



Ref: VITT1200/CSF-IT

# CLASSICAL SWINE FEVER

## IN

# SARDINIA (ITALY)

**Date approved: 30 September 2003**

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## Summary

A single outbreak of CSF occurred in Sardinia (Italy) on 12 September 2003 and was officially reported to the OIE on 24 September 2003. The Italian authorities have applied disease control measures in line with EU rules.

Prohibitions on the movement of live pigs and restrictions on the movement of pig meat products (i.e. subject to veterinary certification) from Sardinia have been in place for years due to the presence of African swine fever and should have reduced the risk of CSF spread from this outbreak.

The Veterinary Directorate considers that the risk to UK animal health has increased to a negligible extent because a limited outbreak exists in a Member State.

# 1. TERMINOLOGY

For the purpose of this qualitative hazard assessment to the UK animal health, the following terminology<sup>1</sup>, presented in alphabetical order, is used:

<b>Terms used as adjectives to qualify likelihood estimate</b>	
Average	The usual amount, extent, rate
Extremely	Outermost, furthest from the centre; situated at either end; the highest or most extreme degree of anything
High	Extending above the normal or average level
Insignificant	Unimportant; trifling
Low	Less than average, coming below the normal level
Negligible	Not worth considering; insignificant
Significant	Noteworthy; important; consequential

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<sup>1</sup> Quoted from: Murray, N. (2002). Import Risk Analysis: Animals and Animal Products. New Zealand Ministry of Agriculture and Forestry, PO Box 2526, Wellington, New Zealand

## 2. CLASSICAL SWINE FEVER – ITALY (SARDINIA)

### 2.1 Disease Report

On 24 September, the Italian authorities notified the OIE<sup>2</sup> of an outbreak of classical swine fever (CSF) in pigs located in Ardara district, Sassari province, Sardinia (Fig.1). This office was also notified by the EU's Animal Disease Notification System<sup>3</sup> on 22 September 2003.



Fig.1. Italy (Sardinia) – location of CSF outbreak in pigs (September, 2003)

The disease (refer to Annex 2 – fact sheet) was suspected by the Italian authorities on 12 September and confirmed on the same day. Limited information was provided on the outbreak which involved 13 pigs. Six of these were reported to have died, while the remaining seven pigs were destroyed on 17 September 2003. No other information was made available at the time, apart from an indication that control measures had been applied according to EU rules.

<sup>2</sup> OIE, (2003). OIE Alert messages. Retrieved on 24 September 2003 from World Wide Web: [http://www.oie.int/eng/info/en\\_urgences.HTM](http://www.oie.int/eng/info/en_urgences.HTM)

<sup>3</sup> SANCO-ADNS, (2003). Notification by e-mail of 22 September, 2003

## **2.2 Legal trade - current information**

### **2.2.1 Live pigs**

Electronic records indicate that there have been no imports of live pigs from Italy for the past nine months. There has been a ban on the movement of live pigs from Sardinia for a number of years because of African swine fever.

### **2.2.2 Meat/meat products**

Intra Community trade in pig meat/meat products is not subject to border inspection controls or electronic notification of consignments. In the case of CSF outbreaks, affected Member States are required to impose EU rules in protection and surveillance zones around outbreaks (refer to section 3).

## **3. RESTRICTIONS IN PLACE**

### **3.1 Situation in Italy**

OIE<sup>4</sup> data indicate that sporadic outbreaks of CSF have been reported in Italy on an annual basis since 1996. In 2001, five outbreaks of CSF<sup>5</sup> were reported in Sardinia. The Italian authorities have reported that routine CSF sero-surveillance of all breeding herds is carried out in Sardinia, and in the whole territory of Italy.

The Italian authorities reported that the CSF disease control measures for the outbreak in Sardinia have been applied in line with EU rules (for an outline, refer to section 3, para 3.2).

These CSF measures come in addition to the control measures for African swine fever (ASF) that have been in place in Sardinia for a number of years. The ASF measures prohibit the movements of live pigs, while the movements of fresh pigmeat and pigmeat-based products is subject to veterinary certification<sup>6</sup>.

### **3.2 European Legislation - CSF**

#### **3.2.1 Summary**

In the case of CSF, EU rules prohibit the export of fresh pig meat and meat products from defined areas (i.e. protection and surveillance zone around infected domestic pig holding). Meat products may be allowed for export

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<sup>4</sup> OIE, (2003). OIE HANDISTATUS II. Retrieved on 24 September 2003 from World Wide Web: [http://www.oie.int/hs2/sit\\_pays\\_mald\\_pl.asp?c\\_pays=94&c\\_mald=14](http://www.oie.int/hs2/sit_pays_mald_pl.asp?c_pays=94&c_mald=14)

<sup>5</sup> OIE, (2002). OIE World Animal Health in 2001. Part 1. Reports on the Animal Health Status and Disease Control Methods and Tables on Incidence of List A Diseases. Paris, 2002

<sup>6</sup> European Commission, (2003). Commission Decision of 10 July 2003 concerning health protection against African swine fever in Sardinia, Italy (2003/514/EC).

provided the meat has been heat treated. Other EU rules govern trade in live pigs, pig semen, embryos and ova from CSF affected Member States.

