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Pseudorabies Eradication

State–Federal–Industry
Program Standards,
Effective January 1, 1998

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Introduction

These Program Standards were adopted for the eradication of pseudorabies virus from all domestic swine in the United States. These are the minimum standards developed by the Veterinary Services division of the Animal and Plant Health Inspection Service (APHIS), an agency of the U.S. Department of Agriculture (USDA), and endorsed by swine health practitioners at the annual meeting of the United States Animal Health Association in October 1997.

The following list highlights changes adopted in this version of the Program Standards. Page numbers where these changes occur follow each entry in parentheses.

Part I—The definition of feral swine has been modified to delete discussion of reclassification as domestic swine following a negative pseudorabies test. (4)

Part III, Stage II (Control)—

Sec. A.5., at item (3), “The Plan shall be part” has been changed to “Such movement shall be part....” (15)

Sec. A.6 has been entirely rewritten. (15)

Sec. C. has been revised to add a third provision, (C). (16)

Part III, Stage III (Mandatory Herd Cleanup)—

Sec. A.5 has been retitled and shortened to eliminate the statement that all hunting preserves and game farms having swine must be under surveillance by State animal health officials. (18)

Sec. D. has been revised to add a third provision (C). (18–19)

Part III, Stage IV (Surveillance)—

Sec. A.3 and Sec. B. have been completely revised. (19)

Sec. E.3.d, regarding importation of feeder pigs, has been revised to allow entry of swine from feeder-pig-monitored herds in Stage III States or areas as well as those from Stage II States or areas. (20)

Sec. G, paragraphs 2 and 3, have been completely revised. (21)

Part III, Stage V (Free)—

Sec. B.2 has been revised to add Stage IV. (21)

Sec. C., paragraphs 2 and 3, have been completely revised. (22)

The minimum standards described in this publication do not preclude the adoption of more stringent standards by any geographic or political subdivision of the United States.

Part I—Definitions

Accredited veterinarian	A veterinarian approved by the Administrator of APHIS, USDA, to perform functions required by cooperative State–Federal–Industry animal disease-control and -eradication programs.
Administrator	The Administrator of APHIS, USDA, or any other official of APHIS to whom authority has been delegated or may be delegated to act in his or her stead.
Approved all-class market	A livestock market approved by the Administrator where breeding, feeding, and slaughter swine are sold in accordance with Federal interstate regulations and applicable provisions of these Program Standards.
Approved differential pseudorabies test	Any test for the diagnosis of pseudorabies that: <ol style="list-style-type: none">1. Can distinguish vaccinated swine from infected swine; and2. Is produced under license from the Secretary of Agriculture with indications for use in the Cooperative State–Federal–Industry Pseudorabies Eradication Program; and3. Is conducted in a laboratory approved by the Administrator.
Approved feeder-pig market	A livestock market selling feeder pigs in which no animals from known infected herds are accepted for sale on the same day, in accordance with Federal interstate regulations and applicable provisions of these Program Standards: <ol style="list-style-type: none">1. All swine must originate in a qualified pseudorabies-negative herd; or2. All swine must originate from a State that has achieved Pseudorabies Eradication Program status of Stage III, IV, or V; or3. All swine must originate in a pseudorabies-monitored feeder-pig herd; or4. All swine are found negative to an official pseudorabies test conducted 30 days or less prior to presentation at the market. In a herd of single-source pigs in which no sows remain, the State Veterinarian may require a negative test of an official random sample (95/5) of the remaining pigs before sale.5. Cleaning and disinfection must be done after all other classes of swine have been removed and before feeder pigs are offered for sale.6. Additional requirements may be imposed as deemed necessary by the State Veterinarian to limit the possibility of disease spread through the market.

Approved slaughter market	A livestock market approved by the Administrator that accepts and releases only shipments of slaughter swine, in accordance with applicable State and Federal regulations. No swine may be released from an approved slaughter market unless consigned directly to another approved slaughter market, a recognized slaughtering establishment for immediate slaughter, or a quarantined feedlot.
Breeding herd	All swine on a premises that are 6 months of age or older, and that are used or intended to be used for breeding.
Certificate	An official document issued for and prior to interstate movement of swine not known to be infected with or exposed to pseudorabies by a Veterinary Services representative, a State representative, or an accredited veterinarian, which states: (1) the number and description of the swine to be moved; (2) the swine to be moved are not known to be infected with or exposed to pseudorabies; (3) the purpose for which the swine are to be moved; (4) the points of origin and destination; (5) the consignor and consignee; and (6) additional information as required by applicable State and Federal laws and regulations.
Common ground	The ground, areas, buildings, and equipment commonly shared by any specific group or groups of livestock.
Deputy Administrator	The Deputy Administrator, Veterinary Services, APHIS, USDA, or any other Veterinary Services official to whom authority has been delegated to act in his or her stead.
Direct shipment	Movement without unloading en route, without contact with swine of lesser pseudorabies status, and without contact with infected or exposed livestock.
Exposed livestock	Any livestock that have been in contact with an animal infected with pseudorabies, including all livestock in a known infected herd. (Livestock other than swine that have not been exposed to a clinical case of pseudorabies for the last 10 consecutive days shall no longer be considered to be exposed.)
Exposed swine	Any swine that have been in contact with an animal infected with pseudorabies, including all swine in a known infected herd.
Farm of origin	A farm where swine were born or on which they have resided for at least 90 consecutive days immediately prior to movement.
Feral swine	Swine that have lived all (wild) or any part (feral) of their lives as free-roaming animals.
Infected livestock	Any livestock determined to be infected with pseudorabies by an official pseudorabies epidemiologist whose diagnosis is supported by official pseudorabies test results.

