



**APHIS Evaluation of the Status of Poland
Regarding Classical Swine Fever and Swine
Vesicular Disease**

**Animal and Plant Health Inspection Service
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Abbreviations

APHIS	Animal and Plant Health Inspection Service
BIP	Border Inspection Post
BVO	Border Veterinary Officer
CFR	Code of Federal Regulations
CSF	Classical Swine Fever
CVO	Chief Veterinary Officer
DVO	District Veterinary Officer
EC	European Commission
EU	European Union
EU-15	Fifteen EU Member States prior to 1 May 2004 accession
FVO	Food and Veterinary Office of the European Commission
GVI	General Veterinary Inspectorate
NVRI	National Veterinary Research Institute
OIE	World Organization for Animal Health
PVO	Provincial Veterinary Officer
SVD	Swine Vesicular Disease

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Executive summary

Poland submitted a request to the U.S. Department of Agriculture's Animal and Plant Health Inspection Service (APHIS) in 2003 to be considered free of classical swine fever (CSF) and swine vesicular disease (SVD). Specifically, Poland would like to be able to export live swine, pork, and pork products to the United States. To accomplish this goal, the country needs to be recognized as low risk or free of CSF, and free of SVD and foot and mouth disease (FMD), in Title 9 of the Code of Federal Regulations (9 CFR). Poland is already considered to be free of FMD under 9 CFR 94.1, with restrictions as described in 9 CFR 94.11. Upon receipt of the request, APHIS initiated an evaluation of Poland's status with regard to CSF and SVD to assess the risk of opening trade.

On 1 May 2004, Poland and nine other countries became new Member States of the European Union (EU). As part of the accession process, Poland adopted the legislation of the European Commission (EC) regarding animal health, welfare, and identification, including that pertaining to CSF and SVD. These decisions and directives were transposed into Polish law and became the basis for new standard operating procedures by the time of accession. Poland also adopted the harmonized EC legislation regarding import, export, and trade of live swine, pork, and pork products.

This report represents APHIS' evaluation of the status of Poland with regard to the infrastructure and control measures in place for these diseases and includes an assessment of disease surveillance measures, import practices, laboratory capacity, emergency response procedures, and other factors that could influence the risk of disease introduction into the United States. Since a previous APHIS analysis of the EU prior to accession of the 10 new Member States concluded that the EC control measures for CSF are effective (APHIS 2000), the CSF evaluation focuses in large part on the implementation of EC controls in Poland.

Supporting documentation for this evaluation consists of information provided by Poland, observations of a site visit team, information from the World Organization for Animal Health (OIE), peer-reviewed articles, reports of missions conducted by the Food and Veterinary Office of the European Commission, and other technical sources. It should be noted that APHIS considered information provided by Poland before, during, and after the site visit, which was conducted in 2004. APHIS used all of the information gathered during the evaluation process to identify risk factors that may require mitigation.

This risk analysis was conducted according to OIE guidelines and therefore includes a hazard identification section, a release assessment, an exposure assessment, a consequence assessment, and a risk estimate. The hazards under consideration are CSF and SVD viruses. Based on the release assessment, APHIS has no evidence that either of these hazards currently exists in Poland. The documentation provided by Poland indicates that CSF and SVD have been eradicated in that country. Poland has not reported a case of CSF since 1994 and the last case of SVD occurred in 1972.

However, the release assessment identified several pathways by which either CSF or SVD virus could be introduced into Poland from other EU Member States or affected third countries, thereby potentially resulting in risk to the United States in opening trade. Specifically, the following pathways for disease introduction into Poland are of interest to APHIS: (1) natural movements of wild boar; (2) import and trade of live swine; (3)

import and trade of swine products; (4) incoming vehicular and human traffic; and (5) agricultural commodities for personal consumption.

Release assessment

Of the pathways assessed, migrating wild boar and agricultural commodities for personal consumption appear to present the greatest risk for CSF introduction into Poland when existing mitigation measures are considered. Poland shares common land borders with at least two countries with known endemic CSF infection is segments of the wild boar population. Poland also shares land borders with several countries that APHIS has not evaluated and therefore regards as unknown risk for CSF and SVD, and there is considerable local passenger traffic across these borders.

Introduction of CSF or SVD into Poland by the assessed pathways would only affect export risk to the United States if a susceptible domestic swine population – either breeding animals as in a semen collection center or production animals raised for slaughter – became infected and this infection was not detected prior to export. As discussed in the release assessment, commercial production and biosecurity practices substantially mitigate the export risk to the United States.

Harmonized EC import legislation imposes less stringent restrictions on sourcing of imported swine and swine products than does United States legislation, although the mitigation measures currently in place substantially reduce the risk of introducing CSF or SVD into Poland via these commodities. However, additional mitigation measures may be necessary to restrict sourcing of swine from Poland for the export process and to prevent commingling of live swine or swine products with those from regions that APHIS regards as affected or of unknown risk for these diseases.

Sufficient information is available from Poland and other EU Member States for APHIS to conclude that there is little substantive difference in the way trade is conducted in these entities. APHIS regards the 15 Member States comprising the EU prior to May 2004 (the EU-15) as low risk with respect to CSF. In addition, large portions of the EU are currently considered by APHIS to be free of SVD, but are subject to certain import restrictions based on the existence of common land borders with regions not considered by APHIS to be free of this disease, and/or import of live swine or swine products from regions not considered free of this disease.

Based on this evaluation, APHIS considers the export risk from Poland equivalent to that of the EU-15. The EU-15 is subject to the import conditions specified in 9 CFR 94.24 for breeding swine; 9 CFR 94.24 and 94.13 for pork and pork products; and 9 CFR 98.38 for swine semen. Poland has implemented EC control measures at a level equivalent to that of the EU-15. Applying the provisions of 9 CFR 94.13, 94.24, and 98.38 to Poland would address the majority of the outstanding risk issues discussed in the release assessment and result in a level of risk that is equivalent to that portion of the EU that is authorized to export breeding swine, swine semen, and fresh pork to the United States.

Exposure assessment

APHIS assessed the probability of exposure of susceptible animal populations in the United States to CSF or SVD viruses carried by pork or pork products, live swine, and swine genetic material imported from Poland. This assessment concluded that the

probability of exposure of susceptible swine to these viruses via waste feeding was low, based on studies of the U.S. waste-feeding sector. Although the unmitigated potential for exposure to infective virus via live swine or swine genetic material was comparatively high, APHIS concluded that the likelihood of exposure of U.S. domestic swine via pork or pork products, live swine, or swine genetic material from Poland was low. The mitigation measures in 9 CFR 94.24 for horizontal transmission and 98.38 for artificial insemination would further limit the risk of exposure to CSF and (indirectly) SVD viruses.

Consequence assessment

APHIS also assessed the biologic and economic consequences of introducing CSF or SVD viruses into the United States. This assessment concluded that CSF virus has the potential to cause significant distress and suffering in affected animals, whereas SVD infection usually follows a more mild course. The economic costs of control and eradication of these diseases would be substantial and export losses due to restrictions imposed by trade partners on animals and products susceptible to these diseases could run into billions of U.S. dollars. An extensive foreign animal disease outbreak could also result in severe psychosocial effects on farmers and farming communities.

Risk estimate

In summary, although a CSF or SVD outbreak in the United States would likely have severe animal health and economic consequences, APHIS considers the risk of infected live swine or swine commodities entering the United States from Poland and exposing U.S. domestic swine to be low. This risk is further reduced if Poland is subject to the same mitigations measures as are specified for other EU Member States in 9 CFR 94.13, 94.24, and 98.38.

Hazard identification

The hazards under consideration in this analysis are the CSF and SVD viruses.

1. Classical swine fever virus

CSF, also known as hog cholera, is a contagious and economically damaging viral disease of domestic swine and wild boar with worldwide distribution. It is caused by the CSF virus of the family Flaviviridae, genus *Pestivirus* (Wengler et al 1995). CSF virus is quite hardy, being stable between pH 4 and 10 (Depner et al 1992) and also stable at low temperatures (Harkness 1985). The virus would likely remain viable even after carcass maturation, and is unlikely to be destroyed by transport or cold storage. Laboratory confirmation of infection, essential during an outbreak situation, is complicated by the close antigenic relationship of the CSF virus with bovine viral diarrhoea virus and border disease virus (Wengler et al 1995).

The incubation period for CSF is 2-14 days (OIE 2005a). The virus multiplies in the epithelial crypts of the tonsils and may be carried to local lymph nodes and into the bloodstream for distribution throughout the body (Trautwein 1988). Blood and all tissues, secretions and excretions of sick and dead animals are sources of virus (OIE 2005a). CSF virus has been recovered from muscle and lymph nodes of infected pigs, and high titers of virus have been isolated from bone marrow (Wood et al 1988). The disease may also be introduced or spread via infected semen (Elber et al 1999).

CSF can spread in an epidemic form as well as establish enzootic infections in domestic swine and wild boar populations. Infection generally spreads directly from pig to pig, but products including fresh, frozen, or cured pork can remain infectious to other pigs via the oral route (Edwards 2000). Imported pig products are frequently implicated in the introduction of CSF virus into previously disease-free regions, primarily through the practice of swill feeding (Fritzemeier et al 2000). Dahle and Liess (1992) demonstrated that the oral infectious dose of CSF virus is very low. Indirect transmission may occur via movement of people, wild animals, and inanimate objects such as live-haul trucks (Elbers et al 2001).

The role of wild boar as a virus reservoir and possible source of infection for domestic swine is well known and epidemiological links between CSF virus infection in wild boar and domestic swine have been reported repeatedly in recent years (Biagetti et al 2001; Laddomada et al 1994). In countries that are free of CSF in domestic swine, epidemics in wild boar are usually started by feeding of infected human food waste (EC 1999). Abnormal mortality and sometimes obviously sick animals are the first indicators of CSF introduction into a wild boar population (EC 1999).

Four distinct clinical forms of CSF have been described, including acute, chronic, congenital, and mild manifestations (Moennig et al 2003; Paton and Greiser-Wilke 2003). The acute form involves a disease progression of 2-4 weeks and is characterized by high fever, generalized illness, hemorrhagic lesions, immunosuppression with secondary infections, and high mortality. The chronic form may last 30-90 days before death and usually involves older swine or congenitally infected piglets. Congenitally infected piglets may develop symptoms of chronic CSF within 3-6 months, or may never develop symptoms but continuously shed virus. Mild CSF is typically seen only in sows and may

result from exposure to a low virulent strain. Infected sows may show no overt clinical signs but continuously shed virus to their young and to other swine they contact.

2. Swine vesicular disease virus

SVD is a contagious and economically damaging disease of domestic swine and wild boar. The disease has historically been recorded in Hong Kong, Japan, and several European countries; however, in 2004 the disease was primarily limited to Italy and Portugal (OIE 2005a). The SVD virus belongs to the family Picornaviridae, genus *Enterovirus* (Wengler et al 1995). SVD virus is particularly hardy, resistant to pH changes between 2.5 and 12 (Herniman et al 1973), and is very stable under cold conditions (Dawe 1974). The virus is therefore unlikely to be destroyed by the post-mortem decrease in muscle pH that accompanies carcass maturation. SVD virus is also resistant to fermentation and smoking processes, and may remain in hams for 180 days, sausages for over a year, and processed intestinal casings for over two years (OIE 2005a).

The incubation period for SVD is 2-7 days. The intestinal tract is the primary site of infection; however, all tissues contain virus during the viremic period. Blood and feces of sick animals, as well as epithelium from vesicles and vesicular fluid, are good sources of virus. Although SVD virus does not appear to have a tropism for skeletal muscle cells, it is easily isolated from muscle tissue from infected animals after slaughter and bleeding out. SVD may be introduced into a herd by feeding garbage containing infected meat scraps, by introducing infected animals, or by contacting infected feces (e.g., an improperly cleaned truck) (Hedger and Mann 1989; USAHA 1998). After the initial introduction the disease spreads through contact of susceptible pigs with infected pigs and infected feces.

The clinical signs of SVD are easily confused with those of FMD and include fever, sudden lameness, and vesicles with subsequent erosions along the snout, feet, and teats. Morbidity rates may be low throughout a whole herd but high in certain pens. SVD causes essentially no mortality, and recovery usually occurs within 1 week (up to 3 weeks). Persistence of infection with SVD is rare (Lin et al 2001); however, some strains produce only mild clinical symptoms or are asymptomatic, and are detected only through laboratory surveillance (OIE 2005a). For example, a 2002 outbreak of SVD in Italy involved subclinical infection in all but one of 10,312 affected pigs (Brocchio et al 2002).

Release Assessment

A release assessment describes the biological pathway(s) necessary for an importation activity to introduce pathogenic agents into a particular environment and estimates the probability of that occurring (OIE 2005b). This release assessment addresses the 11 factors described under 9 CFR 92.2 for evaluation and regionalization of countries for foreign animal disease status. Risk factors and issues of concern, which directly or indirectly affect the risk estimate, are identified and discussed at greater length in Section 12, including risk mitigation measures currently existing in Poland. APHIS evaluated the current status of CSF and SVD in Poland, as well as pathways for disease introduction into Poland with the potential to impact the assessed status.

1. Authority, organization, and infrastructure of the veterinary services

1.1 Legal authority for animal health activities

The main legal authority for the animal health activities of the official veterinary services in Poland resides in the Veterinary Law of 1997, as amended in 1999 and 2001 (Annex 4 of GVI 2004a). The Veterinary Law stipulates the authority and obligations of the official veterinary services with regard to animal identification, import and movement controls, quarantine procedures, reportable diseases, disease control and eradication, and seizure, depopulation, and compensation in outbreak situations.

The Veterinary Law also stipulates the obligations of animal owners and private veterinarians with regard to reporting of animal infectious diseases, and ensures access by government officials to private property. Both CSF and SVD are reportable diseases under the Veterinary Law, with a penalty of fine, limitation of freedom, or imprisonment for noncompliance (Annex 4 of GVI 2004a).

In addition, the Veterinary Law 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 official veterinary service is obliged to inspect at least 10% of farms annually for compliance; however, veterinary officials indicated that some local units have difficulty reaching this level of enforcement (APHIS 2004).

Various additional Regulations of the Minister of Agriculture and Rural Development prohibit the preventive vaccination of animals against CSF and other transmissible diseases of animals, designate border checkpoints for inspection, and specify surveillance measures for CSF, SVD, and other infectious animal diseases. The latter regulation is reissued annually.

The primary articles of EC legislation pertaining to control of CSF and SVD are listed in Table 1.1 with the corresponding transposition into Polish legislation (Annex 1 of GVI 2005). 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. In general, official

veterinarians appeared very familiar with the provisions of the EC and Polish legislation concerning CSF and SVD (APHIS 2004).

Table 1.1: Transposition of critical EC legislation regarding CSF and SVD

Disease	EC legislation	Polish legislation
CSF	Council Directive 2001/89/EC of 23 October 2001 on Community measures for the control of classical swine fever (as amended)	(1) Act of 27 August 2003 on the veterinary border control; (2) Act of 10 December 2003 on the veterinary controls in trade; (3) Act of 29 January 2004 on the veterinary inspection; (4) Act of 29 January 2004 on requirements for animal products; (5) Act of 11 March 2004 on the protection of animal health and eradication of infectious diseases in animals; and (6) various Regulations of the Ministry of Agriculture and Rural Development.
	Commission Decision 2002/106/EC of 1 February 2002 approving a Diagnostic Manual establishing diagnostic procedures, sampling methods and criteria for evaluation of the laboratory test for the confirmation of classical swine fever (as amended)	Directly applicable to Member States
SVD	Council Directive 92/119/EEC of 17 December 1992 introducing general Community measures for the control of certain animal diseases and specific measures relating to swine vesicular disease (as amended)	(1) Act of 29 January 2004 on the veterinary inspection; (2) Act of 11 March 2004 on the protection of animal health and eradication of infectious diseases in animals; and (3) various Regulations of the Ministry of Agriculture and Rural Development.
	Commission Decision 2000/428/EC of 4 July 2000 establishing diagnostic procedures, sampling methods and criteria for the evaluation of the results of laboratory tests for the confirmation and differential diagnosis of swine vesicular disease	Directly applicable to Member States

1.2. Organization of the official veterinary services

1.2.1 Central competent authority

The General Veterinary Inspectorate (GVI) is the central competent authority for Poland. The internal organization of the GVI is described in Resolution No. 1/2003 of the Chief Veterinary Officer of 26 February 2003 (Annex 2 of GVI 2004a). The GVI is managed by a Chief Veterinary Officer (CVO), who is appointed by the Prime Minister at the request of the Minister of Agriculture and Rural Development. Reporting to the CVO are two Deputies and a General Director, with responsibilities as shown in Figure 1.1.

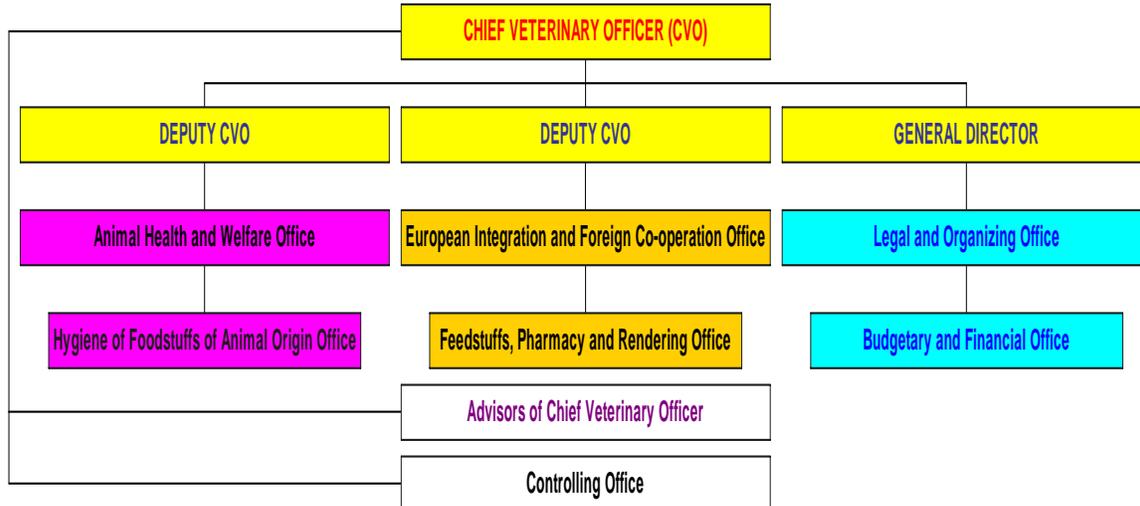
The General Director is responsible for legal and budgetary affairs as well as management of an internal audit office, which audits the civil service and financial operations of the GVI. The Controlling Office, which has 6 employees, additionally functions to control and audit all levels of the official veterinary services. Not shown in

Figure 1.1 but also reporting directly to the CVO are the Director of the Office of Borders and the Director of the Office for Sanitary and Epidemiological Control.

The Office of Borders was established 6 months prior to accession to adjust Polish import and trade laws and physical structures at the border crossings to EC requirements (APHIS 2004). Since May 2004, the Office of Borders has administrative and supervisory responsibilities for all border inspection posts (BIPs), and functions to coordinate BIP activities, review appeals, issue permits for animals and products not harmonized under EC legislation, create and approve health certificates for third countries, and oversee the construction of new BIPs.

The Office for Sanitary and Epidemiological Control consists of 8 people, most of whom are experts in sanitary issues (APHIS 2004). The function of this office is advisory and the role is to deal with emergency situations.

