



Animal and Plant Health Inspection Service  
U.S. DEPARTMENT OF AGRICULTURE

# **Status Review of Denmark for Classical Swine Fever, Foot and Mouth Disease, and Swine Vesicular Disease**

United States Department of Agriculture  
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## Executive Summary

The United States Department of Agriculture’s Animal and Plant Health Inspection Service (APHIS) recognizes the animal health status of foreign regions under the authority of 9 Code of Federal Regulations Part 92. Starting in 2017, APHIS began periodically reviewing animal health statuses it conferred to foreign regions, to confirm that previously conferred statuses are maintained.

APHIS recognizes Denmark as part of the “APHIS-defined European CSF region”, which APHIS has determined to be low risk for classical swine fever (CSF). APHIS also recognizes Denmark as free of foot and mouth disease (FMD) and free of swine vesicular disease (SVD).

In 2019, APHIS reviewed the CSF, FMD, and SVD statuses of Denmark, in collaboration with the Canadian Food Inspection Agency. APHIS found no evidence that Denmark has CSF, FMD, or SVD in its domestic swine or wild boar. APHIS concludes that Denmark’s veterinary infrastructure is capable of and its swine disease surveillance systems are sufficient to detect CSF, FMD, or SVD, should they occur. While there are pathways by which CSF, FMD, or SVD could enter Denmark, mitigations exist to reduce the likelihood of incursions of these hazards. This review confirms that Denmark remains low risk for CSF and free of FMD and SVD.

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## Background

One of the Animal and Plant Health Inspection Service's (APHIS) primary missions is to prevent the introduction of foreign animal diseases into the United States. APHIS has regulatory authority in Title 9, Code of Federal Regulations, Part 92 (9 CFR 92) [1], to assess import risk and conduct animal health status evaluations of foreign regions for several foreign animal diseases. Exporting countries must be conferred one or more APHIS statuses to be eligible to export certain animals or animal products to the United States.

Consistent with the regulations in 9 CFR 92, and under a review program started in 2017, APHIS periodically reviews the animal health status of foreign regions. APHIS assesses the animal health conditions in a foreign region to confirm that the region's APHIS recognition for one or more animal disease can be maintained.

APHIS conducted the current review of the CSF, FMD, and SVD statuses of Denmark as part of that review program. Separately but in conjunction with this status review of Denmark, APHIS is evaluating the animal health statuses of 12 other European Union (EU) Member States; the African swine fever and CSF control measures in place in the EU and EU Member States; and APHIS' approaches to the recognition of animal health statuses in Europe and whether those approaches remain appropriate. Details and findings of those evaluations will be published separately from this report.

For this review, APHIS requested, received, and evaluated information from the competent veterinary authority in Denmark, the Danish Veterinary and Food Administration (DVFA). APHIS determined that DVFA's documentation, supplemented by publicly available information, was sufficient to review Denmark's animal health statuses without conducting a site visit. APHIS collaborated with the Canadian Food Inspection Agency on the review.

This review evaluates Denmark's veterinary infrastructure, livestock demographics, livestock movement and marketing patterns, surveillance programs, disease control capabilities, and emergency response systems for the specified hazards. The review intends to determine that 1) the hazards are not currently present in Denmark; 2) the hazards are unlikely to be introduced into Denmark and ultimately infect or contaminate swine commodities exported to the United States; and, 3) if Denmark experienced an incursion of the hazards, their competent veterinary authorities would rapidly detect, report, control, and eradicate the disease, with exports to the United States promptly stopped to prevent the introduction of the hazard into the United States.

## APHIS Animal Health Status Recognitions of Denmark

APHIS currently recognizes Denmark as part of the “APHIS-defined European CSF region”. APHIS has declared this region low risk for CSF, and as free of FMD and free of SVD [2].

## Last Reported Detections of CSF, FMD, and SVD in Denmark

CSF has not been reported in domestic swine or wild boar in Denmark since 1933 [3, 4]. FMD has not been reported in Denmark since 1983 [3, 5]. SVD has never been reported in Denmark [3, 6].

## Vaccination Against CSF, FMD, and SVD in Denmark

Denmark has not vaccinated against any of the three diseases in the past three years. Additionally, vaccination against all three diseases is prohibited-- CSF vaccination by national legislation *Order no. 1322 of 26.11.2015 on controlling of classic swine fever*; FMD vaccination by national legislation *Order no. 1261 of 10.12.2004 on control of foot-and-mouth disease*; and SVD vaccination by national legislation *Order no. 1480 of 8.12.2015 on control of swine vesicular disease*. For CSF and FMD, emergency vaccination can be authorized under the Danish [contingency plans](#) for those two diseases [3].