Interstate	From any State into or through any other State.
Intrastate	Within a State.
Isolation	Separation of swine by a physical barrier in such a manner that one pig does not have access to the body, excrement, or discharges of another pig; does not share a building with a common ventilation system; and is not within 10 feet of another pig.
Known infected herd	Any herd in which any swine have been determined to be infected with pseudorabies by an official pseudorabies epidemiologist.
Licensed pseudorabies vaccine	Any pseudorabies virus vaccine produced under license from the Secretary of Agriculture under the Virus–Serum–Toxin Act of March 4, 1913, and any legislation amendatory thereof (21 U.S.C. 151 et seq.).
Livestock	Swine, cattle, sheep, and goats.
Monitored negative feral swine population	Feral swine originating from areas that have been geographically defined and under continuous surveillance with no evidence of infection and classified by the pseudorabies epidemiologist as a monitored negative feral swine population.
Moved	Shipped, transported, or otherwise moved; or delivered or received for movement by land, water, or air.
National Pseudorabies Control Board	A board that reviews requests by States for pseudorabies eradication program status according to the Program Standards and makes recommendations to the APHIS, Veterinary Services, for program stage designation. Currently, this is a six-member board composed of two representatives each from the United States Animal Health Association, the National Pork Producers Council, and the Livestock Conservation Institute, appointed by the respective presidents of those organizations.
Official pseudorabies epidemiologist	A State or Federal veterinarian designated by the State animal health official and veterinarian in charge to investigate and diagnose suspected pseudorabies in livestock. The official pseudorabies epidemiologist is expected to have had special training in the diagnosis and epidemiology of pseudorabies which will provide the unique qualifications demanded by the position.
Official pseudorabies herd-cleanup plan	A written plan to eliminate pseudorabies from a swine herd. This plan is (1) developed by an official pseudorabies epidemiologist in consultation with the herd owner and his or her veterinary practitioner, when applicable; (2) mutually acceptable to those parties; and (3) approved by the State animal health official.
Official pseudorabies serologic test	Any official test approved by the Administrator for diagnosis of pseudorabies in swine, conducted in a laboratory approved by the Administrator, and listed in Section 9 of the Code of Federal Regulations (CFR), Part 85.1, to determine the presence or absence of pseudorabies antibodies.

Official pseudorabies test Any test for the diagnosis of pseudorabies approved by the Administrator, conducted in a laboratory approved by the Administrator, and listed in 9 CFR, Part 85.1.

Official random-sample test (95/20) A sampling procedure utilizing official pseudorabies serologic tests which provides a 95-percent probability of detecting infection in a herd in which at least 20 percent of the swine are seropositive for pseudorabies. Each segregated group of swine on an individual premises must be considered a separate herd and sampled as follows:

- Up to 14 head—test all.
- Over 14 head—test 14.

Official random-sample test (95/10) A sampling procedure utilizing official pseudorabies serologic tests which provides a 95-percent probability of detecting infection in a herd in which at least 10 percent of the swine are seropositive for pseudorabies. Each segregated group of swine on an individual premises must be considered a separate herd and sampled as follows:

- Less than 100 head—test 25
- 100–200 head—test 27
- 201–999 head—test 28
- 1,000 and over—test 29

Official random-sample test (95/5) A sampling procedure utilizing official pseudorabies serologic tests which provides a 95-percent probability of detecting infection in a herd in which at least 5 percent of the swine are seropositive for pseudorabies. Each segregated group of swine on an individual premises must be considered a separate herd and sampled as follows:

- Less than 100 head—test 45
- 100–200 head—test 51
- 201–999 head—test 57
- 1,000 and over—test 59

Permit An official document issued for and prior to the interstate shipment of pseudorabies-infected or -exposed swine by a Veterinary Services representative, State representative, or accredited veterinarian, stating: (1) the number of swine to be moved, (2) the purpose for which the swine are to be moved, (3) the points of origin and destination, (4) the consignor and consignee, and (5) additional information required by applicable State and Federal regulations.

Prevalence The number of known infected herds in the State as of the date of the application for Stage III status, divided by the number of swine herds in the State as determined by the National Agricultural Statistics Service (NASS). When a State has conducted a down-the-road survey of all swine producers, the swine population data so developed may be used rather than the NASS data.

Pseudorabies The contagious, infectious, and communicable disease of livestock and other animals also known as Aujeszky's disease.

Pseudorabies-monitored feeder-pig herd	For the purpose of this document, “pseudorabies-monitored feeder-pig herd,” “pseudorabies-monitored vaccinated feeder-pig herd,” “pseudorabies-monitored herd,” and “monitored herd” are interchangeable, and all refer to a swine herd that is in compliance with Part IV, Subpart III, of this document.
Pseudorabies-restricted feeder-pig market	A market specifically designated by the State animal health official to handle shipments of feeder pigs from premises under pseudorabies quarantine. Sales are limited to quarantined feedlots. Pseudorabies-restricted feeder-pig markets are restricted to handling intrastate shipments of pseudorabies-quarantined swine only.
Pseudorabies vaccinates	Any swine that have been vaccinated with a USDA-licensed pseudorabies vaccine.
Quarantined feedlot	A premises where pseudorabies-infected or -exposed swine are fed under the supervision and control of the State animal health official and from which swine are moved directly to a recognized slaughtering establishment or directly through no more than one slaughter market and then directly to a recognized slaughtering establishment.
Quarantined herd	A herd in which pseudorabies-infected or -exposed swine are bred, reared, or fed under the supervision and control of the State animal health official and from which swine are moved directly to a recognized slaughtering establishment, pseudorabies-restricted feeder-pig market, quarantined feedlot, or directly through no more than two slaughter markets and then directly to a recognized slaughtering establishment or quarantined feedlot.
Recognized slaughtering establishment	A slaughtering establishment operated under the provisions of the Federal Meat Inspection Act (21 U.S.C. 601 et seq.) or a State-inspected slaughtering establishment.
State/Area	<p>Any State or Territory of the United States, the District of Columbia, Puerto Rico, Guam, or the Northern Mariana Islands, or any portion of a State which meets the following criteria:</p> <ol style="list-style-type: none"> 1. All counties whose pseudorabies eradication status is in the same Stage must be contiguous. 2. There shall be no more than two Stages in any State. 3. Only the following combinations of status will be permitted within a State: Stages II and III, Stages III and IV. 4. The surveillance system required for Stages III and IV must differentiate between animals and/or herds from areas with different status.
State animal health official	The State official who is responsible for the livestock and poultry disease control and eradication programs in the official’s State/Area, or that person’s designated representative.