Figure 1.1: Organizational structure of the General Veterinary Inspectorate



1.2.2 Regional veterinary services

In 1996, Poland was divided into 49 main provinces (FVO 2001). The country was restructured in 1999 into 16 provinces and 308 districts. Each province has a Provincial Veterinary Inspectorate headed by a Provincial Veterinary Officer (PVO) (GVI 2004a). The organizational structure of the provincial offices is similar to that of the GVI, with divisions for animal health and welfare, food safety, animal feedstuffs, etc. The PVOs are appointed by the Governor of each province and approved by the CVO to manage the provincial veterinary services.

1.2.3 Local veterinary services (administrative unit)

Each province is divided into several districts (*powiats*; singular *powiat*), and most districts have a District Veterinary Inspectorate headed by a District Veterinary Officer (DVO) (GVI 2004a). The district is regarded by APHIS as an “administrative unit,” or the smallest administrative jurisdiction that has effective oversight of normal animal

movements into, out of, and within that jurisdiction, and that, in association with national authorities, if necessary, has effective control over animal movements and animal diseases locally (APHIS 2005). This is the smallest unit to which APHIS could effectively regionalize for disease status under its current regulations.

The organizational structure of the district offices is also similar to that of the GVI. There are 308 districts and 301 DVOs who oversee the field activities of official and private veterinarians. The official veterinarians at the district level are responsible for supervising private veterinarians who are approved to perform official duties.

The role of approved private veterinarians is defined under Article 16 of the Veterinary Law (Annex 4 of GVI 2004a). Private veterinarians are approved and supervised by a DVO, and contracted to perform certain official activities, including prophylactic vaccinations for diseases other than CSF or SVD, examinations prior to animal movement, ante-mortem and post-mortem examinations at slaughter, and sample collection for disease surveillance programs. Out of roughly 7,000 private veterinarians in Poland, approximately 2,000 are approved to carry out official duties, most of whom perform inspections of slaughter animals (APHIS 2004).

1.2.4 Border veterinary inspection

Poland has 9 EC-approved BIPs with veterinary control: 3 seaports, 1 airport, and 5 road crossings (Corrigendum to Council Decision 2004/469/EC). These are described in more detail under Section 7. Each BIP is headed by a Border Veterinary Officer (BVO), who is appointed by and reports directly to the CVO. The GVI has plans to open 2 more BIPs within 2 years: a rail crossing at Terespol on the border with Belarus in 2005 and a road crossing at Hrebenne on the border with Ukraine in 2006 (APHIS 2004).

1.2.5 Diagnostic laboratory services

The National Veterinary Research Institute (NVRI) in Puławy is the national reference laboratory for CSF as described in Section 10 (APHIS 2004). 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.

1.3 Infrastructure of the official veterinary services

1.3.1 Physical infrastructure

The central, provincial, and district offices visited by the site visit teams were housed in buildings that are aging, but in some cases were undergoing extensive renovations (APHIS 2004). All offices had computers with internet and intranet connections. Extensive paper files are kept in most cases, with some difficulties noted in storage and retrieval of records. In comparison, the BIPs visited were relatively new with extensive and comprehensive facilities, some sectors of which have never been used. The NVRI was well equipped to run diagnostic and research projects on swine diseases.

1.3.2 Personnel infrastructure

The official veterinary service employs more than 2,060 veterinarians, in addition to support personnel (OIE 2005a). The GVI has 50 employees as described above. There are approximately 620 employees at the provincial level and 2,411 employees at the district level (GVI 2003a). The number of veterinary inspectors and support personnel at each BIP varies depending on the volume of traffic, but ranges from 2-14 and 1-5, respectively. The NVRI has 360 employees, of which 110 are scientists (APHIS 2004). The Swine Disease Department of the NVRI has a staff of 24, including 8 scientists and 8 technicians. The branch laboratory in Zduńska Wola has a staff of 30, including 4 research scientists and 9 technicians.

All official and private veterinarians must be members of the Polish Veterinary Chamber. Under the Veterinary Law, the CVO, PVOs, DVOs, and BVOs must be licensed veterinarians (Annex 4 of GVI 2004a). The CVO, PVOs, and their deputies must also have at least 5 years experience in veterinary administration. In addition, the DVOs, BVOs, and their deputies must have at least 3 years experience in veterinary administration. The PVOs, DVOs, and BVOs must hold a specialist title in epidemiology, veterinary administration, or food hygiene.

Ongoing training is provided by the GVI for the provincial officials, and by the provincial officials for the district officials. The district officials in turn provide continuing education to the approved private veterinarians (APHIS 2004). The provincial officials may also receive additional training abroad that is funded by the EC. Provincial officials organize monthly seminars for district officials to facilitate knowledge exchange and understanding of new regulations. A PVO may also organize additional subject matter training at the request of a DVO.

District officials meet with private veterinarians who are approved to perform certain functions for the official veterinary services, and in some instances with non-approved private veterinarians, every 3 months to update them on legislative changes and to review the reportable diseases (APHIS 2004). The approved private veterinarians receive additional training on CSF and SVD at the quarterly meetings, including what samples to take in case of suspicion of these diseases.

The border inspectors received practical training prior to accession both at the Polish BIPs and at other checkpoints in the EU (APHIS 2004). They do not generally participate in national disease simulation exercises, but some – for example, at the Warsaw airport – received additional practical experience for 6 months during the 2001 FMD outbreak in the United Kingdom.

1.3.3 Financial resources

The budget for the GVI comes from the Ministry of Agriculture and Rural Development (APHIS 2004). The total budget for veterinary inspection in 2004 was approximately 346.5 million zloty (107 million USD), which included a financial reserve of 75 million zloty (23.2 million USD) for control of infectious animal diseases (GVI 2005). The budget for the official veterinary services 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 GVI (APHIS 2004).

The annual budget for the NVRI is approximately 11 million złoty (3.6 million USD), of which one third comes from the Ministry of Science (research), slightly over one third from the Ministry of Agriculture (reference laboratory), and the rest from user fees for services provided (APHIS 2004). 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 CSF or SVD (Council Decision 90/424/EEC)

1.4 Internal and external audit systems

1.4.1 Internal auditing

As mentioned above, the GVI General Director is responsible for managing an internal audit office, which audits the civil service and financial operations of the GVI. In addition, the Controlling Office functions to control and audit all levels of the official veterinary services. Copies of audit reports from 2004 were provided to APHIS (Annexes 7 and 8 of GVI 2005).

1.4.2 External auditing

The Food and Veterinary Office (FVO), which is part of the EC's Health and Consumer Protection Directorate-General, conducted numerous animal health, animal welfare, and food safety inspections in Poland prior to accession. The majority of these reports has not been made public and was not available for this assessment; however, no derogations were made for animal health at the time of accession. Polish officials indicated that corrective actions were taken as recommended by FVO auditors (APHIS 2004).

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.

1.5 Discussion

The official veterinary services are hierarchically organized and appear to have clear lines of command and reporting, with considerable autonomy at the district level. The responsibilities of each supervisory position and the departments are well defined, and the departments appear to have sufficient independence to carry out the tasks assigned efficiently. Official veterinarians, particularly at the district level, appear to be familiar with directly applicable and transposed EC legislation concerning CSF and SVD, and implement the provisions thereof.

The official veterinary services have sufficient legal authority, personnel, and financial resources to carry out most animal health activities quickly and efficiently. However, some districts are unable to conduct the minimum number of on-farm inspections necessary to adequately monitor compliance with existing legislation, most notably

regarding waste feeding. Similarly, some districts were unable to collect the required number of samples for CSF surveillance in wild boar, as discussed in Section 9.

Waste feeding is arguably the most common route of introduction of CSF or SVD into a susceptible swine population and feeding of household kitchen waste to swine is a common practice for small holders throughout the world. Monitoring of the waste-feeding ban via on-farm inspections by the official veterinary services is unlikely to ensure full compliance, particularly on small swine farms, which is an issue of concern for introduction of swine diseases. The impact on the risk of disease introduction into Poland and export risk to the United States is discussed in Section 12.

2. Disease status in the region

2.1 Classical swine fever

Poland last reported a CSF outbreak in domestic swine in September 1994 (GVI 2003a; GVI 2004a; OIE 2005a). Prior to that, 3 outbreaks occurred in 1993, 9 outbreaks in 1992, 1 outbreak in 1989, and 1 outbreak in 1978. From 1973-1977, up to 20 outbreaks were reported per month, although Polish officials consider the data from this time period unreliable (GVI 2004a).

In 1994, 8 outbreaks were reported in the territories of the current Lubuskie province, which borders Germany; the Podlaskie and Lubelskie provinces, which border Lithuania, Belarus, and Ukraine; and the Wielkopolskie province in west central Poland (see Figure 2.1). All of the outbreaks occurred in domestic swine and were controlled by destroying the affected herds. The outbreak source was not definitively identified. Travelers from the Former Soviet Union and Germany were implicated in the outbreaks in the Podlaskie and Lubelskie provinces, and infected wild boar may have played a role in the outbreaks in the Wielkopolskie and Lubuskie provinces (GVI 2004a).

Figure 2.1: Map of Poland and adjacent regions



No CSF cases in wild boar have been reported in recent years (GVI 2004a). However, the FVO reported that 10 samples out of 1,684 taken from wild boar in 1996 were found to

be virus positive (FVO 2001). An FVO mission conducted in 1997 concluded that the CSF situation in wild boar was not accurately known but considerable advances have been made since that time (see Section 9).

2.2 Swine vesicular disease

The last reported SVD outbreak in domestic swine occurred in 1972 and the affected herds were destroyed (GVI 2003b). SVD has never been reported in wild boar in Poland. Poland is recognized by the EC as free of SVD.

2.3 Discussion

The last reported outbreaks of CSF occurred over 10 years ago in domestic swine and over 7 years ago in wild boar. Both time periods far exceed those recommended by the OIE for disease freedom (OIE 2005a). Over 3 decades have passed since the last reported outbreak of SVD in domestic swine, and Poland has never reported a case of SVD in wild boar. Surveillance practices for CSF and SVD are discussed in Section 9.

3. Disease status of adjacent regions

Poland borders to the west with Germany; to the south with the Czech Republic and Slovakia; to the east with Ukraine, Belarus, and Lithuania; and to the north with the Baltic Sea and the Kaliningrad region of Russia (see Figure 2.1).

3.1 Classical swine fever

APHIS does not recognize any of the neighboring countries as entirely free of CSF, although Lithuania, Slovakia, and the Czech Republic were under evaluation at the time this report was written. APHIS considers any region affected with CSF until the agency has completed an evaluation showing otherwise. An evaluation is initiated when veterinary authorities of the foreign country request, which the third countries bordering Poland have not done.

At the time this report was written, APHIS recognized all of Germany except certain administrative units (kreis) in the Lands of Brandenburg, Lower Saxony, North Rhine-Westphalia, Rhineland-Palatine, and Saxony-Anhalt to be free of CSF. CSF is endemic in certain segments of the wild boar population in Germany and sporadic outbreaks involving both wild boar and domestic swine are ongoing. Numerous outbreaks in wild boar, and occasionally domestic swine, have been reported in recent years in the Land of Rhineland-Palatine, which is located in western Germany (OIE 2006).

Sporadic CSF outbreaks also continue in Slovakia, most recently among domestic pigs in August 2005 in the Lučenec district (OIE 2005a). CSF is present in segments of the wild boar population, with the heaviest concentrations of infected animals reported along the southern border with Hungary (FVO 2001). CSF in wild boar has historically proven very difficult to eradicate in EU Member States and infected wild boar constitute a reservoir for exposure of domestic swine (EC 1999). Outbreaks have occurred outside of established control zones within affected EU Member States (OIE 2004a).

The Czech Republic last reported a CSF outbreak in November 1999, in wild boar (OIE 2005a; FVO 2000). Twelve other outbreaks were reported previously that year. Multiple outbreaks were reported in wild boar in 1998, and 2 outbreaks in domestic swine were reported in both 1997 and 1996. The outbreaks occurred near Kroměříž and Břeclav, which lie to the southeast.

Lithuania last reported a CSF outbreak in October 1992 in domestic swine. The outbreak occurred in Klaipėda county in western Lithuania (OIE 2005a). Several other outbreaks occurred in domestic swine in 1990-1991; however, the closest outbreak was in Alytus district, approximately 55 kilometers from the Polish border.

Of the third countries bordering Poland, Ukraine last reported a CSF outbreak in wild boar in July 2001 in the Trachtemirivskae regional park, which is centrally located in Ukraine (OIE 2005a). In July 2002, Ukraine reported that investigation of 6 wild boar shot in park gave negative results for CSF. Belarus last reported a CSF outbreak in August 1995 (OIE 2005a). CSF outbreaks are ongoing in Russia; however, none have been reported in the Kaliningrad region since April 1996 (OIE 2005a). Ukraine, Belarus, and Russia maintain vaccination programs for CSF (APHIS 2004; OIE 2005a).

3.2 Swine vesicular disease

APHIS recognizes Germany as free of SVD under Title 9, *Code of Federal Regulations*, Section 94.12 (9 CFR 94.12) with restrictions as described under 9 CFR 94.13¹. Lithuania, Slovakia, and the Czech Republic were under evaluation at the time this report was written, although. SVD has never been reported in any of these regions (OIE 2005a). APHIS has not evaluated Belarus, Russia, or Ukraine and regards these countries as unknown risk for SVD; however, SVD has never been reported in Belarus or Russia, and Ukraine last reported an outbreak in 1977 (OIE 2005a).

3.3 Cooperative programs

The GVI receives infectious disease information from neighboring countries via CVO-CVO contacts, through the media, as monthly bulletins, and via diplomatic missions (APHIS 2004). Poland also receives information from the OIE and, for the EU and Norway, through the Animal Disease Notification System (ADNS). Poland has signed agreements with Russia, Ukraine, and Belarus that specifically require notification of outbreaks of infectious animal diseases; however, Polish veterinary officials indicated that access to information regarding the epizootic situation in neighboring non-EU countries has declined since accession (APHIS 2004). Direct CVO-CVO contacts in particular have declined substantially. In addition, there currently appears to be a very poor working relationship at all levels between Poland and Belarus.

3.4 Discussion

3.4.1 Classical swine fever

The existence of common land borders with potentially CSF-affected regions is an issue of concern for introduction of CSF into Poland (see Sections 6 and 7). APHIS considers all of the countries bordering Poland, with the exception of certain kreis in Germany, affected with CSF, although the Czech Republic, Slovakia, and Lithuania were under evaluation at the time this report was written. The majority of these regions have not reported an outbreak in domestic swine in over 6 years; however, APHIS has little knowledge of the surveillance practices in third countries such as Belarus, Ukraine, and Russia. In addition, the third countries vaccinate for CSF, which could potentially mask the presence of the disease. CSF outbreaks outside of established control zones within affected EU Member States where CSF is endemic in wild boar pose a risk of disease spread prior to detection and containment.

3.4.2 Swine vesicular disease

APHIS considers all of the countries bordering Poland, with the exception of Germany, affected with SVD, although the Czech Republic, Slovakia, and Lithuania were under evaluation at the time this report was written. However, SVD has not been reported in these regions for over 2 decades, if ever. While the potential for introduction of SVD

¹ Regions listed under 9 CFR 94.13 are in a special category because, even though APHIS has determined that the region is free of SVD, one or more of the following conditions occur: (1) the region supplements its national pork supply with fresh, chilled, or frozen pork from regions that are not designated in 94.12 as free of SVD; (2) it shares a common land border with regions that are not considered to be free of SVD; or (3) it has trade practices that are less restrictive than are acceptable to the United States. The text of 9 CFR 94.13 is provided in Annex 1.

from neighboring countries cannot be ruled out in the absence of additional information on surveillance and reporting practices, APHIS considers the likelihood to be low in comparison to CSF.

4. Extent of an active disease control program

4.1 Former OIE List A diseases

Polish veterinary officials considered their country to be free of all former OIE List A diseases at the time this report was written. Poland is listed by the OIE as free of FMD without vaccination and is recognized by APHIS as free of FMD and rinderpest under 9 CFR 94.1, with restrictions as described under 9 CFR 94.11².

4.2 Discussion

Active disease control programs for CSF or SVD do not exist in Poland, since these diseases have not been reported for many years. Surveillance for these diseases is discussed in more detail in Section 9. Poland is considered free of FMD and, if found to be free of CSF and SVD as well, would be able to export swine products to the United States with appropriate mitigation measures for these and other swine diseases.

² Regions listed under 9 CFR 94.11 are in a special category for FMD because, even though APHIS has determined that the region is free of FMD, one or more of the following conditions occur: (1) the region supplements their national meat supply through the importation of meat from ruminants or swine from regions that are not designated in 9 CFR 94.1 as free of FMD; (2) they share a common land border with regions that are not designated as free of FMD; or (3) they import ruminants or swine from regions that are not designated as free of FMD under conditions less restrictive than would be acceptable for importation into the United States. The text of 9 CFR 94.11 is provided in Annex 1.

5. Vaccination status of the region

5.1 General information

The last vaccination against CSF occurred in 1996 and vaccination was officially banned in February 1998 (GVI 2003a; GVI 2004a). Although Poland has never vaccinated against SVD, such vaccination was also officially banned in February 1998 (GVI 2003b). Previous legislation banning preventive vaccination against CSF and SVD was then superceded by the Regulation of the Minister of Agriculture and Rural Development of 17 February 2003 prohibiting protective vaccination of animals against specified contagious diseases (GVI 2004a). The Polish contingency plans for CSF (Annex 5 of GVI 2004a) and SVD (Annex 6 of GVI 2005), described in greater detail in Section 11, allow for emergency vaccination in an outbreak situation if sanctioned by the EC.

5.2 Discussion

Vaccination against CSF and SVD is officially prohibited in Poland. Since the last vaccination against CSF occurred in 1996, the probability of a vaccine titer interfering with routine CSF surveillance is very low. Any positive result on surveillance testing triggers a comprehensive epidemiological investigation (APHIS 2004).

6. Separation from adjacent regions of higher risk

6.1 General information

Natural barriers to disease transmission include the Baltic Sea to the north, the Odra and Nysa Luzycka rivers on the western border with Germany, the River Bug on part of the eastern border with Belarus and Ukraine, and the Sudety and Carpathian mountain ranges on the southern border with the Czech Republic, Slovakia, and to a small extent, Ukraine (GVI 2003; GVI 2004a). Wild boar can move freely in the northeastern territory along the Polish border with the Kaliningrad region of Russia, Lithuania, and Belarus, which is primarily woodlands with low population density, and also in the lower sections of the mountains in the south.

6.2 Discussion

The lack of natural barriers along the northeastern border with Lithuania, Belarus, and the Kaliningrad region of Russia, as well as sections along the southern border with the Czech Republic, Slovakia, and Ukraine, is an issue of concern for APHIS. Without natural barriers, few impediments exist to introduction of CSF or SVD via natural movement of wild boar or, less likely, human traffic. Wild boar are not considered to be migratory in nature, but individual animals are known to travel substantial distances in search of food, during mating season, or in response to hunting or other habitat disruptions. Moreover, CSF is known to exist in wild boar in neighboring countries (see Section 3). Factors influencing the likelihood of disease introduction via natural movement of wild boar are discussed in more detail in Section 12.

7. Movement control and biosecurity from higher risk regions

7.1 Border veterinary inspection points

7.1.1 Infrastructure

Poland currently has 8 EC-approved BIPs with veterinary control: 3 seaports on the Baltic Sea at Gdynia, Świnoujście, and Szczecin; 1 airport in Warsaw; 1 road port with the Kaliningrad region of Russia at Bezledy; 2 road ports with Belarus at Kukuryki-Koroszczyn and Kuźnica-Białostocka; and 1 road port with Ukraine at Korczowa (Commission Decision 2001/881/EC). Polish veterinary officials indicated that a road port at Dorohusk on the border with Ukraine is also EC-approved, but only for animal feed (APHIS 2004). There are plans to open 2 more BIPs within 2 years: a rail crossing at Terespol on the border with Belarus in 2005 and a road crossing at Hrebenne on the border with Ukraine in 2006.

