

Summer 2019

IOWA

Pork Producer

Headlines

A publication
of the Iowa
Pork Producers
Association

iowapork.org



HOW PRODUCERS CAN MITIGATE THE RISK OF ASF

and other foreign animal diseases

On a farm, attention to biosecurity and putting a Secure Pork Supply plan into place are the keys for your business continuity in the event of a FAD outbreak.

African swine fever: What you need to know

Will African swine fever (ASF) reach the United States? That's the billion dollar trade-limiting question as this foreign animal disease (FAD) continues to decimate Chinese supply and causes even the boldest risk-takers to break a sweat.

ASF has always had the attention of the swine industry because it's a complex global threat. It can spread through a variety of routes; it's hardy and can survive in extreme environments; and there's no vaccine.

It first appeared in Africa in the early 1900s, hence the name. But, in August 2018, when Chinese officials confirmed the first case in the world's largest pork-producing country, renewed attention focused on the disease and its spread.

African swine fever is a viral disease that infects only pigs and cannot be transmitted from pigs to humans. It's not a human health concern, and consumers may continue safely eating all pork products.

"In a mere six months, the virus spread throughout all provinces in China."



However, with no clear path to contain ASF, producer groups like the Iowa Pork Producers Association, the National Pork Board and the National Pork Producers Council, along with the state and federal government agencies charged with animal health, are working together to prevent ag industry-wide devastation.

Chinese outbreak sparks discussion

In a mere six months, the virus spread throughout all provinces in China. Data from 68 Chinese outbreaks revealed three major routes of transmission: 46 percent by vehicles and workers without disinfection, 34 percent by swill feeding and 19 percent by transportation of live pigs and their products across regions, according to China's Ministry of Agriculture and Rural Affairs (MARA).

Dr. Scott Dee, veterinarian and director of Pipestone Applied Research, believes contaminated feed could be a key transmitter of ASF in Chinese swine herds. Producers here talk with their feed suppliers and have a clear understanding of not only feed sources, but vitamin and supplement sources and how their supplier manages those to prevent ASF contamination.

Dr. Chris Rademacher, associate director of the Iowa Pork Industry Center (IPIC), says that in China, farming culture vastly differs from the U.S. When Chinese producers are faced with abnormal and unexplainable livestock deaths, they will sell the surviving herd.

"In the United States, producers have strong relationships with their veterinarians and implement stronger biosecurity practices," says Rademacher. Instead of selling pigs and further spreading the virus, responsible producers would immediately report the case to their veterinarian.

Additionally, world experts believe Chinese producers and the Chinese government underreported the amount of cases. Their actions further contributed to the spread of the virus.



After the initial August 2018 Chinese outbreak, it's now traveled across borders to Laos, Vietnam, Cambodia, Mongolia and North Korea.

Not only did China fail to contain the virus within provinces, they continue to struggle with repopulating since ASF remains active in extreme environments from months to years.

U.S. producers can apply China's outbreak experience as a learning opportunity, so the same devastation does not occur here in the third largest pork-producing country.



5 Steps to a Secure Pork Supply

This is the outline of five steps deemed necessary for on-farm business continuity in the event there is a FAD outbreak in the U.S. You can also read more on page 6.



1 Get a national premises identification number (PIN). Instructions on how to get a PIN are included on the Secure Pork Supply (SPS) website, www.securepork.org. If you already have a PIN, be sure it's validated and reflects the animals' location. Then start including it on diagnostic lab submissions. "Don't try to combine premises," says Pam Zaabel, DVM, Center for Food Security/Public Health, Iowa State University. "It's really in the producer's best interest to have separate PINs for animal sites. Think of it like a 911 address. In a FAD outbreak, the PIN will be tied to diagnostic results, your biosecurity plan, animal movement records, etc."



2 Maintain detailed records. FADs can spread on contaminated vehicles, equipment and even on people's clothing and footwear. Maintain accurate records on the movement of animals, as well as movement of feed, supplies, equipment, personnel and visitors so you can provide accurate trace-back information. Electronic records are encouraged, but you can use paper records, too. "Have the records in a format and organized so you can retrieve them for an animal health official if asked," Zaabel says.



3 Establish biosecurity measures. Write a site-specific biosecurity plan. Templates on the SPS website can be customized to help you with the process. Zaabel recommends getting your herd veterinarian involved, and if you already have a biosecurity plan, to compare it against the SPS checklist. Create a premises map that includes vehicle movements, line of separation and a perimeter buffer area. Instructions on getting a premises aerial map, what to include and how to label the areas are also available at securepork.org. Assign a biosecurity manager. "This must be someone on site who knows the animals and can ensure biosecurity measures are being followed," Zaabel says.