State pseudorabies committee

An appointed advisory committee composed of swine producers, animal scientists, State and Federal regulatory officials, and other representatives of the swine industry. The responsibilities of the committee include:

- A. Informing and educating all segments of the State/Area swine industry regarding pseudorabies eradication activities.
- B. Reviewing the State/Area pseudorabies eradication program and making recommendations to State and Federal animal health officials and, as appropriate, consulting with State officials in the areas of:
 - 1. Budgeting;
 - 2. Intrastate and interstate regulations, including use of vaccine;
 - 3. Progress through the Program Stages.
- C. Maintaining liaison with other States and with the national pseudorabies eradication program through the National Pork Producers Council, the United States Animal Health Association, the Livestock Conservation Institute, and APHIS.

State representative

A person regularly employed in animal health work by a State and authorized by the State to perform the functions involved or under a cooperative agreement with USDA.

Surveillance index

Refers to the percentage of a population of sows and boars sampled, multiplied by the percentage of positive swine traced to the farm of origin. When no positive swine are found, then the surveillance index will be the percentage of a population of sows and boars sampled.

Only two specific forms of surveillance testing may be included in the surveillance index calculations:

- 1. Samples collected at slaughter.
- 2. Samples collected at markets (first point).

Unless cull sows and boars from herds tested for other purposes (e.g., feeder-pig monitoring, circle testing, etc.) can be eliminated from the population being tested at slaughter or first point—in which case the number of sows in such herds can be deducted from the population to be used for surveillance—data of the following types may not be included in surveillance index calculations:

- 1. Data from samples collected for epidemiologic purposes (e.g., circle testing, tracing into or out of infected herds);
- 2. Data from status testing (e.g., tests to establish qualified-negative herd status, qualified-negative vaccinated herd status, or feeder-pig-monitored herd status; or testing for sale and show).

The percentages of the breeding population in a State/Area to be tested annually to meet the surveillance requirements for Stages III, IV, and V apply regardless of whether the surveillance is conducted at slaughter, at first point, or as part of a down-the-road (area) testing program. Whichever system is used must be random and must be representative of all herds of unknown status in the State/Area.

Randomness of slaughter, first-point, or onfarm (area) surveillance testing must be documented in applications for status.

**Swine Health Committee,
National Pork Producers
Council**

A committee of pork producers, constituted as determined by the National Pork Producers Council and calling on such scientific experts as needed, which shall review the national Pseudorabies Eradication Program and the expenditure of Federal funds for the Program at least annually. The committee will also review, in advance, allocations of Federal funds for any national surveillance program to the various States and make recommendations to the Deputy Administrator of Veterinary Services, APHIS, as it deems appropriate.

**Swine not known to be
infected with or exposed
to pseudorabies**

All swine except those which are part of a known infected herd or are known to have been exposed to pseudorabies.

Veterinarian-in-charge

The veterinary official of Veterinary Services, APHIS, USDA, who is assigned by the Administrator to supervise and perform APHIS' official animal health work in the State/Area concerned.

Veterinary Services

The Veterinary Services branch of APHIS, USDA.

**Veterinary Services
representative**

A person employed by Veterinary Services, APHIS, USDA, who is authorized to perform official pseudorabies eradication activities.

Part II—Administrative Procedures

A. Supervision of the Cooperative State–Federal–Industry Pseudorabies Eradication Program

The Cooperative State–Federal–Industry Pseudorabies Eradication Program (hereafter called “the Program”) must be supervised by full-time animal health veterinarians employed by the State or Federal Government.

B. Entering premises

Persons working for the Program must be authorized by the State to enter premises to carry out Program policy. While on such premises, they must use commonly accepted sanitary procedures to minimize the risk of physically transmitting diseases among groups of livestock on the farm being investigated, as well as to other premises.

C. Providing services to livestock owners

Owners are responsible for handling their animals. Program administrators may contract with accredited veterinarians, paraprofessionals, other State and Federal agencies, or with the management of privately owned firms as needed, to assist State and Federal animal health personnel in collecting blood or tissue samples, in identifying animals, and in performing other Program activities.

D. Notifying the community of pseudorabies-infected herds and quarantined feedlots

State or Federal Program officials should notify swine owners in the immediate community within 30 days after a swine herd has been quarantined for pseudorabies. Program officials should also notify herd owners in the immediate community when they grant approval for a quarantined feedlot. Notification may be by an educational letter emphasizing the importance of taking appropriate actions to protect swine against pseudorabies. When the herd quarantine is released or the approval of the quarantined feedlot is terminated, herd owners should be notified within 30 days by an informational letter.

E. Dealers—Registration and Recordkeeping

The following dealers (individuals or other legal entities) of swine must be registered or licensed with the appropriate State agency:

- Dealers who purchase, deal in, or sell swine;
- Dealers who act as commission representatives or brokers;
- Dealers who operate and conduct an auction where swine are sold.

These dealers must maintain records required by the licensing agency to make it possible for State authorities to trace swine to their herds of origin or destination.

1. Registering dealers—After giving due notice and opportunity for a hearing to the dealer involved, the State agency must have the authority to deny an application for registration, or to suspend or cancel the registration, when the agency is satisfied of either or both of the following:
 - a. There is adequate evidence to establish that the dealer had the intent to violate or circumvent recordkeeping requirements of this section and/or other animal health regulations;
 - b. The dealer has repeatedly demonstrated failure to keep records adequate to trace his swine sales and purchases.
2. Keeping records—Each registered or licensed swine dealer must keep sufficient records of all swine purchased for resale to enable the State agency to trace purchased animals satisfactorily to their herds of origin and destination. The records must be kept for a minimum of 2 years.
3. Dealing with violations—Provisions must exist so that State animal health officials can institute any action at law or in equity that appears necessary to enforce compliance with dealer registration and recordkeeping requirements. This includes the authority to subpoena appropriate records and/or persons who allegedly violate these minimum standards. The appropriate State officials must also have authority to petition the local court that has venue for an order to enforce these subpoenas.

