African Swine Fever

Case Definition

(Notifiable)

1. Clinical Signs

1.1. Clinical signs: African swine fever (ASF) is an infectious disease of both domestic and wild pigs caused by the African swine fever virus (ASFV), the only member of the Asfaviridae family. It can be transmitted through direct or indirect contact or by ticks of the genus Ornithodoros. Infection can be peracute, acute, subacute, or chronic. Pigs that recover from infection can become persistently infected carriers of the virus.

1.1.1. Peracute: Caused by highly virulent strains. Pigs are typically found dead, sometimes without clinical signs of disease or any post-mortem lesions.

1.1.2. Acute: Caused by highly virulent strains. Clinical signs include fever, increased pulse and respiratory rate, lethargy, anorexia, and recumbency. Jaundice, vomiting, bloody diarrhea, eye discharge, bloody nasal discharge, and abortions may be observed. Pigs commonly exhibit reddening, hemorrhage, and/or petechiation of the skin. One to two days before death the pig may develop anorexia, depression or listlessness, cyanosis, and in-coordination. Death occurs 2-13 days after infection. Mortality rates approach 100 percent. Commonly seen post-mortem lesions include; enlarged, and often friable spleen, enlarged liver, renal petechiae/ hemorrhages, hemorrhagic and enlarged lymph nodes (most commonly gastrohepatic and renal), and hemorrhages/ petechiae in other organs including urinary bladder, lungs, heart, stomach, and intestines.

1.1.3. Subacute: Caused by moderately virulent strains. Clinical signs are similar to the acute form but are less severe. The duration of illness is 5-30 days and mortality rates are lower (30-70 percent). Death occurs 15-45 days after infection. Like clinical signs, post-mortem lesions are similar to those seen with the acute form, but typically less severe.

1.1.4. Chronic: Caused by low virulence strains. Clinical signs develop over 2-15 months, are variable, and may include weight loss, fever, respiratory signs, skin necrosis, pericarditis, lung adhesions, and joint swelling. Mortality rates are low. Post-mortem lesions can include emaciation and focal caseous necrosis and mineralization of the lungs.

2. Laboratory criteria:

2.1. Agent isolation and identification: Collect whole blood (EDTA and heparin), spleen, lymph nodes, tonsils, and kidneys. Keep samples as cold as possible without freezing. Tests include: virus isolation (VI), direct fluorescent antibody (DFA), sequencing, and real-time polymerase chain reaction (PCR).

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1 In the 2018 ASF outbreaks in both China and Russia, the disease presented in the acute form.
2.2. **Serology:** Antibody detection in serum by ELISA, indirect fluorescent antibody (IFA), and immunoperoxidase test (IPT). Antibodies develop 7-10 days post-infection and can persist for life. Pigs with virulent ASF virus can die before antibody production occurs.

3. **Case definition and Reporting Criteria:**

   3.1. **Suspect case:** An animal having clinical signs consistent with ASF or an epidemiologic link to ASFV

   3.2. **Presumptive positive case:** A suspect case with a non-negative screening laboratory test result for ASFV (PCR) at National Veterinary Services Laboratories (NVSL) Foreign Animal Disease Diagnostic Laboratory (FADDL) or a National Animal Health Laboratory Network (NAHLN) laboratory approved for ASF Preparedness and Surge Testing, or

   3.2.1. A suspect case that is positive for ASFV antibodies by two different antibody tests at NVSL FADDL.

   3.3. **Confirmed positive case:** An animal from which ASF virus has been isolated and identified at NVSL FADDL or a laboratory designated by the Secretary of Agriculture or,

   3.3.1. A presumptive positive case with a positive confirmatory ASFV antigen test at NVSL FADDL

**Note:** In any ASF outbreak, case definitions may be edited after the first presumptive positive or confirmed positive case (index case). The case definition will be reviewed throughout the outbreak and modified on the basis of additional information or the changing needs of the eradication effort.