## Livestock Demographics in Denmark

Denmark has approximately 13 million pigs that are raised on approximately 8,000 swine holdings. Pigs in Denmark are primarily raised on large, intensive farms, and the majority of Denmark’s swine production-- approximately 90%-- is exported either as live piglets or fattening pigs or as meat or meat products (none exported to the US; [details available later in the report](#)). Denmark has approximately 1.5 million cattle, 15,000 sheep, and 20,000 goats [7].

## Traceability- Identification and Registration of Swine and Swine Holdings

The information Denmark supplied [3] and publicly available information on the DVFA website [8] confirm the identification and registration requirements for swine (and other livestock species), and the requirements of the Central Husbandry Register, Denmark’s national database for the registration of animals and holdings. Swine must be tagged before leaving the holding, or tattooed if being sent directly to slaughter, traceable to country and holding of origin via Denmark’s country code and the holding’s unique number. Swine movements are captured in the Central Husbandry Register by number of pigs moved, date and time of shipment, unique identifier of holding of origin, unique identifier of holding of destination, unique identifier of the transport vehicle, and health certificate information (if required for export). Additionally, the owner/keeper of the holding must also have a herd register with the total number of pigs and on- and off-farm movements, including identification and other information on any pigs they have received from other countries ([import details below](#) for live swine, pork, and pork products). The DVFA conducts compliance controls on randomly selected holdings, in accordance with EU legislation. Depending on the severity of the non-compliance, enforcement actions vary from a warning or fine to reporting to the police

Denmark does have a national system for moving a group of pigs to slaughter without identification. To use this movement strategy, a truck can only be loaded with pigs that are all

owned by the same owner and have the same herd of origin. These pigs travel with documentation stating they are moving as a group, and the slaughterhouse receiving such swine has to have procedures to ensure traceability. DVFA provided the Danish Meat Association's document titled "Group movement of pigs in the slaughterhouse" that describes and illustrates the process [9].

## Denmark's Veterinary Infrastructure

### Organizational structure of the national competent authority for animal health

Danish veterinary officials provided organizational diagrams of the Ministry of Environment and Food of Denmark (MEF). Within MEF is the DVFA, Denmark's national competent authority for animal health. The DVFA is responsible for developing animal/animal health rules and regulations; developing inspection guidelines and sampling plans; supervising and auditing local control offices, laboratories, and task forces; monitoring food and feed safety risks; domestic training and collaboration; and international cooperation [3].

Within the DVFA, there are five total departments, two of which perform the bulk of the veterinary activities that fall under the scope of this review. The Veterinary Department is responsible for animal health and welfare, including inspection of farmed animals and coordinating emergency response activities against animal disease detections. The Meat Inspection Department monitors food law compliance during animal slaughtering and processing, including such activities in slaughterhouses that export beef, pork and poultry from Denmark. Other DVFA departments handle Food Safety, including food inspections of raw materials and finished food products; and Export and Innovation, which protect and promote Danish export markets; and Financial Services, including accounting, operations, and information technology [3].

### Field Veterinary Services, including Veterinary Certification

Denmark is divided into 5 administrative regions and has 98 municipalities; DVFA offices and agricultural units for which DVFA provides oversight are distributed throughout Denmark [3, 10]. DVFA's field veterinary inspection force is organized under three veterinary inspection units (VIUs). Employees in the VIUs administer field veterinary services including, but not limited to, inspecting farmed animals; veterinary certification and registration, approval, licensing, labelling, and traceability of farms, livestock, agricultural facilities, and transporters; and implementing emergency response measures to suspected or confirmed animal diseases [3, 11].

DVFA described the different veterinary controls they apply for animal health, including farm and facility inspections. These controls and inspections appear highly flexible and easily tailored between random, baseline inspections or controls to risk-based programs [11]. DVFA also described the national requirement that large swine farms in Denmark have a service agreement with a veterinarian. To fulfill this contract, the veterinarian conducts regular farm visits and audits with a goal of preventative care and minimizing animal disease risks.

Private veterinarians also provide many routine on-farm veterinary services, inspect animals at shows and assembly centers for slaughter and export, and can conduct ante- and post-mortem inspection and meat inspection at slaughterhouses. Veterinarians receive classroom training on animal diseases and food inspection to obtain their veterinary degree. Additionally, veterinarians employed by DVFA receive on-the-job training and shadow experienced colleagues, including specific on-the-job training related to certification procedures (outlined by Danish Order

no. 671 on issuing certificates and Order no. 806 on export of foodstuffs). However, it is required by Denmark's Animal Health Act that a private veterinarian must notify the VIU if he suspects CSF, FMD, or SVD. An official veterinarian conducts the epidemiological investigations for disease confirmation or exclusion [3].

