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CURRENT SITUATION OF AFRICAN SWINE FEVER IN REGIONS AROUND SERBIA

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Summary

African swine fever (ASF), classified as a notifiable disease by the World Organisation for Animal Health (OIE), causes an acute hemorrhagic fever in domestic pigs. It often results in major economic losses because of the high rates of illness and death associated with the disease. ASF has the potential to spread rapidly and since a vaccine is currently not available, control options are limited to rapid diagnosis of the disease and culling of infected animals and animals in contact with them.

The disease was described for the first time in Kenya in 1921 when the virus spread from infected warthogs (*Phacochoerus aethiopicus*) to domestic pigs (*Sus scrofa*) causing a disease with a 100% case-fatality rate. The disease is currently present in Africa, mainly in many countries located south of the Sahara, in most of which the disease is endemic and continues to spread to previously uninfected countries within the region. ASFV is maintained in Africa by a cycle of infection between wild pigs/*suidae* and soft ticks. In some of these wild pigs/*suidae*, ASFV infection is characterised by low levels of virus in the tissues and low or undetectable levels of viraemia, but this is sufficient to infect ticks and for tick transmission to domestic pigs. This disease cycle makes it very difficult to eradicate ASF in Africa. In 1998, ASF was reported in Madagascar for the first time; it is now considered to be endemic. At the end of 2007, ASF was introduced on a second Indian Ocean island, Mauritius.

In Europe, ASFV was introduced for the first time in 1957 in Portugal, through waste from international flights. Although this first outbreak was rapidly eradicated, in 1960 the virus entered again in Lisbon (Portugal) and spread through the rest of Portugal and Spain, where ASFV remained endemic until 1995. During this period, some outbreaks occurred in other European countries, affecting Andorra (1975), Belgium (1985), France (1964, 1967 and 1974), Malta (1978), The Netherlands (1986) and Italy (1967, 1969 and 1993), including Sardinia island, where ASF has remained endemic since 1978. All these virus introductions were also related with swill feeding. Epidemiological studies have shown that the most frequent source of ASFV contamination was garbage from international airports or ports.

More recently in 2007, ASF virus spread to the Trans Caucasus Countries and the Russian Federation. Georgia first reported ASF to the OIE on 5 June 2007, however mass mortality of pigs was reported at least 2 months before this. The virus was likely introduced into Georgia by ship waste disposed around the port of Poti and subsequently entered the pig population through pigs feeding from this waste. The disease then quickly spread through the whole country. ASF had never

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previously been officially reported in the Caucasus region. The virus was shown to be Genotype II with a close relationship to virus strains from Southeast Africa (Mozambique, Madagascar and Zambia). In Armenia ASF was first reported on 6 August 2007, near the border with Georgia. Most of the subsequent outbreaks were also reported in the north of the country. Azerbaijan has a very low density of domestic pigs and pig husbandry is highly clustered in the few Christian communities. The only reported outbreak occurred in January 2008 in Nidzh, a village where about half of the national pig population was kept.

In the following years it spread into the neighbouring countries of South Caucasus, and then in Russia, affecting wild boars and domestic pigs, and has spread in large part of the country. Currently, the disease is considered endemic in southern Russia and in an area approximately 300 km west from Moscow, both in domestic pigs and in the wild boar. Outbreaks of disease are also frequently reported in other areas in Western Russia. Russia reported to the OIE around 400 outbreaks due to ASF with approximately 12.500 cases in domestic pigs (out of 500.000 susceptible pigs) and 600 cases in wild boar since 2007.

Ukraine reported 1 outbreak in pigs and 3 cases in wild boar in July 2012. In June and July 2013, Belarus notified 2 outbreaks of ASF, one of them very close to the border with Lithuania and Poland and reported 27 cases in wild boar. Again Ukraine confirmed 2 ASF outbreak in pigs and 6 cases in wild boar in January 2014 at the Lugansk Region, close to Russia. Lithuania confirmed on 24 January 2014 the infection with the ASF virus of two wild boars in the south east of Lithuania, not far from the Belarusian border. Poland made on 17 and 19 February 2014 and on 3 May 2014 four notification of cases of ASF in wild boar found dead very close to the Belarus border. Latvia confirmed three cases in one backyard pig holding on 26 June 2014 as well as 13 wild boars found dead and confirmed between 26 June and 03 July 2014. All these cases were adjacent to the border with Belarus. The EU Reference Laboratory confirmed, through genetic studies based on sequencing of fragments of virus isolates from the Lithuanian and Polish wild boar cases, that there is a 100% homology with the virus strains that circulated in Belarus and Russia proving that it comes from Russia

As a conclusion, ASF is now endemic in Russia and has been reported in many Eastern European countries, including in Ukraine the closest country to Serbia during 2014. Due to rapid spread of disease it can be expected that ASF could reach Serbia in the near future, so the National crisis plan for ASF detection, control and eradication has to be adopted/harmonized and put into the force to prevent high economic losses that could arise by ASF spread in Serbia.

Key words: African swine fever, history of disease occurrence, current situation in Europe