

Pseudorabies:

Are we 'depopulating' pork producers as well as pigs?

BY JACK HUBLEY

LANCASTER — While an army of federal and state officials plunge headlong into the battle with avian influenza, a small detachment of the state's pork producers continues to skirmish with a much less renowned foe—pseudorabies virus.

Here in Pennsylvania, the seige actually dates to the late 1970's when PRV, best known for its prevalence in midwestern swine herds, began showing up in the northwestern part of Lancaster County. The good news is that PRV has gained little ground geographically. The bad news is that swine experts have found the disease to be stubbornly resistant to eradication efforts.

Part of the problem can undoubtedly be attributed to PRV's apparent identity crisis. Symptoms can range from no clinical evidence to high rates of mortality, says Strasburg pork producer John Henkel. Henkel is currently the director of a PRV task force sponsored by the Pennsylvania Pork Producers Council, and charged with the duty of coming up with a workable eradication program.

An acute outbreak will usually kill all of the baby pigs under two weeks of age, as well as any cats and dogs on the farm, says Henkel. On the other hand, a herd suffering from chronic bouts with PRV may exhibit no noticeable symptoms at all. The virus is also known to cause stillbirths, abortions and breeding problems, and infected finishing pigs from 100 pounds and up may suffer from pneumonia and other secondary disease problems. "It (PRV) opens the animal up to other infections," notes Henkel.

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According to Bureau of Animal Industry figures, 169 farms in Lancaster and neighboring counties have been placed under quarantine since 1980. Currently 10 breeding herds and 11 feedlots are under quarantine.

"We really do have a low incidence level," says Henkel. "The real sad thing about it is the victims. Financially and emotionally it's very stressful."

One producer who has had to learn to cope with more than his share of stress is Manheim producer Mark Nestleroth. Nestleroth was quarantined in January, 1984, and, by November of the same year he had lost 2,600 head of swine for a total equity loss of \$180,000. The heaviest losses are accrued from the depopulation of brood sows, says Nestleroth. "You automatically lose \$200 a sow from the inventory value of an operating sow herd," he says, pointing out that the producer forced to sell a bred sow for salvage value not only receives a reduced price for the meat, but loses an entire litter as well.

Could Nestleroth have chosen a less costly eradication method than depopulation? At the time he was quarantined, says the producer, the Department of Agriculture's Bureau of Animal Industry required that all infected herds be cleaned up within eight months, which automatically eliminated other more time consuming methods. "I tried to get an extension until the spring of '85, but it was rejected," says Nestleroth.

Bureau of Animal Industry director Dr. Max Van Buskirk contends, however, that a mandatory eight-month depopulation deadline has never been in place. "We asked them (producers) to design a plan whose objective was to get the herd cleaned up in eight months," says Van Buskirk. "But we weren't going to remove permits as long as they were implementing a plan. There was never a cut-and-dried eight-month requirement."



Dr. David Thawley

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The bureau chief says that he received a PRV eradication proposal from the Pork Council's task force last year and that his bureau made a number of concessions on the kinds of control programs they would accept. "We've already implemented a number of recommendations they made," he says. "The only point we were unable to resolve was indemnity."

The lack of compensation available to PRV victims does indeed remain the program's major stumbling block. While Nestleroth's losses were considerable, he maintains that a number of producers suffered losses in excess of \$200,000. Because of the exorbitant costs associated with total depopulation, Henkel and the task force recommended that the option be considered only as a last resort. Other possible options include test and removal of infected pigs or offspring segregation from the infected herd.

Pseudorabies expert Dr. David Thawley agrees that producers should not be expected to shoulder losses in the six-figure area. One of five members of USDA's PRV National Technical Committee, Thawley came to Pennsylvania this week to examine the Pennsylvania situation and make recommendations for eliminating the disease. Thawley was the principle speaker at two meetings held at Lancaster's Farm and Home Center on Monday and Wednesday. He also met with Secretary of Agriculture Richard Grubb and Dr. Van Buskirk on Tuesday.

At Monday's meeting, Thawley pointed out that the cost of eliminating PRV in Iowa operations has been about \$9,000 per farmer, using the offspring segregation method.

Reviewing the latest information gleaned from the PRV pilot programs taking place in five states, (Pennsylvania is one of the group that also includes Iowa, Illinois, Wisconsin and North Carolina) Thawley asserted that the "wherewithal" exists to eliminate the disease.