All of the BIPs are fully approved for products and live animals except for the seaports at Świnoujście and Szczecin, and the airport in Warsaw. The fully approved BIPs were built to EC specifications as described by Annex II of Council Directive 97/78/EC and Commission Decision 2001/812/EC. Each BIP has separate sectors for unloading and inspection of live ungulates, other live animals, products of animal origin for human consumption, and products of animal origin not for human consumption (APHIS 2004). The live animal sectors have appropriate facilities for animal restraint and housing; the product sectors have adequate room for offloading, examination, sampling, and storage at either room temperature, refrigerated, or frozen.

The BIP facilities generally house both the veterinary inspectors and Customs Service employees (APHIS 2004). All of the BIPs are fully computerized and have both internet and intranet access. At the time of the site visit, the BIPs were using the ANIMO system since TRACES was not yet available in Polish, but officials reported that they made the transition to TRACES in December 2004 (GVI 2005). The number of veterinary inspectors and support personnel at each facility depends on the volume of traffic, but ranges from 2-14 and 1-5, respectively. Most of the EC-approved BIPs are open 24 hours, 7 days per week.

The volume of inspections at the BIPs visited by the APHIS team in November 2004 was light and the facilities were operating well within the scope of their resources (APHIS 2004). The veterinary inspectors appeared knowledgeable of the pertinent EC and Polish legislation and were confident in their job skill. The GVI Border Office is responsible for organizing annual inspections of the BIPs, and periodic audits are conducted by the FVO (APHIS 2004; FVO 2005).

7.1.2 Biosecurity

Each sector within a BIP is kept locked and only opened by key or electronic card (APHIS 2004). All employees must go through a clean room with shower and changing facilities when entering or exiting any sector. Each sector is cleaned and disinfected after unloading and reloading, as are the storage rooms if used. Animal transport vehicles entering Poland must be accompanied by documentation indicating that they were disinfected prior to animal loading. It is standard operating procedure for all trucks to

pass over a disinfection mat at the point of entry. In addition, all live-haul trucks must be disinfected after each transportation, preferably at their point of destination (GVI 2005).

The airport and seaports have written agreements with municipal waste removal companies to collect catering waste from incoming flights or ships and transport it to an incineration facility approved for such processing under EC regulations (APHIS 2004; FVO 2005). A confirmation of the amount incinerated is returned to the border officials monthly. Animal waste from transport trucks is also rendered.

Each BIP has a contingency plan to follow in the event of a disease outbreak within the facility or in a neighboring country. Veterinary officials indicated that, if an outbreak were reported, measures would be put in place to disinfect the undercarriage of all vehicles entering from the affected region (APHIS 2004). Additional biosecurity measures would be enacted for airline passengers from affected regions in the event of an outbreak further abroad.

7.2 Import controls

7.2.1 Legislative controls

Live swine, pork, pork products, and genetic materials are harmonized commodities under EC legislation, which means that the requirements for importation from third countries are standardized across all of the Member States. Council Decision 79/542/EEC lists third countries from which live animals and fresh meat may be imported into the EC. Other legislation specifies the conditions under which meat products, meat preparations, wild game meat, and genetic material may be imported from third countries. Most of the basic import control legislation has been transposed into Polish law; however, a lack of Polish translation of some EC legislation has occasionally hindered the transposition and implementation process (APHIS 2004; FVO 2005).

Council Decision 79/542/EC permits importation of live swine from Switzerland, Chile, Canada, New Zealand, and Iceland. APHIS considers all of these countries free of SVD, with or without restrictions under 9 CFR 94.13³, and all but Switzerland free of CSF, with restrictions on Chile under 9 CFR 94.25. The veterinary authorities of Switzerland have not requested that APHIS evaluate the CSF risk of that country. APHIS therefore has little knowledge of CSF surveillance and reporting practices in Switzerland, except that it reported CSF in wild boar in 1999 and is bordered by Member States with endemic CSF infection in wild boar.

Council Decision 79/542/EC also allows importation of fresh pork and pork products from domestic swine from Belarus and several other regions that APHIS has not evaluated and therefore regards as unknown risk for CSF or SVD, and also permits some of these regions to export fresh meat from wild boar to EU Member States. However, slaughter establishments, cutting plants, and cold storage units in third countries must be inspected and approved for export to the EC. The inspection process is stringent, although the EC may grant provisional approval prior to inspection if the exporting country provides sufficient guarantees that the required conditions are met.

³ See footnote on page 19.

Commission Decision 2002/613/EC specifies import conditions for swine semen, including animal health conditions and model veterinary certificates, and lists both third countries authorized to export and approved semen collection centers. Import of swine semen is permitted from approved collection centers in Canada, New Zealand, the United States, and Switzerland. Swine semen collection centers must be approved by the EC in accordance with Council Directive 90/429/EEC, which was amended by Commission Decision 1999/608/EC to introduce more stringent biosecurity measures in response to the 1996-97 CSF outbreaks in domestic swine involving two semen collection centers.

In summary, swine semen collection centers must be inspected by official veterinarians of the exporting country at least twice per year. Under the amended regulations, swine admitted to a semen collection center must originate from a herd that is not situated in an area restricted due to disease in domestic swine and must be quarantined for at least 30 days prior to entry. In the case of Switzerland, boars must test negative for CSF within the 30 days prior to quarantine and, to maintain approval, routine testing for CSF must be carried out on 25% of the animals in the center every 3 months or on all animals leaving the center within 1 year of admission. All animals must be tested at least once while at the center and at least every 12 months if their stay exceeds 1 year.

7.2.2 Certification

EC certification requirements for import of live swine and swine products from third countries are generally comprehensive with respect to OIE guidelines and must be signed by an official veterinarian of the country of origin. Commission Decision 2004/212/EC lays out model veterinary certificates for live swine and fresh meat from domestic swine and wild suidae. Model veterinary certificates for embryos, semen, meat products, and related commodities are provided in other Commission Decisions.

The specific certificate used depends on the commodity for export, the exporting country and, in the case of live animals, the purpose for which they are exported (breeding, production, or direct slaughter). BIP inspectors can download country and commodity specific certificates from a website maintained by the EC (VetLex).

For live animals, an official veterinarian must certify that the exporting region is free of FMD, CSF and/or SVD as appropriate, that the swine have remained in the region at least 3 months (slaughter animals) or 6 months (breeding or production animals) prior to export, and that they have not been exposed to any imported cloven-hoofed animals in the 30 days prior to export. The veterinarian must also certify that the swine have not been vaccinated, have remained at a designated holding or assembly center for 40 days prior to export, and that no outbreaks have occurred within a 20 km radius in the preceding 40 days. In addition, live swine from Switzerland, Chile, and Iceland must test negative for CSF and SVD in the 30 days preceding export.

An official veterinarian must certify similar statements for meat and meat products for export to the EU. Some regions must provide additional certification regarding swill feeding to domestic swine. One provision would require laboratory testing for CSF of fresh meat from feral swine, but this provision is not currently applied to any region. For swine semen, an official veterinarian of the exporting country must certify that the semen originated from donor boars in an approved collection center, located in a region free

from FMD, CSF, and SVD for at least 12 months without vaccination (Commission Decision 2001/613/EC).

7.2.3 Veterinary inspection

Veterinary inspection and laboratory analysis protocols for swine and swine products follow EC requirements as described in Council Directives 91/496/EEC, 97/78/EC, and other regulations (APHIS 2004). Polish veterinary officers have created a handbook for BIP veterinary inspectors that outlines standard operating procedures for inspection of live animals and animal products in accordance with EC legislation (Annex 8 of GVI 2004a). This handbook was recently amended to reflect changes in EC legislation and provide additional guidance to inspectors (FVO 2005).

According to EC legislation, the common veterinary entry document (CVED) must be used for pre-notification of incoming shipments and submitted to the inspection post at least one working day prior to entry. A recent FVO mission noted that pre-notifications were not received for products of animal origin and not always for live animals, and in some cases the CVED pre-notification for live animals was incomplete (FVO 2005). The GVI subsequently gave assurances that these issues had been addressed in the amended handbook and emphasized in subsequent training and inspections.

Once a shipment arrives, there are three stages of control for both live animals and products: (1) a document check 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; (2) an identity check or visual confirmation of correct ear tags, chips, tattoos, or codes; and (3) a general physical examination with a percentage of the shipment singled out for a more thorough examination.

Live animals are usually unloaded unless they are considered to be dangerous (APHIS 2004). The proportion of animals that receive a detailed physical exam each month varies with the purpose for import: 5% of slaughter animals are checked and 10% but not less than 10 head of breeding animals. The number of animals needed to fulfill these monthly percentages is estimated from the previous month. About 3% of animals are examined serologically for relevant diseases each month. Animals are generally not held for the test results, but rather follow-up occurs at the point of destination if an animal is seropositive, which has not occurred in recent years. The BIPs archive animal health documents for 3 years and financial documents for 7 years.

The BIPs can hold animals if quarantine is required as a condition for entry; however, this usually only occurs for animal welfare reasons or if the documentation is incomplete (APHIS 2004). If a former OIE List A disease is suspected, the animals are held at the BIP. If inspectors suspect other diseases, the shipment can be rejected or a quarantine can be ordered at the BIP, a premises designated by the DVO, or the place of destination. In general, the DVO at the point of destination decides whether quarantine is necessary and, if so, designates a specific place. The BVO informs the DVO when a shipment is coming.

Products are examined to ensure that they are properly identified and that the country and exporting establishment are listed as approved by the EC (APHIS 2004). There is a computer-generated system to select 20% of the shipment for a visual check. Three percent of the shipment undergoes laboratory examination using tests selected by the BIP

officials. Testing usually focuses on organoleptic properties but may measure metals or residues. Products are held until the test results are known.

If an infectious animal disease is suspected, the entire shipment would be immediately returned or destroyed via rendering. There have been no suspicions of former List A diseases since accession (APHIS 2004). If the shipment is not in compliance with regulations but there is no immediate danger, it is confiscated and the importer is given 60 days to decide whether to take it back or have it destroyed. After 60 days, the product is destroyed at the expense of the importer. Dead animals and product to be destroyed are moved to a rendering facility under the supervision of the Customs Service and rendering is confirmed by the receiving company.

If the veterinary inspection is satisfactorily completed, an official veterinarian completes and signs the CVED, then passes it to the Customs Service (APHIS 2004). Customs officers meanwhile check the cabin of each truck, and all trucks pass through both a radiation detector and a machine that uses X-ray technology to scan the cargo. The original of the CVED accompanies the shipment to the point of destination. If the shipment is refused, the appropriate information is entered on the CVED and all other EU BIPs are notified of the actions taken.

The APHIS site visit team noted that identification and selection of consignments for veterinary inspection is carried out by the Customs Service without veterinary input (APHIS 2004). The BIP veterinarians did not have access to customs databases and therefore do not have complete knowledge of consignments arriving, transited, or transshipped to the relevant BIPs. An FVO mission also noted this problem and Polish authorities subsequently gave assurances that these issues were addressed through joint training, broader access to customs databases, and other cooperative efforts (FVO 2005).

7.3 Transit and transshipment controls

Transit and transshipment of products between third countries is allowed under EC legislation provided that there are no import restrictions for the commodity on the source country. These products undergo a document check and identity check at the point of entry, but no further unloading or alteration of the cargo is allowed while in Poland. The conveyance is sealed, a route plan approved, and a specific exit point designated. The BIP at the exit point is notified of the trans-shipment and records the exit.

A recent FVO report noted that a system for follow-up of transit consignments in accordance with EC requirements is in place, but several deficiencies were noted in the system to monitor transshipments (FVO 2005). The GVI subsequently provided assurances that these deficiencies had been rectified.

7.4 Controls on intra-Community trade

Trade in live swine and swine products within the EU is primarily governed by a series of Council Directives that were transposed into Polish legislation prior to accession. Shipments to EU markets that cross Member State borders must originate from an assembly center and animals are required to remain on the assembly center premises for an observation period prior to trade. There are official assembly centers for different species in each district in Poland, although all districts do not have assembly centers for all species (APHIS 2004). However, prospective animal exporters can apply to the DVO

of their district and, if they fulfill the requirements for assembly centers, an official veterinarian will go to the farm and certify the shipment.

An approved or official veterinarian performs the physical examination and any required sampling, and an official veterinarian completes and signs the required paperwork. Each lot of animals must appear healthy and be separated by gender. An official veterinarian certifies the health certificate and supervises the loading and unloading of animals for welfare reasons. The shipment is entered into TRACES and the server informs the point of destination as well as any border crossing points. An official veterinarian at the point of destination confirms the arrival. 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 the guarantees provided by the health certificates.

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 legislation. Intra-Community trade in swine and swine products, including semen and embryos, from CSF-affected regions of the Member States of Germany, Slovakia, France, and Luxembourg is prohibited under various Commission decisions. Intra-Community trade in swine and swine products from SVD-affected regions of Italy is also prohibited.

7.5 Volume and type of imports

Poland has historically received live swine and swine products primarily from western European countries (see Annex 2) (GTA 2005). From 1998-2003, Poland imported live swine from Belgium, Denmark, France, the Netherlands, Sweden, and the United Kingdom. Live swine were also imported from Hungary, Canada, Norway, Guyana (26 head in 2000), and the United States. Imports averaged 2,000 head per year from 2002-2003, primarily from France. In 2004, imports of live swine expanded considerably both in numbers and scope of sourcing in response to market changes associated with accession (GTA 2005). Poland became a net importer of live swine with large numbers imported from Germany and the Netherlands, as well as Denmark, France, and Lithuania. A small number of swine were also imported from Slovakia.

Poland imported on average 45,000 metric tons of pork meat from 1998-2004, primarily from Denmark and other western European countries (GTA 2005). Pork meat was also imported from the Czech Republic, Hungary, Canada, Norway, and the United States. In contrast, Poland exported approximately 160,000 metric tons of pork meat in 2004 alone.

APHIS considers most of the countries from which Poland has received live swine and pork meat in recent years to be free of CSF and SVD, although many are subject to trade conditions described under 9 CFR 94.13⁴, 94.24⁵, and 98.38⁶. APHIS was evaluating the

⁴ See footnote on page 19.

⁵ 9 CFR 94.24 restricts the sourcing of pork, pork products, and breeding swine to regions where CSF has not been known to exist, and prohibits commingling with such commodities from CSF-affected regions. The full text of 9 CFR 94.24 is provided in Annex 1 of this document.

⁶ 9 CFR 98.38 restricts the sourcing of swine semen to semen collection centers approved by the national veterinary services of the exporting country, and restricts the sourcing and commingling of donor boars. In

status of Hungary with regard to CSF, and Lithuania, the Czech Republic, and Slovakia with regard to CSF and SVD, at the time this report was written. As discussed in Section 3, CSF infection is endemic in segments of the wild boar population of Germany and Slovakia, and APHIS has only recently again recognized France as free of CSF. Guyana has not been evaluated and APHIS therefore considers the CSF and SVD risk from this country to be unknown.

7.6 Veterinary control of passenger traffic

Passengers through the EC-approved veterinary inspection points are screened by the Customs Service and the military Border Patrol. Up to 100 percent of trucks and their “passports” are examined, and the Customs Service asks about agricultural products. There are no uncontrolled border crossing points into Poland, but there are numerous border crossings for passenger traffic and local transport that do not have veterinary inspection per se (GVI 2003a). These are controlled solely by the Customs Service and the Border Patrol, and passage of animals or animal products is not allowed. Veterinary officials indicated that individuals attempting to cross the border with agricultural products at one of these checkpoints are redirected to a BIP with veterinary inspection, or the products are confiscated.

Per Polish officials, there is considerable passenger traffic from neighboring third countries. Ninety percent of buses are inspected manually, although the luggage may or may not be opened (APHIS 2004). Some facilities have scanners for luggage, and some use dogs to sniff out contraband. Amnesty bins are available for disposal of unacceptable material taken from passengers, which is then sent for rendering. Customs officials can also pass suspect commodities to the veterinary inspectors for judgment if necessary. Most of the smuggled items are alcohol and cigarettes.

Per the border officials, all airport luggage is screened using X-ray technology and approximately 25% is physically inspected by the Customs Service (APHIS 2004). Passenger screening is increased in outbreak situations to 50% of luggage and 25% of passengers. There are containers to collect confiscated or surrendered products, which are then taken to cold storage and on to rendering. During the 2001 FMD outbreak in the UK, all passengers and luggage were inspected, declarations were required, and disinfection mats and hand-washing stations were in use.

Commission Regulation 745/2004, which is directly applicable to all Member States, dictates that posters to promote public awareness of prohibited meat, milk, and meat and milk products must be prominently posted at all border crossings. Under this Regulation, personal consignments of meat, meat products, milk or milk products from the Faeroe Islands, Greenland, Iceland, Liechtenstein, and Switzerland with a combined total weight not exceeding 5 kg are allowed, as well as personal consignments of these commodities from Andorra, Norway, and San Marino. APHIS has not evaluated many of these countries and considers the CSF and SVD risk from them to be unknown, although none have reported an outbreak of these diseases in recent years, if ever (OIE 2006). The site

addition, the regulations stipulate that donor boars be isolated for 30 days and tested for CSF prior to entering the collection center, and the semen held for 40 days after collection while all boars are observed for signs of CSF. The full text of 9 CFR 98.38 is provided in Annex 1 of this document.

visit team observed posters detailing these restrictions at some border ports, but not all (APHIS 2004).

Inspecting for illegal animal products is only one of many activities performed by the Customs Service, and a recent FVO report noted that such inspections were a low priority (FVO 2005). The report also noted that customs officials were not sufficiently familiar with the provisions for passenger checks laid down in Commission Regulation 745/2004. Polish authorities have subsequently given assurances that these issues have been addressed through cooperative efforts, training, and agreements between the Customs Service, the GVI, and the border veterinary inspection service.

7.7 Discussion

The BIPs visited by APHIS in 2004 were impressive facilities that were, in many cases, largely underutilized. The EC standards for BIP approval are high and the approval and auditing processes are strict. The veterinary inspection staff appeared generally knowledgeable of import control legislation cited in the handbook and confident in implementing inspection procedures. Both electronic and paper records were well organized and readily accessible. Biosecurity measures were adequate in the absence of an active outbreak in neighboring third countries.

A recent FVO mission noted several deficiencies in the system for import controls, including gaps in the implementation, enforcement, and application of EU requirements (FVO 2005). APHIS considers that substantial progress has been made in addressing these issues but remains concerned about the extensive role of the Customs Service in preventing illegal import of animal products. Specifically, customs agents retain a greater role in identifying and selecting consignments for veterinary inspection than the inspectors, which is not in accordance with EU requirements. Perhaps more importantly, inspection for illegal imports of animal commodities likely remains a relatively low priority for customs agents at border crossings that do not have veterinary inspection.

Based on the information presented here, the following pathways for disease introduction are of interest to APHIS: (1) import and trade of live swine; (2) import and trade of swine products; (3) incoming vehicular and human traffic; and (4) agricultural commodities for personal consumption. These pathways are discussed briefly below and summarized in more detail in Section 12.

7.7.1 Import and trade of live swine

EC legislation imposes less stringent restrictions on sourcing of imported swine than do APHIS requirements, which could result in a comparatively greater risk of CSF introduction into Poland. However, Poland has historically imported very few live animals from third countries that APHIS does not consider free of these diseases, and live swine from Switzerland or Chile would appear to present a minimal risk of CSF introduction under current EC certification requirements.

Intra-Community trade in live animals on the internal common market creates a potential risk of CSF introduction into Poland. Although standard control measures limit the movement of live swine from restricted areas, CSF outbreaks have occurred outside of established control zones within Member States where CSF is endemic in wild boar, posing a risk to the common and export markets until detected. This is of concern to

APHIS in light of the tremendous increase in swine traded to Poland from Germany since accession.

