silk Belt Road Initiative connecting China to Europe. Around 150 trucks pass through per 12-hour shift. Only a few have animal products, primarily fish, dairy, cheese. Customs was unable to provide documents on SOPs for ASF during the visit [7].

Past infractions included illegally issued export certificates from Kazakhstan. As a result, the BIP revised its procedures for Kazakhstan authority requiring permits to be sent by email to avoid forged or improperly issued export certificates. Neighboring border posts are also notified if any consignments are rejected so the transport doesn't enter through alternate routes. Infraction data goes into TRACES – BIP enters info into the system, EU notification is generated, initiating stricter requirements for the establishment by the EU. The BIP inspects around 3% or less of containers, but all containers must pass through a scanner located in the Customs area. The team observed several containers passing through the scanner and Customs officials demonstrated how they looked at scans for materials not allowed into Poland. Not all trucks are scanned [7, 22].

This BIP also showed the team a spreadsheet of rejected shipments which included types of products rejected, reasons for rejection, and disposition of rejected product. Testing at this facility is mainly for

residues – officials provided an example of a casings shipments that were rejected for chloramphenicol residues. Rejections for casings are due to residues which is the main focus of testing, not ASF or other diseases. Testing is done at the facility and shipment is held until test results are received [7].

The BIP has a section for products not for human consumption which has a separate laboratory adjoining the offloading dock for preparing samples. All trucks are offloaded, except for harmonized commodities where only a % are offloaded and inspected. Separate storage rooms are available where products can be cooled and reach frozen temperatures within 2 hours. No consignments to date have required complete offloading into storage. This BIP has a separate in-house laboratory for small and large animals from the EU and an agreement with a local Terespol veterinarian is in place if any treatments are needed. Currently, large animals from the EU are primarily horses currently [7].

Visit to Gdansk BIP

The Gdansk BIP was established in 2008 and is located at the Gdansk sea harbor directly across the container terminal which is the largest in Poland. The BIP is staffed by 13 employees of which 9 are OV's (all fulltime employees of the BVI). Staff hours are from 8 am to 4 pm, however vets are available all the time. No private veterinarians are hired at BIPs [7].

Each container subject to veterinary control comes into the facility except for shipments of exported processed animal protein which has a special area for inspection. On the day of our visit, the BIP was unloading 3 ships including 1 from Asia which is one of the largest container ships in the world. Current capacity of the terminal is 3 Million TEUs per year (a TEU is a 20 ft. container), and capacity is being extended to handle 4 Million TEUs per year. This terminal covers 71-hectare area. It has the capacity for up to 1,072 freezer containers, has 4 tracks over 2½ km long, and a storage warehouse over 8,200 m². The ownership of this terminal is 30% Polish Development Fund, 30% IMF investors, and 40% owned by Australian Pension Funds. The BIP has 3 inspection centers [7]:

- IC1 – Headquarters – approved for inspecting edible packaged food (e.g., fish, casings, honey) and non-edible packaged/unpackaged products (e.g., pet food, pig hair, wet-salted hides on pallets); inspection zones are separate. This inspection center is fully equipped and has its own veterinary staff
- IC2 – inside harbor – packaged foodstuffs and non-edible products (not much shipment of the latter)
- IC3 – cold storage – located in long-range fishing port; approved for packaged frozen fishery products. This is the most recent center and the only post in Poland where frozen fish products (not in containers) can be inspected.

No live animals are received at this port since it is not approved for live animals. Only 1 seaport in Poland accepts live animals which is the Gdynia seaport. The BIP can inspect animal feed on non-animal origin – animal feed requires special inspection. In 2018 and 2019, the number of shipments of products of animal origin at this BIP were 4,701 and 3,008 respectively. The EC has imposed obligation to use seals on shipments with animal products. All shipments are subject to document and identity inspections. Not all shipments are physically inspected – 20% of meat product shipments, 20% of fish products. Animal origin products imported through this BIP include [7]:

- HC category – edible products: primarily fishery products, casings (from China, Morocco, Russia, Pakistan), honey, dairy products, and other compound products.

- NHC category – feathers subjected to heat treatment (non-heat-treated feathers are not allowed), pet food including dog chews from China and Canada, animal byproducts for pet food manufacture, lanolin, pig hair from China, and wet-salted hides from Argentina and Chile.
- Feed – animal feed with no tissue content, soybean and buckwheat, fatty acids of plant origin (primarily palm oil), and minerals including NaHCO₃

Sampling for these products is carried out using the Monitoring Plan Act by Poland rather than the EC plan. Sampling is defined by categories of animal products and focuses on antibiotics, *Salmonella*, and residues. If there is suspicion with a particular shipment, the BVO is called, and information is added to TRACES and the RASFF system (Rapid Alert System for Food and Feed) which is an EU system for information on dangerous food and feed products. All BIPs across the EU can access information from RASFF including rejections and reasons for rejection. The RASFF system is linked to TRACES. Risk factors for selection of shipments to inspect are based on several factors: history of RASFF alerts and whether threats were identified at the borders or in the market; history of shipments; country/region of origin; rejections from other inspection posts; other info on threats that appear in other countries including infectious diseases. Based on BIP inspections, the EU can order special inspections for certain issues or certain establishments. In these situations, 10 consecutive shipments must be sampled, tested, and inspected. Special inspection and sampling procedures are lifted after 10 shipments across the EU are satisfactorily tested [7].

