

Wildlife Health Bulletin 2021-01

National Wildlife Health Center
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African Swine Fever Detected in Dominican Republic

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Summary

- African Swine Fever (ASF) has been confirmed in pigs in the Dominican Republic by the U.S. Department of Agriculture's (USDA) Foreign Animal Disease Diagnostic Laboratory.
- Both domestic and feral swine are susceptible to ASF and entry of this virus into the United States could have major economic implications as well as long-term ramifications for the swine industry if feral populations became a persistent reservoir for the virus.
- State, federal, and tribal natural resource professionals are encouraged to remain vigilant and report instances of sick or dead feral swine to their State Animal Health Official, the USDA Veterinary Services veterinarian in charge of the state, or the USDA Wildlife Services State Director.

On 28 July 2021, African swine fever (ASF) was confirmed in pigs (*Sus scrofa*) from two locations in the Dominican Republic by the U.S. Department of Agriculture's (USDA) National Veterinary Services Laboratories (NVSL)-Foreign Animal Disease Diagnostic Laboratory. The Dominican Ministry of Agriculture now reports ASF-positive samples from 15 of 32 provinces, including Barahona, Dajabón, Duarte, Elías Piña, Espaillat, Hermanas Mirabal, La Vega, Monte Plata, Montecristi, the National District, San Juan, San Pedro de Macorís, Sánchez Ramírez, Santiago Rodríguez, and Santiago (NBIC 2021; Figure 1). These are the first recorded cases of ASF for the Dominican Republic and the first cases of ASF in the Western Hemisphere in 40 years.

Although ASF is not a human health concern, it is a highly contagious viral disease-causing hemorrhagic fever and high mortality rates in pigs. Both domestic (*Sus scrofa domestica*) and feral swine (*Sus scrofa*) are susceptible to ASF so entry of this virus into the United States could have major economic implications as well as long-term ramifications for the swine industry if feral populations became a persistent reservoir for the virus. Numerous safeguards already in place will likely minimize the risk of entry into the U.S. via trade such as the prohibition of pig and pork product imports from the Dominican Republic (DR) due to the presence of classical swine fever (CSF) in the DR. The primary risk to the U.S. is considered to be informal transmission routes, such as airline passengers carrying undeclared animal products. U.S. Customs and Border Protection agricultural inspectors are working closely with USDA Animal and Plant Health Inspection Service (APHIS) to address risks and prevent ASF from entering the U.S.

Due to its classification as a Foreign Animal Disease (FAD), confirmatory laboratory testing for ASF virus (ASFV) is restricted to the USDA NVSL-Foreign Animal Disease Diagnostic Laboratory (FADDL). Consequently, the U.S. Geological Survey National Wildlife Health Center's (NWHC) current role is to assist USDA via information sharing with our state, federal, and tribal wildlife management agency partners to encourage and expedite reporting of mortality events in feral swine.

State, federal, and tribal natural resource professionals are encouraged to remain vigilant and report instances of sick or dead feral swine to their [State Animal Health Official](#), the [USDA Veterinary Services veterinarian in charge of the state](#), or the [USDA Wildlife Services State Director](#). Once a report is received, follow up will include:

- The state and federal agricultural officials will assign a Wildlife Services disease biologist, a Foreign Animal Disease Diagnostician, or both, to investigate the morbidity/mortality event.
- The investigation team will be in constant communication with the USDA and state officials to determine if samples should be collected and submitted for a FAD investigation.

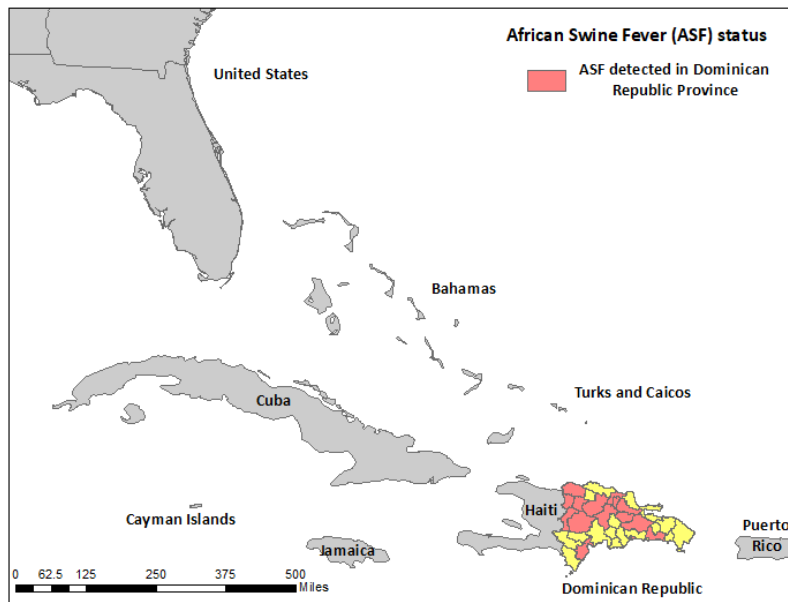


Figure 1. Dominican Republic provinces where ASF has been detected (colored in pink) as of August 30, 2021, and relative proximity to the U.S. mainland and territories.

Disease Ecology, Clinical Presentation, and Biosafety Recommendations

African swine fever (ASF) is highly contagious hemorrhagic viral disease of domestic and wild pigs. African swine fever virus (ASFV) is a DNA virus in the Family *Asfarviridae* and is the only known DNA arbovirus. ASFV is present in domestic and wild pigs in regions of Asia, Europe, and Africa where it is responsible for significant economic impacts and production losses.

Clinical signs and mortality rates vary with different strains and pig species. Highly virulent strains can cause sudden death, but clinical signs often include fever, anorexia, listlessness, and hemorrhages in the skin (e.g., ears, abdomen, legs). Respiratory signs can also be present in subacute or chronic infections. Although signs of ASF and classical swine fever (CSF) can be similar, ASFV is unrelated to the CSF virus. Transmission occurs via direct contact between sick and healthy animals; indirect transmission can occur through a variety of pathways including animals feeding on contaminated meat (ASFV can remain infectious in uncooked products for 3-6 months), ticks of the genus *Ornithodoros*, and contact with contaminated fomites such as vehicles, tools, and clothing.

ASFV is highly resistant to low temperatures and can remain viable for long periods in blood, feces, and tissues. ASFV can be inactivated by heat (140°F for 20 minutes) and bleach solutions (1% sodium hypochlorite for 30

min). There are no treatments or vaccines to date for ASF; euthanizing infected pigs followed by appropriate carcass disposal, thorough disinfection of facilities, and control of animal movements are measures employed to control outbreaks in domestic animals.

Wildlife professionals investigating morbidity or mortality events involving feral swine should wear personal protective equipment (PPE) and decontaminate all field gear, clothes, and vehicles. General PPE recommendations for investigating morbidity or mortality in feral swine should include boots, gloves, and outer clothing that can be bagged, cleaned, and disinfected; or bagged and thrown away. Specific PPE recommendations should be determined by individual agencies based upon known and anticipated risks relevant to the disease event under investigation.

Due to the threat posed by ASF, field necropsies for feral swine are discouraged at this time. Reporting all morbidity/mortality in feral swine followed by Foreign Animal Disease Diagnostician response is recommended. A portion of the response will include appropriate carcass disposal. Carcasses should be incinerated or buried deep enough to prevent access by scavengers to avoid additional environmental contamination. Clean and disinfect equipment that is used at these locations prior to leaving work sites with 10% sodium hydroxide or 1 to 2% formalin to limit spread of ASFV or other potential pathogens.

References:

Additional Information on ASF, including biosafety recommendations for swine producers, can be obtained from the following sources:

- [Iowa State University – Center for Food Security & Public Health](#)
- National Biosurveillance Integration Center. 2021. National Biosurveillance Integration Center (NBIC) Monitoring List – 30 August 2021.
- [National Pork Producers Council](#)
- [U.S. Department of Agriculture](#)
- [World Organisation for Animal Health](#)

Disease Investigation Services

To request diagnostic services or report wildlife mortality, please contact the USGS National Wildlife Health Center at 608-270-2480, by email at NWHC-epi@usgs.gov, or through the Wildlife Health Information Sharing Partnership – event reporting system ([WHISPers](#)) interface and a field epidemiologist will be available to discuss the case. To report wildlife mortality events in Hawaii or Pacific Island territories, please contact the Honolulu Field Station at 808-792-9520 or email Thierry Work at thierry_work@usgs.gov.

Further information about our services can be found at <https://www.usgs.gov/centers/nwhc/science/disease-investigation-services>. To learn more about submitting samples and reporting events, go to <https://www.usgs.gov/centers/nwhc/science/report-mortality-events-and-submit-specimens>. The [WHISPers](#) system can also be used to enter event information, request diagnostic services, and to view and search summary information on wildlife morbidity/mortality events. If you have questions or concerns regarding the scientific and technical services we provide, please do not hesitate to contact NWHC Director Jonathan Sleeman at 608-270-2401, jsleeman@usgs.gov.

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