Risk mitigation measures currently in place substantially reduce the risk of introducing disease into Poland via import or trade in live swine. These measures include a mandatory observation period and veterinary inspection prior to shipment, certification of disease status by an official veterinarian, and isolation procedures with veterinary spot-checks at the point of destination. Imported swine also undergo veterinary inspection at the port of entry into Poland.

EC certification requirements also reduce the risk of disease introduction and are generally comprehensive with regard to international standards. Country and commodity specific certificates are readily available to veterinary inspectors on the internet and the inspectors appeared familiar with the content and governing regulations. The observation periods and veterinary inspection greatly increase the likelihood of disease detection but depend in large part on the extent of clinical signs and the ability of the observers to recognize the diseases of concern. Serological testing for CSF or SVD is generally not required for import or trade.

EC import policies and the restricted scope of SVD infection worldwide limit the risk of introducing this disease into Poland. Similarly, APHIS considers the risk of introducing SVD into Poland via intra-Community trade in live animals to be low at present time.

7.7.2 Import and trade of swine products

Harmonized EC legislation permits importation of fresh pork and pork products, as well as fresh meat from wild boar, from third countries that APHIS does not recognize as free of CSF or SVD (i.e., countries of unknown risk). EC legislation also permits importation of swine semen from Switzerland, which APHIS has not evaluated and regards as unknown risk for CSF. Intra-Community trade in most swine products is prohibited from regions affected by CSF or SVD, which substantially limits the risk to the common market. However, CSF outbreaks occurring outside of established control zones pose a risk to the common and export markets during the time that they remain undetected.

Risk mitigation measures currently in place concerning swine products include approval of establishments for export or trade, veterinary certification requirements, and veterinary spot-checks at the point of destination. Imported products must also originate from authorized third countries and undergo veterinary inspection at the point of entry. Although veterinary inspection of imported swine products at the port of entry is comprehensive, testing for CSF or SVD is generally not required. Consequently, veterinary inspection would likely detect irregularities in documentation or identity, but the physical examination would not detect virus if present.

However, EC certification requirements for pork, pork products, and swine genetic material are generally comprehensive with regard to international standards and must be signed by an official veterinarian of the country of origin. The certificate used depends on the commodity for export and includes specific guarantees for products from certain countries. Approval of exporting establishments substantially limits exports from authorized third countries.

7.7.3 Incoming vehicular or human traffic

As discussed in Section 3, Poland shares land borders with several countries that APHIS has not evaluated and regards as unknown risk for CSF and SVD, and there is considerable local passenger traffic to and from these countries. None of the regions directly on the Polish border have reported outbreaks of these diseases in several years and the likelihood of such diseases in domestic animal populations is low. However, APHIS has little knowledge of the disease surveillance and reporting practices in some of these regions, particularly the third countries.

Poland has standard biosecurity measures in place for disinfection of live-haul trucks and other vehicular traffic entering from neighboring third countries at a BIP with veterinary inspection, and requires disinfection of live-haul trucks after each transport (APHIS 2004). Officials indicated that, if an outbreak were reported in a neighboring region, biosecurity measures would be put in place such as disinfecting the undercarriage of all vehicles. Such measures are not currently in place at border crossings without veterinary inspection. Additional biosecurity measures would be enacted for airline passengers from affected regions in the event of an outbreak further abroad.

7.7.4 Agricultural commodities for personal consumption

EC legislation permits personal consignments of products that could carry live CSF or SVD virus from countries that APHIS has not evaluated and regards as unknown risk for these diseases. The majority of border crossings are controlled by the Customs Service, without veterinary control per se. The percentage of incoming traffic inspected varies between border crossings and, considering the volume of traffic entering Poland, illegal introduction of animal commodities cannot be entirely excluded. Signs indicating prohibited items and prominently placed amnesty bins may decrease the amount of illegal products unintentionally carried across the border.

8. Livestock demographics and marketing practices in the region

8.1 Livestock demographics

8.1.1 Domestic swine census

There are an estimated 18.6 million pigs in Poland (GVI 2004a). These are located on over 700,000 holdings, of which approximately 650,000 have less than 50 pigs (APHIS 2004). There are also 60 breeding farms with over 5,000 pigs, several of which have more than 20,000 pigs. These are confinement operations with restricted access, each of which is housed internally with perimeter fencing. The site visit team noted biosecurity measures such as limiting or excluding vehicular traffic onto the farm, thoroughly disinfecting any entering vehicles, limiting entry of nonessential personnel and visitors, requiring a change of clothing when entering the production areas, etc (APHIS 2004). Smaller holdings exhibited less attention to biosecurity and disease exclusion, although officials indicated that swine on small holdings are often raised indoors.

The greatest numbers of swine are in the Wielkopolskie, Kujawsko-pomorskie, and Mazowieckie provinces (Annex 2 of GVI 2003a; GVI 2005), whereas the greatest swine density is in the Wielkopolskie, Kujawsko-pomorskie, and Łódzkie provinces (see Table 8.1). Poland produces around 5 million fat hogs per year from 300,000 breeding sows. Most producers are small but much of the pig production comes from large operations. Per Polish officials, the trend is toward further consolidation of the industry.

The number and density of swine in each province is given in Table 8.1, as well as the number of breeding farms with over 5,000 pigs (GVI 2004a; GVI 2005). According to Polish officials, these large farms are the most likely to export to the United States (APHIS 2004).

Table 8.1: Porcine demographics, density, and land area by province (2004 data)

Province	No. pigs	Pig density per km ²	No. farms with >5,000 pigs	Estimated No. wild boar	Wild boar density per km ²	Land area (km ²)
Dolnośląskie	484,527	24.63	5	13,600	0.69	19,672
Kujawsko-pomorskie	2,104,458	118.41	7	7,600	0.43	17,772
Lubelskie	1,211,715	67.17	0	6,200	0.34	18,040
Lubuskie	260,866	10.50	2	12,700	0.51	24,835
Łódzkie	1,401,899	101.34	1	3,900	0.28	13,834
Małopolskie	523,591	35.05	0	1,800	0.12	14,940
Mazowieckie	1,796,882	51.43	1	8,100	0.23	34,937
Opolskie	692,294	74.50	2	6,100	0.66	9,293
Podkarpackie	338,310	19.10	0	3,800	0.21	17,716
Podlaskie	828,779	41.80	1	5,800	0.29	19,828
Pomorskie	1,096,246	61.17	13	11,300	0.63	17,922
Śląskie	402,331	32.76	1	4,200	0.34	12,280
Świętokrzyskie	422,729	38.07	0	1,500	0.14	11,104
Warmińsko-mazurskie	874,523	37.04	6	16,400	0.69	23,610
Wielkopolskie	4,192,542	142.54	13	15,900	0.54	29,413
Zachodniopomorskie	763,622	34.53	8	24,400	1.10	22,117
Total	17,395,314	56.60	60	160,500	0.52	307,313

8.1.2 Wild boar census

In 2003, there were an estimated 143,100 wild boar in regions hunted by the Polish Hunting Association (80% of woodlands) and 17,508 wild boar in regions managed by the Central Board of State Forests (GVI 2004a). The greatest numbers of wild boar were located in the Zachodniopomorskie, Warmińsko-mazurskie, and Wielkopolskie provinces (GVI 2005); the greatest wild boar density was in the Zachodniopomorskie, Warmińsko-mazurskie, and Dolnośląskie provinces (see Table 8.1). However, hunting data suggests that the number of wild boar may be underestimated in some districts (FVO 2004).

8.2 Animal identification system

A national system for domestic swine identification was implemented in December 2003 (GVI 2004a). The Agency for the Restructuring and Modernization of Agriculture (ARMA), an independent governmental agency under the Ministry of Agriculture, is responsible for implementing and maintaining the national animal identification systems, as well as tracking animal movements.

ARMA assigns each animal owner a unique number regardless of the animal species kept, and keeps track of the number and type of animals owned by that person (APHIS 2004). The number consists of the country code (PL) followed by a unique 9-digit owner identification number and a 3-digit herd number. The ARMA system also identifies collection points, assembly points, and markets. At present, ARMA does not assign individual swine identification numbers. However, all animal owners are obliged by law to keep a herd register of animals existing on their property, in accordance with Commission Decision 2000/678/EC. In addition, some of the larger swine operations maintain individual animal identification using an internal system. District officials check animal identification and the herd register when visiting a farm, and have access to the ARMA database to confirm the accuracy of the information.

Animal owners are also required by law to notify ARMA within 7 days of the purchase, sale, or death of an animal (APHIS 2004). Both the buyer and the seller are required to notify ARMA when a transaction occurs. Unique numbers are assigned to slaughterhouses as well, and confirmation is sent to ARMA when animals are slaughtered. The ARMA computer system raises an alert when it notes a discrepancy. The source is notified twice by mail and then visited by an ARMA employee. If the discrepancy is not resolved, ARMA notifies the appropriate district veterinary inspectorate and movement restrictions are placed on the premises.

When moved off the farm, live swine receive a tattoo or ear tag with the unique herd ARMA number. Trace-back from slaughter can theoretically be accomplished through systems used by the slaughterhouses to track payments to animal owners (routine suppliers contract with an agreement number assigned to the owner).

During the 2004 site visit, Polish veterinary officials indicated that the swine identification system was 50-60% implemented: the larger herds were in the system, but the smaller herds were not yet in compliance (APHIS 2004). However, an FVO mission report from September 2004 indicated that only 25% of swine holdings were included in the ARMA database (FVO 2004). Enforcement is ongoing in that swine without identification are not eligible for slaughter or sale. There is no monetary incentive to

participate in the national animal identification program, but owners will not be compensated in an outbreak if the animal identification is not in order.

8.3 Marketing practices

There are no large marketing centers in Poland (GVI 2003a; GVI 2004a). The sale of pigs takes place directly through the owner, through round-ups or at small local fairs. Under the Veterinary Law, the DVO must be notified when markets, roundups, or exhibitions will occur. Live swine must be marked with the ARMA number by ear tag or tattoo and must also have a valid health certificate issued by an official or approved private veterinarian (GVI 2003a).

Many of the larger swine operations have formal agreements with a specific slaughterhouse for routine slaughter and processing. These agreements may be exclusive, or in some cases the swine operation may actually own a slaughterhouse, which creates a relatively closed production system. Poland is a net exporter of live swine and swine products (see Annex 2).

8.4 Internal movement controls

Animal movement within Poland is governed by the Veterinary Law, animal welfare legislation, animal identification legislation, and requirements for export/trade, as well as certain regulations of the CVO. The DVOs and approved private veterinarians perform most of the movement control activities. Poland used health certificates for internal movement prior to accession but they are not used now (GVI 2003a; APHIS 2004).

Animals are brought together at collection points, which are for internal movement only (APHIS 2004). Movement must be approved by the competent authority, and animal identification and welfare requirements must be satisfied prior to movement, although an extensive physical exam is not performed unless an abnormality is noted on visual exam. Loading and unloading of animals is usually supervised by an approved private veterinarian. Each veterinarian has a booklet of certification papers; the original goes with the animals and the booklet with the carbon copies goes to the district veterinary offices, where it is kept for 3 years. The buyer must also keep records of the transaction for 3 years and animal traders must send a report on their activities to the DVO.

8.5 Discussion

The considerable number of small holdings in Poland increases the difficulty for the official veterinary services in monitoring compliance with legislation concerning waste feeding, animal identification, and herd registration. The preponderance of small holdings could also hinder detection and reporting of an outbreak in the absence of good veterinary oversight. However, small holders appear to value their animals and to have good working relationships with their veterinarians, which increases the likelihood of timely disease reporting. In addition, the staffing at the province and district levels is sufficient to maintain a reasonable level of premises inspections, and the inspection process is thorough.

Good herd registration and swine identification systems are in the implementation stages: large swine producers are well integrated, but small producers are lagging behind. The current system would most likely capture movement to slaughter, but relies heavily on reporting by the seller and purchaser for capturing other transactions. The combination of

a relatively large number of unregistered small holdings and potential underreporting of animal movements could hinder the epidemiological investigation in an outbreak situation.

The 60 large swine operations are confinement facilities with perimeter fencing and restricted access are well protected from contact with wild boar. Standard biosecurity measures at the facilities visited by APHIS in 2004 minimize potential exposure to CSF or SVD viruses via other routes as well. Pigs on smaller holdings are less protected and interaction with wild boar is possible, considering the distribution and overlap of the two species.

In summary, small holdings predominate in Poland, which presents a challenge in terms of monitoring and enforcing compliance with existing legislation, and implementing and maintaining a national swine identification system. In addition, the relative lack of biosecurity measures on small holdings increases the probability of interaction with wild boar and introduction of CSF or SVD viruses by other routes in comparison with the larger operations. Although these factors potentially increase the risk of disease introduction and establishment prior to detection on small operations, exports to the United States will likely be derived from the confinement operations with more stringent biosecurity measures in place, which are also more closely monitored by the official veterinary services.

9. Disease surveillance in the region

9.1 General information

National surveillance plans are in place for CSF in domestic swine and wild boar, and for SVD in domestic swine, and are updated each year by means of a regulation issued by the Minister of Agriculture and Rural Development. Poland does not conduct surveillance for SVD in wild boar. All testing is financed through the GVI budget each year and is not subsidized by the EC (APHIS 2004). Additional CSF testing is paid for by producers through the Health Control Program, a private initiative. The official veterinary services work with the hunting associations to ensure access to wild boar for testing.

9.2 CSF surveillance in domestic swine

9.2.1 History

The national surveillance program in domestic swine and wild boar started in 1996 (FVO 2001). It was modified initially in 1999 to adapt to new administrative procedures when the province boundaries were adjusted, and twice more in 2000 and 2001 in response to requests from the EC. From 1996-1999, the veterinary services were instructed to send 200 serum samples annually from 18 provinces considered to have low swine density, 500 samples from 14 provinces with medium swine density, and 1,000 samples from 17 provinces with high swine density.

A new surveillance system was established in October 1999 under which the instructions were to take 20 serum samples annually from domestic swine from each district and an additional 39 samples from all districts located along the Polish border (FVO 2001). In October 2000, the CVO requested that the DVOs of some “high risk” districts increase the total number of samples to 59 from domestic swine. In April 2001, an order was issued which divided the country into districts of high, medium and low risk, and created a differentiated sampling design as described below (GVI 2003a).

9.2.2 Current sampling plan

High risk districts are those which (1) border a country where CSF exists or was reported within the last 5 years, (2) border a country of unknown CSF status, (3) reported a positive CSF result within the last 6 years, (4) have a swine density of over 200 head/sq km, or (5) contain international airports or harbors (GVI 2003a). Medium risk districts are those that are adjacent to districts bordering countries where CSF has existed in the last 5 years or countries of unknown CSF status. Low risk districts have a swine density of less than 200 head/sq km and have not reported a positive serological result for CSF within the last 6 years.

The national surveillance plan sets a minimum number of 59 samples from high risk districts and 29 samples from medium risk districts. No sampling is required from low risk areas. The sampling plan is in accordance with EC recommendations and is designed to detect CSF at 5% prevalence in higher risk areas and 10% prevalence in lower risk areas, at the 95% confidence level. The sample size calculations assume 100% test specificity, which could result in underestimation of the number of samples required.

The samples are taken by an official or approved veterinarian. The district officials have latitude to determine the sampling plan within the district but are encouraged from the

national level to sample as many farms as possible, both large and small (APHIS 2004). Sampling is described as random but is actually based on perceived risk, targeting herds near forests where wild boar live, locations with significant amount of people or animal movement, or those close to previous CSF outbreaks (APHIS 2004). Observations of fever are used to identify and target higher-risk animals within a herd.

The specific procedures for collecting samples are detailed in the Instructions of the Chief Veterinary Officer of 12 April 2001 on the principles of surveillance tests for the presence of CSF in pigs and wild boars (Annex 11 of GVI 2004a).

9.2.3 CSF surveillance results – domestic swine

Summary results of CSF serological testing in domestic swine from 2001-2004 are shown in Table 9.1 (APHIS 2004), and more detailed results are presented in Annex 3 of this document (GVI 2003a; GVI 2004a; GVI 2004b; APHIS 2004). Any samples positive to the ELISA test are retested using a neutralization peroxidase-linked assay (Annex 13 of GVI 2004a; APHIS 2004). Under this regimen, no confirmed positive test results have been reported.

The number of suspect cases of CSF reported from the field on the basis of clinical signs in 2000-2003 is shown in Table 9.2 (GVI 2004a). In addition, 14 suspect cases were reported from January through October 2004 (APHIS 2004). Suspect CSF cases are the subject of epidemiological investigations as described in Section 11.

Table 9.1: Summary CSF surveillance results in domestic swine 2001-2004

Year	Laboratory	Purpose of Testing	Number of Samples	
			Tested	Confirmed Positive
2001	NVRI	Surveillance	10,539	0
		HCP*	9,185	0
	Total		19,724	0
2002	NVRI	Surveillance	4,705	0
		HCP	9,566	0
	Regional lab	Surveillance	3,553	0
	Total		17,824	0
2003	NVRI	Surveillance	3,278	0
		HCP	9,927	0
	Regional lab	Surveillance	5,644	0
	Total		18,849	0
2004 (I-III)	NVRI	Surveillance	1,565	0
		HCP	6,766	0
	Regional lab	Surveillance	3,669	0
	Total		12,000	0

* HCP = Health Control Program (paid for by producers)

Table 9.2: Number of CSF suspect cases 2000-2003

Province	No. Suspect CSF Cases
Dolnośląskie	2
Kujawsko-pomorskie	4
Lubelskie	6
Lubuskie	3
Łódzkie	6
Małopolskie	2
Mazowieckie	15
Opolskie	0
Podkarpackie	1
Podlaskie	8
Pomorskie	0
Śląskie	1
Świętokrzyskie	0
Warmińsko-mazurskie	12
Wielkopolskie	6
Zachodniopomorskie	4
Total	70

9.3 CSF surveillance in wild boar

9.3.1 History

Poland started testing meat samples from wild boar for CSF in 1996, and then tonsils and lymph nodes in 1997 (FVO 2001). Those samples were taken from hunted wild boar stored in slaughterhouses that specialized in exporting game meat, located in 17 provinces. From 1998, the official veterinary services were also obliged to send blood samples taken by hunters from 5% of all hunted boar.

Under a surveillance system established in October 1999, samples from 5% of hunted and dead wild boar in each province are tested annually. The number of samples from declared “high risk” districts was increased to 10% in October 2000. In April 2001, an order was issued which divided the country into high and low risk districts, and created a differentiated sampling plan as described below (GVI 2003b).

9.3.2 Current sampling plan

Blood, blood clots, tonsils, or lymph nodes must be collected each year from 10% of wild boar killed in high risk districts, which are those in which (1) seropositive results for CSF were reported in wild boar within the last 5 years; (2) seropositive results for CSF were reported in domestic swine within the last 6 years; (3) the wild boar density is at least 2 boar/sq km; (4) the swine density is at least 200 pigs/sq km; or (5) the border abuts a territory in which CSF is present or has appeared within the last 5 years, or in which the CSF status is unknown.

Districts considered to be low risk are those that do not meet the criteria listed above and in which the wild boar density does not exceed 2 boar/sq km. Samples must be collected from only 5% of wild boar killed each year in these districts. In both high and low risk regions, samples of tonsils or lymph nodes must be collected and tested from all wild boar that are found dead. This sampling plan is in accordance with EC recommendations for surveillance in the absence of known CSF infection (EC 1999).