No fresh or frozen pork or meat products from third countries have been imported via this BIP in the last 5 years. However, as shown in Table 7, hundreds of tons of pork casings are imported from third countries [7].

Table 7: Imports of pork casing via the Gdansk BIP

Year	Origin	Number of shipments	Net weight (kg)
2016	China	10	158,920
2017	China	42	638,361
2018	China	71	1,214,905
2019 (Aug. 31)	China	61	864,367
	Russia	5	100,192.78
	Morocco	16	212,166

The above table shows a high volume of pork casings have been imported from China, Russia, and Morocco; APHIS considers all 3 countries to be affected with the diseases under review. The site visit team requested more details to understand how casings are handled, processed and how to distinguish swine, bovine and other casings. BVI officials stated that the inspection process involves the following steps [7]:

1. Document control (following EC 2003/779):
 - a. The country must be on the list of approved countries.
 - b. List of approved establishments from which casings can be imported are checked on the website.
 - c. Product must be accompanied by a health certificate, and by a document stating that the casings have been tested for chloramphenicol and nitrofurans.
 - d. Product must also be accompanied by a CVED (Common Vet Entry Document) in addition to the health certificate.

2. Identity control – visually inspecting markings and labeling on document and product (barrels for casings), country of origin, and establishment.
3. Physical control:
 - a. 1% of all packages, not less than 2 packages and not more than 10, are opened and a minimum of 2% of contents are sampled.
 - b. 20% of meat products undergo meat inspection annually.
 - c. Visual inspection of random shipments and containers.

In 2019 and 2018, there were 11 and 12 rejected shipments, respectively. The team reviewed a spreadsheet specifying reasons for rejections and disposition of shipments – disposal or return to country of origin or another country. Examples of rejected of animal products/byproducts shipments include pet food shipment from China with no original health certificate and discrepancies between certificate and label contents, and a byproducts (horse offal) for feed shipment from Uruguay with no labeling and an incorrect establishment number. Disposal Procedures for animal products and by-products include [7]:

- Issuance of a destruction order by BVI;
- Containers are sealed by BVI officials and the materials must be transported in the same container – there is no requirement for cleaning and disinfection of transport vehicle;
- Disposal must occur at an approved facility – Gdansk uses authorized facility nearby. no requirements for C&D of transport;
- Destruction of products must be confirmed by BVI officials.

Poland is the last EU point before exiting the EU to other countries. Exit inspection is mainly carried out for animal welfare purposes. Trucks transporting live animals are generally not sealed due to 24-hour requirement for offloading (animal welfare legislation). Officials at the BIP receive information on veterinary certificates, journey/route/itineraries, ear tags, etc. through TRACES [2, 10].

9.5 Transit controls

Transit of products between third countries through EU Member States is allowed under EC legislation, provided that there are no import restrictions on the source country. The conveyances are sealed at the point of origin in the third country, although officials at the point of departure from that country can break and replace the seal for inspection purposes. A customs officer records the seal number and breaks the seal upon arrival at the BIP point of entry. The products in transit undergo the same checks as imported consignments, but no further unloading or alteration of the cargo is allowed while in Poland. A veterinary inspection seal and customs seal are applied at the entry BIP for transit, a route plan is approved, and a specific exit point is designated. The BIP at the point of exit is notified of the transit shipment, records the exit, and sends confirmation back to the BIP at the point of entry when the vehicle leaves the country [7, 20].

Two types of transshipments come to Gdansk seaport – e.g., China to Hamburg through Gdansk for entry or between third countries to Gdansk to another country like Russia. Transshipments for which unloading to the bay takes less than 7 days, the person responsible for the consignment must report to the BVO at the BIP; however, BVI control is not required for those types of shipments. If unloading will take 7-20 days, the BVO must check the original or certified true copies of the health certificate or veterinary document of origin or any other original of document accompanying the consignment. The BVO will then the CVED with notation that the consignment is approved for transshipment. The BVO must also supervise the shipment in the customs area. Transshipments that require more than 20 days for unloading must go

through full veterinary control at the first BIP of arrival in the EU that includes document control, identity control and physical control. The CVED is issued with approval for entry to the EU market. Transshipments destined to a third country and it takes over 7 days to unload, must undergo full veterinary control. An extension of up to 14 days is possible under EU regulations for such shipments but this can only occur at specific BIPs; three of which are in Germany [7].