### Legal authority to conduct animal health activities

Danish veterinary officials provided a table of the legal acts or regulations that authorize animal health activities in the country [3]. The tables suggest that European Commission legislations have been transposed into Danish national law. Denmark's Animal Health Act is the primary legislation for animal health. In the Animal Health Act are the legal provisions for most of the veterinary services DVFA provides, including but not limited to disease reporting requirements and the legal authority to conduct epidemiological investigations, quarantine, create protection and surveillance zones and control movements therein, depopulation, disposal, indemnity, conduct emergency vaccination programs, etc. [10]. Other specific legislations or corresponding requirements will be discussed as necessary and at the relevant portions of this document.

### Infrastructure and financial resources

Danish veterinary officials provided current staffing levels and key budget/financial information for the DVFA and for the Veterinary Department for 2017 and 2018. Summarizing, DVFA employs approximately three times the full-time-equivalent of veterinarians at the regional level as it does at the national level, suggesting priority for field delivery of programs. In contrast, most of DVFA's administrative staff is employed at the national level. Denmark funds its veterinary infrastructure primarily through nationally budgeted monies and fees collected for certain of the services the DVFA provides. The figures suggest sequential increases in annual funding from 2017 to 2019, with the bulk of DVFA's financial resources fairly evenly split between the Veterinary, Food Safety, Administration/Laboratory, and Meat Inspection departments [3].

## Denmark's Ability to Detect, Control, and Eradicate CSF, FMD, or SVD

### Laboratory Diagnosis of Swine Diseases

DVFA described laboratory tests and reporting protocols for CSF, FMD, and SVD [3]. Until 2019, Denmark's National Veterinary Institute (DTU Vet), operated in conjunction with the Technical University of Denmark, was the national reference laboratory for CSF, FMD, and SVD and Denmark's only laboratory authorized to perform official diagnostic tests for those diseases. (Some pre-export tests for CSF and SVD can be performed by accredited laboratories in other EU Member States.) DTU Vet was therefore also responsible for required disease reporting [10]. Diagnostic test results are emailed directly to national competent authorities and uploaded to the DIKO database to complete the information exchange circuit between the field, the laboratory, and the national competent authority. Danish animal health officials informed APHIS via email on May 20, 2020 that, beginning in 2020, the Statens Serum Institut (SSI, <https://en.ssi.dk/about-us>) is now the national reference laboratory.

## Surveillance for CSF, FMD, and SVD

### Classical swine fever surveillance program

DVFA conducts CSF serologic surveillance to demonstrate the absence of this disease. Their serologic surveillance program was revised in 2012 to now include three components for domestic swine: random sampling of a maximum of 2% of sows at slaughter; targeted testing of boars at semen collection centers (in accordance with 90/429/EEC); and sampling of animals intended for export to certain countries outside the EU [10]. Due to this third parameter, and fluctuations in trade, the number of samples tested annually for CSF can, and does, change significantly. CSF testing data for the last three years is presented in Table 1.

Table 1: Serological surveillance under Denmark's CSF surveillance program, 2016-2018 [3, 12].

<i>Year</i>	<i>Samples / domestic pigs</i>	<i>Samples / wild boar</i>
<b>2016</b>	41,842	53
<b>2017</b>	35,705	29
<b>2018</b>	23,658 or 34,249 <sup>a</sup>	200

<sup>a</sup> Samples for 2018 not yet validated. Citing both sources, which likely vary due to date the data was provided or published.

DVFA's CSF surveillance data shows a relatively small number of tests for CSF in wild boar. However, DVFA reports that Denmark does not have a free-ranging population of wild boar. Wild boar are only occasionally observed, and it is Danish national policy that they be killed [13].

### Supplementary Surveillance for Classical Swine Fever

Denmark supplements its serological surveillance program for CSF in domestic swine by sampling and virologically testing carcasses of pigs submitted for post-mortem examination. If the carcass tests positive, the result is reported back to DVFA as a suspect case. DVFA reported that this supplementary surveillance program yielded 287, 265, and 365 laboratory submissions in 2016, 2017, and 2018, respectively. All tested negative for CSF [10].

### Surveillance for FMD and SVD

There is no active surveillance program for FMD or SVD in Denmark. Denmark's primary FMD and SVD surveillance strategy is early identification and required notification of suspect cases of the disease. Per Danish law, samples are collected and tested for FMD as part of epidemiological investigations and disease confirmation or exclusion. For SVD, additional testing may be conducted on animals for export if SVD testing is a required condition of the importing country [3]. FMD and SVD testing for the last three years is presented in Table 2.