The official veterinary services work with the hunting associations to ensure compliance with the wild boar testing requirements (APHIS 2004). The national hunting association estimates the population of wild boar each year and determines the number of wild animals that can be hunted in each region. The DVO then meets with the local hunting associations to tell them the number of samples needed based on the national estimates. However, some evidence indicates that the density of wild boar may be underestimated in certain districts (FVO 2004). Hunters must have a permit for each boar shot and hunted animals are marked with an individual identification as required by the hunting association. Hunters are also required to report dead boar and those behaving abnormally.

The specific procedures for collecting samples are detailed in the Instructions of the Chief Veterinary Officer of 12 April 2001 on the principles of surveillance tests for the presence of CSF in pigs and wild boars (Annex 1 of GVI 2003a; Annex 11 of GVI 2004a). Approved private veterinarians provide game meat inspection and take samples for CSF testing. Trained hunters can also take samples (APHIS 2004). A form is filled out for each sample that assigns a reference number to the sample and details the identity of the hunter, location and time shot, any behavioral abnormalities noted by the hunter, and a description of the carcass including age, weight, and health status (Annex 1 of GVI 2003a; Annex 11 of GVI 2004a). A different form is completed for animals found dead.

Several district officials noted that they have difficulty obtaining the targeted number of samples each year (APHIS 2004). In at least one instance, the targeted number of samples in a low-risk district was less than 5% of the estimated wild boar population (FVO 2004). There is no bonus system for hunters or veterinarians to encourage participation in the surveillance program. In addition, the number of wild boar that were found dead and tested is low in relation to the estimated number of wild boar in the country, suggesting that the number of dead wild boar may be underreported throughout the country.

9.3.3 CSF surveillance results – wild boar

The summary results of wild boar testing activity from 2001-2004 are shown in Table 9.3, and more detailed results are presented in Annex 3 of this report. Twenty-seven wild boar found dead were tested for CSF in 2003, and 13 were tested in the first nine months of 2004, with negative results. As noted in Section 2, an FVO report indicated that 10 samples taken from wild boar in 1996 were found to be virus positive (FVO 2001). APHIS requested additional data concerning these findings, but Polish veterinary officials indicated that the results of CSF monitoring in wild boar in 1996 are not available to the GVI (GVI 2005).

Table 9.3: Summary CSF surveillance results in wild boar 2001-2004

Year	Laboratory	No. Blood Samples		No. Organ Samples	
		Tested	Negative	Tested	Negative
2001	NVRI	5,415	5,415	540	540
2002	NVRI	2,241	2,241	196	196
	Regional	2,364	2,364	119	119
	Total	4,605	4,605	315	315
2003	NVRI	2,050	2,050	51	51
	Regional	2,707	2,707	239	239
	Total	4,757	4,757	290	290
2004*	NVRI	1,075	1,075	35	35

*Results from January through September 2004.

9.4 SVD surveillance in domestic swine

9.4.1 Sampling plan

Veterinary officials in all districts must collect a minimum of 10 samples per year for SVD surveillance in domestic swine (GVI 2003b; APHIS 2004). Testing is also performed for export and import purposes, at private expense. The national sampling plan does not differentiate between districts based on perceived risk, and there is no routine sampling in wild boar. Selection of herds for sampling is at the discretion of the district officials and is generally targeted toward herds in close proximity to forest land or to a border, those with high swine density, or those with recurring health problems. Within the herd, animals may be sampled that are showing abnormal behavior, movement, or temperature.

9.4.2 SVD surveillance results

Summary sample numbers for SVD testing activities from 2001 through September 2004 are shown in Table 9.4. More detailed results are presented in Annex 4 of this report. Any samples positive to the ELISA screening test are retested using a virus neutralization test (APHIS 2004). No confirmed positive test results have been reported, and no suspect SVD cases have been reported from the field in the previous 3 years.

Table 9.4: Summary SVD surveillance numbers in domestic swine 2001-2004

Year	Surveillance	Export	Import	Total
2001	3540	1681	199	5420
2002	3431	3209	1605	8245
2003	3360	5308	1111	9779
2004*	2783	4785	40	7618

*Results from January through September 2004.

9.5 Discussion

9.5.1 Classical swine fever

Poland conducts ample risk-based surveillance to detect CSF in domestic swine, although the sampling scheme may underestimate the number of samples needed to detect the target prevalence at the desired confidence level. Surveillance is based on serology for

antibodies to the CSF virus, as is common throughout the world. Since antibodies occur late in CSF infection, serological surveillance would likely miss an early infection (e.g. first 21 days). Training and national simulation exercises as discussed in Section 1 aid in passive surveillance for CSF by developing and maintaining the ability to quickly detect these diseases. Passive surveillance is likely sufficient to detect overt clinical signs of CSF, but detection may be delayed in the case of moderate or low virulence strains.

In contrast, the surveillance program in wild boar may not detect a CSF incursion at an early stage in all districts. There is little positive incentive for sampling of wild boar by hunters and the number of wild boar found dead is likely underreported. In addition, Polish officials may be underestimating the density of wild boar in some districts, such that the target sampling figures are too small. The impact of this issue on the risk of disease introduction into Poland and the export risk to the United States is discussed in greater detail in Section 12.

9.5.2 Swine vesicular disease

Poland conducts SVD surveillance in domestic swine at a considerably lower level than for CSF, and relies more on passive surveillance for this disease. Consequently, detection may be delayed in the absence of overt clinical signs, although serological surveillance would eventually detect the historical presence of the disease. These factors affect the timeframe for outbreak detection and the export risk to the United States, as discussed in Section 12. Poland does not conduct surveillance for SVD in wild boar, since this disease has never been reported in wild boar in the country.

10. Diagnostic laboratory capacity

10.1 Classical swine fever

The NVRI in Puławy has been an OIE Reference Laboratory for CSF since 1991 and has been officially recognized as the Polish National Reference Laboratory for CSF since 2002 (GVI 2004a; APHIS 2004). The NVRI has participated in inter-laboratory comparison testing since 1994 and has cooperated with the EU Reference laboratory for CSF in organizing inter-laboratory comparison testing for Central Europe. Four regional laboratories in Wrocław, Poznań, Gdańsk, and Kielce also conduct serological testing for CSF; the NVRI is responsible for the harmonization of standards and diagnostic methods of the regional laboratories.

The following diagnostic tests for CSF are performed at the NVRI (APHIS 2004):

1. Serology
 - a. ELISA (Bomelli and IDEXX) – ISO 17025 accredited
 - b. Neutralization peroxidase-linked assay
2. Virology
 - a. Antigen ELISA (Bomelli) – ISO 17025 accredited
 - b. Nested reverse transcriptase polymerase chain reaction (RT-PCR)
 - c. Virus isolation

All tests are performed in accordance with OIE recommendations and are able to discriminate CSF from bovine viral diarrhoea (BVD) and border disease (BD) viruses and antibodies (APHIS 2004). Virologic assays and virus neutralization assays for CSF are performed under biosafety level 2 (BSL-2) conditions. The laboratory handles live CSF virus and has restricted access; anyone working in the laboratory is prohibited from visiting swine farms for a 2-week period.

The PCR facilities are conventional and well equipped, and real-time assays are available for CSF diagnosis. Developmental work is being conducted on a real-time RT-PCR assay able to differentiate CSF virus from BVD and BD viruses. Construction of a large addition to the NVRI, which will include BSL-3 laboratory facilities for working with CSF virus, is scheduled to begin in early 2005.

The APHIS site visit team suggested that samples collected from the field that are sent directly to a regional laboratory for testing be shared with the NVRI for quality control purposes. The team also suggested that formal plans be made to accommodate the large number of samples that would be anticipated in the event of a CSF outbreak. Polish officials indicated they would address these issues.

10.2 Swine vesicular disease

The NVRI branch laboratory in Zduńska Wola (Laboratorium Zakładu Pruszczycy Państwowego Instytutu Weterynaryjnego) is the National Reference Laboratory for SVD (GVI 2003b; APHIS 2004). It is centrally located no more than 4-5 hours from any part of Poland. The laboratory is a BSL-3 facility and does all of the testing for FMD and SVD. It also participates in OIE ring tests. No regional laboratories are equipped to carry out vesicular disease testing.

SVD serological testing employs the ELISA described in the OIE Manual which utilizes the monoclonal antibody 5B7 (Istituto Zooprofilattico Sperimentale della Lombardia e dell'Emilia Romagna, Brescia, Italy) and the virus neutralization test (APHIS 2004). The cell culture unit produces cells used in virus isolation and virus neutralization tests. IBRS-2 and BHK-21 cell lines as well as primary calf and piglet kidney cells are available. The cell lines originate from reference laboratories that have certified them free of contaminating agents. Quality control includes mycoplasma testing using a commercially available kit, sterility testing of cell culture media, and assessing the sensitivity of the lines to SVD and FMD viruses.

The vesicular disease virus isolation protocol involves 2 passages in IBRS-2 cells of 48-72 hours each (APHIS 2004). Cells are checked twice daily for the presence of cytopathic effect. If a cytopathic effect is observed, the culture fluid is tested for FMD and SVD virus antigens using an indirect sandwich ELISA. The reagents for this ELISA are obtained from Pirbright. If no cytopathic effect is observed and the indirect sandwich ELISA results are negative following 2 cell passages, the submission is reported as negative for FMD and SVD viruses. If sufficient material is submitted an indirect sandwich ELISA is run in parallel with virus isolation in cell culture. PCR methods are available for SVD but are not used routinely.

10.3 Education and training of laboratory personnel

The NVRI staff are trained in OIE and EC reference laboratories in the EU (GVI 2003a), and the NVRI conducts training for the district laboratory staff (GVI 2004a). The NVRI also participates in the annual CSF ring test organized by the EU liaison laboratory for CSF in Hannover, Germany, and the NVRI is responsible for organizing this test in the Central and Eastern European countries.

10.4 Discussion

The NVRI has an experienced professional and technical staff to support laboratory diagnostics and research development. The Swine Diseases Department of the NVRI and the branch laboratory in Zduńska Wola are well equipped to conduct diagnostic and research projects on swine diseases, including CSF.

The OIE-sanctioned battery of tests for CSF and SVD are performed within the OIE guidelines and recommendations. ELISA tests for CSF and other swine diseases are ISO 17025 accredited and more tests have been submitted for accreditation. Polish officials indicated in 2005 that they have implemented quality control procedures that involve random retesting by NVRI of CSF samples initially run by a regional laboratory. Laboratory biosecurity practices are adequate to prevent the escape of live virus.

11. Emergency response capability

11.1 Classical swine fever

The emergency response policies and regulations formulated by the central competent authority reflect control measures established in Council Directive 2001/89/EC and Commission Decision 2002/106/EC. The Polish National Contingency Plan for CSF (Annex 5 of GVI 2004a) was developed by the GVI and was approved by the EC under the Corrigendum to Commission Decision 2004/431/EC. Each of the 16 provincial offices and the 301 district offices have prepared individualized contingency plans based on the national guidelines (GVI 2004a). The national plan is updated every 6 months in accordance with the recommendations of EC experts; contingency plans at the lower levels are updated more often, in part to ensure accurate contact information.

The national contingency plan outlines a plan of action at all levels if an outbreak should occur, including establishing crisis centers, lines of communication, models for public relations, rules for eradication, and the basic responsibilities of the CVO, PVOs, and DVOs (Annex 5 of GVI 2004a). The plan also details essential information on CSF virus and disease manifestations, the legal authority for emergency actions, modes of financing the response, and the likely magnitude of economic losses. Furthermore, the national contingency plan outlines the types and forms of training to be provided to official and private veterinarians to ensure emergency preparedness.

The main function of the provincial officials in an outbreak situation is to coordinate and supervise the emergency response at the district level. The provincial office arranges transport, equipment, personnel, and financial resources, and coordinates the local crisis centers (Annex 5 of GVI 2004a). The district officers carry out the technical investigation in accordance with Polish regulations and EC provisions.

Upon suspicion of CSF in domestic swine, the DVO acts to prohibit movement of swine or swine products from the affected holding and to implement appropriate diagnostic procedures. If CSF is confirmed, a protection zone (3 km radius) and a surveillance zone (10 km radius) are established around the affected holding, all swine on the holdings are killed and the carcasses are processed in such a way as to prevent spread of disease, and an epidemiological investigation is conducted. Cleaning and disinfection procedures occur in accordance with Annex 2 of Council Directive 2001/89/EC.

Similar plans are in place for suspected or confirmed CSF outbreaks in slaughterhouses, transport vehicles, or wild boar (Annex 5 of GVI 2004a). Vaccination of domestic swine or wild boar is prohibited unless approved by the EC to control a CSF outbreak. This has never been an issue for Poland. A plan for audit and control of the emergency response is also in place. Separate contingency plans have been developed and approved for the laboratory system and the border checkpoints.

EC legislation and the Polish CSF contingency plan allow removal of CSF restrictions in protection zones as early as 30 days after completion of preliminary cleaning and disinfection measures on the infected holding (21 days in surveillance zones). Measures are lifted after clinical examinations and serology indicate that the pigs remaining in the zones are free of CSF.

11.2 Swine vesicular disease

The emergency response policies and regulations formulated by the central competent authority reflect control measures established in Council Directive 92/119/EEC and Commission Decision 2000/428/EC. The Polish National Contingency Plan for SVD (Annex 6 of GVI 2005) was developed by the GVI and is currently under revision; EC approval is not required for SVD contingency plans. The provinces and districts are in the process of preparing individualized contingency plans based on the national guidelines (APHIS 2004). Contingency plans at all levels are updated at least annually or as needed to remain current.

The national contingency plan outlines a plan of action at all levels if an outbreak should occur, provides essential information on SVD virus and disease manifestation, cites the legal authority for emergency actions, and establishes the extent of training needed to ensure emergency preparedness. As in the planned response to a CSF outbreak, the technical investigation occurs at the district level.

In summary, upon suspicion of SVD in domestic swine the DVO acts to prohibit movement of swine or swine products from the affected holding and to implement appropriate diagnostic procedures. If SVD is confirmed, a protection zone (3 km radius) and a surveillance zone (10 km radius) are established around the affected holding, all swine on the holdings are killed and the carcasses processed in such a way as to prevent spread of disease, and an epidemiological investigation is conducted. Cleaning and disinfection procedures occur in accordance with Annex II of Council Directive 92/119/EC. Vaccination of domestic swine or wild boar is prohibited unless approved by the EC to control a SVD outbreak.

11.2 Indemnity and compensation

Owners of swine killed on the authority of an official veterinarian are compensated from the State budget at market value (GVI 2004a; GVI 2003b). In addition, the EC provides partial indemnity in case of outbreak of certain diseases, including CSF and SVD. Commission Decision 90/424/EEC describes the conditions under which the EC would support a financial contribution for emergency control and eradication of these diseases; most of these conditions are covered in the CSF and SVD contingency plans.

11.3 Discussion

The contingency plans for CSF and SVD are comprehensive and reflect control measures developed and promulgated by the EC. Equally important, the official veterinary service members, particularly at the district level, are familiar with the provisions of the contingency plans and the actions required of them in the event of suspicion and/or confirmation of CSF and SVD infection. Training and national simulation exercises as discussed in Section 1 aid in developing and maintaining the ability to quickly detect and contain these diseases.

However, APHIS is concerned that 30 days following a CSF outbreak is insufficient time to ensure that an area where an outbreak has occurred is no longer affected by the disease. CSF has recurred in several areas of the EU shortly after EC restrictions were removed from those areas and the movement of swine commenced. For example, in December 2001 a CSF outbreak was confirmed in Osama, Spain, 22 days after release of

EC movement restrictions and 83 days after depopulation on the affected holding (APHIS 2004a). Similarly, a CSF outbreak in August 2002 in Luxembourg was epidemiologically linked to an outbreak that occurred in June 2002 (APHIS 2004a). The August outbreak occurred 27 days after release of EC movement restrictions and 56 days after depopulation.

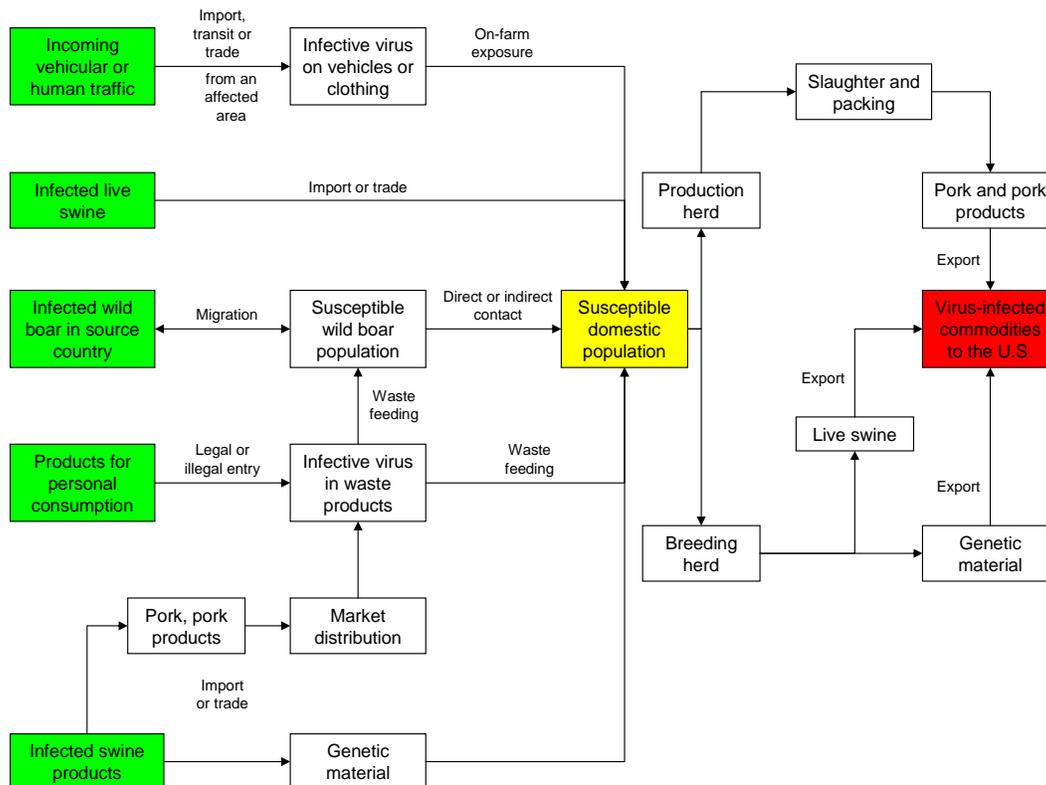
These observations suggest that 30 days may be an insufficient duration for restrictions. APHIS addressed this concern for the EU-15 in a previous regulation by establishing a process which would not allow swine, swine products, or semen from an area affected with CSF in domestic swine to be exported until 6 months after the last affected premises was cleaned and disinfected (APHIS 2006).

12. Discussion of identified risk factors

12.1 General discussion

The preceding 11-factor assessment identified five main pathways by which CSF or SVD could be introduced into Poland from other EU Member States or third countries, resulting in exposure of a domestic swine population (see Figure 12.1). However, introduction of CSF or SVD into Poland by the identified pathways would only affect export risk to the United States if a susceptible domestic swine population – either breeding animals as in a semen collection center or production animals raised for slaughter – became infected and this infection was not detected prior to export. The timeframe for detection of a disease incursion depends on a number of factors, including characteristics of the disease agent, surveillance practices, diagnostic capabilities, and the disease recognition capability of animal caretakers and veterinarians.

Figure 12.1: Pathway assessment for virus introduction and subsequent export



As discussed under the hazard identification section, some forms of CSF and SVD are difficult to detect in live animals or on post-mortem examination without laboratory testing. For example, carrier sows that were exposed to low virulence CSF strains are capable of shedding virus for substantial periods of time without clinical signs. Similarly, subclinical SVD infection is common, although the period of virus shedding is generally short and persistent infection is rare.

