SURVEILLANCE OF INFECTIOUS DISEASES IN ANIMALS AND HUMANS IN SWEDEN 2011

SVA NATIONAL VETERINARY INSTITUTE

Jordbruks verket Swedish Board of Agriculture

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LIVSMEDELS VERKET NATIONAL FOOD AGENCY

Disease Surveillance 2011

African swine fever

BACKGROUND

African swine fever (ASF) is an acute disease of domesticated pigs and wild boar. The acute clinical form of ASF can not, although caused by an unrelated virus, be distinguished from the clinical manifestation of CSF. ASF has its origin in sub-Saharan Africa where the virus persists in a sylvatic cycle including wild pigs and soft ticks. Outside Africa it is usually spread by the same routes as CSF, feeding pigs infected meat being the most important means of spread to new areas. Europe experienced a long-lasting outbreak of ASF in Spain and Portugal in the beginning of the late 1950s. This lasted until 1995 and one reminiscence of this outbreak is the continuous presence of the disease in Sardinia. In 2007, ASF was spread to Georgia and further to neighbouring countries in the Caucasus including Russia. The spread of ASF in this region and especially in Russia is ongoing and a great concern for neighbouring countries and the EU. ASF has never been diagnosed in Sweden.

DISEASE

Infection with ASF virus give rise to acute, severe illness including high fever, inappetence, and severely impaired general condition. Dyspnea, discolouration of the skin, diarrhea and sometimes vomiting and haemorrhages are seen. Milder forms of the disease have been described.

LEGISLATION

ASF is included in the Swedish Act of Epizootic diseases (SFS 1999:657 with amendments) and the control of the disease is regulated in detail through EU-directives.

SURVEILLANCE

The purpose of the surveillance activities is to document freedom from ASF in the Swedish pig population and to contribute to the maintenance of this situation. The National Veterinary Institute (SVA) has been responsible for sample selection, sample analysis and reporting to the Swedish Board of Agriculture.

The serological analyses of ASF and analyses for ASF virus genome were performed at the National Veterinary Institute (SVA). ASF serology was done using a commercial kit (Ingezim PPA COMPAC 11.PPA.K.3) and in case of positive ELISA results a confirming western blot assay for detection of antibodies against ASFV was performed.

Passive surveillance

As ASF is notifiable on clinical suspicion for both veterinarians and farmers, cases with suspect clinical signs will be investigated following notification to the Swedish Board of Agriculture. The following investigation is included: restrictions on the farm during investigation, sampling of sick or dead animals and examination of the herd for prevalence of clinical signs and production results. Due to the similarity of clinical signs, both diseases are investigated in suspicions of CSF or ASF. This regime is strongly recommended by the EU.

Active surveillance

In 2011, sera for the active surveillance were collected by systematic random sampling from the surveillance carried out by the Swedish Animal Health Service for porcine respiratory and reproductive syndrome (PRRS).

RESULTS

Passive surveillance

Fifteen investigations following clinical suspicion of CSF/ASF were carried out during 2011. In the majority of these, reproductive failure was the main clinical manifestation. Following investigation including sampling the herds could be declared negative for CSF/ASF.

Active surveillance

In total 2,262 samples were analyzed for antibodies to ASFV and all samples were negative regarding these antibodies.

DISCUSSION

The results from the surveillance in Sweden regarding ASFduring 2011 give additional documentation of freedom from this infection in the Swedish commercial pig population.

The present situation regarding ASF within and in close proximity of the EU emphasizes the need for both passive and active surveillance for ASF.

Infectious diseases in wild boars

BACKGROUND

Contagious pig diseases in general and classical swine fever in particular can affect and be spread by the wild boar population. This has been the situation in several European countries. The wild boar population is increasing in Sweden and is estimated by the Swedish environmental protection agency to be more than 100,000 heads. Since year 2000 more than 2,000 dead hunted wild boars from different parts of the country have been bled in connection to slaughter. The samples have been sent to National Veterinary Institute (SVA) for analysis for antibodies to certain infections.

LEGISLATION

The infections in the wild boar surveillance program 2011 are all included in the Swedish Act of Epizootic diseases (SFS 1999:657 with amendments) and are notifiable on suspicion. If any of them are suspected or confirmed, measures will be taken to control the disease and to prevent further spread.

SURVEILLANCE

In 2011, 342 blood samples from wild boars from different parts of Sweden were analyzed for antibodies to Aujeszky´s disease (AD) virus, porcine reproductive and respiratory syndrome (PRRS) virus, African swine fever (ASF) virus and classical swine fever (CSF) virus. The samples were analyzed for antibodies to ADV and PRRSV using the methods described under the respective disease headings in this report. Antibodies to CSF and ASF were analyzed using commercial ELISA-methods (IDEXX® HerdChek CSFV Antibody Test Kit, IDEXX, Sweden and Ingezim PPA COMPAC 11.PPA.K.3, Ingenasa, Spain, respectively)

RESULTS

The geographical distribution of sampled wild boars was roughly correlated to the distribution and density of the wild boar population. All samples tested were serologically negative.

DISCUSSION

The Swedish wild boar population is growing and the boundaries for its presence in the Swedish fauna moves further north. In areas where wild boars already are present the population becomes denser, which increases the risk of direct or indirect contact between wild boars and domestic pigs. With the increasing population, hunting wild boar becomes more popular and foreign hunters come to Sweden to hunt and Swedish hunters go abroad. These hunting travels may pose an increased risk of introducing exotic diseases into Sweden as people have direct or indirect contacts with wild animals that may be infected. There is also a risk that wild boar may be infected by eating infected meat that is brought in to Sweden illegally and dumped for some reason. Once the wild boars are infected there is a possibility that they will spread the disease to domestic pigs.