

Aujeszky's disease – Pseudorabies (PR)

The disease is caused by a herpesvirus virus (PHV-1 or PRV) showing respiratory, reproductive and nervous clinical signs. **In pregnant sows the virus crosses the placenta and infects piglets.**

The pig is the main host. It can affect other species that normally do not transmit the disease, including cows, horses, dogs and cats, which can show nervous signs and die. There is no information regarding human infection.¹

The presence of other diseases like PRRS, CSF, or PCV2 **can increase the severity of the disease.**

This is a notifiable disease and **must be reported to local authorities.** Young pigs are highly susceptible, and **losses may reach 100% in piglets <7 days old.**

¹ Aujeszky's disease. Diseases manual. www.pig333.com



Economic impact

The costs for the primary pig producing sector can be divided in several specific cost categories:

- Direct costs (production losses and direct costs of control)
- Consequential costs (direct and indirect)
- Subsequent costs (result of price changes or changes in buying/sales opportunities)

An outbreak of Aujeszky's disease can have a disproportional large impact for some stakeholders. **In the worst case the farm can go bankrupt.**²

² Bosman K.J., et Saatkamp H.W. Minimization of the economic consequences of Aujeszky's disease outbreaks in the euregion nl-nrw-nds: a conceptual framework. Farm Animal Health Economics, 2010. Journal of Veterinary Research, 2015.



Prevalence

Formerly present in many countries, PR has been eradicated from some and is notifiable in many. Large populations of wild boars in certain regions act as wildlife reservoirs for the virus.³

USA and the European countries are currently considered free of PRV after successful eradication and there are no restrictions on the interstate movement of pigs for this disease.⁴

PR has been controlled efficiently in China for many years by vaccination. However, it suddenly broke out in many pig farms in 2012-2013 in southern China.⁵

³ Saylor KA, et al. Development of a rapid, simple, and specific real-time PCR assay for detection of pseudorabies viral DNA in domestic swine herds. J Vet Diagn Invest. 2017.
⁴ Oregon Department of Agriculture. United States. July 10, 2020.
⁵ Gu Z, et al. Emergence of highly virulent pseudorabies virus in southern China. Canadian Journal of Veterinary Research, 2015.



Diagnosis

This disease affects **all age groups.**

African and Classical Swine Fever could be confused with acute PR, but once the disease has become chronic it could be confused with PRRS and chronic swine fever. Laboratory tests would be required to differentiate them.⁶

Acute outbreaks of the disease can happen when a virulent strain affects for the first time a susceptible farm, in which no vaccination against PRV has been practiced.

There are many different clinical signs, depending on the age of the affected animals:

In piglets:

- Sneezing
- Coughing
- Fever
- Malcoordination
- High mortality rate⁶

In sows:

- Abortions
- Reproductive failure.



The suspected diagnosis is based on these clinical signs, but should be confirmed by serology, PCR, and virus isolation.

Lab tests:

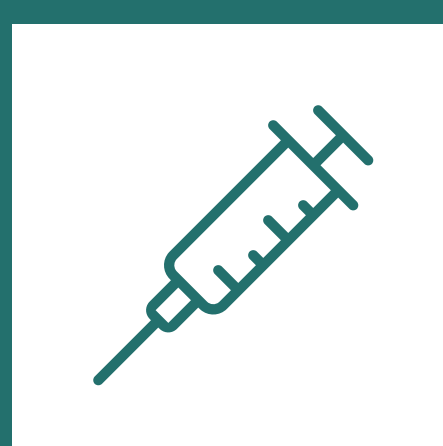
- IFA on dead piglet tissues (particularly tonsils). This is reliable and results are available in few hours.
- Serology: An rtPCR assay is useful for detection of pseudorabies viral DNA³.

³ Saylor KA, et al. Development of a rapid, simple, and specific real-time PCR assay for detection of pseudorabies viral DNA in domestic swine herds. J Vet Diagn Invest. 2017.
⁶ Aujeszky's disease. Disease guide. www.thepigsite.com



Treatment and prevention

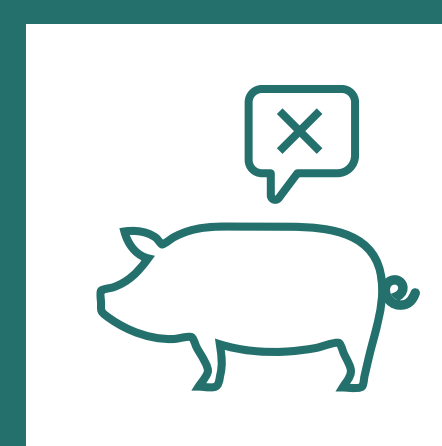
Since it is slowly transmitted, it can be eradicated through:



Vaccination



Good management practices



Elimination of carrier pigs

Control key points¹:

- There is **no available treatment** (antibiotic use to control secondary bacterial infections must be considered).
- Vaccination against PRV must be done when an acute outbreak appears or as a control or preventive measure (in the EU, vaccination is banned in PRV1 free countries).
- Gilts and boars must be:
 - bought from farms free of Aujeszky's disease.
 - vaccinated at their arrival or in the quarantine area.
- Eradication policies can vary from "slaughter + repopulation" to "vaccination + serology".

¹ Aujeszky's disease. Diseases manual. www.pig333.com