The ongoing training and national simulation exercises discussed in Section 1.3.2 aid in passive surveillance for CSF and SVD by developing and maintaining the ability to quickly detect these diseases. The fact that numerous suspect CSF cases have been reported from the field in recent years suggests that the level of awareness of this disease is relatively high (*see* Section 9.2.3).

Active serological surveillance for CSF in domestic swine appears sufficient to detect the presence of the disease (*see* Section 9), and is well supported by the diagnostic laboratory system (*see* Section 10). However, serological surveillance for antibodies to CSF would likely miss an early infection, since antibodies occur relatively late (around 21 days). Passive surveillance could also overlook early infection with a moderate or low virulence strain, thereby delaying the time to detection, but the current level of serological surveillance would likely reveal the historical presence of CSF.

CSF surveillance in wild boar may be hindered by the lack of positive incentive for sampling by hunters (*see* Sections 9.3.2 and 9.5.1). In addition, some districts may be under-sampled with respect to the target confidence level, due to underestimation of the wild boar density. Although the surveillance program in wild boar cannot guarantee that an incursion of CSF virus would be detected quickly in all districts, serological surveillance again would likely reveal the historical presence of CSF.

Poland conducts active surveillance for SVD at a much lower level, and relies to a greater extent on passive surveillance to detect this disease. Consequently, detection could be delayed in the absence of overt clinical signs.

APHIS concludes from this discussion that the timeframe for detection of a CSF incursion in domestic swine in Poland would likely be short, whereas a CSF outbreak in wild boar or a SVD incursion could take substantially longer to detect. There would therefore be a period of time between virus introduction and outbreak detection during which infected animals and products could be presented for export to the United States. Physical inspection of individual animals is sufficient to detect clinically affected animals prior to live export, slaughter, or collection of genetic material. However, such inspection is unlikely to detect subclinical or persistent infection.

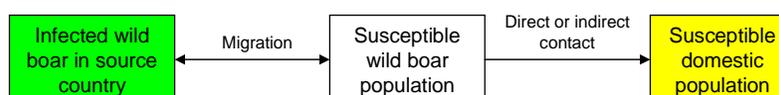
As noted in the hazard identification section, CSF and SVD viruses may remain viable through carcass maturation, transport, and storage, and may be present in genetic material as well. Consequently, if CSF or SVD is introduced into a domestic animal population in Poland, the potential exists for it to remain undetected long enough for export of infected live animals, pork, pork products, and genetic material to the United States. Although APHIS considers the probability of this scenario occurring to be relatively low, it cannot be entirely disregarded. Consequently, the likelihood of disease introduction via the pathways identified in the previous sections resulting in exposure of a susceptible domestic animal population is examined below.

12.2 Natural movement of wild boar into Poland

12.2.1 Central risk issue

Infected wild animals migrating from neighboring affected regions, either third countries or other Member States, could introduce CSF or SVD virus into Poland. As shown in Figure 12.2, direct or indirect contact with infected wild boar could spread the disease to a domestic swine, creating the potential for export of infected live swine or swine products to the United States. The likelihood of introduction of these diseases into Poland and the associated export risk are discussed below.

Figure 12.2: Pathway for disease introduction via migrating wild boar



12.2.2 Risk factors and existing mitigation measures

The likelihood of introducing CSF or SVD into Poland via migration of infected wild boar from surrounding regions depends primarily on the disease status of wild boar in the neighboring regions and the extent to which natural barriers prevent movement of wild boar into Poland. Risk factors for disease introduction and associated mitigating factors identified in Sections 1-11 are summarized below.

Risk factors for disease introduction:

1. CSF and SVD – Poland shares common land borders with several third countries that APHIS has not evaluated and therefore regards as unknown risk for CSF and SVD (*see* Sections 3.1 and 3.2). APHIS cannot rule out the existence of these diseases in wild boar in these regions.
2. CSF – CSF in wild boar populations in Germany and Slovakia constitutes a reservoir for exposure of domestic swine (*see* Section 3.1).
3. CSF and SVD – Natural barriers do not protect against movement of wild boar into Poland along the northeastern border with Lithuania, Belarus, and the Kaliningrad region of Russia, nor along the southern border with the Czech Republic, Slovakia, and Ukraine (*see* Section 6).

Factors mitigating the risk of disease introduction:

1. SVD – SVD has not been reported in Germany or Ukraine for decades, and has never been reported in other countries bordering Poland (*see* Section 3.2).
2. CSF – Natural barriers protect against movement of wild boar into Poland along the border with Germany (*see* Section 6).

12.2.3 Summary discussion

APHIS considers the risk of introducing SVD virus into Poland via migration of wild boar from potentially affected neighboring regions to be very low, considering the limited worldwide distribution of this disease. The risk of CSF introduction into Poland is greater and is an issue of concern for exposure of domestic animals. However, the risk of direct

or indirect exposure is substantially mitigated by commercial production and biosecurity practices on swine confinement operations such as breeding farms, semen collection centers, and large production units (*see* Section 8.1.2).

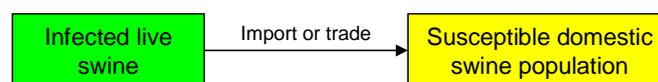
Current surveillance practices in Poland may not quickly detect low-level incursions of CSF in wild boar, thereby allowing more time for the disease to spread to domestic swine (*see* Sections 9.3.2 and 9.5.1). Exposure of domestic swine to wild boar is more likely on small farms with limited biosecurity. In contrast, strict biosecurity practices on swine confinement operations such as breeding farms, semen collection centers, and large production units limit the likelihood of exposure to wild boar. Production and slaughter systems in Poland are such that large confinement operations are the most likely source of swine commodities for export. Consequently, commercial production and biosecurity practices substantially mitigate the export risk to the United States.

12.3 Import, transit, or trade of infected live swine

12.3.1 Central risk issue

Infected live swine may enter Poland legally through import from third countries or intra-Community trade, or illegally via smuggling from neighboring countries (*see* Figure 12.3). Legally imported live swine may be intended for breeding, production (i.e. fattening and slaughter), or direct slaughter. APHIS considers the likelihood of live swine illegally entering Poland from neighboring regions to be low.

Figure 12.3: Pathway for disease introduction via live swine



12.3.2 Risk factors and existing mitigation measures

The likelihood of CSF or SVD introduction via legal import or trade of live swine depends primarily on the provisions of the harmonized EC import legislation for swine, the efficacy of limiting intra-Community trade from affected regions, and Polish import and trade practices. Risk factors for disease introduction and associated mitigating factors identified in Section 1-11 are summarized below.

Risk factors for disease introduction:

1. CSF – Harmonized EC legislation allows Poland to import live swine from Switzerland, which APHIS has not evaluated and regards as unknown risk for CSF (*see* Section 7.2.1).
2. CSF and SVD – Veterinary inspection of imported swine at the ports of entry is unlikely to detect incubating or subclinical infection (*see* Section 7.2.3).
3. CSF – Outbreaks occurring outside of established control zones within affected Member States where CSF is endemic in wild boar pose a risk to the common and export markets until detected (*see* Section 3.1).

4. CSF – The number of swine traded to Poland from Germany, a Member State with endemic CSF infection in wild boar, has increased tremendously since accession (*see* Section 7.5).
5. CSF – Outbreaks have recurred in several areas of the EU shortly after EC restrictions were lifted, suggesting that 30 days may be an insufficient duration for restrictions (*see* Sections 11.1 and 11.3).

Factors mitigating the risk of disease introduction:

1. SVD – APHIS considers all of the countries from which EC legislation permits Poland to import live swine to be free from SVD (*see* Section 7.2.1).
2. CSF and SVD – EC certification requirements for import, transit, or trade in live swine are comprehensive and must be signed by an official veterinarian of the country of origin (*see* Section 7.2.2).
3. CSF and SVD – Veterinary inspection at the point of entry is likely to detect clinically diseased swine (*see* Section 7.2.3).
4. CSF and SVD – EC legislation and the control measures put in place by affected Member States prohibit the sale of live swine from zones under restrictions for CSF or SVD (*see* Section 7.4).
5. CSF and SVD – EC requirements for isolation, observation, and veterinary inspection of live swine prior to transport increase the likelihood of detecting infected animals (*see* Sections 7.2.2 and 7.4).

12.3.3 Summary discussion

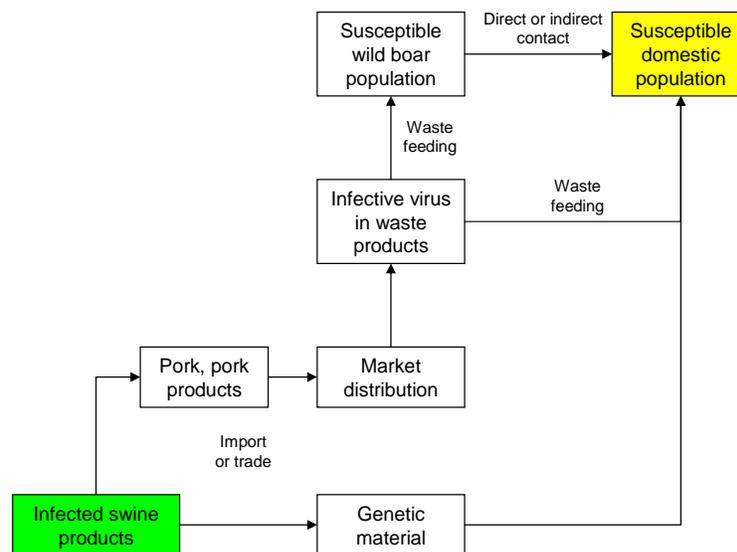
EC legislation imposes less stringent restrictions on sourcing of imported swine than does U.S. legislation, which could result in a comparatively greater risk of CSF introduction into Poland and other Member States with which Poland trades. In addition, the potential exists for trade on the internal common market to introduce CSF from undetected infected herds in unrestricted areas, or from herds in areas released from restrictions too quickly following an outbreak.

However, the mitigation measures currently in place substantially reduce the risk of CSF introduction into Poland via live swine from other Member States or third countries. The potential for exposure of domestic swine in Poland is limited by the practices of isolating, observing, and inspecting swine at the point of destination. However, additional mitigation measures may be necessary to restrict sourcing of swine for export and to prevent commingling of live swine with those from regions that APHIS regards as affected with CSF.

12.4 Import, transit, or trade of infected swine products

12.4.1 Central risk issue

Infected swine products such as fresh pork, pork products, semen, embryos, or ova can enter Poland legally through import or trade, or illegally via smuggling. Figure 12.4 shows the main pathways for introduction of CSF or SVD virus via infected swine products.

Figure 12.4: Pathways for disease introduction via infected swine products

12.4.2 Risk factors and existing mitigation measures

The likelihood of introducing CSF or SVD virus via infected swine products depends primarily on the provisions of the harmonized EC import legislation for swine, the efficacy of limiting intra-Community trade from affected regions, and Polish import and trade practices.

Risk factors for disease introduction:

1. CSF and SVD – Harmonized EC legislation allows Poland to import fresh pork and pork products, as well as fresh meat from wild boar, from third countries that APHIS has not evaluated and regards as unknown risk for CSF and SVD (*see* Section 7.2.1).
2. CSF – Harmonized EC legislation allows Poland to import swine semen from Switzerland, which APHIS has not evaluated and regards as unknown risk for CSF (*see* Section 7.2.1).
3. CSF and SVD – Veterinary inspection of imported swine products at the port of entry is unlikely to detect infective virus (*see* Section 7.2.3).
4. CSF – Outbreaks occurring outside of established control zones within affected Member States where CSF is endemic in wild boar pose a risk to the common and export markets until detection (*see* Section 3.1).
5. CSF – Outbreaks have recurred in several areas of the EU shortly after EC restrictions were lifted, suggesting that 30 days may be an insufficient duration for restrictions (*see* Sections 11.1).

Factors mitigating the risk of disease introduction:

1. CSF and SVD – EC certification requirements for imported commodities derived from swine and wild boar in third countries are comprehensive and

must be signed by an official veterinarian of the country of origin (*see* Section 7.2.2).

2. CSF and SVD – The EC approval process for exporting establishments, including semen collection centers and slaughterhouses, is rigorous and comprehensive, and substantially limits exports from approved third countries (*see* Section 7.2.1).
3. CSF and SVD – EC legislation and the control measures put in place by affected Member States prohibit the sale of swine commodities from regions restricted for CSF or SVD outbreaks (*see* Section 7.4).
4. SVD – Poland has historically imported fresh pork and pork products from western European countries that APHIS considers free of SVD (*see* Section 7.5).

12.4.3 Summary discussion

APHIS considers disease introduction via pork and pork products, rather than genetic material, to be the primary risk concern associated with this pathway. Although infected genetic material would most likely result in direct exposure of domestic swine, the strict biosecurity practices required of semen collection centers substantially reduce the risk of disease introduction from this quarter.

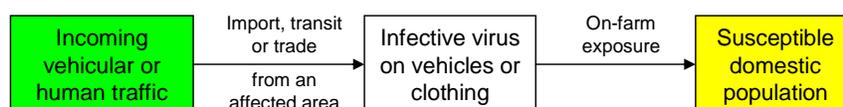
Harmonized EC legislation imposes less stringent restrictions on sourcing of swine products than does U.S. legislation, resulting in comparatively greater risk of introducing CSF or SVD into Poland. However, the approval process for exporting establishments in third countries provides substantial risk mitigation and limits the number of countries actually exporting to the EU. As is the case for live animals, the potential exists for trade on the internal common market to introduce CSF via commodities from undetected infected herds in unrestricted areas, or from areas released from restrictions too quickly.

As discussed in the hazard identification section, waste feeding of infected pork or pork products is perhaps the most common cause of outbreaks in domestic swine and wild boar in previously free regions. Noncompliance with the waste feeding ban is most likely on small swine holdings, as is exposure to infected wild boar (*see* Sections 1.5 and 8.1.1). Biosecurity practices limit the risk of exposure on large confinement operations, which are the most likely source of swine commodities for export to the United States (*see* Section 8.1.1). However, additional mitigation measures may be necessary to prevent commingling of pork and pork products destined for export with those sourced from an affected country or region.

12.5 Incoming vehicular or human traffic

12.5.1 Central risk issue

CSF or SVD could be introduced into Poland via incoming vehicular traffic, particularly improperly disinfected live-haul trucks originating in affected regions of Member States or third countries. Virus could also be passively introduced by human traffic from affected regions through transmission of live virus on clothing, potentially resulting in on-farm exposure of a domestic swine population (*see* Figure 12.5).

Figure 12.5: Introduction pathways via vehicular or human traffic

12.5.2 Risk factors and existing risk mitigation measures

The likelihood of introducing CSF or SVD into Poland via incoming vehicular or human traffic depends primarily on the disease status of neighboring regions and disinfection practices at the point of entry. Risk factors for disease introduction and associated mitigating factors identified in Sections 1-11 are summarized below.

Risk factors for disease introduction:

1. CSF and SVD – Poland shares common land borders with several third countries that APHIS has not evaluated and regards as unknown risk for CSF and SVD (*see* Sections 3.1 and 3.2).
2. CSF – Poland shares common land borders with EU Member States that APHIS regards as affected with CSF in part or whole (*see* Section 3.1).
3. CSF and SVD – Considerable local traffic occurs from neighboring third countries and Member States (*see* Section 7.6).

Factors mitigating the risk of disease introduction:

1. SVD – SVD has not been reported for decades in Germany or Ukraine, and has never been reported in the other countries bordering Poland (*see* Section 3.2).
2. CSF and SVD – Poland requires certification that live-haul trucks have been disinfected prior to animal loading, and live-haul trucks must be disinfected after unloading. All trucks from third countries must pass over disinfection mats at the point of entry (*see* Section 7.1.2)
3. CSF and SVD – The official veterinary services are prepared to implement extensive biosecurity measures to prevent disease introduction via vehicular or human traffic if an outbreak is reported in a neighboring region (*see* Sections 7.1.2 and 7.6).

12.5.3 Summary discussion

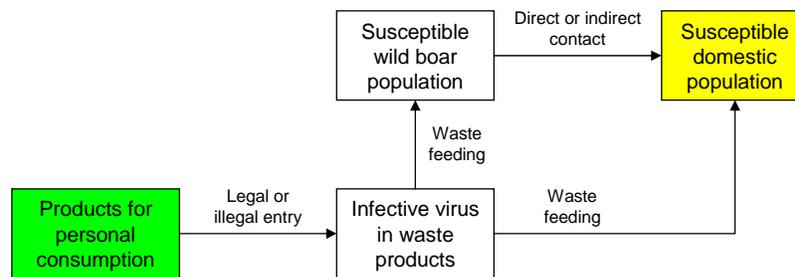
APHIS considers the risk of introducing SVD virus via incoming vehicular or human traffic to be low. The risk of CSF introduction via this pathway is considerably greater, particularly from affected regions of Germany and Slovakia. Biosecurity practices on most small swine holdings are likely insufficient to protect against virus exposure from this quarter. However, small swine operations in Poland are also unlikely to contribute products for export to the United States. Existing husbandry and production conditions in Poland substantially mitigate the export risk to the United States.

12.6 Agricultural commodities for personal consumption

12.6.1 Central risk issue

Infected meat or meat products carried into Poland by human traffic for personal consumption could introduce CSF or SVD into the country, as shown in Figure 12.6. Such products may be intentionally smuggled into the country or simply missed during Customs inspections at border crossings.

Figure 12.6: Introduction pathways via personal consignments



12.6.2 Risk factors and existing mitigation measures

The likelihood of introducing CSF or SVD via agricultural products for personal consumption depends primarily on EC policies regarding allowable commodities for personal consumption, the extent of passenger traffic from affected regions, and Customs Service inspection, confiscation, and disposal practices at the point of entry.

Risk factors for disease introduction:

1. CSF and SVD – EC legislation permits personal consignments of meat, fluid milk, and meat and milk products from several countries that APHIS has not evaluated and regards as unknown risk for CSF and SVD (*see* Section 7.6).
2. CSF and SVD – Considerable local traffic occurs from neighboring third countries that is subject to Customs inspection (*see* Section 7.6).

Factors mitigating the risk of disease introduction:

1. CSF and SVD – None of the countries from which the EC allows personal consignments have reported outbreaks of CSF or SVD in recent years, if ever (*see* Section 7.6).
2. CSF and SVD – The Customs Service inspects a substantial percentage of incoming traffic and luggage, and the inspection process is thorough (*see* Section 7.7.4)
3. CSF and SVD – Signs indicating prohibited items and prominently placed amnesty bins decrease the amount of illegal products unintentionally carried across the border (*see* Section 7.6).

12.6.3 Summary discussion

APHIS considers the risk of introducing CSF into Poland to be far greater than SVD, considering the limited distribution of the latter disease. A risk assessment recently

estimated the risk of disease introduction into Great Britain via illegally imported meat as once in 10 years for CSF and once per billion years for SVD (DEFRA 2004). Infective virus in agricultural commodities for personal consumption could result in direct exposure of susceptible wild boar or domestic swine populations via waste feeding.

Noncompliance with the waste-feeding ban and exposure of domestic swine to infected wild boar are most likely to occur on small swine holdings, which are unlikely to contribute products for export to the United States. Although APHIS considers this a higher risk pathway for CSF introduction into Poland, existing production and biosecurity measures limit the export risk to the United States.

13. Release assessment conclusions

Based on the preceding assessment of the 11 factors specified in 9 CFR 92.2, APHIS has no evidence that CSF or SVD currently exists in Poland. CSF has not been detected in domestic swine since 1994 or in wild boar since 1997, and SVD has not been reported since 1972. Poland's current surveillance practices for these diseases may be insufficient to detect low levels of infection in wild boar in a timely manner, although exposure of domestic swine on confinement operations is unlikely. CSF and SVD surveillance measures in domestic swine are commensurate with the risk of introduction of these diseases into the swine population and are adequate to detect active outbreaks in this context. In case of a recognized disease incursion, the Polish veterinary services are well trained and equipped to contain and eliminate the outbreak.