F. Administrative review of Program activities

Appropriate Veterinary Services personnel will review the progress of State/Area pseudorabies programs on an ongoing basis to ensure compliance with the Program Standards.

G. Application for Program status

Application for Program entry and advancement in status will be jointly signed by the State animal health official and veterinarian-in-charge, and the original plus seven copies, along with required documentation, must be submitted to the Veterinary Services Swine Health Staff for approval. The application shall be reviewed by the National Pseudorabies Control Board prior to a final decision by the Deputy Administrator.

H. Other movements

The State Veterinarian may, upon request in specific cases, permit the movement of livestock not otherwise provided for in these Program Standards to prevent the spread of pseudorabies. It is the intention of these Standards that such authority be used only in situations and under circumstances that could not have been reasonably anticipated in advance. It is not the intention that such authority be used repeatedly to cover the same problem, but that the Program Standards be amended to conform with needed changes as they come to light.

Part III—Program Stages and Requirements

Stage I—Preparation

This is the initial Program stage in which the basic procedures to control and eradicate pseudorabies are developed.

A. To qualify for Stage I recognition, the application for Program status shall provide documentation that the following standards are met:

1. A State pseudorabies committee has been formed and is functioning;
2. Plans are formulated for a reliable system of determining pseudorabies prevalence in the State/Area swine population, which may include:
 - a. Mandatory reporting of suspected pseudorabies by producers, veterinarians, and laboratories;
 - b. Change-of-ownership test requirements;
 - c. Collection of blood samples from sows and boars at swine markets, slaughter establishments, or farms. Emphasis is given to pseudorabies testing of blood samples that are collected for other purposes, e.g., brucellosis validation, disease diagnosis, exhibition requirements, etc.
3. State officials and/or industry representatives have, or are actively seeking, legislative and regulatory authority to:
 - a. Participate in the Cooperative State–Federal–Industry Pseudorabies Eradication Program;
 - b. Require reporting of suspected pseudorabies by producers, veterinarians, and laboratories to the State animal health official;
 - c. Conduct diagnostic and epidemiologic investigations of suspected pseudorabies;
 - d. Quarantine premises on which pseudorabies is confirmed;
 - e. Trace purchases and sales of swine to and from quarantined premises and inspect and collect diagnostic specimens from such swine;
 - f. Regulate shipments of breeding swine, feeder pigs, and slaughter swine within and into the State;
 - g. Control the use of pseudorabies vaccines;
 - h. Control disposal of dead animals.
4. A system for distribution of Program literature to producers and other interested groups is developed and functioning.

5. Applicable Federal pseudorabies regulations are enforced.
6. A State progress report will be produced quarterly.

The States will prepare a quarterly report of pseudorabies eradication activities and submit it to Veterinary Services for tabulation and distribution in a national Program progress report. Veterinary Services shall make reports as requested and at least annually to the Oversight Committee, National Pork Producers Council, on Program progress, Program operation, and use of Federal funds, including, but not limited to, the operation of any national slaughter surveillance program.

B. Duration of status

Twenty-four to 28 months following assignment of Stage I status by Veterinary Services, a State must (1) indicate that it continues to meet the Stage I requirements, utilizing the same certification procedures as followed initially, or (2) certify that it meets the requirements of a subsequent Program Stage. States failing to recertify as required will automatically lose their Stage I status.

Stage II—Control

In this stage, a State will continue to participate with Veterinary Services on a cooperative basis. The goals of this stage are to determine which herds are infected with pseudorabies and to begin herd cleanup.

A. To qualify for Stage II recognition, the application for Program status shall provide documentation that the following standards are met:

1. Stage I standards have been implemented.
2. A surveillance program plus circle-testing 1.5 miles around all newly identified infected herds has been implemented to find additional infected herds. This surveillance should be based on testing sows and boars at slaughter, on the farm, or at first point of concentration.
3. States/Areas must have acquired the authority to require herd-cleanup plans on all known infected herds before the States/Areas can apply for a subsequent Program Stage or reapply for status in Stage II.
4. Swine movements into the State/Area are controlled as follows:
 - a. Breeding swine not known to be infected or exposed to pseudorabies must:
 - (1) Be negative to an official pseudorabies serologic test within 30 days prior to interstate shipment; or
 - (2) Originate in a qualified pseudorabies-negative herd; or

- (3) Originate in a qualified pseudorabies-negative gene-altered vaccinated herd; or
 - (4) Be shipped directly from the farm of origin in a Stage IV or Free State; or
 - (5) Originate in a qualified pseudorabies-negative herd or be negative to an official pseudorabies serologic test within 30 days prior to sale at an approved all-class market and be released under State quarantine for isolation and retest in 30–60 days at the importer's expense.
- b. Feeder pigs not known to be infected with or exposed to pseudorabies and not mingled with or exposed to swine of lesser or unknown status must:
- (1) Be negative to an official pseudorabies serologic test within 30 days prior to interstate shipment; or
 - (2) Originate in a qualified pseudorabies-negative herd; or
 - (3) Originate in a qualified pseudorabies-negative gene-altered vaccinated herd; or
 - (4) Originate in a pseudorabies-monitored feeder-pig herd; or
 - (5) Be shipped directly from the farm of origin in a Stage III, IV, or Free State; or
 - (6) Be sold at an approved all-class market or approved slaughter market and imported for feeding in a quarantined feedlot; or
 - (7) Be sold at an approved feeder-pig market and imported for feeding without restriction.
- c. Slaughter hogs:
- (1) Swine not known to be infected with or exposed to pseudorabies may move as follows:
 - (a) Directly to a recognized slaughter establishment; or
 - (b) Directly to an approved slaughter market or approved all-class market and then directly to another approved slaughter market or a recognized slaughter establishment or quarantined feedlot; or
 - (c) Directly to an approved slaughter market and then to a quarantined feedlot.