4 Train farm personnel. Go to securepork.org for videos, barn posters and manuals (all in English and Spanish) that illustrate biosecurity measures, disease symptoms and transmission. "People on site need to understand what to do and why," Zaabel says. "A biosecurity plan only works if everyone follows it all of the time. That requires training and education."



5 Actively monitor pigs daily "Record what you see, know who to call and what steps to take if/when needed," Zaabel says. "Rapid detection and response are critical in guarding against FADs." Resources on securepork.org show the clinical signs caused by these diseases. Looking for the clinical signs daily can help demonstrate no evidence of infection, so a movement permit can be requested in an outbreak.



ASF has export role

By year end, ASF will reduce Chinese pork production by 25 to 35 percent, according to Rabobank, a world leading financial services provider for the food and agribusiness sector. Their prediction estimates that ASF will affect 150 to 200 million pigs in China. For comparison, the United States produces 115 million pigs annually.

If a case occurred in the U.S., producers would not only lose a portion of pigs from the disease and depopulation, but they'd immediately lose their export markets, which account for 25 percent of U.S. pork sales. Countries with confirmed ASF cases are subject to international trade restrictions aimed at reducing the risk of spreading the disease through trade.

Economic Impact

Producers must keep in mind the industry-wide economic consequences of an FAD outbreak. The reduction in pork supply caused by ASF would also lead to billions in revenue loss for other commodities according to a 2011 economic impact study conducted by Dermot Hayes, an ag economist at Iowa State University.

An estimated \$8 billion loss in the value of pork leads to inexpensive pork flooding the domestic market. Beef would then reduce its prices to remain competitive, leading to a \$3 billion loss. With fewer pigs in the market to consume corn and soybeans, those prices drop, too, by \$4 billion and \$1.5 billion, respectively.

 **\$3 BILLION LOSS**

\$4 BILLION LOSS 

 **\$1.5 BILLION LOSS**

Prevention, preparation and early detection are a producer's best bets. Producers and members of their team must know the signs of an ASF outbreak to control the spread if a case occurs.

Detecting ASF

Quickly recognizing and reporting ASF is the difference between controlling the impact of the disease and a devastating national collapse of the industry.

Rademacher says that initially, African swine fever moves slowly through a herd compared to other diseases. Symptoms can be difficult to detect because the virus can initially appear similar to other diseases such as salmonella or PRRS. Additionally, it may take 5-21 days for even experienced producers to recognize the virus' signs.

Signs may include pigs going off feed, becoming lethargic, and a few deaths but nothing above the farm mortality threshold. Other characteristics include high fever, hemorrhages in the skin and internal organs and bloody diarrhea.

Rademacher says "It's called African swine fever for a reason. An early tell-tale sign is an unusually high fever between 105 and 108 degrees." Rademacher recommends carrying a thermometer to quickly check a pig's health status.



Abortions may be the first signs of an outbreak on a sow farm, and mortality rates may be 100 percent.

Producers who notice any of these signs should immediately contact their local veterinarian and stop any transportation on and off the site.

The national economic consequences are too dire to not plan and implement greater biosecurity measures. Enhanced biosecurity increases the defense against not only ASF but also other diseases such as foot and mouth disease (FMD), porcine reproductive and respiratory syndrome (PRRS), porcine epidemic diarrhea (PED) and more.

What's being done here?

Organizations at the national and state levels understand the complex economic challenges associated with ASF outbreaks and are aiding producers by providing valuable biosecurity and FAD response resources.

USDA APHIS works with U.S. Customs and Border Protection to confiscate illegal pork products from ASF-infected countries. They also added ASF testing to existing classical swine fever (CSF) surveillance to help find potential disease quicker.

In the U.S., 28 states permit and regulate swill feeding or garbage feeding which is the feeding of food scraps to



livestock. Raw meat may transmit numerous infectious or communicable disease including FMD, CSF and ASF.

USDA APHIS enforces the Swine Health Protection Act (SHPA) that regulates food waste containing any meat products fed to swine. Compliance with this act ensures that all food waste fed to swine in the U.S. is properly treated to kill disease organisms.

The SHPA also requires the food waste and trash from any international flight or ship (excluding Canada) be moved under seal, directly to incineration.

