

## African Swine Fever Situation and Diagnostic Methods in Lithuania

**Authors :** Simona Pileviciene

**Abstract :** On 24th January 2014, Lithuania notified two primary cases of African swine fever (ASF) in wild boars. The animals were tested positive for ASF virus (ASFV) genome by real-time PCR at the National Reference Laboratory for ASF in Lithuania (NRL), results were confirmed by the European Union Reference Laboratory for African swine fever (CISA-INIA). Intensive wild and domestic animal monitoring program was started. During the period of 2014-2017 ASF was confirmed in two large commercial pig holding with the highest biosecurity. Pigs were killed and destroyed. Since 2014 ASF outbreak territory from east and south has expanded to the middle of Lithuania. Diagnosis by PCR is one of the highly recommended diagnostic methods by World Organization for Animal Health (OIE) for diagnosis of ASF. The aim of the present study was to compare singleplex real-time PCR assays to a duplex assay allowing the identification of ASF and internal control in a single PCR tube and to compare primers, that target the p72 gene (ASF 250 bp and ASF 75 bp) effectivity. Multiplex real-time PCR assays prove to be less time consuming and cost-efficient and therefore have a high potential to be applied in the routine analysis. It is important to have effective and fast method that allows virus detection at the beginning of disease for wild boar population and in outbreaks for domestic pigs. For experiments, we used reference samples (INIA, Spain), and positive samples from infected animals in Lithuania. Results show 100% sensitivity and specificity.

**Keywords :** African swine fever, real-time PCR, wild boar, domestic pig

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