9.6 Passenger traffic

Imports of animal products from third countries by private individuals in passenger luggage are governed by Commission Regulation (EC) No. 206/2009 on the introduction into the Community of personal consignments of products of animal origin [20]. Customs is competent authority for products at the border for inspecting passenger luggage. At the local level, agreements are executed between the DVO and local Customs authority to conduct such inspections. Agreements are based on the specific border crossing, volume of transit, type of crossing and other factors and can be amended as needed to adapt to changing disease statuses and situations [7].

Imports of pork and pork products for personal consumption is not permitted in accordance with EU regulations. All passenger luggage entering Poland from third countries is screened at any of the BIP, sea ports, and airports by Customs and border patrol guards using non-intrusive methodology, such as x-ray equipment and/or sniffer dogs; however, manual inspections can be carried out if necessary. Passengers traveling within the EU are not subject to such inspections [7].

At the car terminal in Terespol, there are 6 lanes for passenger cars – 1 lane is diplomatic, and 1 lane is for declared goods. The Customs officer may inspect any vehicle, but the current threshold is 12% of vehicles. There is also a special building and section for bus passengers. The BVI also uses 7 dogs at various border crossings – four of these dogs are stationed at this location and are trained to detect tobacco product (the most smuggled product at this terminal). At the incoming side of the border, Customs officers thoroughly inspect 18-20 vehicles per shift and also target vehicles that frequently crosses the border [7].

Customs officials informed the team that 506,305 cars; 22,670 buses; and 1,665,362 travelers crossed at that location in 2018. Around 650-750 cars and 1,600-1,800 people are inspected daily with fewer numbers crossing during weekends. All vehicles must be inspected, and passengers are informed that they can discard animal products prior to reaching the inspection station. Special bins are available for disposal. Bus passengers have to offload luggage and go through Customs where luggage goes through a scanner. If travelers declare animal products, they are informed that they can dispose of them in the special bins and no fines are imposed. However, if the traveler does not declare anything and if products are found, fines between 210 złoty to 1000 złoty can be imposed. Customs imposed many fines last year. In 2018, a total of 3,845 fines totaling 1 Million złoty were imposed, and in 2019 to date of the visit, a total of 1,471 fines totaling 406,030 złoty. If travelers refuse to pay fine, legal proceedings are initiated. A total of 117 tons of products were confiscated in 2018, to date of visit in 2019, a total of 42 tons were confiscated. The site visit team reviewed the database of confiscations “Register of intercepted products of animal origin v1.07”; a total of 122 kg were confiscated from September 9-14, 2019 [7].

Confiscated products are bagged and weighed then stored in locked dedicated deep freezers until disposal. When bags are taken for disposal, the freezer is washed and cleaned. Confiscated product is picked up weekly by an authorized company and sometimes there might be a need to call the company for additional pickups. Confiscated products are incinerated under the supervision of VI officials. The

incineration company is audited 2-4 times annually according to a time schedule established by the DVO. Any irregularities detected result in additional inspections. Routes for disposal of waste are predetermined. The nature of the shipment is described, documented, and confirmation must be received that the waste has been received and has been incinerated as required. Disposal can be by burying, but BVI officials stated that burial is not currently practiced in Poland. Confiscated products are not routinely tested for ASF [7].

9.7 International waste

Waste generated on board of vessels and remains of consignments are handled in accordance with EU regulations and Polish regulations [2, 7]. Each port in Poland is subject to the waste disposal management regulations and must be approved by the Ministry of the Environment. The waste disposal management plan defines procedures for disposal of all wastes including kitchen and catering waste, and waste of animal origin. At the BIP in Gdansk, the site visit team observed the use of a form used for declaration of waste to be left at the seaport for disposal in accordance with the waste management plan. Food waste is classified as Category 1 and must be carefully packed before unloading. The waste is collected directly from the ship by pre-approved specialized companies with their own transport and sent for disposal by incineration. Food waste can only be unloaded from a vessel only after BVI has been informed. Poland does not allow unloading of food waste from aircrafts coming from third countries [2, 7].

10 Export controls

VI ability to ensure that exported animals and animal products comply with importing country requirements centers on its systems for inspections, slaughter controls, identification and traceability, movement controls, and export certification. Live animals are mainly transported to other EU member states or to the third countries by roads. Live pigs and pork used for production of ready to eat pig meat products intended for export to the U.S. can only originate from free areas [2, 10, 11].

10.1 Approval of establishments

Pork production is highly commercialized. There are 18 establishments listed on FSIS list of approved foreign establishment for Poland of which 3 establishments are currently restricted by APHIS (can only export products treated to kill the ASF virus) [2]. In Poland, all establishments producing food of animal origin, including pork meat and pork meat products, must have a veterinary ID number assigned to it by the DVO at the time of registration/approval in accordance with MARD regulation of 15 December 2016 [2].

