

It's the Pits

PEDV a Concern for Hog Producers

by Faye Rudsenske

As if hog producers didn't have enough problems to be concerned about, another big issue has plopped down on their plate.

On May 10, 2013, the Veterinary Diagnostic Laboratory at Iowa State University in Ames confirmed Porcine Epidemic Diarrhea Virus (PEDV) had been found in pigs in Iowa. However, an article written by Beth Mole in Scientific American, stated that when the lab screened earlier samples from other states, they then found a case from Ohio, which had been submitted on April 16. This is now the earliest known U.S. detection of PEDV, according to Iowa State pathologist Gregory Stevenson.

PEDV, a lethal virus that causes diarrhea and vomiting in pigs, has already created havoc in the barns with mortality rate estimates in young pigs ranging from 50 to 100 percent. According to the USDA, the disease is most severe in young pigs, but can affect pigs of any age.

USDA chief veterinarian Dr. John Clifford says mortality rates associated with PEDV are only one to three percent in feeder pigs, but are much higher in baby pigs. Most of the older pigs recover from the disease within 7 to 10 days and have higher survival rates, but there is currently no treatment for it.

Although the USDA indicates the virus poses no threat to humans, other animals or food safety because it is NOT a zoonotic disease (a contagious disease spread between animals and humans), the monetary loss to the already cash-strapped \$97-billion dollar pork industry could be staggering. Additionally, there are biosecurity concerns as it is unknown how the virus entered the United States.

What is PEDV?

Mole describes the pathogen as a type of coronavirus that thrives only in pig intestines and was first identified in the Great Britain in 1971 where it caused mass epidemics in Europe for the next two decades. Pigs eventually developed immunity and only occasional isolated incidents have occurred since. However, it also spread to Asia, where it has been considered endemic since 1982, with substantial economic losses to the pork producers there.

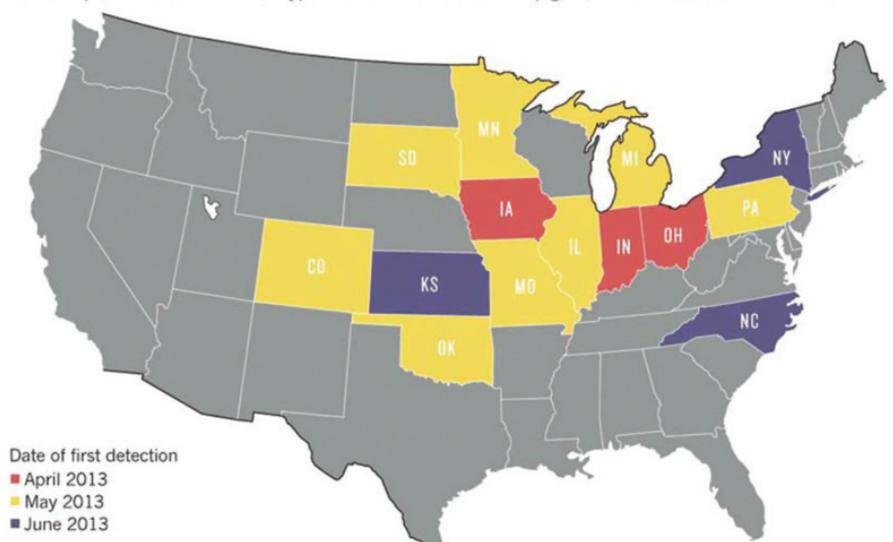
University of MN Veterinary Diagnostic Laboratory (UMVDL) scientist Douglas Marthaler and his team indicate that one strain of the virus found on a Colorado farm was 99.4 percent identical to the Chinese strain of PEDV, which leads to the suspicion that the virus may have originated in China. However, he points out the potential origin does not determine the route in which it arrived. Neither the United States nor Canada, the main source for pigs entering the U.S., import pigs from China so researchers are befuddled on how it evaded biosecurity defenses.

New PEVD Test Available

Worldwide collaboration among the scientific community is working quickly to try to stem the tide of rising incidences. The virus can spread quickly and has been confirmed in 16 states and more than 200 farms, thus far, according to the University of Minnesota. In July, the U of M developed the first PEVD test (which also includes testing for transmissible gastroenteritis) for less than \$50 with results available in 24 hours. To date, there is no preventative vaccine or treatment for PEVD, which makes prevention a top priority.

PIG VIRUS ON THE WING

Porcine epidemic diarrhea virus, a type of coronavirus that can kill piglets, has been detected in 14 US states.



Manure Handling May be the Key

While the investigation is ongoing regarding genetic links and non-genetic materials including feed, what is known is that the virus is transported via infected manure. It is not known how long it can survive outside a pig's intestines so there are a variety of ways in which it could be transported.

Those in the Midwest are concerned that the cooler temperatures may make the virus more stable during the colder winter months creating an atmosphere of an even more dangerous outbreak, which makes manure handling practices even more important.

Cross contamination can occur between haulers, their equipment and workers moving from site to site. Possible carriers include clothing, shoes, equipment and trucks and trailers, which can then be transferred to other facilities. It is imperative to have clearly defined boundaries with implemented procedures for disposal of contaminated clothing, shoes or equipment. It is also extremely crucial that equipment and trucks and trailers be cleaned and disinfected thoroughly between site hauling with, perhaps, restricted access to farms.

Producers, farm managers, workers and commercial haulers are encouraged to be especially vigilant and communicate on a daily basis as to what has been done and where they have been.

It will take a team effort of everyone involved to contain the spread of PEVD.

Guidelines for preventing the spread of PEDV are available at www.pork.org/pedv.



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