- (2) Infected or exposed swine may move directly to a recognized slaughter establishment or directly to no more than two approved slaughter markets and then directly to a recognized slaughter establishment when
 - (a) The carrier transporting pseudorabies-infected or -exposed slaughter swine is cleaned and disinfected before it is used to transport nonslaughter swine or feedstuffs within the following 30 days; and
 - (b) Additional State-of-destination swine-identification requirements and regulations are followed.
- d. Interstate movements of swine from infected herds in multisite production systems must be made as part of a herd-cleanup plan approved by the State Veterinarians of the originating and recipient States.
- 5. Intrastate movements are controlled as necessary to meet State needs.

Movement of quarantined swine between multiple-site production units may be approved under the following guidelines: (1) The breeding herds must be vaccinated at least twice a year with a differentiable vaccine; (2) Movement of breeding stock, either from one site to another or from the final site, shall be intrastate only; (3) Such movement shall be part of a State-approved cleanup plan that will provide a maximum of 18 months for elimination of the virus from the infected breeding herd; (4) Progeny shall be tested monthly; (5) Before movement of progeny as breeding stock, 100 percent of the progeny must be tested.

- 6. Transmission of disease from wild or feral swine shall be controlled as follows:
 - a. Any swine that have had known exposure to wild or feral swine must be separated from wild or feral swine and quarantined until released in accordance with Part IV, subpart IV.
 - b. Wild or feral swine of unknown status may be moved to immediate slaughter. Movement to hunting preserves or game farms is not classified as shipment to slaughter.
 - c. Wild or feral swine moved to hunting preserves or game farms, or for exhibition, or feeding, must test negative on an official pseudorabies test conducted within 30 days prior to shipment under permit of the State animal health official.
 - d. Wild or feral swine moved for breeding purposes must be held separate and apart from all swine for 90 days and must test negative on two official pseudorabies tests conducted at least 60 days apart.

B. Voluntary herd cleanup

Owners desiring to eliminate pseudorabies from a herd may utilize one of the basic strategies as published by the Livestock Conservation Institute (Swine Pseudorabies Eradication Guidelines, appendix 1).

C. Duration of status

Twelve to 14 months following assignment of Stage II status by Veterinary Services, a State/Area must (1) certify that it meets the requirements of a higher Program Stage; or (2) indicate that it continues to meet Stage II requirements, utilizing the same certification procedure as followed initially; and (3) demonstrate progress in herd cleanup consistent with the goal of eradication by the year 2000 by, at a minimum, meeting the following provisions: (A) herd-cleanup plans written on all herds within 30 days of quarantine; (B) all quarantined herds tested at least semiannually with a 95/10 test, and herd plans reviewed semiannually and revised as necessary; (C) all sows in infected breeding herds tested prior to or at farrowing and all positive sows removed from the herd for slaughter or isolation for slaughter within 15 days after weaning. All boars must be tested quarterly, and all those testing positive must be removed from the herd for slaughter or isolation for slaughter within 15 days after test results are reported. States failing to recertify as required will be reviewed by the National Pseudorabies Control Board and may lose their Stage II status.

Stage III—Mandatory Herd Cleanup

In this stage, the cleanup of infected herds becomes mandatory. The State pseudorabies committee shall provide time limits for developing and completing official pseudorabies herd-cleanup plans in conformity with Section C. An official pseudorabies epidemiologist will consult with the herd owner and his or her veterinary practitioner, when applicable, to develop a mutually acceptable official pseudorabies herd-cleanup plan based on the strategies outlined in the Livestock Conservation Institute's Swine Pseudorabies Eradication Guidelines. The attending accredited veterinarian should play a major role in selecting and implementing herd-cleanup plans. Pseudorabies prevalence in the affected community must be determined for all groups of swine, including swine in feedlots.

A. To qualify for Stage III recognition, the application for Program status shall provide documentation as follows:

1. The standards of Stage II are implemented and, with the endorsement of the State pseudorabies committee, the State animal health official is implementing mandatory herd-cleanup procedures.
2. Epidemiology
 - a. Swine movements into and out of infected premises or premises suspected of being infected are traced, and the status of receiving and source herds is appropriately established by either a test of all breeding swine or an official random-sample test.

- b. All swine units, including feedlots within a 1.5-mile (2.4-kilometer) radius of infected premises, are monitored either by a test of all breeding swine or by an official random-sample test.
- c. The State prevalence of infected herds is 1 percent or less, based on surveillance testing that meets the requirements of section 3, below.

3. Surveillance

- a. Surveillance by slaughter or first-point testing:

At least 10 percent of the breeding swine population is surveyed annually using an official pseudorabies serologic test with at least 80-percent successful traceback of seropositives to the farm of origin, or testing and traceback to achieve a surveillance index of 0.08. Current data from the National Agricultural Statistics Service, USDA, on breeding swine populations will be used to calculate surveillance data. The surveillance program must be random and must be representative of all herds in the State. Tests of swine from premises currently known to be infected may not be included in totals to meet the requirements of this section.

Only two specific forms of surveillance testing may be included in the surveillance index calculation: (1) samples collected at slaughter, and (2) samples collected at markets (first point).

If sows and boars from herds tested for other purposes (e.g., feeder-pig monitoring, circle testing, etc.) can be eliminated from the population being tested at slaughter or first point, then the number of sows in such herds can be deducted from the population to be sampled for surveillance. Applications for status for States/Areas taking advantage of this provision must explain how this is being accomplished.

- b. Surveillance by herd testing:

If an official random sample test (95/10) or a monitored herd test is used, 25 percent of the herds or 10 percent of the breeding swine in the Stage III area must be tested annually.

If an official random-sample test (95/20) is used, 33 percent of the herds in the Stage III area must be tested annually.