Table 2. FMD and SVD testing in Denmark, 2016 – 2018 [16].

<i>Disease</i>	<i>Year</i>		
	<b>2016</b>	<b>2017</b>	<b>2018</b>
<b>FMD</b>	116	3	28
<b>SVD</b>	10,588	6,946	8,152

### Epidemiological Investigation of Suspect Cases and Disease Confirmation or Exclusion

Per Denmark's Animal Health Act, notifiable animal diseases must be reported. Summarizing, farmers must call their veterinarian if they suspect disease. The veterinarian must then report the disease to the local DVFA office. Depending on whether the disease is List 1 or



List 2<sup>1</sup>, notification is required immediately upon suspicion or only upon confirmation, respectively. A DVFA veterinarian inspects the animal or herd and, if the disease cannot be excluded, imposes restrictions on the animals, herd, or premises and collects samples for diagnostic testing. Suspect cases of notifiable diseases are logged into DVFA's Digital System (DIKO), a database that captures notification information (reported by whom; where and when; relevant herd/animal information, including clinical signs). Additionally, DVFA can use DIKO and the Central Husbandry Register to determine herd ownership and conduct tracing. To ensure that epidemiological investigations are consistent, DVFA developed and supplies "[action cards](#)" for most of their notifiable diseases that explain the steps to be taken during epidemiological investigations [3]. DVFA publishes all suspected cases of a notifiable disease immediately on the DVFA website, and, as necessary, informs OIE and trading partners if exports are impacted [10].

In 2018, DVFA was notified of fourteen suspected cases of CSF in swine and three suspected cases of FMD in cattle. Most suspected cases originated from perceived clinical signs of these diseases either on the farm or in animals presented at slaughter. CSF and FMD were subsequently excluded from diagnosis either by subsequent post-mortem examination and clinical examination or by laboratory testing, with varying levels of restrictions, including movement controls, on animals or premises while the suspect cases were being investigated [10].

## Emergency Response Capability

### Emergency Response Framework

DVFA provided information to APHIS about their emergency response capability, including their "Classical Swine Fever Outbreak Manual" [17], and also publishes some emergency response information on their website [18]. Summarizing their emergency response framework, DVFA is the national competent authority during an animal disease outbreak. DVFA's framework establishes National Disease Control Centers (NDCC) and Local Disease Control Center(s) (LDCC) and allows for participation and contribution by other veterinary experts (e.g., laboratories, academia) and the impacted agricultural industry. DVFA's framework intends that the response is first local and staffs the NDCC with local DVFA employees until the size or scope of the disease outbreak stipulates otherwise. Local DVFA employees are trained in emergency response activities, and DVFA implements annual simulation exercises to enhance emergency response capability.

### Contingency Plans

Denmark has a general contingency plan and several disease-specific plans. Together they provide the overall eradication strategy, the scientific, technical, and operational tools for eradication, and the organizational structure and procedures for emergency response to an animal disease outbreak [10].

### Action Cards

To supplement their contingency plans, DVFA 'action cards' provide written instructions for handling suspect cases of diseases. Each action card contains general information about the disease; a description of actions to take when the disease is suspected; and, for CSF and FMD, detailed procedures for farm visits to a holding where the disease is suspected or a second disease

<sup>1</sup> Notifiable animal diseases are listed in Executive Order No. 532 (2018) and are divided into two groups: List 1 and List 2.

card for actions to be taken when the disease is suspected at a slaughterhouse [3]. DVFA supplied a blank “action card” as part of their information packet.

## Ability to Certify Exports of Animals and Animal Products

### Export of Animals and Animal Products

Denmark exports animals and animal products to third countries (EU term for non-EU Member States) and to other EU Member States as part of intra-Union trade. Denmark reports a higher number of pigs exported annually for 2016 – 2018 than in their national census, exporting approximately 13.4 million, 14.7 million, and 15 million pigs in those years, respectively. They also exported approximately 57,000, 63,000, and 71,000 cattle in those same years, respectively, and on average 1,200 sheep and goats annually during that timeframe [19].

Per the World Trade Organization’s International Trade Center database, Denmark did not export any live swine (or ruminants) to the United States in 2016, 2017, or 2018. Denmark did, however, export approximately 24,000 tons of fresh pork to the United States each for year for 2016 and 2017 and approximately 43,000 tons of fresh pork to the United States in 2018. They also exported varying amounts of other animal products—e.g., offal, fat—that could be of swine origin [20].