All companies intending to export meat or meat products to the U.S. must comply with APHIS and FSIS requirements and must be included in FSIS' approved establishment list. The company submits an application to the district VI to be approved to export fresh meat and heat-treated meat products to the U.S. along with documentation on the following [2, 7, 10]:

- Implementation of the Hazard Analysis and Critical Control Point (HACCP) System and procedures in accordance with EC regulation No. 852/2004.
- Implementation of a procedures to ensure compliance with U.S. requirements with emphasis on the separation of production processes for meat and meat products intended for the U.S. market from the production processes for meat and meat products intended for other markets.

- A laboratory testing program for production intended for the U.S. and analysis of laboratory testing results obtained for at least 2 months to ascertain that the production manufactured for the U.S. market complies with FSIS requirements.

The DVO will review the application and attached documents to ensure that all production and processing information comply with U.S. requirements as well as EU's and VI' regulations. The DVO will conduct an inspection then submits his/her recommendations to include (or not include) the establishment in the list of approved establishments to the RVO who makes a request in writing to the CVO for a final inspection to be carried out by VI's Controlling Office. If the results are satisfactory, the CVO will issue an opinion and based on the opinion, the DVO will issue approval and communicate the approval to FSIS. FSIS will make the decision to list the plant on its approved establishments list on its website.

10.2 Slaughter and meat processing controls

The VI implements specific official inspections on products of animal origin intended for human consumption in accordance with EU regulation No. 853/2004 and 854/2004. The official controls which include periodic inspections of each entity, are conducted by the DVO. Establishments are classified based on the result of a risk assessment; low risk establishments are inspected every 12 months, medium risk establishments every 6 months, and high risk establishments every 3 months [2, 7, 24]. Meat processing plants approved for export to the U.S. are inspected by the DVO on a monthly basis. All fresh meat or meat products destined for the U.S. must originate from ASF-free areas and be derived from pigs that originated from ASF-free areas [2, 7, 10, 24].

Official controls on slaughter start at the farm level; each company keeps a list of approved suppliers of pigs to the plant which is approved by VI based on the latest regionalization for ASF, EU implementing decisions for ASF, compliance with biosecurity requirements, and no introduction of pigs from protection and surveillance zones. The suppliers list is updated regularly by VI based on changes in ASF-restricted areas [2, 7], [24].

All incoming and outgoing trucks transporting pigs to the slaughter plant must be thoroughly cleaned and disinfected and recorded in a logbook. The OV will issue a cleaning and disinfection report to document the process. The OV will check all transport documents accompanying the animals and ensures that everything is in order and done in accordance with the regulations and the approved slaughter plan. Transport documents include: transport certificate, slaughter permit (issued by an AV), and ASF laboratory testing results (passive surveillance) [7], [24].

All slaughter procedures and inspections are carried out under supervision of OVs permanently stationed at the plants. The OV supervises pre-operation sanitation and must be present upon arrival and unloading of the animals to check for proper movement documentations, laboratory results (depending on origin area), and to conduct the ante-mortem inspection once the animals are unloaded into the receiving pens. The ante-mortem inspection involves visual observations of all animals for disease signs, injuries, tiredness or agitation, cleanliness, and animal welfare status. The OV must also measure rectal temperature from no less than 10% of the incoming pigs. All pigs that are dead on arrival are necropsied and samples are collected for ASF testing if changes are observed during the necropsy that suggest ASF. Slaughter must occur within 24 hours following the ante-mortem inspection, otherwise, it must be repeated [7, 24].

Post-mortem inspection is also carried out by AVs (under OVs supervision) who must be present on each slaughter line. The inspection involves primary examination of the carcass and head, checking for fecal

contamination, abnormal pathology, and improper blood drainage, sampling for trichinella, examination of internal organs (heart, liver, spleen, lymph nodes, and genital organs, and a final visual inspection of the carcass and applying the appropriate stamp. Tainted or contaminated carcasses and offal are removed via a separate line for further examination or laboratory testing; if significant issues are observed, the lines can be stopped until the issue is resolved. Condemned carcasses (for chronic diseases or other problems) are labelled accordingly and sent to disposal as category II materials [7, 24].

Each half carcass receives a health stamp which is applied only when there are no grounds for declaring the meat unfit for human consumption. The health stamp is applied to animals that undergone ante-mortem and post-mortem inspection on the external surface of the carcass in such a manner that if carcasses are cut into half-carcasses or quarters, or half-carcass are cut into three pieces, each piece bears a health mark. When the carcass there are no grounds for declaring the meat unfit for human consumption an oval-shaped health stamp is used which includes the country (PL) and the approval number of the establishment [7, 24].

Carcasses that are approved for the EU or for export to the U.S. receive official oval-shaped stamps containing the establishment approval number. Carcasses are stored in cold rooms; those used to produce U.S. products are stored in dedicated cold rooms and are processed first. Carcasses are then directed to deboning and cutting lines which are separate depending on the part of the carcass and sometimes, the intended use of the product. Traceability is maintained throughout the slaughter and processing process (see below) [7].