### **3.2.1 Detail**

Refer to Annex 1

## **4. HAZARD ASSESSMENT FOR THE UK**

Given the current outbreak of CSF in Sardinia (Italy), the Veterinary Directorate consider at present, that with regard to:

### **4.1 Legal trade in:**

#### **4.1.1 Live pigs**

- The risk is negligible from legal trade as the movement of live pigs from the whole territory of Sardinia has been banned for a number of years because of the outbreaks of African swine fever.

#### **4.1.2 Pig meat and pigmeat products**

- The risk from legal trade is negligible as the whole territory of Sardinia has been subject to EU controls for a number of years because of the outbreaks of African swine fever. Additionally, EU rules for CSF control prevent exports of meat/meat products from pigs that are subject to control measures in protection or surveillance zone.

### **4.2 Illegal trade**

- Illegal movements of meat/meat products may pose a background risk for the introduction of the disease. Although this type of risk is difficult to qualify, it appears that the risk remains unchanged given the EU history of sporadic outbreaks of CSF in domestic pigs and the disease presence in the wild boar population in some Member States.

## **5. CONCLUSION**

The initial information indicates that the outbreak is confined to a single pig herd in one province of Sardinia. The relevant EU CSF control measures are reported to have been implemented.

The risk of CSF spread from this outbreak via movement of live pigs, pig meat and pig meat products may have been reduced due to the implementation of

EU rules for the control of African swine fever in Sardinia for a number of years.

The general animal health situation in Sardinia is of concern because of recent outbreaks of African swine fever, bluetongue (a new serotype of the virus detected) and now classical swine fever, all of which have occurred within the last three months.

The Veterinary Directorate continues to monitor the situation and will re-assess the hazard in light of new information to come.

Although Italy has applied EU controls in the protection and surveillance zone around the infected holding in Sardinia, the fact that a limited outbreak of CSF exists in a Member State means the risk to the UK animal health from this disease has increased to a negligible extent.

Richard Cawthorne  
Deputy Chief Veterinary Officer (30/09/03)

## **Annex 1. CSF – Detailed EU rules**

### **1.1 CSF in domestic pigs**

EU requires Member States to follow Directive 2001/89/EC. The control measures include clinical and laboratory examination, epidemiological investigation, stamping out of infected pigs that may include possible contacts, movement restrictions for live pigs/pig meat/fomites within zone surrounding the farm. The control zones are based on geographical and epidemiological principles and do not take into account national borders of the Member States. Following an outbreak in a domestic pig holding, two zones are established: a protection zone of 3km, and a surveillance zone of 10km around the infected holding. The rule allows for the formation of a buffer zone around the surveillance zone, if the situation warrants such a measure to be implemented. Should there be multiple outbreaks, a regionalisation approach is allowed to enable effective control measures to be applied to a defined area in order to prevent disease spread, and to allow trade from areas outside the controlled area.

EU rules prohibit export of pig meat from defined protection and surveillance zone around infected domestic pig holding. Export of meat products may be allowed subject to specified heat treatment. EU rules govern trade in live pigs, pig semen, embryos and ova from CSF affected Member States.

### **1.2 CSF in wild boar population**

Following the detection of CSF in a wild boar population, EU rules require Member States to take the following measures:

#### **1.2.1 Initial control activities**

Initial disease control activities are primarily aimed at the domestic pig holdings within the infected area to prevent the spread of the disease to domestic pigs. An affected Member State is required to:

- a) Establish an expert group comprised of veterinarians, hunters, wildlife biologists and epidemiologists to assist the competent authority in defining boundaries of the infected area, including control measures to be applied within,
- b) Draw a specific eradication plan for the CSF control in wild boar (refer to section 1.2.2) to be approved by the Commission within 90 days following an initial outbreak of CSF.

#### **1.2.2 Approved eradication plan**

Subsequent to the initial control measures (refer to 1.2.1), a specific eradication plan for the CSF control in wild boar must be agreed with the Commission and other Member States and must include:

- The outcomes of previous activities carried out with the infected zone,
- A defined infected area that is based on results of epidemiological investigation related to geographical distribution of the disease, feral pigs population in the area, and existence of major natural or artificial obstacles to movements of feral pigs,
- Activities to determine number and location of meta-populations of feral pigs in and around infected area
- Epidemiological investigation and laboratory testing of feral pig population, including age-stratification,
- The measures to prevent contact between meta-populations of wild pigs, and measures taken to reduce their movement,
- Extensive experts consultation and agencies co-operation, including information campaign, primarily targeting hunters,
- Safe handling of laboratory samples,
- Safe disposal of dead feral pigs

### **1.2.3 Current protection measures**

Eradication plans have been agreed for parts of Germany, France, Belgium and the whole of Luxembourg.

A specific safeguard decision requires Member States with areas subject to wild boar control measures to ensure that no domestic pigs are exported, unless they originate outside the specified restricted areas and come from a holding where no pigs from the specified restricted areas have been introduced during the 30-day period prior the despatch of the consignment.

