



OUTLOOK ON THE OUTBREAK

A virus that has the capability of wiping out an entire generation. A virus so deadly, the effects can take place overnight, and a person can literally wake up to an epidemic.

Unfortunately, farmers across America are waking up to this reality as Porcine Epidemic Diarrhea Virus (PEDv) gains a foothold in the United States swine industry. With little to no warning PEDv can ravish a hog operation, causing massive casualties and leaving gaping holes in production schedules.

Will Winter, of Wintex Farms, a show hog production facility in Lubbock, Texas, said the threat of a PEDv outbreak poses a very serious danger to their operation. Winter explained the high dollar production cost associated with raising show hogs leaves little room for liabilities.

"The risk is so high every year," Winters said, "if we didn't have a pig crop to sell, it would be the end of us."

Sadly, in the past year, countless farmers across the country have experienced that very devastation as PEDv decimated their facilities and pillaged their herds, leaving little room for profit and threatening their livelihoods.

The USDA first identified Porcine Epidemic Diarrhea Virus, or PEDv, in the United States on May 17, 2013. According to the National Pork Producers Council, more than 4 million swine deaths across 26 states have been attributed to the highly contagious virus since its identification.

PEDv is a coronavirus that infects the cells lining the small intestine of a pig, according to the American Association of Swine Veterinarians. This infection causes porcine epidemic diarrhea, a condition of severe diarrhea and dehydration. The disease is so deadly, it boasts nearly a 100 percent mortality rate in preweaned pigs.

PEDv is transmitted via oral contact with contaminated feces, and the infectious dose needed to corrupt and wreak havoc on an operation is incredibly small. Once an outbreak of the disease occurs, it spreads like wildfire through a

farm, wiping out entire generations within a herd in as little as 24 hours.

Biosecurity is a vital component of reducing an operation's risk. Even the most common practices pose a threat if mismanaged. PEDv can be transferred from farm to farm through minute traces of infected organic matter; shavings, water, mud, snow and manure can transfer the disease to people, clothing, footwear, trucks and equipment.

Dr. Anoosh Rakhshandeh, assistant professor of Swine Health and Nutrition for Texas Tech University, said he believes lax protocol in the day-to-day activities that go into running a hog operation raises the risk of spreading the illness.

"It is very infectious," Rakhshandeh said. "Once the first area of defense, biosecurity, is broken, PEDv is hard to control."

Any equipment that travels from operation to operation poses a risk, including everything from unsanitized shipping trailers to the shoes on the feet of a farmer who visited a community feed mill. With an incubation rate ranging from 24 hours to up to 28 days in certain conditions, and a shedding rate of 3 to 4 weeks, the challenge of managing this disease is formidable.

Corby Barrett, director of Human Resources and General Affairs at Texas Farms in Perryton, Texas, said his operations have significantly stepped up their biosecurity since

the PEDv outbreak in the United States.

"To keep it out of a facility, a producer needs to be doing more than is common in any portion of the industry," Barrett said.

Ideal practices would include limiting farm traffic to a bare minimum, Barrett said, and raising awareness of the previous whereabouts of personnel on the farm. Barrett said if limiting traffic is not an option, he recommends visitors shower and change into clothing the farm provides before coming in contact with any animals, equipment, or facilities, and keeping animal transportation vehicles off site when not in use.

The impact of PEDv may have not fully been felt at this point. While the mortality rate of piglets is very high,



A piglet looks on from a farrowing cage as his siblings nurse.

the death rate for grow-to-finish pigs is much lower. However, pigs of that age may develop adverse effects from PEDv, even if they live through the initial symptoms.

Rakhshandeh said the problem doesn't stop at mortality. He said PEDv affects the immune system of older animals, and has the capability of developing into a chronic condition that causes hogs to become more susceptible to contracting other diseases, ultimately lowering the carcass yields.

An animal will continue to consume feed at the same rate, Rakhshandeh said, but will spend the nutrition on their weakened immune system instead of production of lean tissue. Rakhshandeh said this loss in feed efficiency is

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more costly to producers than one might think.

"That has been a big question," Rakhshandeh said, "which one is more damaging; severe disease or chronic disease? Subclinical, or chronic disease, it affects the productivity and efficiency of your animal. And that's expensive considering 65-70 percent of the cost of production of a pig, farrowing to finishing, is feed. So one unit difference in feed efficiency is going to be a big loss."

As the rate of infections accelerates, the pork industry has risen to the challenge of protecting its animals, producers, and farms. The information cycle for PEDv evolves on almost a daily basis, and the pork industry has had an unprecedented level of communication during this outbreak in an effort to reduce the footprint PEDv will have on the pork market.

Leading organizations within the swine industry such as the National Pork Board, the National Pork Producers Council, the American Association of Swine Veterinarians, and USDA APHIS have each made educational resources available through their web presence. Throughout the country, millions of dollars have been contributed to PEDv research and seminars dedicated to producer education.