Herds to be tested must be selected randomly during the surveillance period. Herds are eligible for selection when more than 12 months have elapsed since the last herd test. Quarantined herds are not eligible for selection.

4. Vaccination

Vaccination may be permitted by the State animal health official as part of an approved herd-cleanup plan and in area control programs.

5. Transmission of disease from wild or feral swine shall be controlled as follows:

Regulations to prevent transmission from feral to domestic swine within the State are implemented.

B. During Stage III:

1. Information and education efforts are intensified.
2. The effectiveness of regulations is monitored, and enforcement is strengthened as necessary.
3. Industry commitment for Program advancement is secured.
4. Epidemiologic evaluation of Program activities is utilized.
5. Swine may not be moved from a quarantined herd to any location within a Stage III area unless part of the herd was at this location when the original herd quarantine was issued or such movement is required as part of an approved herd-cleanup plan.

C. Disposition of quarantined herds

Owners of quarantined herds must complete their cleanup plans and fulfill the requirements for quarantine release as follows:

Quarantines issued before January 1, 1997, must be released by January 1, 1999.

Quarantines issued during 1997 must be released within 24 months from the quarantine date.

Quarantines issued after January 1, 1998, must be released by January 1, 2000.

These timeframes must be included in all herd-cleanup plans.

D. Duration of status

Twelve to 14 months following assignment of Stage III status by Veterinary Services, a State/Area must (1) certify that it meets the requirements of a higher program stage, or (2) indicate that it continues to meet Stage III requirements, utilizing the same certification procedure as followed initially, and demonstrate progress in herd cleanup consistent with the goal of eradication by the year 2000, by, at a minimum, meeting the following provisions: (A) herd-cleanup plans written on all herds within 30 days of quarantine; (B) all quarantined herds tested at least semiannually with a 95/10 test, and herd plans reviewed semiannually and revised as necessary; and (C) all sows in infected breeding herds tested prior to or at farrowing and all positive sows removed from the herd for slaughter or isolation for slaughter within 15 days after weaning. All boars must be tested quarterly, and all those testing positive must be removed from

the herd for slaughter or isolation for slaughter within 15 days after test results are reported. States failing to recertify as required will be reviewed by the National Pseudorabies Control Board and may lose their Stage III status.

Stage IV—Surveillance

To qualify for Stage IV recognition, the following requirements shall be met:

A. The application for Program status shall demonstrate that the standards of Stage III are in effect and shall document that:

1. There is no known infection in the State/Area and the surveillance program required for Stage III has been in effect for at least 2 years.
2. The State/Area has and enforces regulatory authority requiring farm-of-origin identification of cull sows and boars.
3. No new cases of pseudorabies were confirmed during the year prior to application for Stage IV status, except as follows: In the event of an isolated case, application for Stage IV status may be made if the affected herd was disposed of within 15 days after test results were reported with no spread to additional premises as determined by testing of all exposed herds and all swine herds within 2 miles of the new case with an official random sample test (95/5). Testing of the above herds must be accomplished with negative results no earlier than 30 days and no later than 60 days after cleanup.

B. Surveillance of breeding herds must be continued at the same rate required for Stage III.

C. Certification, with respect to continuous-flow feedlots on premises on which there are no breeding animals, must show that:

1. Such feedlots have been included in a down-the-road herd-testing program, or
2. Such herds will be monitored by slaughter or first-point surveillance of butcher hogs, or
3. During the period since the last case in a State/Area has been cleaned up, such herds
 - a. Have been negative to an official random-sample test (95/10) as defined in these Standards, or
 - b. Have undergone a 30-day depopulation with appropriate cleaning and disinfection.

D. Vaccination is prohibited except by permission of the State animal health official in high-risk herds or as part of an approved herd-cleanup plan.

E. Swine import requirements shall be as follows:

1. Slaughter swine
 - a. Infected or exposed swine may only be shipped into a Stage IV State/Area by permit directly to a recognized slaughter establishment or to an approved slaughter market.
 - b. Imports of slaughter swine from States or Areas with a Program status up to and including Stage III are permitted to a recognized slaughter establishment or an approved slaughter market only.
2. Breeding swine
 - a. Direct shipment from a Stage IV or V State/Area, or
 - b. Direct shipment from a qualified pseudorabies-negative herd in any State/Area, or
 - c. Negative official pseudorabies serologic test within 30 days prior to shipment with quarantine, isolation, and retest at destination in 30–60 days following importation.
3. Feeder pigs
 - a. Direct shipment from a farm of origin or a market in a Stage IV or V State/Area, or
 - b. Direct shipment from a farm of origin in a Stage III State/Area, or
 - c. Direct shipment from a qualified pseudorabies-negative herd, or
 - d. Entry is allowed into Stage IV States/Areas from feeder-pig-monitored herds in Stage II or Stage III States under the following conditions:
 - (1) That the swine enter on permit directly to a designated feedlot;
 - (2) That the swine originate from an approved feeder pig market or direct from a qualified-negative (QN) herd, a qualified-negative vaccinated (QNV) herd, or a feeder-pig-monitored (FPM) herd;
 - (3) That the swine be quarantined until they are sent to slaughter.

F. Intrastate swine movements—no restrictions.

G. Duration of status

Twelve to 14 months following assignment of Stage IV status by Veterinary Services, a State/Area must (1) indicate that it continues to meet the Stage IV requirements, utilizing the same certification procedures as followed initially, or (2) certify that it meets the requirements of another Program Stage. States/Areas failing to recertify as required will automatically lose their Stage IV status.

In the event of a confirmed case of pseudorabies, the national program coordinator for Veterinary Services shall be notified immediately, and the county or counties within a 2-mile radius of the new case will revert to Stage III status (except as noted below) until 60 days following cleanup and quarantine release. During the 60 days following quarantine release, and before Stage IV status is reinstated, all exposed herds and all swine herds within 2 miles of the new case must be tested with an official random sample test (95/5) and be found negative.