Thawley noted that pigs themselves are still considered to be the primary source of infection, and that wildlife is an unlikely source of long-term spread of PRV. While pigs shed the virus for 14 to 15 days following infection, other animals are shedders for no more than two days before death. "You get it out of the pigs and you don't have to worry about wildlife

or other species," he said.

Nor is manure a problem. "Body wastes are not considered a significant source of PRV," said Thawley. "Pigs don't excrete it (virus) in sufficient quantities to infect other swine. The problem is saliva."

"It takes a lot of virus to infect a pig," said Thawley, "so environmental contamination is not as critical as in avian influenza or foot-and-mouth disease. There is no conclusive evidence that it spreads in the air, except within buildings and immediately outside of buildings." Thawley said that, from his experience, a six-foot gap between buildings is enough to prevent the spread of PRV.

How long does it last in the environment? Thawley said that a 30-day period following cleanup is sufficient downtime to insure that the disease will be gone. Manure pits will be free of virus if pumped and left open for three days.

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"One thing that we're worried about is the fact that protein protects the virus," Thawley emphasized. "A dead animal (from PRV) can putrify considerably and is still loaded with infectious virus." A carcass can harbor virus for at least two months, he said.

Thawley is convinced that many infections that seem to defy explanation were the result of small animals containing active virus being ground up in feed. He said that infections occurring in isolated herds managed under strict biosecurity regulations have convinced him that feed was the most likely avenue of infection.

Going one step farther, Thawley cautioned producers that using hog feed containing meat scraps may be risky. "Heat treatment in processing should take care of the virus, but the question is, do you want to take the risk?" he said.

Although it does pose a serious threat to herd health, the virus is in fact very fragile, Thawley pointed out. PRV is easily destroyed by heat, dryness or "any sort of alkalinity or acidity," he said.

Reviewing the three cleanup options submitted to the Bureau of Animal Industry by the task force, Thawley said that depopulation may be advisable when more than 80 percent of the herd is infected, there are no valuable genetic strains involved and there are multiple disease problems along with PRV.

Offspring segregation can be economically devastating, Thawley said, but will permit producers to salvage bloodlines. The procedure also requires extra buildings for housing baby pigs, and producers run the risk of infecting the segregated herd if all baby pigs are not tested before segregation.

Test and removal of infected pigs is the least costly of the three

options, Thawley said, and has proved to be successful in herds with less than a 50-percent infection rate. Thawley reported that he "feels comfortable" with a test-and-removal program when coupled with vaccination.

But Thawley also cautioned that vaccination should not be considered a miracle cure. While vaccine will help to suppress a "major clinical outbreak," it will not prevent infection. "I recommend it," he said, "but only the killed (vaccine)."

"We cannot permit the use of vaccine except in an infected herd to reduce disease losses."

Because vaccinated pigs test positive for PRV, the use of vaccine has always been controversial in Pennsylvania. While pigs treated with the "killed" vaccine will test negative for PRV after four to six months, this is not the case when a "modified live" vaccine is used. The use of any vaccine in Pennsylvania is prohibited except by special permit from BAI.

"We cannot permit the use of vaccine except in an infected herd to reduce disease losses," says Van Buskirk. "And we'd still insist that the infected animals have to be depopulated." Van Buskirk emphasized that the bureau will not permit the use of vaccine on negative herds as a preventive measure.

After examining Pennsylvania's PRV problem, Thawley recommended that eradication efforts should be instituted on a case-by-case basis. "If I were in your position, I'd propose that the state hire a swine practitioner to work with these herds and develop plans for them," Thawley told producers. "You've got such a small number of herds that you'd probably be better off with one private practitioner."

But the number of reported PRV herds may not be an accurate reflection of the scope of the problem, noted one producer. Faced with the possibility of total depopulation without an indemnity safety net, it's likely that the owners of some infected herds have elected to keep their problems to themselves.

Although Van Buskirk said that his bureau has made no decisions nor taken any action in response to his meeting with Thawley, he noted that there is hope that indemnification could become a reality. There has been at least one such bill introduced in the state legislature, and the Governor's proposed budget for 1986-87 includes a provision for \$125,000 to be added to the \$225,000 animal indemnity fund. The increase would be earmarked specifically for PRV indemnification.

According to John Henkel, the Pork Council has no intention of letting the issue fade away. "We're going to keep working on some way to find funding," he concluded.



An acute case of pseudorabies in the farrowing house often results in 100 percent mortality in baby pigs under two weeks

