Program Activity Report (PAR)

Investigating Production-Limiting Diseases Carried by Feral Swine

As feral swine populations continue to expand their range and numbers in the U.S., the NWDP has made it a priority to monitor regulatory diseases such as pseudorabies virus (PRV) and swine brucellosis, which are reportable according to international trade standards. These diseases have been eliminated in the U.S. domestic swine industry, but remain a threat because they are endemic in feral swine.

Relatively less emphasis has been directed at production-limiting diseases carried by feral swine. These are diseases often characterized by high morbidity and low mortality. Examples include porcine reproductive and respiratory syndrome virus (PRRSV) and porcine circovirus type 2 (PCV-2). Both diseases are common in domestic swine. PRRSV can cause reproductive failure in sows, and respiratory disease in nursery and finishing pigs. It may also weaken the immune system, predisposing animals to concurrent infections with other pathogens. PCV-2 causes post-weaning multisystemic wasting syndrome in domestic pigs.

The NWDP completed a retrospective study of feral swine for exposure to PRRSV and PCV-2 in 2011, testing over 2,000 serum samples from the Feral Swine Serum Archive. The results suggested that PRRSV may occasionally spill over from domestic swine to feral swine, but probably cannot be sustained by feral populations. In contrast, exposure to PCV-2 was found to be quite common. Antibodies to PCV-2 were found in 26% of samples tested from across the U.S.

Recently, the NWDP has been collaborating with scientists at the University of Montreal, College of Veterinary Medicine, to screen feral swine serum and tonsils for a number of other production-limiting diseases. Preliminary results indicate that exposure to some of these diseases is common and widespread in feral swine. Diseases with apparent high prevalence (> 50%) include *Streptococcus suis*, *Actinobacillus pneumonia*, and *Lawsonia intracellularis*. Less common (< 50%) were *Salmonella* spp. and *Mycoplasma pneumonia*.

Feral swine may not display clinical signs of these diseases, and it is unknown at this time if they play a role in the transmission to domestic swine. But this pilot project suggests that they may serve as reservoirs and provides further reasons to prevent contact between feral and domestic swine.

For more information please contact John Baroch,

John.A.Baroch@aphis.usda.gov

The original artwork on this page was created by the National Wildlife Disease Program's Erika Kampe and Sarah Goff