If the newly infected herd is isolated and disposed of within 15 days after test results are reported and there is no spread to additional premises as determined by testing of all exposed herds and all swine herds within 2 miles of the new case with an official random sample test (95/5), Stage IV status may be maintained. Testing of the above herds must be accomplished with negative results no earlier than 30 days and no later than 60 days after cleanup.

Stage V—Free

This is the stage in which a State is declared pseudorabies free.

A. To qualify for this final surveillance stage, the application for Program status shall provide evidence that the State is implementing the standards of Stage IV.

B. In addition, the State must document that:

1. The State has been free of pseudorabies for 1 year since recognition of Stage IV status.
2. Surveillance of breeding herds continued at one-half the rate required for Stage III and Stage IV.
3. Swine imports are controlled as follows:
 - a. Slaughter swine—same as Stage IV;
 - b. Breeding swine—same as Stage IV;
 - c. Feeder pigs—same as Stage IV.

4. Vaccination is not permitted except by permit from the State Veterinarian in certain high-risk herds.
5. Intrastate swine movements—no restrictions.

C. Duration of status

Twelve to 14 months following assignment of Stage V status by Veterinary Services, a State/Area must indicate that it continues to meet Stage V requirements, utilizing the same certification as followed initially. States/Areas failing to recertify as required will automatically lose their Stage V status.

In the event of a confirmed case of pseudorabies, the national program coordinator for Veterinary Services shall be notified immediately, and the county or counties within a 2-mile radius of the new case will revert to Stage III status (except as noted below) and all other counties in the State will revert to Stage IV status. Stage IV status for the affected county may be reinstated as outlined under Stage IV requirements.

If the newly infected herd is isolated and disposed of within 15 days after test results are reported and there is no spread to additional premises as determined by testing of all exposed herds and all swine herds within 2 miles of the new case with an official random sample test (95/5), Stage V status may be maintained. Testing of the above herds must be accomplished with negative results no earlier than 30 days and no later than 60 days after cleanup.

Part IV—Participation in Herd Plans and Release of Quarantines

Subpart I—The Qualified Pseudorabies-Negative Herd

- A. Establishment of a qualified pseudorabies-negative (QN) breeding herd:**
1. For breeding herds, QN status is attained by (1) subjecting to an official pseudorabies serologic test all swine over 6 months of age plus a number of progeny equal to 20 percent of the breeding swine population of the herd, and (2) finding that all swine are negative to the test. Progeny shall be randomly selected from swine between 4 and 6 months of age. The herd must not have been a known infected herd within the 30 days prior to the qualifying test. A minimum of 90 percent of the swine in the herd must have been on the premises and a part of the herd for at least 60 days prior to the qualifying official pseudorabies serologic test or have entered by direct shipment from another QN herd.
 2. When all swine are shipped directly from existing QN herds, a new QN breeding herd may be established if, within 30 days of arrival, all swine in the initial shipment (up to 50 animals) are tested and found negative to an official pseudorabies serologic test.
 3. Any breeding herd in a Stage IV or V State/Area is recognized as a QN herd.
- B. QN breeding herd status may be maintained by monthly or quarterly pseudorabies testing as follows:**
1. Monthly testing:
 - a. Every 30 days, conduct an official pseudorabies serologic test of 7 percent of all breeding swine 6 months of age or older, and test a number of offspring 4 to 6 months of age located on the same premises as the breeding herd equal to 2 percent of the breeding animals in the herd, or
 - b. On approval of the State Veterinarian, herds in Stage III, IV, or V States/ Areas may maintain status on the basis of a monthly negative official random sample test (95/5) in each separate population of breeding swine on a premises, and a monthly test of 50 offspring 4 to 6 months of age located on the same premises as the breeding herd. Sampling in the population must be random and the testing protocol in the herd must be a part of the approval. Progeny must be selected at random from all groups on the premises.
 - c. Progeny testing on multisite herds is covered in item D. on pages 24–25 regarding establishment and maintenance of QN growout premises on which no adult breeding swine are maintained.

2. Quarterly testing:
 - a. Every 80 to 105 days, conduct an official pseudorabies serologic test of 20 percent of all breeding swine 6 months of age or older, and test a number of offspring 4 to 6 months of age located on the same premises as the breeding herd equal to 6 percent of the breeding animals in the herd.
 - b. Progeny testing on multisite herds is covered in item D. on pages 24–25 regarding establishment and maintenance of QN growout premises on which no adult breeding swine are maintained.
3. All swine tested shall be randomly selected and, in the case of the adult swine, representative of all age groups on the premises.
4. All swine intended to be added to a QN herd shall be isolated until they are negative to an official pseudorabies serologic test conducted 30 days or more following their placement in isolation except:
 - a. Swine from a herd of unknown status must be negative to an official pseudorabies serologic test not more than 30 days prior to movement, with a second test in isolation at least 30 days after movement.
 - b. Swine intended to augment a QN herd and coming directly from another QN herd may be added without isolation or testing.
 - c. Swine intended to be added to a QN herd from another QN herd, but with interim contact with swine other than those from a QN herd, shall be isolated until they have been found negative to an official pseudorabies serologic test, conducted 30 days or more after the swine have been placed in isolation.

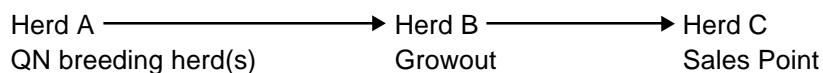
C. Reestablishment of QN breeding herd status following confirmation of infection in the herd

1. A QN herd that has been determined to be pseudorabies infected may qualify for reinstatement as a QN herd if:
 - a. All swine in the herd 6 months of age and over are negative to an official pseudorabies serologic test, and
 - b. An official random-sample (95/10) test of progeny 2–6 months of age is conducted and all swine tested are negative, and
 - c. In 30 or more days, the testing described in *a* and *b* above is repeated.

