



SCWDS BRIEFS

A Quarterly Newsletter from the
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AFWA Adopts CWD Best Management Practices

The Association of Fish and Wildlife Agencies (AFWA) adopted the *Best Management Practices for Prevention, Surveillance, and Management of Chronic Wasting Disease* (BMPs) at its recent annual meeting in Tampa, Florida. The BMPs are a set of recommendations for agencies to consider as they develop or revise their CWD prevention, surveillance, and management programs, and are not meant to be prescriptive or to mandate programs at the local, state, provincial, tribal, or territorial level. The BMPs are supported by a 111-page technical report that references the peer-reviewed science and field-tested methods that justify the recommended practices. In addition to adopting the BMPs, AFWA passed a resolution that affirms and endorses the BMPs, encourages its members to adopt those practices deemed appropriate by individual jurisdictions to support scientific CWD management, and requests the AFWA Fish and Wildlife Health Committee to initiate the development of further science-based recommendations regarding the implementation of recommended practices.

The BMPs are subdivided into sections on CWD Prevention, Surveillance, Management, and Supporting Activities. The section titled Prevention of CWD Introduction and Establishment addresses movement of live animals, carcasses, products of cervid origin (including reproductive tissues, germplasm, semen, embryos, and products containing cervid urine, feces, deer pen soil, etc.), and unnatural concentration of cervids through artificial management activities, such as baiting and feeding.

The section on CWD Surveillance contains recommendations regarding testing methodology and surveillance for initial detection of CWD as well as for monitoring prevalence and geographic distribution after initial detection. The Management section includes recommendations regarding development and enhancement of CWD response plans, initial response to the first detection, managing CWD prevalence, rehabilitation of deer and other cervids, carcass disposal, and decontamination/disinfection methods for equipment. The Supporting Activities section covers a wide range of topics including internal and public communications, research, cervid regulations in North America, captive cervids, and public health.

The BMPs, technical report, and AFWA resolution were created through the collaborative efforts of more than 30 wildlife health specialists, biologists, and veterinarians from 22 states and two Canadian provinces. The documents can be found at <https://www.fishwildlife.org/afwa-acts/afwa-committees/fish-wildlife-health-committee>. (Prepared by John Fischer)

African Swine Fever Hits Belgium

A recently detected outbreak of African Swine Fever (ASF) has alarmed European animal health officials and swine producers. Western Europe's first case of this deadly disease in decades was confirmed in a wild boar (*Sus scrofa*) in southern Belgium on September 13, 2018. As of mid-November 2018, more than 160 infected wild boars in the region have been reported to the World Organization for Animal Health (OIE). In addition, China has been battling ASF outbreaks in domestic swine in

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several provinces since August 2018, and there have been recent, unconfirmed reports of ASF virus detection in wild boar and in intercepted pork products headed for Japan and Taiwan. All of this has heightened concerns for the potential introduction of ASF into North America and elsewhere.

Warthogs (*Phacochoerus africanus*) and bushpigs (*Potamochoerus larvatus*) are the recognized natural hosts of ASF and serve as important reservoirs in Africa. While all other species of domestic and wild suids are susceptible to infection and may develop clinical signs, warthogs and bushpigs are subclinical carriers. Wild boar and domestic swine (*S. scrofa domesticus*) commonly succumb to disease. Humans are not susceptible to infection.

African Swine Fever is caused by the only known virus in the Asfarviridae family. The virus was discovered in the 1920s when European swine became sick and died upon arrival in Kenya. Acute infections can be diagnosed quickly with a polymerase chain reaction (PCR) test for viral DNA, and an enzyme-linked immunosorbent assay (ELISA) is available for detection of antibodies, which begin to appear 7-10 days post infection. The OIE requires reporting of all ASF occurrences due to its importance to global animal agriculture.

The clinical signs of ASF vary depending on the virulence of the viral strain involved. Mortality rates in suids range from 0-100%, and all but a handful of the reported infections in wild boars in the current Belgium outbreak have been fatal. The most virulent strains cause death before clinical signs or lesions become apparent. Some strains cause high fever, hemorrhages in the skin and throughout the body, abdominal pain, and huddling. Suids infected with less virulent strains may exhibit lethargy, joint pain, pneumonia, and weight loss. There is no treatment or vaccine.

The epidemiology of ASF is complex. The virus can be transmitted by *Ornithodoros* ticks, fomites, or contact with live or dead suids, pork products and wastes. All secretions and tissues from an infected animal, including saliva, feces, blood, offal, and meat, can be infectious. The

virus is relatively resistant to heating and cooling and can remain viable in the environment for months.

African Swine Fever is endemic in many regions in sub-Saharan Africa, but it has been introduced repeatedly to other continents through human-facilitated movement of suids, pork products, and fomites. Between 1960 and 2000, ASF appeared in Belgium, Brazil, Haiti, Madagascar, The Netherlands, Portugal, Sardinia, and Spain. Most countries eradicated the disease, but ASF currently is considered endemic in Madagascar and Sardinia.

In 2007, ASF was detected in the Caucasus and it has been spreading throughout eastern Europe since then. Although human-facilitated movement of pork products has contributed, wild boars are believed to have played a role in the spread of ASF. There were grave concerns about the disease reaching western Europe's dense wild boar and domestic swine populations, as now appears to have occurred. Wild or feral disease reservoirs and/or disseminators greatly complicate disease control and/or eradication in domestic animals.

