# Worth knowing about

ResPig
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# PRRS

Intervet
Schering-Plough Animal Health

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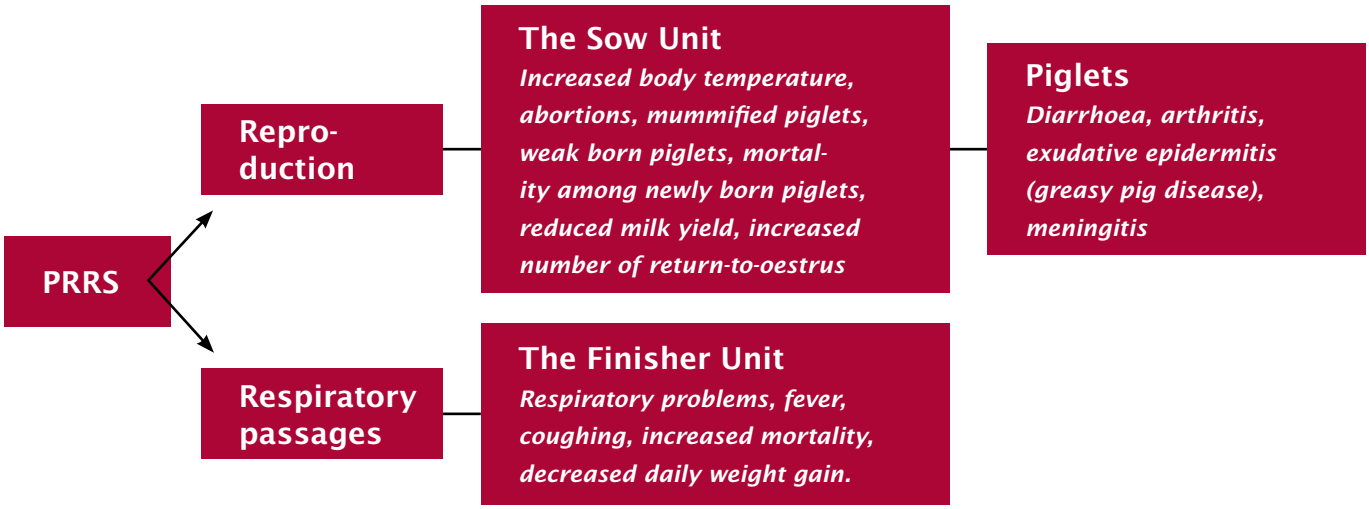
## *Introduction*

Porcint Reproduction and Respiratory Syndrome, also known as PRRS, is a contagious viral disease, which causes reproduction and respiratory disease problems. PRRS was first diagnosed in Denmark in 1992, but has become widespread throughout Danish pig herds over the years.

In Denmark 2 types of PRRS occur, an American and a European. The European virus seems to have less impact than the American virus. It is assumed that 5-10 % of the Danish herds will have an introduction of the disease annually, and that 75 % of the Danish herds are infected with either one or both types of PRRS virus[1].

## *Symptoms*

The symptoms of PRRS virus can vary a lot from one herd to another. Some herds are not affected by the disease, but show only a decrease in productivity seen on the efficiency controls, whereas other herds have clear signs of infection.




## *Symptoms*

### *Sows*

Among sows the symptoms are quite obvious in the form of reduced appetite, more or less constant fever and decreased milk production. Furthermore, a number of late abortions or early farrowing and a high number of return-to-oestrus are seen.

At farrowing you can observe many dead or mummified piglets, a high number of weak born piglets, and a high mortality rate for newly born piglets. The piglets will experience more complications such as diarrhoea, arthritis, exudative epidermitis (greasy pig disease) and meningitis.

### *Finisher Unit*

Respiratory symptoms can occur at all ages, but it is most frequently seen among growers and finishers. The symptoms can be difficult to detect as they are often less specific. PRRS among growers and finishers can be observed as increased body temperature, coughing, reduced daily weight gain, and increased mortality. Furthermore, the animals will be more susceptible to other respiratory tract infections, which then become difficult to control.

*Result of PRRS in the sow unit*

*PRRS piglet born weak*

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## