RESOLUTION NUMBER: 4 **Combined with 8, 12, 17, 21 and 37** **APPROVED**

SOURCE: **COMMITTEE ON ANIMAL EMERGENCY MANAGEMENT**
USAHA/AAVLD COMMITTEE ON ANIMAL HEALTH SURVEILLANCE AND INFORMATION SYSTEMS
USAHA/AAVLD COMMITTEE ON NAHLN
COMMITTEE ON FOREIGN AND EMERGING DISEASES
COMMITTEE ON SWINE
COMMITTEE ON GLOBAL ANIMAL HEALTH AND TRADE

SUBJECT MATTER: **AFRICAN SWINE FEVER (ASF) SURVEILLANCE PROGRAM AND TISSUES FOR OFFICIAL ASF TESTING IN NATIONAL ANIMAL HEALTH LABORATORY NETWORK LABORATORIES**

BACKGROUND INFORMATION:

African Swine Fever (ASF) virus is highly contagious (for swine; people are not affected) and can spread rapidly in swine populations. ASF virus can be transmitted to swine by ticks, direct contact, fomites (including vehicles, feed, and equipment), or consumption of uncooked pork. Other bloodsucking insects such as mosquitoes and biting flies may also transmit the virus mechanically.

ASF has a clinical predilection for the macrophage. Post mortem clinical indications include splenomegaly and swollen and hemorrhagic lymph nodes. At this time, the United States Department of Agriculture (USDA) has approved only whole blood and tonsil for official Polymerase Chain Reaction (PCR) testing.

The National Pork Board (NPB) and the Swine Health Information Center (SHIC) have funded a negative cohort study to validate ASF nucleic acid detection by PCR performed on swine oral fluids. The NPB, the SHIC, and USDA are funding the positive cohort study needed to complete the validation of oral fluid testing.

There is no vaccine or treatment currently available for ASF, and it is unlikely that an effective vaccine will become available to aid in the control of an outbreak. This increases the importance of rapid detection and aggressive measures to stamp out infected herds. Unlike Foot and Mouth Disease and Classical Swine Fever, for which effective vaccines exist at this time, there is no potential to use vaccination to suppress an outbreak of ASF before entering the final phase of disease eradication.

ASF virus isolates vary in virulence from highly pathogenic strains that cause near 100% mortality to low–virulence isolates that can be difficult to diagnose. An outbreak of high virulence ASF virus will likely be detected sooner and be easier to trace and stamp out. In the absence of an effective surveillance program, low virulence strains may become widespread before detection and will be more difficult to trace based on clinical signs alone.

The USDA has no formal active ASF surveillance program in the US. Currently, USDA allows an official ASF PCR test to be done only on whole blood submitted to the National Animal Health Laboratory Network veterinary diagnostic laboratories (VDLs). The Iowa State University (ISU) VDL reports that fewer than 200 whole blood samples have been submitted from approximately 50,000 diagnostic case investigations into clinically ill swine that involved the submission off a case history and tissues for histopathological evaluation by a diagnostic pathologist at the ISU VDL, over the course of the past 5 years.

The USDA “Foreign Animal Disease (FAD) Investigation Manual” (FAD PReP Manual 4-0) (2017) lists whole blood, tonsil, spleen, and lymph nodes as specimens for collection during ASF investigations.

The state pork producer associations of Arizona, Colorado, Florida, Hawaii, Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Missouri, Mississippi, Montana, Nebraska, New York, North Carolina, Oklahoma, Ohio, Pennsylvania, South Dakota, Texas, and Wisconsin recognize the need for an effective ASF surveillance program as a key element for protection of the United States swine herd. Additionally, they support the approval of additional tissues for official ASF testing.

RESOLUTION:

The United States Animal Health Association and American Association of Veterinary Laboratory Diagnosticians urge the United States Department of Agriculture, Animal and Plant Health Inspection Service to immediately begin an active formal African Swine Fever (ASF) surveillance program in the United States and approve tonsil, spleen, and lymph nodes as additional tissues for official ASF testing in the National Animal Health Laboratory Network laboratories.

RESOLUTION NUMBER: 5 Combined with 9, 13, 18, 22, and 36 APPROVED

SOURCE: **COMMITTEE ON ANIMAL EMERGENCY MANAGEMENT**
USAHA/AAVLD COMMITTEE ON ANIMAL HEALTH SURVEILLANCE AND INFORMATION SYSTEMS
USAHA/AAVLD COMMITTEE ON NAHLN
COMMITTEE ON FOREIGN AND EMERGING DISEASES
COMMITTEE ON SWINE
COMMITTEE ON GLOBAL ANIMAL HEALTH AND TRADE

SUBJECT MATTER: **ENHANCING CLASSICAL SWINE FEVER SURVEILLANCE IN NATIONAL ANIMAL HEALTH LABORATORY NETWORK DIAGNOSTIC LABORATORIES**

BACKGROUND INFORMATION:

Classical Swine Fever (CSF) is a highly contagious and economically significant viral disease of pigs. The severity of the illness varies with the strain of the virus, the age of the pig, and the immune status of the herd. Acute infections, which are caused by highly virulent isolates and have a high mortality rate in naive herds, are likely to be diagnosed rapidly. Infections with less virulent isolates, however, can be more difficult to recognize, particularly in older pigs. The range of clinical signs and similarity to other diseases can make classical swine fever challenging to diagnose.

The United States Department of Agriculture (USDA), Animal and Plant Health Inspection Services (APHIS) now has funding to use the tonsil as part of a routine surveillance program to detect CSF and is offering incentives to encourage practitioners to submit samples for surveillance.

Tests using the tonsil have been developed by the Foreign Animal Disease Diagnostic Laboratory (FADDL) at USDA's Plum Island Animal Disease Center to aid in detection and diagnosis of CSF. USDA's *Classical Swine Fever (CSF) Surveillance Procedure Manual* includes tonsil, tonsil scrapings, and nasal swabs as appropriate samples for CSF detection if collected and submitted properly. As an incentive for producers and veterinarians to submit tonsils, the USDA will credit the submitter with $50 to be applied to the diagnostic workup for cases tested by one of the following National Animal Health Laboratory Network (NAHLN) laboratories: Arizona, California, Florida, Georgia, Iowa, New York, North Carolina, Texas, or Washington.

The National Pork Board (NPB) and the Swine Health Information Center (SHIC) have funded a negative cohort study to validate CSF nucleic acid detection by PCR performed on swine oral fluids. The NPB, the SHIC, and USDA are funding the positive cohort study needed to complete the validation of oral fluid testing.

The Iowa State University Veterinary Diagnostic Laboratory reports that outside of the USDA CSF surveillance testing, over the past 5 years only 383 diagnostic tests were performed on porcine tonsils submitted with the approximately 50,000 diagnostic case investigations into clinically ill swine that involved the submission of a case history and tissues for histopathological evaluation by a diagnostic pathologist.

In the absence of an effective surveillance program that includes official CSF testing of tissues routinely submitted to the NAHLN laboratories for diagnostic case investigations, low virulence CSF strains may become widespread before detected.

The USDA “Foreign Animal Disease (FAD) Investigation Manual” (FAD PReP Manual 4-0) (2017) lists tonsil, spleen, and lymph nodes as specimens for collection during CSF investigations.

The state pork producer associations of Arizona, Colorado, Florida, Hawaii, Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Missouri, Mississippi, Montana, Nebraska, New York, North Carolina, Oklahoma, Ohio, Pennsylvania, South Dakota, Texas, and Wisconsin recognize the need for an effective CSF surveillance program as a key element for protection of the United States swine herd. To ensure effectiveness, they support the approval of additional tissues for official CSF testing.

RESOLUTION:

The United States Animal Health Association and the American Association of Veterinary Laboratory Diagnosticians urge the United States Department of Agriculture, Animal and Plant Health Inspection Service to approve tonsil, spleen, and lymph nodes as additional tissues for official Classical Swine Fever testing in the National Animal Health Laboratory Network laboratories.

RESOLUTION NUMBER: 6 Combined with 10, 14, 19, 23, and 38 APPROVED

SOURCE: **COMMITTEE ON ANIMAL EMERGENCY MANAGEMENT**
USAHA/AAVLD COMMITTEE ON ANIMAL HEALTH SURVEILLANCE AND INFORMATION SYSTEMS
USAHA/AAVLD COMMITTEE ON NAHLN
COMMITTEE ON FOREIGN AND EMERGING DISEASES
COMMITTEE ON SWINE
COMMITTEE ON GLOBAL ANIMAL HEALTH AND TRADE

SUBJECT MATTER: **IMPLEMENTATION OF PSEUDORABIES VIRUS DEOXYRIBONUCLEIC ACID DETECTION (POLYMERASE CHAIN REACTION) IN NATIONAL ANIMAL HEALTH LABORATORY NETWORK VETERINARY DIAGNOSTIC LABORATORIES**

BACKGROUND INFORMATION:

Pseudorabies virus (PRV) was eradicated from domestic swine in 2004. Vaccination was discontinued at that time, leaving the United States (US) herd vulnerable to infection and outbreak. Although eradicated from US domestic swine, PRV remains endemic in US feral swine.

A virulent strain of PRV in China, different than the strain eradicated from the US, emerged in Asia in 2011 where it is causing high morbidity and mortality. Research has shown that PRV could survive in feedstuffs under time, temperature, and humidity conditions mimicking those during shipment from China, revealing a potential path for introduction in the US.

Early detection of the virus and understanding the pathways of potential PRV transmission are critical to containing virus spread and preventing economic losses, should the virus arrive in the US. US PRV surveillance now relies solely on antibody detection.

Capable, rapid response will necessitate the use of nucleic acid detection (polymerase chain reaction - PCR) to enable detection of the virus in tissue samples sent to veterinary diagnostic labs (VDLs). The National Animal Health Laboratory Network (NAHLN) VDLs currently do not have the direct ability to detect PRV in submitted tissue samples with a validated PCR.

The National Pork Board's Swine Health Committee believes there is a rational urgency for the United States Department of Agriculture to prepare the NAHLN laboratories for the possibility of the re-emergence of PRV.

The state pork producer associations of Arizona, Colorado, Florida, Hawaii, Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Missouri, Mississippi, Montana, Nebraska, New York, North Carolina, North Dakota, Oklahoma, Ohio, Pennsylvania, South Dakota, Texas, and Wisconsin recognize the need for an effective PRV surveillance program as a key element for protection of the US swine herd and support the implementation of PRV Deoxyribonucleic Acid detection, proficiency testing in the NAHLN laboratories, and validation of their use with oral fluids.

RESOLUTION:

The United States Animal Health Association and the American Association of Veterinary Laboratory Diagnosticians urge the United States Department of Agriculture, Animal and Plant Health Inspection Service to actively pursue validating a Pseudorabies Virus (PRV) polymerase chain reaction assay for the detection of PRV Deoxyribonucleic Acid in swine oral fluids and other appropriate samples to be used in National Animal Health Laboratory Network laboratories as is currently being done with Foot and Mouth Disease Virus, Classical Swine Fever Virus, and African Swine Fever Virus.