An identification mark is applied on products of animal origin by the manufacturer and must be applied before the product leaves the establishment. The identification mark may be applied directly to the product (using authorized colors), printed on the label affixed to the product, the wrapping or packaging, or may have the form of a tag. The identification mark is oval-shaped. Additionally, specific requirements apply to packages cut meat or offal. In this case, the identification mark must be applied in such a way that it is destroyed when the packaging is opened. When wrapping provides the same protection as packaging, the label may be affixed to the wrapping [7, 24].

The APHIS team visited 4 slaughter and processing plants that are listed as approved on the FSIS' foreign establishment list, and conducted interviews and reviewed documents at different levels of the slaughter and production [7]. Two plants are located in "grey areas" (note: "grey areas" are considered by APHIS to be located in restricted for ASF areas). The third plant is located in a Part II area. All 3 plants are only allowed to ship fully cooked, shelf stable processed products (cooked to kill the ASF virus). The fourth plant is located in a free area. The team observed the OV conducting the ante-mortem inspection and reviewed the movement records, the accompanying health certificate of the lot, cleaning and disinfection logs, and traceability documents identifying all the required information for the animals maintained in the office, and confirmed that all animals arriving at the slaughterhouse received ante-mortem inspection within 24 hours prior to slaughter [7].

The team also observed the entire slaughter and processing activities including post-mortem inspection stations, deboning, cutting, processing, packaging, labeling and storage, and confirmed that all procedures are conducted under supervision by OVs at plants. In addition, while visiting various areas inside the plant, the APHIS team observed and went through strict biosecurity procedures. Strategically located stations for changing uniforms and boots, in addition to washing and disinfection units for hands boots, wearing hair nets, etc. [7].

10.3 Traceability

Traceability means the ability to trace and follow a food, feed, food-producing animal or substance intended to be, or expected to be incorporated into a food or feed, throughout all stages of production, processing, and distribution. All food or feed which is placed on the market or is likely to be placed on the market in the EC must be adequately labelled or identified to facilitate its traceability, through relevant documentation or information in accordance with Regulation (EC) No. 178/2002 of the European Parliament and of the Council for food of animal origin and other relevant requirements [2, 7, 10].

The VI requires establishments to have a traceability system based on the "one step back - one step forward" approach, which implies that food business operators have in place a system enabling them to identify their immediate supplier(s) of animals and their immediate customer(s) of their raw materials, semi-finished products and products used for production. A "supplier-animal" or "supplier-raw material" link needs to be established (i.e. a possibility to determine, which animals or raw materials come from which suppliers), as well as a link between "customer-product" (i.e. a possibility to determine, which products were delivered to which recipients). The establishment must make the information available to VI on demand [2, 7, 24].

The traceability system must include the following information [24]:

- Information on animals, raw materials, semi-finished products, products and additional allowed substances incorporated into a particular product as a part of a food product in the course of its production, preparation or processing, materials and products intended to come in contact with food;
- An accurate description of the food and the volume or quantity of the product;
- The name and address of the food business operator or the consignor (if different) from which the product has been dispatched; and,
- The name and address of the food business operator or consignee (if different) to whom the food is dispatched; and,
- A reference number or code identifying the lot, batch, or consignment, and the date of dispatch.

During the visits to the slaughter and processing plants, the team observed that the traceability system is well managed and documented. The team also observed that the company separate production batches and equipment for products destined to the U.S. market. Traceability demonstrations were conducted on samples of a finished products and the company was able to trace back to the supplier farm through the CBD-SIRZ. In addition, trace forward was demonstrated on paper to the place of destination of meat and meat products [7].

10.4 Export certification

The VI utilizes a structured system for export inspection controls to ensure that all shipments of live animals and animal products comply with requirements of the importing country as well as with EU requirements. Export certificates are issued in accordance with the general principles of certification laid down in Council Directive 96/93/EC and those of Annex IV to Council Directive 2002/99/EC and with Instruction of the CVO No. GIWue 0201 – 2/11 on dealing with veterinary health certificates for goods to be exported to third countries which unifies the procedures of the Veterinary Inspection bodies in issuing and archiving certificates as well as granting, receiving, recording and storing specially protected certificates. The VI certifies the health status of animals, meat, and meat products based on information

contained in the ADNS system; regular inspections at establishments performed by the DVO or OV's authorized by him/her; results of any required laboratory tests; information contained in electronic systems (e.g. CBD-SIRZ); assessment of the quality and safety assurance procedures at the establishment; and, ensuring compliance with the specific requirements of third countries. Export certificates are sent electronically (via the TRACES system) to the border post. In addition, animals are subject to veterinary control for welfare in accordance with EC regulations [2, 7].