### Export certification procedures for animals and animal products

DVFA is the national certifying authority—all certifying veterinary officers are employees of the DVFA—and the national competent authority for approving export establishments for meat and edible by-products. Producers in Denmark that export animal products must register with DVFA, and are required to notify DVFA of the type, amount, origin, and destination of each commodity intended for export [3, 21].

Exporting establishments are governed by Denmark’s two primary national legislations covering certification of animals or animal products. Executive Order 671 governs export of animals and animal products (thereby implementing EC legislation 96/93/EC on issuing certificates for animals and animal products) and Executive Order 806 regulates export of food and food contact material. Summarizing key points, DVFA conducts at least one annual audit of establishments authorized to export meat and edible by-products to verify compliance with export requirements. Certifying veterinary officers, who must be authorized to endorse export health certificates, conduct random checks of consignments and establishments to verify and certify export requirements. The certifying officer must have personal knowledge via inspection or auditing of that which they are certifying and can have no conflicts of interest. Authorized establishments must ensure adequate separation between products of varying export status. In other words, meat and edible by-products intended for export to the United States, for example, must be adequately separated from and not commingled with meat and edible by-products that would not comply with U.S. import requirements [3].

For live swine and swine semen, DVFA implements (and described in their written information) a tiered inspection system for farms. Under this approach DVFA can conduct either random, baseline inspections or targeted, risk-based inspections to gauge on-farm compliance with various animal health and husbandry standards, including biosecurity. DVFA appears to flexibly tailor this farm inspection program, meaning they can set inspection rates overall or individually,

using a number of indicators, such as farm size or production type or mortality rates or other production parameters. This tiered structure also allows for DVFA to establish minimum inspection requirements, for example swine semen export facilities must be inspected twice annually [3].

## Potential for CSF, FMD, or SVD Incursions into Denmark

APHIS identified four pathways by which CSF, FMD, or SVD could be introduced into Denmark: via natural movement of wildlife (e.g., feral swine); via incoming vehicular or human traffic; via commercial import of contaminated animal product; and via commercial import of infected live animals. This section briefly summarizes each entry pathway and the corresponding likelihood and mitigations.

### Natural Movement of Wildlife, Particularly Feral Swine

The entry pathway of natural movement of wildlife, particularly feral swine, is mitigated by Denmark's physical boundaries and border intervention strategies. Denmark is predominantly a peninsular and island country surrounded by the North and the Baltic Seas. These water boundaries reduce the likelihood of terrestrial animal migration, including potentially infected wild boar, from adjacent regions. Denmark does have a southern land border with Germany, which spans approximately 45 miles [3]. However, Denmark has proactively fenced the border [3, 22] to prevent terrestrial animal migration. While the fence may not entirely prevent wild boar from migrating into Denmark, it is a substantial mitigation. Additionally, Germany has not reported CSF, FMD, or SVD since 2006 (in domestic swine) and 2009 (in wild boar), 1988, and 1985, respectively [23, 24].

### Incoming Passenger and Vehicle Traffic

The entry pathway of incoming vehicles and passengers is mitigated by Denmark's physical boundaries and Denmark's border interdictions. Vehicles and passengers can enter Denmark via all four travel modes—road, rail, air, and sea. Denmark is connected to Sweden via a bridge and a tunnel spanning approximately 5 miles [3].

The Danish Customs Agency is responsible for implementing EC-level measures for intra-Union movement of passengers and vehicles and requirements for passengers and vehicles arriving from third countries. Some of these arriving vehicles and passengers (e.g., road, rail) are more likely entering from other EU Member States, and those vehicles and passengers are subject to limited veterinary controls [3], i.e., the Danish Customs Agency can conduct random inspections for prohibited passenger products.

For vehicles and passengers arriving from third countries, Danish Customs officials enforce the EC's rules (e.g., EC/206/2009) for personal consignments of animal products arriving into the European Union. Amongst other things, this legislation prohibits travelers from bringing meat, milk, or their products except for small amounts (<10kg) from certain destinations (Faroe Islands, Greenland, or Iceland) or products otherwise exempted (e.g., infant milk). Any prohibited passenger products that are found are subsequently confiscated and destroyed. DVFA border veterinary inspection personnel can communicate and coordinate with Customs officials by identifying third countries with animal diseases and implementing targeted controls. Given the overall high volume of international travel, and the speed and distance over which modern

international travel can occur, it is possible that one of the hazards could be introduced into Denmark via this pathway.