APHIS considers that the potential for introduction of CSF or SVD into Poland is greater than the potential for introduction of these diseases into the United States. Specifically, Poland shares common land borders with several regions that APHIS does not consider to be free of these diseases, engages in free trade with other Member States that import live animals or animal commodities from such regions and, under harmonized EC legislation, could directly import live swine or swine commodities from such regions.

As a result, the risk profile of Poland resembles that of the EU-15. APHIS' current regulations recognize an equivalent level of risk across the EU-15 due to harmonized EC legislation and trading on the internal common market. The EU-15 is considered a low-risk region for the purposes of export to the United States and is subject to the import conditions specified in 9 CFR 94.24 and 94.13 for pork and pork products, 9 CFR 94.24 for breeding swine, and 9 CFR 98.38 for swine semen.

APHIS has recognized in previous assessments that a reservoir of CSF infections exists in wild boar in the EU-15 (APHIS 2000; APHIS 2004a). This reservoir is likely to produce continuing CSF outbreaks in domestic swine in the EU. However, in its prior assessments of the situation in the EU-15, APHIS concluded that EC control measures were sufficient to detect and contain any outbreaks that might occur. This assessment verified that the same EC control measures apply in Poland as in the EU-15.

APHIS considers the export risk from Poland equivalent to that of the EU-15. Applying provisions of 9 CFR 94.13, 94.24, and 98.38 to Poland would address the majority of the risk issues discussed in Section 12 and result in a low level of risk equivalent to that portion of the EU authorized to export breeding swine, swine semen, and fresh pork to the United States.

The text of 9 CFR 94.13, 94.24, and 98.38 is provided in Annex 1. In summary, these CFR sections mitigate the risk associated with less restrictive trade practices by (1) restricting the sourcing of swine for export or slaughter to regions free of CSF and SVD; (2) prohibiting commingling of live swine, pork, or pork products for export with such commodities from regions not considered free of these diseases; (3) placing certain restrictions on the use of transportation equipment for live swine; and (4) requiring exporting slaughterhouses to be approved by the U.S. Department of Agriculture's Food Safety and Inspection Service. An official veterinarian of the exporting country must certify that these conditions have been met.

The CFR provisions do not directly address the risk of exporting infected live swine or swine commodities during the period between virus incursion and outbreak detection. However, 9 CFR 94.24 and 98.38 substantially mitigate this risk by prohibiting sourcing of swine from a restricted zone established because of detection of CSF in wild boar or a CSF outbreak in domestic swine, as well as for the 6 months following depopulation, cleaning, and disinfection of the last infected premises in the zone. In addition, swine semen collection centers must be approved by the national government of the exporting country according to EC requirements, which provides substantial risk mitigation.

Biosecurity measures and production practices on the large swine confinement operations most likely to export to the United States limit exposure risk for domestic swine in Poland as discussed in Section 12. Other potential mitigation measures include a mandatory period of observation and/or diagnostic testing prior to live export or slaughtering for export. However, since the results of this assessment indicate that Poland is currently free of CSF and SVD, these measures are not necessary.

Exposure assessment

An exposure assessment as defined by the OIE describes the biological pathway(s) necessary for exposure of animals and humans in an importing country to the hazards released from a given risk source, and estimates the probability of the exposure(s) occurring (OIE 2005b). APHIS' regulatory authority is limited to animal health, however, so potential risks to animals are the primary focus of this evaluation.

APHIS considers that the most likely pathway of exposure of domestic livestock to CSF and SVD viruses in pork and pork products is through feeding of contaminated food waste to swine (CEAH 2001). Other exposure pathways are more direct and include contact with imported infected live animals or contact with infected genetic material.

1. Waste feeding to susceptible swine

1.3 Waste-feeding practices in the United States

The likelihood of exposure of susceptible species to virus-infected meat was evaluated in previous APHIS studies. In 1995, APHIS conducted a pathway analysis to estimate the likelihood of exposing swine to infected waste (APHIS 1995). The analysis included two pathways for exposure of swine to contaminated waste; namely, exposure associated with illegal household imports, and exposure associated with legal imports. The latter is the exposure pathway that would be applicable to importing meat or meat products from Poland. With 95% confidence, APHIS estimated that 0.023% or less of plate and manufacturing waste would be inadequately processed prior to feeding to swine (APHIS 1995). Based on this fraction, less than 1 part in 4,300 (reciprocal of 0.023%) of imported meat is likely to be fed to swine as inadequately cooked waste.

APHIS, VS, conducted a survey in 2001 of the U.S. swine waste-feeding sector to update a similar study done in 1994 (APHIS 2002). Based on this survey, VS estimated that the proportion of plate and manufacturing waste fed to swine diminished by about 50% between 1994 and 2001 due to a significant decrease in the number of waste-feeding premises. The study also found that:

1. Several more states prohibited feeding food wastes to swine;
2. The number of waste-feeding premises in the continental United States decreased by 40.5% from 1994-2001, and in Hawaii and Puerto Rico decreased by 37.5% and 52.3%, respectively; and
3. Institutions and restaurants provide nearly 90% of all plate waste fed to swine.

APHIS considers that prohibiting the feeding of unprocessed plate waste to swine has further contributed to the reduction of waste-feeding to swine. Waste-feeder operations must be licensed and inspected regularly by USDA inspectors (9 CFR 166). The licensing process requires that producers adequately cook the waste fed to swine using methods designed to destroy foreign animal disease agents.

Based on the 1995 estimate that a very small proportion of food waste is inadequately processed prior to feeding to swine, and the substantial reduction in waste-feeding operations in recent years, APHIS concludes that the likelihood of exposure of susceptible swine to CSF or SVD viruses through inadequately processed food waste is

low. Based on the results of the release assessment, APHIS further considers the probability of exposure of susceptible swine to these viruses through inadequately cooked infected meat from Poland to be low.

2. Imported live animals

The likelihood of exposure of susceptible species to infected live swine was evaluated by briefly reviewing virus persistence and shedding in live swine, as well as U.S. standard import requirements for this species. This exposure assessment focuses on breeding animals because transportation costs are prohibitive for export of other live swine (e.g. feeder pigs) to the United States from EU Member States, and because U.S. regulations only allow import of breeding swine from the EU-15. APHIS considers exposure of U.S. swine to illegally imported infected live swine from Poland to be highly unlikely.

The survival period of CSF virus within live swine ranges from 1 week to greater than 6 months depending on various host-pathogen factors. Although SVD virus is not known to cause persistent infection, a large percentage of infections are subclinical and therefore may remain undetected without diagnostic testing prior to export.

Consequently, APHIS considers this potential pathway for disease introduction to have high unmitigated risk. The risk is partially mitigated by current U.S. regulations requiring a minimum quarantine period of 15 days for all imported swine (9 CFR 93.510), which increases the probability of disease detection. Based on the results of the release assessment, APHIS considers the likelihood of exposure of U.S. domestic swine to CSF or SVD virus via live swine from Poland to be low. With the mitigation measures for live swine described in 9 CFR 94.24, which further limit the sourcing of swine for export (see footnote on page 29), the probability of exposure of susceptible U.S. swine to CSF virus via infected swine from Poland is very low.

3. Imported genetic material

Genetic materials have been implicated in the introduction of foreign animal diseases into susceptible populations, as well as the spread of established disease epidemics over considerable distances. For example, two semen collection centers became infected during the course of the 1997-1998 CSF epidemic in the Netherlands (Hennecken et al 2000). Potentially contaminated semen was distributed to 1,680 swine herds over the course of 5 weeks, during which the disease remained undetected in the donor boars. Although investigators concluded that only 36 farms had been infected through artificial insemination, all suspect farms were subject to quarantine and testing, resulting in a tremendous expenditure of resources.

Survival of CSF virus in semen has been estimated in experimental studies to be 12-72 hours at 20°C but ranges from 1 month to several years at 4°C or below (Floegel et al 2000). Survival in embryos and ova is unknown (Floegel et al 2000; Glossup and Cameron 2002). Survival of SVD virus in genetic material is possible but is not considered to be a primary mode of transmission (OIE 2005a).

APHIS considers the unmitigated likelihood of exposure of domestic swine to CSF virus in infected semen to be high. However, based on the results of the release assessment, APHIS considers the likelihood of exposure of susceptible animals to CSF virus via

infected semen from Poland to be low. With the mitigation measures for swine semen described in 9 CFR 98.38, which require additional observation of donor boars after semen collection (see footnote on page 29), the probability of exposure of susceptible swine to CSF or SVD viruses via infected semen from Poland is very low.

Consequence assessment

A consequence assessment describes the biologic and economic consequences of introducing the hazards under consideration into the United States. This consequence assessment addresses both direct and indirect consequences as recommended by the OIE (OIE 2005b).

The magnitude of the biologic and economic consequences following an introduction of CSF or SVD virus would depend on the location of the introduction; the virus serotype introduced; the rate of virus spread and whether other environmental conditions at the introduction site that might facilitate this spread; the ability to detect the disease rapidly; swine demographics and movement patterns; and the ease of employing eradication procedures. In addition, depending on the extent of export of swine and swine products, trade restrictions imposed by trading partners may result in severe economic consequences.

Direct consequences include effects of the disease on animal health and the subsequent production losses, the total costs of control and eradication, the effect on the environment, and public health consequences. Indirect consequences include impacts on international trade and associated domestic consequences.

1. Effects on animal health and production

1.1 Classical swine fever

CSF infection may take an acute or a chronic course. The severity of the disease depends largely on the age of the animal and virulence of the viral strain, with young animals usually more severely affected than older animals. In older breeding pigs the course of infection is often mild or even subclinical, whereas mortality rates may reach 90% in young pigs (Moennig 2000). Low virulence strains may manifest primarily as poor reproductive performance and birth of piglets with neurologic defects.

1.2 Swine vesicular disease

SVD is typically a transient vesicular disease of pigs. The virus causes essentially no mortality, and infected pigs generally recover within one week (up to three weeks). Some strains produce only mild clinical symptoms or are asymptomatic (OIE 2005a). Morbidity rates may be low throughout a whole herd but high in certain pens.

2. Control and eradication costs

The overall cost of control and eradication depends on the mitigation or policy option chosen to control and eradicate the disease. Potential costs include disease control measures such as imposing quarantine measures and movement controls, direct costs related to stamping out of affected and other herds, indemnity payments, vaccination costs, surveillance and laboratory testing, etc. For disease-free countries like the United States that have a substantial export market for livestock and livestock products, the preferred option for control and eradication has traditionally been to stamp out infected herds without the use of vaccine.

The U.S. policy for most significant foreign animal disease emergencies is to follow strict quarantine measures and stamping out of infected and contact herds with ongoing assessment for the need for and implementation of strategic vaccination. Available data do not allow quantification of the number of herds/farms that would be affected if one of these diseases were introduced. Nevertheless, the cost of control, eradication and compensation is likely to be significant.

2.1 Classical swine fever

Since there have been no CSF outbreaks in the United States from which economic estimates can be derived, estimates of economic effects in other countries are provided as illustrations. Saatkamp et al (2000) reviewed the economic aspects of control of small and large CSF outbreaks in the EU from 1990-1997. For the largest outbreak, involving 429 herds over 14 months, the cost of removal of affected swine was 426.9 million Euros, slaughter for welfare purposes cost 1.2 billion Euros, and program operational costs were 134.3 million Euros. Overall, the outbreak cost pig producers 712.4 million Euros, the national government 230.5 million Euros, and the EU 807.8 million Euros. Approximately 10 million pigs were destroyed during the course of the outbreak, primarily for welfare reasons (overcrowding or overweight) (Stegeman et al 2000). The total cost of smaller outbreaks ranged from 10.9 million Euros (8 affected herds over 2 months) to 208.7 million Euros (113 affected herds over 10 months) (Saatkamp et al 2000).

Garner et al (2001) estimated the potential economic impact of CSF on the pig industry of Australia using a stochastic modeling process. The model estimated a loss in gross income of 28-37% for the pig industry in the affected region, and a 9-11% loss in gross income for the national pig industry.

2.2 Swine vesicular disease

Little information exists on the cost of control and eradication of SVD in a previously free region. SVD virus generally does not spread as quickly as CSF virus; even on infected premises, spread from one pen to another may not occur in the absence of a common open drainage system or of frequent movement of pigs between pens (Lin and Kitching 2000). However, a SVD outbreak may not be detected for weeks or even months due to the frequently mild nature of the disease, allowing ample time for spread to other swine establishments. In addition, the virus is extraordinarily stable in the environment, which could lead to disease recurrence on previously infected farms.

In the absence of specific data on the cost of control and eradication, APHIS assumes a baseline cost similar to that of a small- to medium-sized CSF outbreak (see above).

3. Effect on the environment

Environmental effects have been considered under all applicable environmental review laws in force in the United States. These are considered in a separate, but related, environmental assessment conducted for certain regions of the EU (APHIS 2003). The environmental assessment complies with the National Environmental Policy Act (NEPA) and implementing regulations (NEPA 1969).

4. Effect on public health

Although public health consequences are not issues under APHIS' regulatory authority, the subject is briefly addressed in this assessment. Direct public health consequences are insubstantial because the occurrence of CSF or SVD infection in humans is quite rare. In fact, the number of cases reported is so small when compared with the number of persons exposed to these viruses that the World Health Organization generally does not consider CSF or SVD viruses to be a threat to humans.

Perhaps more importantly, a substantial foreign animal disease outbreak can result in severe psychosocial effects on farmers and farming communities (Anonymous 2004). Farmers and their families can suffer from grief over losing animals, in some cases blood lines kept over many generations, as well as loss of control over their lives due to movement restrictions, disruptions in community life, and short- and long-term stress over their financial future.

5. Indirect consequences

In addition to the direct costs of CSF or SVD introduction, impacts on international trade and related domestic consequences need to be considered. Export losses due to restrictions imposed by trade partners on animals and products susceptible to these diseases could run into billions of U.S. dollars. The value of U.S. exports of pork and pork products, which would be immediately lost if an outbreak of one of these diseases occurred, was an estimated 1.3 billion USD in 2003 (FAS 2005). The impact of an outbreak of a foreign animal disease on the rural and regional economic viability, including businesses reliant on livestock revenue, could also be substantial.

Indirect economic losses to U.S. firms that support export markets for live animals and animal products could also be substantial. In the longer term, if trade restrictions persisted and alternative export markets did not develop, the U.S. swine production sector could contract, allowing other supplying countries to establish trade relationships in the absence of U.S. supply.

Risk Estimation

Risk estimation consists of integrating the results from the release assessment, exposure assessment, and consequence assessment to produce overall measures of risk associated with the hazards identified at the outset (OIE 2005b). Thus, risk estimation takes into account the whole risk pathway from hazard identified to the unwanted event.

APHIS concluded from the release assessment that there is no evidence that CSF or SVD currently exist in Poland. APHIS considers the risk potential for introduction of these hazards from Poland into the United States via exported live swine and swine commodities to be low. In keeping with previous analyses, APHIS also concludes that the export risk from Poland is equivalent to that portion of the EU that is subject to the import conditions specified in 9 CFR 94.24 for breeding swine, 9 CFR 94.24 and 94.13 for pork and pork products, and 98.38 for swine semen.

APHIS concluded from the exposure assessment that the unmitigated risk associated with certain pathways for exposure of domestic swine in the United States, particularly those involving genetic material, is inherently high. APHIS also concluded that the animal health and economic consequences of a CSF or SVD outbreak in the United States would be severe; although control and eradication measures would be costly, the major economic impact would likely result from export trade losses.

In summary, although exposure of U.S. domestic swine is likely under certain circumstances and the consequences of an outbreak would be severe, the likelihood of release of live CSF or SVD virus from Poland is low. The overall risk of opening trade with Poland in swine and swine products is further reduced if Poland is subject to the same mitigations measures as are specified for other EU Member States in 9 CFR 94.13, 94.24, and 98.38.

Annexes

Annex 1: Text of Title 9 Code of Federal Regulations 94.13, 94.24, and 98.38.

9 CFR 94.13: Restrictions on importation of pork or pork products from specified regions.

Austria, the Bahamas, Belgium, Bulgaria, Chile, Denmark, France, Germany, Hungary, Luxembourg, the Netherlands, Portugal, Republic of Ireland, Spain, Switzerland, the United Kingdom (England, Scotland, Wales, the Isle of Man, and Northern Ireland), Yugoslavia, and the Regions in Italy of Friuli, Liguria, Marche, and Valle d'Aosta are declared free of swine vesicular disease in Sec. 94.12(a) of this part.

These regions either supplement their national pork supply by the importation of fresh (chilled or frozen) meat of animals from regions where swine vesicular disease is considered to exist, have a common border with such regions, or have trade practices that are less restrictive than are acceptable to the United States. Thus, the pork or pork products produced in such regions may be commingled with fresh (chilled or frozen) meat of animals from a region where swine vesicular disease is considered to exist, resulting in an undue risk of swine vesicular disease introduction into the United States. Therefore, pork or pork products and ship's stores, airplane meals, and baggage containing such pork, other than those articles regulated under part 95 or part 96 of this chapter, produced in such regions shall not be brought into the United States unless the following requirements are met in addition to other applicable requirements of part 327 of this title:

(a) All such pork or pork products, except those treated in accordance with Sec. 94.12(b)(1)(i) of this part, shall have been prepared only in inspected establishments that are eligible to have their products imported into the United States under the Federal Meat Inspection Act (21 U.S.C. 601 et seq.) and under Sec. 327.2 of this title and shall be accompanied by the foreign meat inspection certificate required by Sec. 327.4 of this title. Upon arrival of the pork or pork products in the United States, the foreign meat inspection certificate must be presented to an authorized inspector at the port of arrival.

(b) Unless such pork or pork products are treated according to one of the procedures described in Sec. 94.12(b) of this part, the pork or pork products must be accompanied by an additional certificate issued by a full-time salaried veterinary official of the agency in the national government responsible for the health of the animals within that region. Upon arrival of the pork or pork products in the United States, the certificate must be presented to an authorized inspector at the port of arrival. The certificate shall state the name and official establishment number of the establishment where the swine involved were slaughtered and the pork was processed. The certificate shall also state that:

(1) The slaughtering establishment is not permitted to receive animals that originated in, or have ever been in a region listed in Sec. 94.12(a) as a region in which swine vesicular disease is considered to exist;

(2) The slaughtering establishment is not permitted to receive pork derived from swine which originated in such a region or pork from swine from a swine vesicular disease free region which has been transported through a region where swine vesicular disease is considered to exist except pork which was transported in containers sealed with serially numbered seals of the National Government of a region of origin listed in Sec. 94.12 as a region considered free of the disease.

(3) The pork has been processed, stored, and transported to the means of conveyance that will bring the article to the United States in a manner that precludes its being commingled or otherwise coming in contact with pork or pork products that have not been handled in accordance with the requirements of this section.

9 CFR 94.24: Restrictions on the importation of pork, pork products, and swine from the EU-15.

(a) Pork and pork products. In addition to meeting all other applicable provisions of this part, fresh pork and pork products imported from the EU-15 must meet the following conditions:

(1) The pork or pork products must not have been derived from swine that were in any of the regions described in paragraphs (a)(1)(i) through (a)(1)(iii) of this section during the periods described, unless the swine were slaughtered after the periods described:

(i) Any region when the region was classified in §§ 94.9(a) and 94.10(a) as one in which classical swine fever is known to exist, except for the EU-15;

(ii) In a restricted zone in the EU-15 established because of an outbreak of classical swine fever in domestic swine, from the time of the outbreak until the designation of the zone as a restricted zone is removed by the competent veterinary authority of an EU-15 Member State or until 6 months following depopulation of the swine on affected premises in the restricted zone and the cleaning and disinfection of the last affected premises in the zone, whichever is later; or

(iii) In a restricted zone in the EU-15 established because of the detection of classical swine fever in wild boar, before the designation of the zone as a restricted zone is removed by the competent veterinary authority of an EU-15 Member State.