With regard to ASF, the VI implement recommendations for methods of verification and enforcement included in provisions of the Federal Meat Inspection Act of the United States Department of Agriculture. The VI specifies the rules for required training provided to the Veterinary Inspection employees based on U.S. requirements. Pork intended for export from Poland to the U.S. cannot be obtained from pigs that came from areas listed in any part of the Annex to Commission Implementing Decision 2014/709/EU (i.e. Part I, II, and III). Also, if any of the Polish pork plants authorized to export to the US market are located in any of the areas listed in Part I, II or III of the Annex to Commission Implementing Decision 2014/709/EU, it cannot export to the U.S. market or deliver raw material to other establishments approved for export to the U.S. market, until the restrictions are lifted. It is the responsibility of all DVOs responsible for the establishments approved for export to the U.S. market to check on [7, 10]:

- amendments and updates of the Commission Implementing Decision 2014/709/EU, concerning the administrative areas listed in Part I, II or III of its Annex;
- establishments are not located in ASF-restricted areas;
- establishments do not use pigs or pig meat obtained from pigs originating in ASF-restricted areas;
- suppliers of the raw material used for production are not located in the ASF-restricted areas; and,
- establishments have an updated list of livestock suppliers that contains information on location in relation to ASF-restricted areas.

Export health certificates can only be signed by the DVO or an OV at the plant; the DVO must keep a list of all OV's entitled to issue and sign the certificates. The DVO is prohibited from issuing veterinary health certificates for consignments destined to the U.S. until any restrictions are lifted. The OV issuing the export certificate should have knowledge of the provisions contained in relevant legal acts, be familiar with the rules of conducting veterinary checks and the manner of issuing health certificates. The VI conducts a structured training program for export certification; all officials authorized to issue export health certificates must undergo this training. The CVO trains RVOs who in turn train DVOs and OV's. The training program is conducted in the form of lectures and practical sessions that provide participants with information on rules and procedure of issuing health certificates and veterinary documents, veterinary legislation including provisions for veterinary control in trade of products of animal origin, protection of and combating animal infectious diseases, the system of identification and registration of animals, protection of animals, feed and by-products of animal origin, sample collection and diagnostic testing [2, 7, 10].

Procedures for issuing certificates will likely ensure the accuracy of the data certified in the certificates and prevent unfair, and false certification. The OV should not certify data of which he/she has no personal knowledge or cannot be checked, sign unfilled or incompletely filled health certificates, or certificates for products that were produced in companies not under his/her direct control [2, 7, 10].

Prior to issuing the certificate, the OV conducts a pre-export inspection which includes verification of all documentation regarding the batch of product sent such as dates of slaughter, cutting, production, and

labeling, expiration date of the product, product weight, the cleanliness of the means of transport, temperature of the assortment etc. The documentation review also includes confirmation of APHIS and FSIS requirements, checking the establishment's specifications of shipments, checking the provisions of the establishment's pre-shipment review related to the manufacture of products to ensure completeness of records and to establish that critical limits have been met at all critical control points (CCPs) and that the establishment took corrective actions including appropriate handling of the product. The OV accepts the shipment for certification after conducting this review and ensures that all pre-shipment documents are correct, and the results of all tests are acceptable. Copies of export certificate must be kept for 3 years from the date of issue or for a longer period if required by a third country [2, 7, 10].

In accordance with applicable regulations and procedures before dispatching products of animal origin outside the EU, at the place of loading (production establishment, cold store, logistics warehouse), the products are subject to a veterinary control. Before loading the batch, a detailed inspection of the means of transport is carried out in terms of meeting the hygiene requirements and keeping the cold chain, including the documentation of the cleaning and disinfection carried out of the means of transport. Products of animal origin exported from Poland to third countries (including U.S.) are supplied with health certificates and other documents required by the competent authorities of the destination of the products. Health certificates and other documents are attached to the shipment of products and made available at any request of the customs authority, because the transport of products to the place of departure from the territory of the European Union remains under customs supervision [7, 10].

Immediately after loading, the OV puts a seal on the means of transport, container or box, if required by the third country of destination of these products. The OV can re-apply a new seal in the event of breaking the seal during inspection by the customs authority. The DVO must keep a register of issued seals at the district VI office, which includes among other information: name and surname of the OV, date of collection of seal and signature of the OV collecting the seal, and the date of returning the seal and signature of the OV taking the seal, and the imprint of the issued seal [7].

The DVO controls all export certification procedures conducted by OVs at establishments under their jurisdiction. The DVO issues a batch of blank export certificates with specific numbers to the OV at the plant who must keep it under their control at all times. In addition, the DVO conducts periodic reviews of OVs who issue export certificates at the plant to verify the correctness of all official and certification activities. In that regard, the DVO checks whether the OV properly conducts the following activities [2, 7, 10]:

- Checks labels and export health certificate for accuracy;
- Checks the product and packaging to ensure it meets the requirements for health quality specified in the applicable regulations;
- Reviews the establishment's pre-shipment documentation;
- Secure access to official seals and personal stamps;
- Supervises product marking with correct identification marks;
- Notifies the establishment of batches of products not qualified for shipment and explains the reasons and interprets the relevant requirements; and,
- Ensures that all CCPs meet general hygiene requirements and instrument control requirements.