Global trade planning

As ASF spreads throughout Europe and Asia, the goal is to keep the tenacious virus out of the North, Central and South Americas regions. Over 150 government and industry leaders from 15 countries gathered recently to share their ASF experience and create a unified strategy.

Iowa's State Veterinarian Jeff Kaisand and Al Wulfekuhle, past IPPA president and a pig producer from Quasqueton, represented Iowa at the International ASF Forum in Ottawa, Ontario, Canada on April 30 and May 1.

Attendees at the Forum shared experiences, so others could learn to better prevent the entry of ASF or any FAD. Conducting economic trade talks are crucial to business continuity.

After the forum, Dr. Jack Shere, U.S. Chief Veterinary Officer (CVO), and Dr. Jaspinder Komal, Canada's

"Control what you can and be informed about what you can't." Jeff Kaisand, Iowa's State Veterinarian

On-site options to explore

Solutions to preventing ASF and other FADs, start on the farm with greater biosecurity measures. While adopting these, producers should remember to balance long-term goals with short-term planning.

Contingency Planning

Each farmer's operation is unique, therefore the plan to dispose of all infected, suspect and contact animals should be, too. Rademacher says, "There's not a certain playbook to this. It's situational depending on the size and location of the operation."

If ASF infects your operation, you will deal with mass depopulation, carcass disposal, financing and insurance factors.

Farm visits

Managers should enact an international traveler standard operating procedure (SOP). Farm visits for international travelers aren't recommended but if they must occur, then the visitors should complete five days downtime once on U.S. soil before stepping foot on a hog farm.

They should also ensure that visitors aren't bringing imported meat into the U.S. Also, provide them with clothes and shoes at an off-site location that they can wear when visiting your farm.

OVER 150 GOVERNMENT & INDUSTRY LEADERS



CVO, released a joint statement and announced that both countries would "continue trade in approved disease-free zones in the event of an ASF outbreak." The agreement marked a major success for business continuity.

Conducting and envisioning these measures prior to an outbreak is necessary. It's a much better alternative to experiencing the uncertainty and financial pain like Chinese producers and others in the supply chain.

Officials are acting at a national level to combat the virus' spread, but it remains the producer's responsibility to prevent infection on their operation. Preparedness efforts are important to staving off a virus with an unknown arrival date.

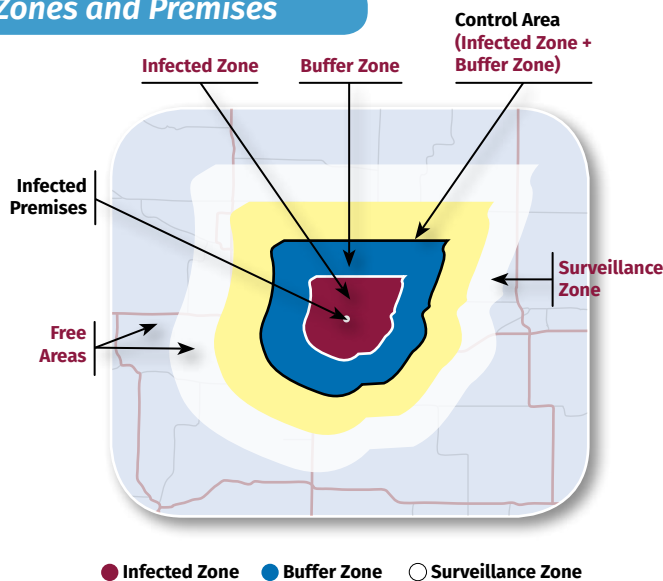
The first case scenario

One reported case of ASF in the United States would launch immediate consequences. USDA APHIS outlined a working plan if a case occurs. Note, that this response plan is subject to change as new information arises and tasks overlap.

Once a case is discovered, a 72-hour standstill is announced, which may include a 12-hour grace period. The grace period is meant to allow pigs in transit to reach a destination but no new loads should be put on the road. This reduces the spread of ASF via animals, animal products, vehicles and other equipment.

After 12-hours, the standstill order would go into effect for a minimum of 72-hours. The standstill allows officials to assess where the virus is and isn't. From there, they'll set up regulatory control areas (areas where premises are quarantined and movement is restricted) based on prem IDs and detailed movement records provided by producers.

Zones and Premises



Zaabel, the public health veterinarian, says "The areas and zones won't necessarily be concentric rings. Depending on natural geographical features and size of the outbreak, the areas and zones could be marked by county, regional area or state."

Animal health officials could extend the 72-hour standstill depending on whether additional infected sites are confirmed and the location of those sites. Therefore, producers should know their emergency plans if days-long standstills are required.