### Import Controls for Pork and Pork Product Imports

Danish animal health officials first provided information stating, “Denmark does not import pork for free circulation” and that “import of products produced from pigs into Denmark is very little” [3]. APHIS interprets these statements as Denmark does not import pork *from third countries* and found data at the World Trade Organization’s (WTO) International Trade Centre (ITC) database [25] to support Denmark’s claim. However, the same data indicates that pork and pork products do enter Denmark from other EU Member States. DVFA subsequently provided additional data-- categorized by commodity type, but not specifying the country of origin [11] -- confirming that pork and pork products (and ruminant products) do enter Denmark. Summarizing the WTO data, Denmark’s top 10 suppliers of swine meat (fresh, chilled, or frozen) were all EU Member States or Norway, a European Free Trade Association Member State<sup>2</sup>. Denmark’s top supplier of this commodity group in 2018, by a very large margin (approximately 8-fold), was Germany, who supplied approximately 32,000 tons. Second was the Netherlands, who supplied approximately 4,400 tons. The United States of America was Denmark’s largest third country supplier of swine meat in 2018, sending 9 tons. The data for edible offal, including swine, was similar-- the top 10 suppliers to Denmark in 2018 were other EU Member States, with Germany again the top supplier by a large margin.

The pork and pork products that enter Denmark from other EU Member States via intra-Union trade are subject to the common market rules of intra-Union trade, as established by the EU. Notably, there are no true border controls for animal products moving between Member States as intra-Union trade. These products do undergo inspection and certification prior to intra-Union trade, and those inspection and certification processes include documentation, identification, and a certain percentage of physical checks [3, 26].

Border veterinary controls are applied to animal products arriving into the EU from third countries. Animal products from third countries are subject to requirements stipulated by EC legislation (e.g., 97/78/EC). To summarize, these products must enter an EU Member State, in this case Denmark, at a Danish border control post (BCP) approved for animal products (Denmark has a total of 12 BCPs). The official competent authority, DVFA, must be notified prior to arrival and each consignment of arriving products must be accompanied by a “common veterinary entry document” (CVED) and an export health certificate. DVFA employees, or the veterinarians they supervise, then perform document controls, identification checks, and physical inspection on arriving animal products. Every arriving consignment of animal products is subject to documentation and identification verification, including confirmation via seal or label inspection and export health certificate that the consignment is from an approved establishment in an authorized country. However, not all arriving products are subject to physical inspection. Instead, the type (e.g., temperature, sensory) and percentage of physical checks is determined based on a number of factors, including risk of the consignment, frequency of arrivals, and history of non-compliance by an importer. Similarly, risk-based and other factors can trigger some consignments to be sampled for laboratory testing. If, during any of these entry control processes, the animal

<sup>2</sup> The European Free Trade Association is a regional organization of non-EU Member States who have a harmonized trade policy with the EU and participate in the European Single Market.

products are determined to not satisfy entry requirements, or otherwise present an animal health or public health risk, BCP officials can reject the entry and return or destroy the product [3, 26].

Member States are required to register the aforementioned activities into the EC's Trade Expert and Control System, [TRACES](#). TRACES is the European Commission's online database for recording the movements of animal products via intra-EU trade and the movements of animal products imported into, or transiting, the EU from third countries.

### Import Controls for Live Animals

Denmark imports very few live swine (or ruminants) from other EU Member States as part of intra-Union trade or from third countries. For swine, DVFA reported importing 330, 3, and 16 pigs in 2016, 2017, and 2018, respectively [18]. APHIS verified import data using the WTO ITC TradeMap database [27]. Summarizing the WTO import data, Denmark has imported very few live swine since 2014, and none since 2016. In 2014 and 2015 Germany was Denmark's largest supplier, and no imports were reported from third countries. The only live swine imports in 2016 were from Norway, a European Free Trade Association Member State (see Footnote 48). Denmark imported cattle in the same timeframe, with Germany again the primary supplier in each of those years and again no imports from third countries. Denmark did not import sheep or goats in the five-year period of 2014 – 2018; the way the data is reported, Denmark possibly imported sheep or goat germplasm from Germany in 2016.

Similar to animal products, the arrival processes and border veterinary controls for arriving live animals differs if the animals are entering Denmark as part of intra-Union trade or if entering Denmark as an import from a third country. Namely, there are no true border controls for animals moving between Member States as intra-Union trade. The EC has overarching regulations for intra-Union trade of live animals and germplasm, i.e., 90/425/EEC concerning veterinary and zootechnical checks applicable in intra-Union trade of certain live animals and products. The EC also has species-specific intra-Union trade requirements, e.g., 64/432/EEC, which stipulates the animal health requirements for intra-Union trade of bovines and swine. Summarizing, the competent authority for the Member State of origin verifies that the animals (or germplasm) for intra-Union trade meet EC identification and registration requirements and meet animal health requirements, as verified by a health certificate, and are accompanied by other transport documents. Additionally, the animals must originate from eligible holdings not subject to any movement restrictions [3, 26].