At the same time it is the responsibility of the DVO or OVs authorized by him/her to check on an ongoing basis whether the production process of the products intended for dispatch in the U.S. takes place in a

separate production cycle, subject to all rules and requirements in force. In addition, meat and meat products eligible for certification for export to the U.S. at any stage of their production and storage until shipment must be kept separate from other meat and meat products; this separation should also be subject to ongoing official verification [7].

The EU and Polish legislations establish the duties and rights of VI and food business operators. The Administrative Code of Poland provides VI the authority to apply a range of sanctions including warnings, penalties and confiscation, suspending or prohibiting export of products to third countries, or suspending or canceling the export approval of food business operators.

11 Review conclusions

APHIS concludes that VI has sufficient legal authority to carry out animal health programs including official controls and field activities for all the diseases under review. Review of information provided by Poland demonstrated adequate technical infrastructure of official and authorized veterinarians, support personnel, and financial resources for carrying out disease control and eradication programs. During the September 2019 site visit, the team observed that the official veterinarians are familiar with provisions of the EC and Polish legislation for the diseases under evaluation.

11.1 Likelihood of presence of the hazards

Based on documentation provided by Poland, APHIS did not find evidence to suggest presence of FMD, CSF, or SVD in Poland despite ongoing passive and/or active surveillance. There have been no detections of FMD since 1982; CSF since 2011; and SVD has never occurred in Poland. In addition, there is no evidence available to APHIS to suggest that these diseases may exist in wildlife populations in Poland, which is supported indirectly by surveillance for these diseases in domestic populations with the highest risk of contact with wild animals. Vaccination against all four diseases is prohibited or has never been used. Therefore, APHIS concludes that the likelihood of presence of FMD, CSF, or SVD in Poland is negligible. By contrast, APHIS considers ASF to be present in both domestic swine and wild boar populations in Poland since 2014.

11.2 Likelihood of introduction of the hazards

APHIS considers that there are no natural barriers sufficient for restricting animal movement and human traffic except for the Baltic Sea in the north. Roaming of susceptible animals, in particular wild boar, into Poland through international borders with affected regions could occur with little or no physical barriers, particularly from neighboring regions where the status of the diseases under review are unknown or remain uncontrolled. In that regard, APHIS considers the Kaliningrad region of Russia and Belarus to be affected with the diseases under review; therefore, APHIS cannot exclude the possibility that the diseases exist in those two regions. As mentioned in section 2 of this report, FMD and SVD have never been reported in wild species in Poland. Additionally, APHIS found no evidence of FMD or SVD introduction via wildlife in Poland from neighboring regions. Given the epidemiological status and history of occurrence of FMD and SVD in European wild boar populations, APHIS concludes that the likelihood of introducing FMD or SVD virus into Poland via susceptible wild animals is negligible.

By contrast, APHIS considers the likelihood of CSF introduction into Poland via migration of wild boar from potentially affected neighboring region to be higher, given the history of the disease in wild boar populations. Likewise, APHIS considers the likelihood of ASF introduction via roaming wild boar from

affected neighboring regions to be high and an issue of concern for exposure of domestic animals particularly in small swine farms. However, Poland is implementing rigorous detection and sanitary hunting strategies to detect infected and dead wild boar and to reduce the wild boar population. In addition, Poland imposes very high and strict biosecurity requirements and movement controls on all swine farms and hunting which led to a significant reduction in the number of small farms raising pigs for their own consumption. These strategies mitigate the likelihood of exposure of domestic swine to infected wild boar to a low level.

Poland imposes a stringent system for legal importation of animals and animal products that consists of certification requirements, transit controls, intra-Community trade requirements, transport requirements, and border inspection controls to mitigate against introduction of the diseases under review. This system is harmonized with EC regulations which include multiple levels of inspections and verification of import and transit requirements. Poland is importing large volumes of casings from China, Morocco, and Russia under certain restrictions in line with EC and Polish import conditions. APHIS considers the three countries to be affected with all of the diseases under review. In addition, APHIS prohibits imports of casings from ASF affected regions. There is a potential that casings imported into Poland and the EU from ASF affected regions might end up being used to produce cured products such as sausages. However, according to APHIS regulations, filled casings are considered part of the meat products and are subject to import restrictions applicable to cured and processed products – i.e. subject to processes that inactivate viruses causing ASF, FMD, CSF, and SVD.