Iowa's State Veterinarian Jeff Kaisand says "A few hours and days on the front side of the first case

prevents months and more likely years on the back end."

During a FAD outbreak, many things will be out of the producer's control. However, proactively completing the Secure Pork Supply plan right now is one way that producers can prepare their operation.

Secure Pork Supply

The Pork Checkoff funds Secure Pork Supply (SPS), a preparation plan that aids in business continuity should a FAD outbreak occur. Maintaining business continuity for the pork industry is critical for food security and animal health and well-being.

The goal of the plan is to develop procedures that



pork producers, processors, and federal and state agencies all agree are feasible.

Again, note that the response plans during an outbreak are subject to change based on the unique characteristics of each case. The SPS plan provides baseline preparation for producers and improves communication with animal health officials should an outbreak occur.

Zaabel says, "The framework is designed to allow movement permits for producers who are impacted by movement restrictions but are not infected with the disease and have kept appropriate records."

Producers with infected sites would work directly with state and federal animal health officials.

Secure Pork Supply is intended for completion prior to a FAD outbreak to enhance communication and coordination, accelerate a successful FAD response and support the continuity of business.

Zaabel says "The SPS plan provides resources to help sites prepare ahead of time rather than during the disarray of an outbreak."

Like enhanced biosecurity measures, this plan is not specific to ASF and applies to trade-limiting diseases CSF and FMD, too.

The steps outlined in SPS make producers consider various factors: updating prem IDs, detailed animal movement records, proper employee training, writing site-specific biosecurity plans, creating a premises map, etc.

A condensed five-step plan to SPS is on page 3 of this publication.

The Secure Pork Supply website provides producers with resources relative to how much time they can dedicate. There's a one-page handout, seven-page guide and 12-page booklet.

Producer Wulfekuhle says, "I think a big misconception is that Secure Pork Supply is a certificate. You don't automatically receive a movement permit upon completion."

Becoming Secure Pork compliant speeds and eases the process of obtaining a movement permit after an outbreak but does not automatically guarantee one.

Wulfekuhle was an early adopter of addressing ASF concerns and improving practices on his operations. Wulfekuhle, like many other responsible producers, updated and continues to update his prem IDs and ensures accurate movement records, along with his overall SPS plan.

"We need producers to start or continue updating their prem IDs," says Wulfekuhle. "Every time a load of pigs goes to the packing plant, they need to include the premises ID with the load. Producers should record prem IDs with every pig movement."

Regulatory officials will require premises to demonstrate certain criteria that reduce the risk of disease spread relative to movement. Once approved by an animal health official, these producers then can safely transport their non-infected herd to harvest channels or other production sites.

No vaccine for quick solution

Despite decades of research, it's estimated that a safe and effective vaccine is years out. The problem lies in the size of the ASF virus.

A typical virus may have 10 to 12 proteins, and the ASF virus contains 170 proteins.

Scientists face difficulty in creating a vaccine that covers all of them.

Producers can't rely on a vaccine to solve this global issue, and that's why organizations focus on improved prevention and preparation methods.



170 PROTEINS

SUMMARY

It's estimated that China, the largest pig producing country will lose one-third of its herd by year end. The U.S. swine industry would face an \$8 billion loss should an ASF outbreak occur in this country.

Since China's first reported case, the Iowa Pork Producers Association has worked diligently with national and state organizations and government agencies to offer resources to producers and prevent the entry of ASF into the United States. These efforts address prevention, preparation and mitigation of ASF and other FADs.

Actions include global trade talks for business continuity, confiscation of illegal pork products

intended for delivery in the U.S., and greater regulation of food waste fed to pigs.

\$8 BILLION LOSS



In addition to organizational efforts, individual producers must proceed with the goal of constant biosecurity improvement to protect their herds. IPPA encourages producers to start and continuously update their Secure Pork Supply plan to remain prepared.

Disease protection procedures involve balancing short-term plans with long-term goals. Starting SPS now and prior to an outbreak, helps all producers reach a common goal - doing what's best for their pigs.

The Iowa Pork Producers Headlines newsletter is an official publication of the Iowa Pork Producers Association. Editorial and advertising offices are located at the address listed.

The publisher cannot guarantee the accuracy of all information or the absence of errors and omissions, nor be liable for content of any advertisements that may appear in the newsletter.

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Mission Statement

The Iowa Pork Producers Association promotes, educates and provides a leading voice for a sustainable, socially responsible, and globally competitive pork industry.



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