

Pseudorabies History Summary **by Lowell Anderson, DVM**

Dr. Anderson began his career in regulatory veterinary medicine in 1987, when he was hired by the Iowa Department of Agriculture and Land Stewardship as the Assistant State Veterinarian. He has been employed with the USDA, Animal and Plant Health Inspection Service, Veterinary Services since 1991. Dr. Anderson received a Master of Science degree in Veterinary Preventive Medicine from Iowa State University in 1995, and is currently employed as an Area Epidemiology Officer in Des Moines, Iowa.

Dr. Anderson provided a presentation developed to serve as a history of the United States' (U.S.) Aujeszky's Disease (Pseudorabies) Eradication Program and as a guide when future disease eradication programs are contemplated. Pseudorabies is an economically-significant disease of swine. Clinical signs include mild to severe respiratory disease, listlessness, lack of appetite, and reproductive failure. Litter mortality rates of 90% or greater have been observed in some herds. Disease characteristics and effects which contributed to the Pseudorabies eradication argument included the following: limitation of infection to a single host species; disease agent not sustained in wildlife reservoirs; distinctive, serious clinical signs; brief period of infectiousness; and immunity of long duration. Additionally, public concern, cost effectiveness of eradication, and political will were important factors. The presentation was summarized from information compiled during 2007, three years after the last four states qualified for Stage V (Free) Status. This eradication effort was formally initiated in 1989.

This presentation summarizes a variety of information representing various viewpoints of persons participating in this effort. Characteristics of the virus and the history of the disease in the U.S. followed by the emergence of virulent strains in the 1970's that coincided with management changes in the swine industry are covered to introduce the problem. The emphasis on genetics to increase litter size and selection for the "meat type" hog, transportation of hogs over greater distances, and increase of herd sizes were factors in disease spread. Early attempts at control, vaccines and diagnostic tools are discussed. The evolution and acceptance of a national eradication program including debate, pilot projects, funding, testing protocols, cleanup plans and the development of gene-deleted vaccines (the first live, bioengineered veterinary vaccine was for Pseudorabies, licensed in 1986) and their complementary tests are detailed. The ongoing threat of reintroduction from feral swine and emergency response plans are included.

Finally the presentation discusses the advantage of added funding and benefits achieved by implementing the Accelerated Pseudorabies Eradication Program. Eradication required a concerted effort which began with support from the Livestock Conservation Institute, now the National Institute for Animal Agriculture (NIAA), in 1975. Additional support was provided by the National Pork Producers Council (NPPC), in 1983, when it sponsored and provided some funding for pilot projects. The NPPC's endorsement of eradication goals and its ability to garner producer consensus in the late 1980s was also necessary for program success. In 2005, at its annual meeting, the NIAA celebrated the eradication of Pseudorabies from the commercial swine population in the United States.

The main reference used for compiling this presentation was cited as: [*Pseudorabies \(Aujeszky's Disease\) and Its Eradication: A Review of the U.S. Experience. 2008. Tech. Bul. 1923. APHIS, USDA, VS. 231 pp.*](#)