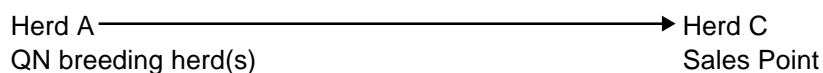
2. If on a qualifying official pseudorabies serologic test or any subsequent official pseudorabies test, any swine test positive, QN herd status is suspended until the infection status of the herd is determined by an investigation conducted by an official pseudorabies epidemiologist.
3. The official pseudorabies epidemiologist will consider the following factors in determining the presence or absence of pseudorabies in the herd:
 - a. The specific titers of titered swine;
 - b. The percentage and number of titered swine;
 - c. The vaccination history of titered swine;
 - d. Proximity and pseudorabies infection status of neighboring herds;
 - e. The possibility of laboratory or sample identification error;
 - f. Other pertinent herd history and clinical signs.
4. Based on the above information obtained by the official pseudorabies epidemiologist, a final determination of infection status will be made; however, before QN herd status may be attained or maintained, all seropositive swine must either:
 - a. Be sold for slaughter, and a complete herd test conducted at least 30 days later must be negative; or
 - b. Be negative to an official pseudorabies serologic test.

D. Establishment and maintenance of QN growout premises on which no adult breeding swine are maintained:

Situation 1



Situation 2



Pigs moved from herd(s) A within 1 week of weaning are not required to be pseudorabies tested.

Herd B

QN status may be attained and maintained by monthly negative official random sample tests (95/5) beginning within 30 days after establishment of the herd, except that in all-in/all-out units, 1 test of 50 head is required of each group. If herds A, B, and C are in the same State and program stage, this testing is not required.

Herd C

QN status is attained by a negative official pseudorabies serologic test of the entire initial shipment or 50 head selected at random, whichever is less.

QN status may be maintained by a monthly negative official pseudorabies serologic test of 50 swine selected at random from those that have been in the herd at least 30 days, except that in all-in/all-out units, 1 test of 50 head is required of each group. Each segregated group of swine on an individual premises must be considered a separate herd.

Subpart II—The Qualified-Negative Gene-Altered Vaccinated (QNV) Herd

Qualified-negative gene-altered vaccinated (QNV) herd status is attained and maintained under the same guidelines as for qualified pseudorabies-negative (QN) herd status, except that swine may be vaccinated with an approved gene-deleted pseudorabies vaccine, and testing may be completed using an official pseudorabies serologic test.

Subpart III—The Pseudorabies-Monitored Feeder-Pig Herd

A. Monitored status in Stage II States or Areas

1. For breeding herds, pseudorabies-monitored feeder-pig status is attained when the herd has been sampled and was negative to an official pseudorabies serologic test during the last 12 months at the following rate:

10 head—test all
11–35 head—test 10
36 or more—test 30 percent or 30, whichever is less

Tested breeding swine are to be selected at random from all age groups, including herd boars, and all age groups are to be proportionately represented.

2. An offsite nursery that is not otherwise part of a pseudorabies-monitored herd, to which pigs have been moved within 1 week of weaning from pseudorabies-monitored feeder-pig herds, may be recognized as a pseudorabies-monitored feeder-pig herd on the basis of a negative official random sample test (95/10) as determined by an official pseudorabies epidemiologist. The required tests must be conducted within 30 days prior to movement out of the offsite nursery.

An official random sample test (95/10) as determined by an official pseudorabies epidemiologist must be conducted on each group of pigs moving through the offsite nursery. In the case of a continuous-flow facility, monthly tests (95/10) must be conducted.

B. Monitored status in Stage III, IV, or V States or Areas

1. Any breeding herd in a Stage III, IV, or V State or Area not known to be infected is recognized as a pseudorabies-monitored feeder-pig herd.
2. Offsite nurseries in Stage III, IV, or V States or Areas shall be recognized as pseudorabies-monitored feeder-pig herds if all pigs in the nurseries come from breeding herds in Stage III, IV, or V States or Areas. If part of the pigs in the offsite nursery originate from a Stage II area, the nursery must be tested as outlined in Part A of this section.

C. Monitored status in the vaccinated swine breeding herd is attained and maintained as outlined in parts A and B of this section.

Subpart IV—Quarantine Release Procedures

A herd of swine shall no longer be classified as a known infected herd when no livestock or other animals on the premises show clinical signs of pseudorabies after removal of the positive swine, and at least one of the four following conditions has been met. Additionally, if the herd is vaccinated, all vaccinates must be vaccinated with the same official gene-altered pseudorabies vaccine.

- A. All swine were removed from the premises; the premises were cleaned and disinfected under official supervision with a disinfectant approved by Veterinary Services for such use; and the premises have been maintained free of swine for 30 days or a period of time determined adequate by an official pseudorabies epidemiologist.**
- B. All swine positive to an official pseudorabies serologic test or an approved differential pseudorabies test have been removed from the premises and all remaining swine, except suckling pigs, were subjected to an official (or approved differential) pseudorabies serologic test and found negative 30 days or more after removal of all positive swine.**
- C. All swine positive to an official pseudorabies serologic test or an approved differential pseudorabies test have been removed from the premises; all breeding swine that remain in the herd and an official random sample (95/10) of grower-finishing swine over 2 months of age are subjected to an official (or approved differential) pseudorabies serologic test and found negative 30 days or more after removal of positive swine. A second test of grower-finishing swine at least 30 days after the first is required if the State is in Stage III or IV of the Program.**

- D. (Stage I, II, and III only) All swine present on the date the quarantine was imposed have been removed, and there have been no clinical signs in the herd for at least 6 months. Two successive official (or approved differential) random-sample (95/10) tests of the breeding herd [95/5 for Stage III States], conducted at least 90 days apart, have been determined by the official pseudorabies epidemiologist to reveal no infection, and two successive official (or approved differential) random-sample (95/10) tests of progeny at least 4 months of age, conducted at least 90 days apart, are negative. Herds removed from quarantine by this provision are required to be negative by an official (or approved differential) random-sample (95/10) test 1 year after quarantine release.**

References

Livestock Conservation Institute. 1990. Pseudorabies Herd Plan Manual (rev).
Madison, WI: Livestock Conservation Institute. 36 p.