In an attempt to control the Belgian outbreak of ASF, animal health officials have taken measures including restrictions on the movement of swine and equipment. There is no treatment of affected animals, and carcasses, pork products, and wastes must be disposed of appropriately. Surveillance is being conducted on wild boar and domestic swine populations within and outside the containment zone, and vaccine development is underway in other parts of the world.

In the United States, 120 million swine are produced each year and seven million hogs are maintained for breeding; production is concentrated in Iowa, Minnesota, and North Carolina. In addition, approximately six million feral swine are distributed across the U.S. with the highest concentrations from the Gulf States to North Carolina as well as in California. The U.S. swine industry supports 550,000 jobs and produces a gross income of \$20 billion annually. Consequently, an ASF incursion could kill millions of hogs and cause significant economic losses if it were not quickly detected and controlled.

Preventing the virus from reaching domestic and/or feral swine populations in the U.S. is crucial as is early detection if an introduction were to occur. The USDA's Animal and Plant Health Inspection Service (APHIS) and state animal agriculture agencies are on heightened alert and urge implementation and maintenance of all preventive measures. Techniques in use include practicing strict biosecurity on swine farms, banning importation of swine or pork products from foreign areas with ASF, and training animal health officials to identify the disease. More information on ASF, animal health emergency management, and other topics can be accessed through the USDA-APHIS website on Animal Disease Information (<https://www.aphis.usda.gov/aphis/ourfocus/animalhealth/animal-disease-information>).

African Swine Fever incursions have been eradicated in several countries in the past, and there is hope that the current outbreaks in Europe and China also can be curtailed before further spread occurs. (Prepared by Susie Masecar of North Carolina State University College of Veterinary Medicine and Nicole Nemeth)

Awards for SCWDS and Our Students

In early September, SCWDS received the Ernest Thompson Seton Award at the annual meeting of the Association of Fish and Wildlife Agencies (AFWA), which represents the fish and wildlife management agencies of all 50 states. This is a prestigious, national award and according to AFWA, "*The purpose of the award is to promote the scientific management of wildlife resources by bringing to the attention of the public the need and benefits of scientific wildlife management; and to recognize the agency that has taken a strong position in support of the integrity of its professional program.*" Dr. Fischer accepted the award on behalf of everyone who has worked, studied, or collaborated with SCWDS since its founding in 1957 because they all have contributed to the enviable reputation SCWDS enjoys today. The award is a beautiful, framed wildlife print donated to AFWA by the National Wild Turkey Federation.

Our graduate students dominated the award ceremony at the annual meeting of the Wildlife Disease Association (WDA) in August. Sarah

Sapp won the WDA Graduate Student Research Recognition Award for her project on the ecology of *Baylisascaris procyonis* (raccoon roundworm) in wildlife, domestic dogs, and people. Sarah has obtained her PhD and taken a position with the U.S. Centers for Disease Control and Prevention. Charlie Bahnson won the Terry Amundson Award for Best Student Presentation for "Experimental infections and serology provide evidence for including White Ibis (*Eudocimus albus*) among the type A influenza virus natural reservoir system." Charlie successfully defended his dissertation research on avian influenza virus and has taken a position as state wildlife veterinarian for North Dakota. Jenny Bloodgood won the WDA Graduate Student Scholarship Award that recognizes outstanding academic and research accomplishment, productivity, and future potential in the pursuit of new knowledge in wildlife health or disease. She is a DVM-PhD student, has finalized her PhD research, and will graduate with a DVM in 2021. In the WDA photography competition, Jenny took first place for "people in nature" and second place in the "landscapes" category, and Henry Adams received the People's Choice Award. Henry is a Master of Science (MS) student studying amphibian pathogens in Costa Rica and North America.

Kayla Garrett recently attended the annual meeting of The Wildlife Society (TWS) in Cleveland, Ohio, where she was the recipient of a travel award from the TWS Wildlife Disease Working Group. She presented results from her *Babesia* studies in raccoons and her work on transmission pathways for *Dracunculus*. Kayla received her MS with SCWDS and currently works with us as a research technician.

Our graduate program is one of our greatest strengths at SCWDS and our graduates are in high demand by local, state, and federal agencies; universities; and other organizations across the country. We are extremely proud of our students at SCWDS and consider their recognition by the WDA and TWS as very well deserved. (Prepared by SCWDS faculty)

A Note to Our Readers

We thank you for your sustained interest in our quarterly newsletter, the SCWDS BRIEFS. We continue to receive positive feedback from many

readers, which lets us know that we are still providing items of interest to you in each issue.

One difficult aspect of putting out a publication such as the BRIEFS is maintaining the mailing list. We want to reach as many of you as we can, but can do so only if you let us know you want to be included on the mailing list, notify us of any address changes, or inform us of someone else you know who would like to be added to the mailing list. Of course, if you want to reduce the volume of mail coming into your home or office, you may opt to be removed from the regular mailing list and have your name added to our email list to be informed when each new issue is posted on our website. This way, you usually can read the newsletter at least 10 days before a mailed copy would arrive. As always, if you have suggestions for improvement of the BRIEFS, please let us hear from you. Our goal is to provide information of interest to you.

Recent SCWDS Publications Available

Below are some recent publications authored or co-authored by SCWDS staff. Many of these can be accessed online from the web pages of the various journals. If you do not have access to this service and would like to have a copy of any of these papers, let us know. Many can be sent to you electronically with minimum effort; others will be mailed to you. For your convenience, please indicate requested publications, fill out the form on page 7, and check the appropriate box to receive either an electronic copy or a hard copy and return it to us: SCWDS, College of Veterinary Medicine, University of Georgia, Athens, GA 30602 or email at brewton@uga.edu.

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