

African Swine Fever and the Cost of Your Bacon

Our topics for this week are:

- **African Swine Fever signs of disease**
- **The current global spread of African Swine Fever**
- **Control of African Swine Fever**

Pork is the most consumed meat in the world. Its production in the U.S. involves 60,000 producers and generates \$23.4 billion in gross revenues. Two-thirds of U.S. production is controlled by 4 companies: Smithfield Foods is the largest and owned by the Chinese company, WH Group. The others are Seaboard Farms, Pipestone System, and Iowa Select Farms. Nearly 1/3 of all U.S. pork products are exported to other countries, primarily in Asia.

Transmission

African swine fever virus causes high mortality rates in domestic pigs. Some isolates can cause death of animals as quickly as a week after infection. It persistently infects its natural hosts, warthogs and bushpigs but causes no signs of disease in these species. Soft ticks likely act as a vector. It does not cause disease in humans. ASFV is endemic to Africa and exists in the wild through a cycle of infection between ticks and wild pigs, bushpigs, and warthogs. Transmission can be by ticks, live or dead pigs, pork products, contaminated feed, and handlers. The virus can survive days on vehicles and equipment, for weeks in raw meat, and months in frozen pork products. There is no treatment or vaccine for ASF, although Vietnam reported it successfully may have produced the first vaccine against African swine fever on June 1, 2022. Until this is verified and vaccine is readily available, infected and exposed pigs must continue to be euthanized.

Signs and Symptoms

Signs occur after an incubation period following exposure of 5-21 days. In the acute form of the disease, pigs may develop a high fever, but show no other noticeable symptoms for the first few days. They then gradually lose their appetites and become depressed. In white-skinned pigs, the extremities turn blueish-purple and hemorrhages become apparent on the ears and abdomen. Groups of infected pigs lie huddled together shivering, breathing abnormally, and sometimes coughing. If forced to stand, they appear unsteady on their legs. Within a few days of infection, they enter a comatose state and then die. In pregnant sows, spontaneous abortions occur. In milder infections, affected pigs lose weight, become thin, and develop signs of pneumonia, skin ulcers, and swollen joints.

History

In the 1990s, the disease had mostly been contained to Africa, but in 2018 the virus spread to China, affecting more than 10 percent of the total pig population in several countries, leading to severe economic losses. One hundred million pigs have died from ASF in Asia. One-half of pigs in China have died or had to be depopulated for control of ASF. By mid-2019, the virus had spread to many other Asian countries and to Europe. In 2021, it was detected in the Dominican Republic and Haiti. It has never been in the U.S. but if it gains access to this country, the losses are estimated to be \$8 billion per year. Specially trained beagles are being used in the U.S. at international airports and seaports for the detection of foreign-origin pork products.

Why is the African Swine Fever spreading? International travel and commerce are part of the cause. Another reason is the consolidation of pork production. Concentrated Animal Feeding Operations (CAFOs) have increased at least 5 fold in the U.S. since the late 1970s. For example, within a period of 30 years 90% of Missouri hog operators were put out of business by CAFOs. The mean herd size in the 1980s was 200 hogs. Today, average herd are at least 3,000 hogs. Hog CAFOs can house 10,000 hogs each and at least 20,300 hog CAFOs are known in the U.S. CAFOs put a higher percentage of hogs in the U.S. at risk from an outbreak in each facility. The chance of isolation and depopulation to gain control of an outbreak is less in a CAFO than hogs on pasture or in forested land.

Our recommendation for humane and ecological reasons is to have a more reliable source of U.S. pork. You may be able to find a local hog producer who raises hogs on pasture or in forested land and obtain your pork products locally, or there are online sustainable agriculture groups that can guide you to a better source of pork products from hogs raised on pasture or in forested areas.

If you have comments or you're interested in particular subjects contact us at CBC@BetterAnimalHandling.com

Now let's recap the key points to remember from today's episode:

- 1. African Swine Fever is caused by a virus that is resistant to destruction in the environment.**
- 2. The mortality rate of African Swine Fever is high and depopulation is currently the only means of control.**

- 3. Consolidated hog operations dominate the industry and put a higher percentage of hogs at risk from an outbreak at each facility compared to the traditional method of raising hogs on pasture or in forested land.**
- 4. An outbreak of African Swine Fever in the U.S. could cost billions of dollars and make bacon very expensive.**

Abby says it is time to wrap up this episode.

More information on animal handling is available in my book, *Animal Handling and Physical Restraint*, published by CRC Press and available on Amazon and from many other fine book supply sources.

Additional information is available at: www.betteranimalhandling.com

Don't forget, serious injury or death can result from handling and restraining some animals. Safe and effective handling and restraint requires experience and continual practice. Acquisition of the needed skills should be under the supervision of an experienced animal handler.