(2) The pork and pork products must not have been commingled with pork or pork products derived from swine that were in any of the regions or zones described in paragraphs (a)(1)(i) through (a)(1)(iii) of this section at any time during the periods described, unless the swine were slaughtered after the periods described. Additionally, the pork and pork products must not have been derived from swine that were commingled with swine that were in any of the regions or zones described in paragraphs (a)(1)(i) through (a)(1)(iii) of this section at any time during the periods described, unless the swine were slaughtered after the periods described.

(3) The swine from which the pork or pork products were derived must not have transited any region or zone described in paragraph (a)(1)(i) through (a)(1)(iii) of this section during the periods described, unless moved directly through the region or zone in a sealed means of conveyance with the seal determined to be intact upon arrival at the point of destination, or unless the swine were slaughtered after the periods described.

(4) The pork and pork products must be accompanied by a certificate issued by an official of the competent veterinary authority of the EU-15 Member State who is authorized to issue the foreign meat inspection certificate required by § 327.4 of this title, stating that the applicable provisions of paragraphs (a)(1) through (a)(3) of this section have been met.

(b) Live swine. In addition to meeting all other applicable provisions of this title, live swine imported from the EU-15 must meet the following conditions:

(1) The swine must be breeding swine;

(2) The swine must not have been in any of the following regions or zones at any time during the periods described in paragraphs (b)(2)(i) through (b)(2)(iii) of this section:

(i) Any region when the region was classified in §§ 94.9(a) and 94.10(a) as one in which classical swine fever is known to exist, except for the EU-15, unless the swine are exported to the United States after APHIS removes its classification of the region as one in which classical swine fever is known to exist;

(ii) In a restricted zone in the EU-15 established because of an outbreak of classical swine fever in domestic swine, unless the swine are exported after the designation of the zone as a restricted zone is removed by the competent veterinary authority of an EU-15 Member State or after 6 months following depopulation of the swine on affected premises in the restricted zone and the cleaning and disinfection of the last affected premises in the zone, whichever is later; or

(iii) In a restricted zone in the EU-15 established because of the detection of classical swine fever in wild boar, unless the swine are exported after the designation of the zone as a restricted zone is removed by the competent veterinary authority of an EU-15 Member State;

(3) The swine must not have been commingled with swine that have at any time been in any of the regions described in paragraphs (b)(1)(i) through (b)(1)(iii) of this section during the periods described, unless the swine are exported after the periods described;

(3) The swine must not have transited any region or zone described in paragraph (b)(2) of this section during the periods described, unless moved directly through the region or zone in a sealed means of conveyance with the seal determined to be intact upon arrival at the point of destination, or unless the swine are exported after the periods described;

(4) No equipment or materials used in transporting the swine may have previously been used for transporting swine that do not meet the requirements of this section, unless the equipment and materials have first been cleaned and disinfected; and

(5) The swine must be accompanied by a certificate issued by a salaried veterinary officer of the competent veterinary authority of the EU-15 Member State, stating that the conditions of paragraphs (b)(1) through (b)(4) of this section have been met.

(c) The certificates required by paragraphs (a)(4) and (b)(5) of this section must be presented by the importer to an authorized inspector at the port of arrival, upon arrival of the swine, pork, or pork products at the port.

9 CFR 98.38: Restrictions on the importation of swine semen from the EU-15.

In addition to meeting all other applicable provisions of this part, swine semen imported from the EU-15 must meet the following conditions, except as noted in paragraph (h) of this section with regard to swine semen imported from Denmark, Finland, the Republic of Ireland, Sweden, or the United Kingdom:

(a) The semen must come from a semen collection center approved for export by the competent veterinary authority of the EU-15 Member State;

(b) The semen must not have been collected from a donor boar that was in any of the regions or zones described in paragraphs (b)(1) or (b)(2) of this section at any time during the periods described, unless the semen was collected after the periods described:

(1) Any region when the region was classified in §§ 94.9(a) and 94.10(a) of this chapter as one in which classical swine fever is known to exist, except for the EU-15; or

(2) During the following time periods in any restricted zone in the EU-15:

(i) In a restricted zone in the EU-15 established because of an outbreak of classical swine fever in domestic swine, from the time of the outbreak until the designation of the zone as a restricted zone is removed by the competent veterinary authority of an EU-15 Member State or until 6 months following depopulation of the swine on affected premises in the restricted zone and the cleaning and disinfection of the last affected premises in the zone, whichever is later; or

(ii) In a restricted zone established because of the detection of classical swine fever in wild boar, before the designation of the zone as a restricted zone is removed by the competent veterinary authority of the EU-15 Member State.

(c) The semen must not have been collected from a donor boar that was commingled with swine that at any time were in any of the regions or zones described in paragraphs (b)(1) or (b)(2) of this section, unless the semen was collected after the periods described;

(d) The semen must not have been collected from a donor boar that transited any region or zone described in paragraphs (b)(1) and (b)(2) of this section during the periods described, unless the donor boar was moved directly through the region or zone in a sealed means of conveyance with the seal determined to be intact upon arrival at the point of destination, or unless the semen was collected after the periods described;

(e) The donor boar must be held in isolation for at least 30 days prior to entering the semen collection center;

(f) No more than 30 days prior to being held in isolation as required by paragraph (c) of this section, the donor boar must be tested with negative results with a classical swine fever test approved by the Office International des Epizooties (World Organization for Animal Health);

(g) No equipment or materials used in transporting the donor boar from the farm of origin to the semen collection center may have been used previously for transporting swine that do not meet the requirements of this section, unless such equipment or materials had first been cleaned and disinfected;

(h) Except for semen collected from swine in Denmark, Finland, the Republic of Ireland, Sweden, or the United Kingdom, before the semen is exported to the United States, the donor boar must be held at the semen collection center and observed by the center veterinarian for at least 40 days following collection of the semen, and, along with all other swine at the semen collection center, exhibit no clinical signs of classical swine fever; and

(i) The semen must be accompanied to the United States by a certificate issued by a salaried veterinary officer of the competent veterinary authority of the EU-15 Member State, stating that the provisions of paragraphs (a) through (f) of this section have been met.

Annex 2: Import and export data for Poland for 1998-2004.**Table 2-A: Import data for Poland from 1998-2004 (GTA 2005)**

Import	1998	1999	2000	2001	2002	2003	2004
Live Pigs (head)							
TOTAL	2422	580	2806	397	1979	1931	234,464
- EU 15	1939	572	2256	262	1979	1834	225,677
- Austria	0	0	0	0	0	7	3
- Belgium	11	0	0	0	0	0	0
- Denmark	414	36	644	23	68	155	8943
- France	74	116	1288	220	1181	1647	4684
- Germany	0	0	0	0	0	0	113,520
- Netherlands	0	382	273	0	0	0	98,527
- Sweden	0	38	25	19	30	25	0
- United Kingdom	1440	0	26	0	700	0	0
- EU 10	263	0	524	0	0	0	8683
- Hungary	263	0	524	0	0	0	0
- Lithuania	0	0	0	0	0	0	8503
- Slovakia	0	0	0	0	0	0	180
- Other	220	8	26	135	0	97	104
- Canada	0	0	0	80	0	97	59
- Guyana	0	0	26	0	0	0	0
- Norway	220	0				0	45
- U.S.	0	0	0	55	0	0	0
Pig Meat (metric tons)							
TOTAL	58008	43706	36989	18976	45879	61000	45000
- EU 15	50210	29530	29470	12403	37925	50000	40000
- Austria	57	574	0	0	0		
- Belgium	0	0	2852	1048	4286		
- Denmark	41035	22889	21180	8673	22105		
- France	3578	1238	2016	794	3029		
- Germany	727	769	0	767	1232		
- Ireland	0	0	871	640	1279		
- Italy	0	0	0	61	564		
- Netherlands	0	170	323	420	4902		
- Spain	0	0	455	0	0		
- Sweden	0	0	0	0	528		
- United Kingdom	4813	3890	1773	0	0		
- EU 10	2079	8641	3857	1305	1810	3000	2000
- Czech Republic	57	1100	0	52	0		
- Hungary	2022	7541	3857	1253	1810		
- Other	5719	5535	3662	5268	6144	8000	3000
- Canada	4798	2887	2065	4491	1620		
- Norway	0	1572	302	0	0		
- U.S.	397	88	4	462	3486		
- Not listed	524	2560	1593	315	1038		

Table 2-B: Export data for Poland from 1998-2004 (GTA 2005)

Export	1998	1999	2000	2001	2002	2003	2004
Live Pigs (head)							
TOTAL	29831	3163	12841	5137	8154	32,056	137,858
- EU 15	0	0	0	0	0	0	0
- EU 10	693	2527	3555	1119	791	1233	12,082
- Hungary	693	368	85	128	37	0	584
- Latvia	0	550	982	0	0	706	2178
- Lithuania	0	1609	2488	991	754	527	9320
- Other	29138	636	9286	4018	7363	30,823	125,776
- Belarus	30	88	1405	74	16	0	15
- Bosnia/Herzegovina	0	0	110	270	224	505	120
- Bulgaria	0	0	0	0	1	200	711
- Croatia	12320	0	0	1775	126	0	0
- India	0	20	0	0	0	0	0
- Panama	0	10	0	0	0	0	0
- Philippines	0	0	155	0	0	0	0
- Romania			1816	0	0	850	1955
- Russia	16505	28	5278	1003	6648	29,140	122,686
- Serbia/Montenegro	0	0	0	0	0	0	132
- Thailand	0	369	0	114	0	0	0
- Ukraine	0	121	502	782	348	128	157
- Not listed	283	0	20	0	0	0	0
Pig Meat (metric tons)							
TOTAL	163695	178956	121413	74841	70064	280000	160000
- EU 15	980	1316	1035	1769	5170	31000	30000
- Germany	0	0	0	0	1615		
- Spain	0	0	0	0	1445		
- United Kingdom	980	1316	1035	1769	2110		
- EU 10	3027	10649	8568	5766	3935	19000	10000
- Estonia	0	0	2798	2079	0		
- Latvia	3027	7848	4576	1904	1944		
- Lithuania	0	2801	1194	1783	1991		
- Other	159688	166991	111810	67306	60959	230000	120000
- Azerbaijan	2575	1530	957	1129	0		
- Belarus	1667	6136	5095	4234	4735		
- Bulgaria	0	1250	0	0	0		
- Korea	0	0	0	0	1540		
- Moldova	4621	5039	3618	3279	2600		
- Romania	0	1617	1568	2898	5239		
- Russia	133913	130061	82393	39621	30145		
- Ukraine	5590	9388	6400	2240	0		
- United States	5916	6948	7081	6998	7722		
- Not listed	5406	5022	4698	6907	8978		

Annex 3: CSF surveillance results in domestic swine and wild boar.**Table 3-A: CSF surveillance results in domestic swine in 2000**

Province	Number of serum samples	
	Tested	Confirmed positive
Dolnośląskie	831	0
Kujawsko-pomorskie	497	0
Lubelskie	673	0
Lubuskie	565	0
Łódzkie	467	0
Małopolskie	606	0
Mazowieckie	921	0
Opolskie	573	0
Podkarpackie	673	0
Podlaskie	760	0
Pomorskie	353	0
Śląskie	1,777	0
Świętokrzyskie	261	0
Warmińsko-mazurskie	613	0
Wielkopolskie	1098	0
Zachodniopomorskie	829	0
Total	11,497	0

Table 3-B: CSF surveillance results in domestic swine in 2001

Province	Number of serum samples	
	Tested	Confirmed positive
Dolnośląskie	775	0
Kujawsko-pomorskie	257	0
Lubelskie	707	0
Lubuskie	613	0
Łódzkie	223	0
Małopolskie	529	0
Mazowieckie	936	0
Opolskie	324	0
Podkarpackie	648	0
Podlaskie	727	0
Pomorskie	711	0
Śląskie	999	0
Świętokrzyskie	341	0
Warmińsko-mazurskie	711	0
Wielkopolskie	1,147	0
Zachodniopomorskie	891	0
Total	10,539	0

Table 3-C: CSF surveillance results in domestic swine in 2002

Province	Number of serum samples	
	Tested	Confirmed positive
Dolnośląskie	506	0
Kujawsko-pomorskie	177	0
Lubelskie	589	0
Lubuskie	528	0
Łódzkie	214	0
Małopolskie	587	0
Mazowieckie	138	0
Opolskie	295	0
Podkarpackie	647	0
Podlaskie	761	0
Pomorskie	619	0
Śląskie	510	0
Świętokrzyskie	59	0
Warmińsko-mazurskie	648	0
Wielkopolskie	1,104	0
Zachodniopomorskie	876	0
Total	8,258	0

Table 3-D: CSF surveillance results in domestic swine in 2003

Province	Number of herds tested	Number of serum samples	
		Tested	Confirmed positive
Dolnośląskie	260	685	0
Kujawsko-pomorskie	160	236	0
Lubelskie	417	533	0
Lubuskie	262	566	0
Łódzkie	44	118	0
Małopolskie	122	616	0
Mazowieckie	88	104	0
Opolskie	83	293	0
Podkarpackie	352	648	0
Podlaskie	517	788	0
Pomorskie	134	563	0
Śląskie	343	634	0
Świętokrzyskie	95	408	0
Warmińsko-mazurskie	431	656	0
Wielkopolskie	306	1,316	0
Zachodniopomorskie	527	758	0
Total	4,141	8,922	0

Table 3-E: CSF surveillance results in domestic swine January-September 2004

Province	Number of herds tested	Number of serum samples		
		Tested	Negative*	Confirmed positive
Dolnośląskie	236	539	539	0
Kujawsko-pomorskie	81	129	129	0
Lubelskie	369	445	436	0
Lubuskie	162	334	334	0
Łódzkie	28	74	45	0
Małopolskie	45	285	285	0
Mazowieckie	70	89	54	0
Opolskie	93	206	206	0
Podkarpackie	292	542	542	0
Podlaskie	333	393	393	0
Pomorskie	33	118	118	0
Śląskie	209	338	313	0
Świętokrzyskie	112	378	378	0
Warmińsko-mazurskie	306	467	467	0
Wielkopolskie	223	585	585	0
Zachodniopomorskie	252	332	311	0
Total	2,844	5,254	5,135	0

*Testing of some samples was not completed at the time the data was provided to APHIS.

Table 3-F: CSF surveillance results in wild boar in 2000

Province	No. serum samples		No. internal organs	
	Tested	Confirmed positive	Tested	Confirmed positive
Dolnośląskie	302	0	4	0
Kujawsko-pomorskie	213	0	1	0
Lubelskie	229	0	59	0
Lubuskie	337	0	487	0
Łódzkie	314	0	6	0
Małopolskie	47	0	14	0
Mazowieckie	312	0	16	0
Opolskie	385	0	10	0
Podkarpackie	182	0	7	0
Podlaskie	296	0	8	0
Pomorskie	227	0	46	0
Śląskie	209	0	1	0
Świętokrzyskie	72	0	23	0
Warmińsko-mazurskie	686	0	0	0
Wielkopolskie	483	0	120	0
Zachodniopomorskie	601	0	0	0
Total	4,898	0	802	0

Table 3-G: CSF surveillance results in wild boar in 2001

Province	No. serum samples		No. internal organs	
	Tested	Confirmed positive	Tested	Confirmed positive
Dolnośląskie	626	0	31	0
Kujawsko-pomorskie	103	0	3	0
Lubelskie	278	0	1	0
Lubuskie	239	0	327	0
Łódzkie	219	0	0	0
Małopolskie	53	0	17	0
Mazowieckie	279	0	2	0
Opolskie	132	0	0	0
Podkarpackie	189	0	5	0
Podlaskie	426	0	0	0
Pomorskie	232	0	68	0
Śląskie	286	0	4	0
Świętokrzyskie	143	0	31	0
Warmińsko-mazurskie	743	0	0	0
Wielkopolskie	481	0	13	0
Zachodniopomorskie	986	0	38	0
Total	5,415	0	540	0

Table 3-H: CSF surveillance results in wild boar in 2002

Province	No. serum samples		No. internal organs	
	Tested	Confirmed positive	Tested	Confirmed positive
Dolnośląskie	373	0	29	0
Kujawsko-pomorskie	231	0	2	0
Lubelskie	118	0	2	0
Lubuskie	523	0	162	0
Łódzkie	148	0	0	0
Małopolskie	5	0	3	0
Mazowieckie	116	0	6	0
Opolskie	79	0	0	0
Podkarpackie	89	0	15	0
Podlaskie	148	0	0	0
Pomorskie	151	0	22	0
Śląskie	166	0	3	0
Świętokrzyskie	52	0	10	0
Warmińsko-mazurskie	701	0	4	0
Wielkopolskie	366	0	36	0
Zachodniopomorskie	1,166	0	21	0
Total	4,605	0	315	0

Table 3-I: CSF surveillance results in wild boar in 2003

Province	No. serum samples		No. internal organs	
	Tested	Confirmed positive	Tested	Confirmed positive
Dolnośląskie	419	0	2	0
Kujawsko-pomorskie	389	0	14	0
Lubelskie	177	0	6	0
Lubuskie	314	0	212	0
Łódzkie	109	0	0	0
Małopolskie	34	0	7	0
Mazowieckie	111	0	8	0
Opolskie	122	0	0	0
Podkarpackie	119	0	3	0
Podlaskie	109	0	0	0
Pomorskie	113	0	21	0
Śląskie	166	0	0	0
Świętokrzyskie	54	0	1	0
Warmińsko-mazurskie	790	0	1	0
Wielkopolskie	470	0	12	0
Zachodniopomorskie	1,261	0	3	0
Total	4,757	0	290	0

Table 13-J: CSF surveillance results in wild boar January-September 2004

Province	No. found dead	No. hunted	Negative*	Confirmed positive
Dolnośląskie	2	249	251	0
Kujawsko-pomorskie	1	256	257	0
Lubelskie	0	138	138	0
Lubuskie	1	303	285	0
Łódzkie	0	60	27	0
Małopolskie	2	22	24	0
Mazowieckie	0	86	71	0
Opolskie	0	67	67	0
Podkarpackie	0	80	80	0
Podlaskie	0	41	41	0
Pomorskie	1	108	105	0
Śląskie	0	197	192	0
Świętokrzyskie	0	41	41	0
Warmińsko-mazurskie	1	450	451	0
Wielkopolskie	5	295	300	0
Zachodniopomorskie	0	664	597	0
Total	13	3057	2927	0

*Testing of some samples was not complete at the time the data was provided to APHIS.

Annex 4: SVD surveillance results in domestic swine.**Table 4-A: SVD surveillance in domestic swine January-September 2004**

Province	Number of herds tested	Number of serum samples	
		Tested*	Confirmed positive
Dolnośląskie	119	246	0
Kujawsko-pomorskie	174	184	0
Lubelskie	161	176	0
Lubuskie	76	100	0
Łódzkie	31	52	0
Małopolskie	52	140	0
Mazowieckie	320	331	0
Opolskie	44	90	0
Podkarpackie	163	165	0
Podlaskie	107	125	0
Pomorskie	32	110	0
Śląskie	212	289	0
Świętokrzyskie	58	105	0
Warmińsko-mazurskie	138	157	0
Wielkopolskie	113	237	0
Zachodniopomorskie	130	143	0
Total	1,930	2,650	0

*Testing of some samples not complete at the time the data was provided to APHIS.

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