Entry into Denmark of live animals from third countries are subject to more rigorous border veterinary controls, as established by EC legislation (e.g., 91/496/EEC) and implemented by Danish animal health officials. Requirements include that the animals enter at one of Denmark's border control posts approved to inspect live animals entering from third countries into Denmark [3, 26]. Summarizing other relevant EC requirements, DVFA must be notified prior to arrival of each consignment of live animals at least 24 hours in advance so that official veterinarians can be available to provide inspection services. Each consignment of live animals arriving from third countries must be accompanied by a CVED and export health certificate. DVFA employees at Denmark's BCPs, or the veterinarians they supervise, then perform document controls, identification checks, and physical inspection on the arriving animals. Every arriving consignment of animals is subject to documentation controls, identity verification, and physical inspection.

Collectively, these border control processes confirm via the export health certificate that the animals are from an authorized country and meet all entry requirements for health status. (Noting that the physical inspection of animals is largely focused on animal welfare, and fitness for travel.) The physical check can include a clinical examination, and may trigger the collection of samples for laboratory testing. Similarly, risk-based and other factors can trigger some consignments to be sampled for laboratory testing. If, during any of these entry control processes, the animals are determined to not satisfy entry requirements, or otherwise present an animal health or public health risk, border veterinary officials can reject the entry and return or euthanize the animal(s).

As with animal products, Member States are required to register the aforementioned activities into the EC's Trade Expert and Control System, [TRACES](#). TRACES is the European Commission's online database for recording the movements of animal products via intra-EU trade and the movements of animal products imported into, or transiting, the EU from third countries.

## Conclusions

From the preceding information, APHIS determines that Denmark does not appear to have CSF, FMD, or SVD in its domestic swine or wild boar. APHIS also determines that Denmark's veterinary infrastructure is capable of and its swine disease surveillance systems are sufficient to detect CSF, FMD, or SVD, should they occur. While there are pathways by which CSF, FMD, or SVD could enter Denmark, mitigations exist to reduce the likelihood of incursions of these hazards.

This review confirms that Denmark remains low risk for CSF and free of FMD and SVD.



## References

1. U.S. National Archives and Records Administration. *Code of Federal Regulations. Title 9, Animals and Animal Products. Part 92, Importation of animals and animal products: Procedures for requesting recognition of regions*. Washington, DC, Office of the Federal Register. Available at: [https://www.ecfr.gov/cgi-bin/text-idx?SID=04ebc88ebad6624e4cef94be0374ea41&mc=true&node=se9.1.92\\_12&rgn=div8](https://www.ecfr.gov/cgi-bin/text-idx?SID=04ebc88ebad6624e4cef94be0374ea41&mc=true&node=se9.1.92_12&rgn=div8).
2. Animal and Plant Health Inspection Service (APHIS). *Animal Health Status of Regions*. Available at <https://www.aphis.usda.gov/aphis/ourfocus/animalhealth/animal-and-animal-product-import-information/animal-health-status-of-regions/animal-health-status-of-regions>.
3. Danish Veterinary and Food Administration (DVFA). *Clarification of Information Requested for an Animal Health Status Review*. Enclosure to Official Letter of January 3, 2019.
4. World Organization for Animal Health (OIE). Handistatus II database. Available at: [https://web.oie.int/hs2/sit\\_pays\\_mald\\_pl.asp?c\\_pays=52&c\\_mald=14](https://web.oie.int/hs2/sit_pays_mald_pl.asp?c_pays=52&c_mald=14).
5. World Organization for Animal Health (OIE). Handistatus II database. Available at: [https://web.oie.int/hs2/sit\\_pays\\_mald\\_pl.asp?c\\_pays=52&c\\_mald=2](https://web.oie.int/hs2/sit_pays_mald_pl.asp?c_pays=52&c_mald=2).
6. World Organization for Animal Health (OIE). Handistatus II database. Available at: [https://web.oie.int/hs2/sit\\_pays\\_mald\\_pl.asp?c\\_pays=52&c\\_mald=4](https://web.oie.int/hs2/sit_pays_mald_pl.asp?c_pays=52&c_mald=4).
7. Danish Agriculture and Food Council, cited by the Danish Veterinary and Food Administration (DVFA) in *Animal Health in Denmark – 2018*. Ministry of Environment and Food of Denmark. July 2019.
8. Danish Veterinary and Food Administration (DVFA). *Livestock Identification, Registration and Traceability* webpage. Available at: [https://www.foedevarestyrelsen.dk/english/Animal/AnimalHealth/Monitoring\\_control\\_animal\\_diseases/Livestock\\_identification\\_registration\\_and\\_traceability/Pages/default.aspx](https://www.foedevarestyrelsen.dk/english/Animal/AnimalHealth/Monitoring_control_animal_diseases/Livestock_identification_registration_and_traceability/Pages/default.aspx).
9. Danish Meat Institute. *Group movement of pigs in the slaughterhouse*. Enclosure to Official Letter of June 14, 2019.
10. Danish Veterinary and Food Administration (DVFA). *Animal Health in Denmark – 2018*. Ministry of Environment and Food of Denmark. July 2019.
11. Danish Veterinary and Food Administration (DVFA). *APHIS Request for Additional Information from Denmark, June 2019*. Enclosure to Official Letter of June 14, 2019.
12. National Veterinary Institute, Technical University of Denmark, and other official laboratories in the EU. Cited by Danish Veterinary and Food Administration (DVFA) in *Animal Health in Denmark – 2018*. Ministry of Environment and Food of Denmark. July 2019.