In addition, there appear to be sufficient controls on passenger traffic coming from third countries, as well as handling of international waste (flights from third countries, ships, cruises, etc.). However, there are no controls on passengers traveling within the EU, which means that passengers that might be carrying products from ASF-restricted areas can move freely within the EU. However, it was demonstrable during the site visit that VI conduct a considerable amount of outreach and education campaigns and posts information on prohibited products at airports and passenger crossings. The feeding of waste of animal origin originating from international sources, slaughterhouses, restaurants, hospitals, or other establishments, to pigs has been prohibited since 2008. Therefore, APHIS concludes that Poland has demonstrated that sufficient controls exist to mitigate the likelihood of introduction of the diseases under review via legal importation of susceptible animals and animal products from affected regions to a negligible level.

11.3 Detection, response, and effective control

APHIS concludes that Poland has a comprehensive surveillance system capable of detecting all of the hazards under review. Active and passive surveillance systems for FMD, CSF, ASF, and SVD are in place and are appropriate given Poland's disease history, geographical location, and import practices. The VI takes into consideration important factors such as higher risk areas, production type, vaccination status, and presence of and interaction with susceptible wild animals when designing its surveillance programs. Adequate laboratory procedures and capabilities are available to support surveillance programs and testing is conducted in accordance with the OIE's Diagnostic Manual and latest scientific methods.

By law, all of the hazards under review are reportable and VI passive surveillance programs depend on this mandatory reporting requirement. VI enhances its passive surveillance through conduct of various outreach/education materials and training sessions to producers, veterinarians, and hunters using multiple types of delivery and mass media.

APHIS considers Poland to have sufficient controls in place to rapidly detect the hazards under review and manage its animal disease investigation, response, and control programs effectively using comprehensive emergency response plans and available resources. Adequate protocols and authority for implementing controls of potential occurrences of the hazards are in place and all animal disease events are investigated by trained official veterinarians and staff. VI has demonstrated that it can promptly notify the EC, the U.S. and/or the OIE of hazard events and introduce sufficient controls to trace and prevent product shipments from being exported.

Therefore, APHIS concludes that if FMD, CSF, and SVD were to be introduced into Poland or if ASF were to be introduced into other free areas of the country, the likelihood of broad spread without detection is negligible. However, APHIS also concludes that ASF will continue to circulate in Poland's wild boar populations for some time; as a result, it is highly likely that more ASF detections in wild boar will occur, and the disease will slowly spread in wild boar westward into free areas of Poland with occasional spill over into the domestic swine populations.

11.4 Export certification

Poland applies adequate movement controls on animals and animal products, implements appropriate animal identification and traceability systems, and implements stringent systems of verification and inspections for certifying exports of animals and their products. Export verification and certification systems for the diseases under review ensure that exported animals and animal products, beginning at the farm and extending through all components of production meet importing country requirements. Therefore, APHIS concludes that the likelihood that ineligible animals and animal products be certified for export to the U.S. is negligible.

The EU allows certain derogations by which live swine, swine meat and meat products can move from ASF-restricted areas to other Member States or third countries. Poland considers Part I areas to be free from ASF (buffer) and thus, allows the movement of live swine under certain conditions from farms located in Part I to other Member States and third countries. In addition, these ASF derogations allow movement of fresh swine meat and meat products from Parts II, III, and IV provided they are produced from pigs that originate from farms in unrestricted areas; however, such movements are allowed only under very stringent conditions. On the other hand, APHIS considers all Parts (I-IV) to be restricted and prohibits pork or pork products from such regions unless it complies with processing requirements in Section §94.8 of the CFR. Similar to the situation with CSF restrictions, there is a potential that fresh pork from ASF-restricted areas might end up in other unrestricted Member States and later shipped to the U.S. However, the EC's and Polish regulations and strict implementation of those regulations require that all fresh swine meat and meat products must be sourced and processed in accordance with U.S. import requirements and only prepared and processed in FSIS-approved establishments. Therefore, APHIS concludes that the likelihood that fresh meat and meat products sourced from ASF-restricted areas being exported to the U.S. is negligible.

With regard to CSF, the EU lifts its restrictions on regions or zones affected with CSF in domestic swine or wild boar 30 days after cleaning and disinfection of the last affected holding. However, APHIS import regulations in Section §94.31(1)(a)(ii) of the CFR specify that a designation of a restricted zone must remain in place for a minimum period of 6 months. The difference in the time frames in APHIS' and EC's regulations coupled with free trade in pork and pork products among EU Member States might hinder the ability of EU officials to certify shipments in accordance with APHIS import requirements. However, EC

and Polish regulations require that certifying officials must review all documentation and confirm the origin and sourcing of animals and products prior to issuing export certificates.

12 Recommendations

Based on the conclusions of APHIS' review of Poland's animal health statuses, APHIS recommends that the current conferred statuses and import mitigations for ASF, CSF, FMD, and SVD are appropriate. Recognition of these statuses will be maintained until the next APHIS review or until a change in Poland's animal health status is reported.

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