Meanwhile, the affected Member states must also ensure the following controls are applied to pig holdings located in the specified restricted areas pending approval of the eradication plan in wild boar:

- Effective isolation of domestic pigs from feral pigs (e.g. prevention of physical contact and contact with waste),
- Implementation of biosecurity measures including cleaning and disinfection of pig holdings,
- Application of hygienic measures, including a possibility of temporary ban on specified movements with regard to people who may have been in contact with feral pigs,
- Laboratory testing of all dead pigs for the presence of CSF virus,
- Prohibition of bringing into a pig holding of any part of any feral pig, or equipment that have been in contact with wild pigs,

## Annex 2. Classical swine fever – Fact sheet

### 2.1 Definition

Classical swine fever (CSF) (syn. Hog cholera, European swine fever) is an OIE List A disease. It is a highly contagious viral disease of pigs, generally resulting in high morbidity and mortality.

### 2.2 Which animals are susceptible and what is the outcome?

The only susceptible animals are domestic and wild pigs. The disease is fatal in most cases, particularly in its acute phase.

Young pigs are more severely affected than older pigs. Mortality rates in young pigs may reach 90%.

### 2.3 The disease

#### 2.3.1 The virus

CSF virus is an RNA virus that belongs to the genus *Pestivirus*, family *Flaviviridae*. The virus is related to the bovine diarrhoea virus (BVD) and the border disease (BD) virus of sheep.

While relatively stable in excretions and fresh meat products (i.e. ham, salami, salami type products), the virus is readily destroyed by heat, detergent, lipid solvent, and common disinfectants.

#### 2.3.2 Worldwide distribution

The disease was first observed in the USA at the beginning of 19<sup>th</sup> century. By the end of 20<sup>th</sup> century, the disease remains widespread in many parts of the world (Fig.1).

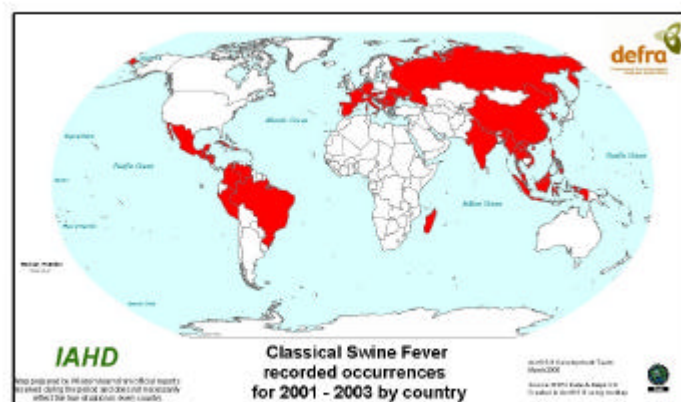


Fig.1. Classical swine fever – World situation (2001/2003)

### 2.3.3 What are the signs?<sup>7,8</sup>

Two forms of the disease are recognised: acute and chronic. Regardless of the disease form, the animals are viraemic as long as they show clinical signs. Death may occur within 2-3 weeks after infection (acute form) or up to three months (chronic course). The incubation period for CSF is variable but is usually between five and ten days. In the acute form pigs develop a high temperature (40.5°C), then become dull and go off their food. Other symptoms seen can vary considerably, but may include some or all of the following:

- Constipation followed by diarrhoea
- Gummed-up eyes
- Coughing
- Blotchy discolouration of the skin
- Abortion, still births and weak litters
- Weakness of hindquarters
- Nervous signs including convulsions and tremors in new born piglets.

### 2.3.4 How is it spread?

The primary disease transmission route is ingestion of material containing the viable virus. The movement of infected pigs is a common method of spreading this disease. Apparently healthy pigs may be incubating disease and recovered pigs can excrete the virus for long periods of time. The virus can exist outside the pig for a long time and would require thorough cleaning and disinfection to be inactivated. The movement of contaminated vehicles, people, clothing, footwear and equipment can also spread disease.

The virus may also be present in wild boar population, and in some areas of Europe the disease in wild boar poses a constant threat to domestic pigs.

### 2.3.5 Public health – can people contract the disease?

There are no circumstantial or published literature data to suggest that people may be susceptible to the disease.

## 2.4 Disease Control measures

EU control measures for dealing with CSF are based on slaughter of infected pigs and various movement controls. EU rules includes provision for vaccination of domestic pigs, ideally with a marker vaccine to allow veterinary authorities to separately identify a vaccinated pig from an infected one. However, no such marker vaccine is currently available, although some drug companies are researching this area. If current vaccines were used to control the spread of disease then any vaccinated pig would be required to be slaughtered because pigs may remain infectious indefinitely. CSF controls include, among other control measures, permissive vaccination for CSF in wild boar as part of a wildlife disease control strategy.

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<sup>7</sup> Extract from: Moening, V. (2000). Introduction to classical swine fever: virus, disease and control policy. *Veterinary Microbiology*, 73, 93-102

<sup>8</sup> Extract from: DEFRA (2003). Classical swine fever. Retrieved on 15 August 2003 from World Wide Web: <http://defraweb/animalh/diseases/notifiable/disease/classicalsf.htm>