13. Danish Veterinary and Food Administration (DVFA). “Preventative measures” webpage. Available at:

[https://www.foedevarestyrelsen.dk/english/Animal/AnimalHealth/Monitoring\\_control\\_animal\\_diseases/Preventive\\_measures/Pages/default.aspx](https://www.foedevarestyrelsen.dk/english/Animal/AnimalHealth/Monitoring_control_animal_diseases/Preventive_measures/Pages/default.aspx).

15. National Veterinary Institute, Technical University of Denmark. Cited by Danish Veterinary and Food Administration (DVFA) in *Clarification of Information Requested for an Animal Health Status Review*. Enclosure to Official Letter of January 3, 2019.

16. Danish Veterinary and Food Administration (DVFA). *Classical Swine Fever- Outbreak Manual*. Enclosure to Official Letter of January 3, 2019.

17. Danish Veterinary and Food Administration (DVFA). “Monitoring and Control of Animal Diseases” website. Available at:

[https://www.foedevarestyrelsen.dk/english/Animal/AnimalHealth/Monitoring\\_control\\_animal\\_diseases/Pages/default.aspx](https://www.foedevarestyrelsen.dk/english/Animal/AnimalHealth/Monitoring_control_animal_diseases/Pages/default.aspx).

18. European Commission (EC). Trade Control and Expert System (TRACES), cited by Danish Veterinary and Food Administration (DVFA) in *Animal Health in Denmark – 2018*. Ministry of Environment and Food of Denmark. July 2019.

19. World Trade Organization (WTO). International Trade Centre, TradeMap database.

Available at: <https://www.trademap.org/>, searching “Denmark” for “exports” of “live animals” and “meat of swine, fresh, chilled, or frozen” and selecting “United States of America” as “partner”.

20. Danish Veterinary and Food Administration (DVFA). “Export of Animals and Animal Products” website. Available at:

[https://www.foedevarestyrelsen.dk/english/ImportExport/Export\\_of\\_animals\\_and\\_animalproducts/Pages/default.aspx](https://www.foedevarestyrelsen.dk/english/ImportExport/Export_of_animals_and_animalproducts/Pages/default.aspx).

21. Ministry of Environment and Food of Denmark. *Construction begins on wild boar fence*.

Available at: <https://en.mfvm.dk/news/news/nyhed/construction-begins-on-wild-boar-fence/>.

22. World Organization for Animal Health (OIE). World Animal Health Information System (WAHIS).

Available at [https://www.oie.int/wahis\\_2/](https://www.oie.int/wahis_2/), searching “Germany” and “Animal Health Situation”.

23. World Organization for Animal Health (OIE). Handistatus II database. Available at:

<http://web.oie.int/hs2>, searching “Germany” and “swine vesicular disease”.

24. World Trade Organization (OIE). International Trade Centre, TradeMap. Available at:

<https://www.trademap.org/>.

25. Danish Veterinary and Food Administration (DVFA), “Import of Animals and Animal Products” website. Available at:



[https://www.foedevarestyrelsen.dk/english/ImportExport/Import\\_of\\_animals\\_and\\_animalproducts/Pages/default.aspx](https://www.foedevarestyrelsen.dk/english/ImportExport/Import_of_animals_and_animalproducts/Pages/default.aspx).

26. World Trade Organization (WTO). International Trade Centre, TradeMap. Available at: <https://www.trademap.org/>.