Will Winter agreed that his operation has tightened security since the disease became prevalent. Winters said his facility has used the Pork Checkoff's recommended biosecurity protocols, as well as advice from veterinarians across the country to better educate his operation and raise awareness of the potential hazards.

"Under no circumstances," Winter said, "if they pose any threat of contamination, do we let them come on the farm."

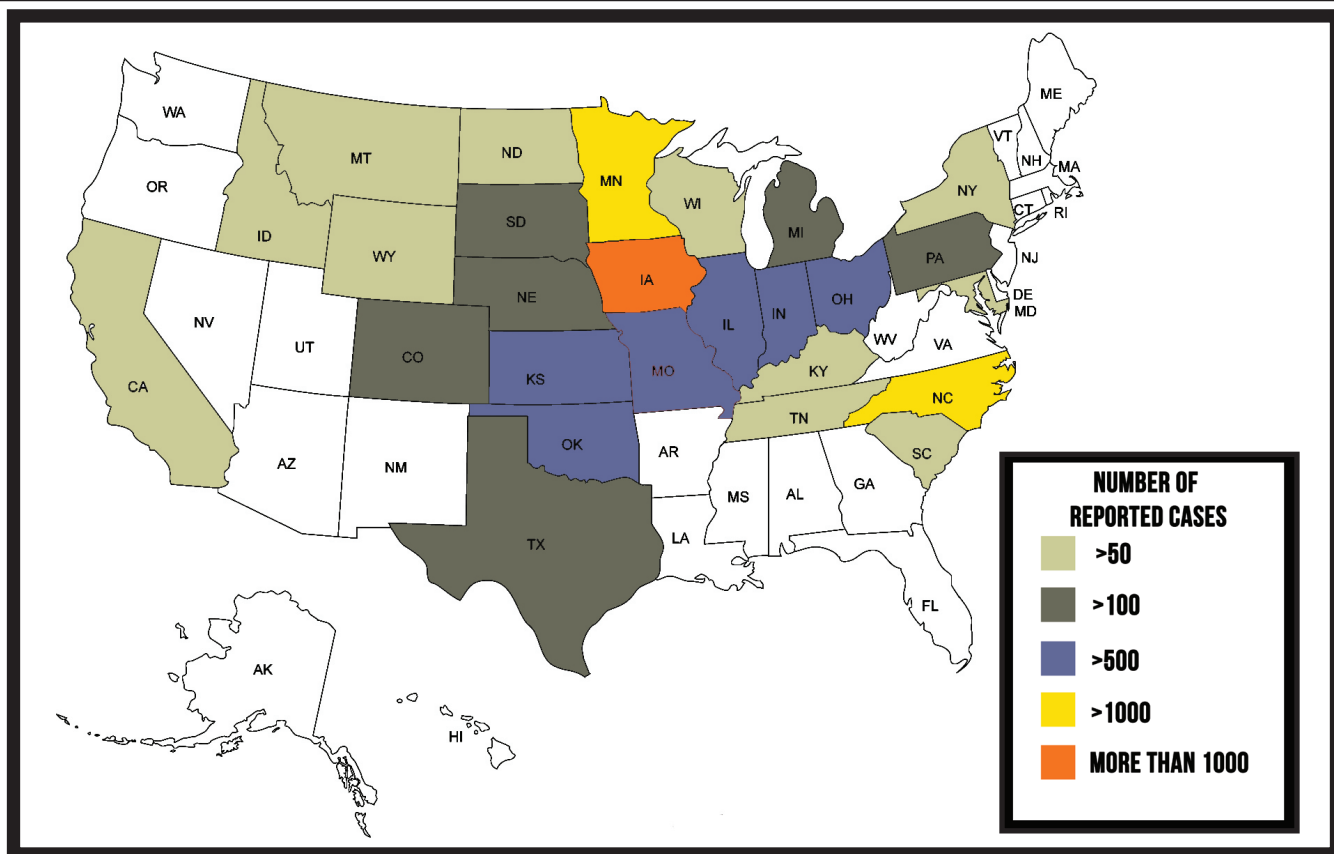
Cindy Cunningham, Assistant Vice President of Communications for the National Pork Board, said the biggest ally in the battle against PEDv is communication; as reports of confirmed cases trickle in, the industry can better track the evolution of the disease.



Photo Courtesy of The Pork Checkoff.



Photo Courtesy of Faith Jurek.



“The research that is going on right now is really based on those cases that have been reported and understanding all of those cases,” Cunningham said, “so we are encouraging producers through their veterinarian to report those cases of PEDv so that the researchers can better understand the virus, how it spreads, and what can be done to contain and control it.”

Cunningham said the challenges of PEDv extend beyond the financial standpoint for producers; they are also deeply affected by the negative physical effects PEDv inflicts on their animals.

“Pork producers care very much about their pigs, and when they see a disease like this sweep through their herds, it can be very challenging for them,” Cunningham said. “We know they are all trying to do the right thing and take care of those pigs the best possible way they can.”

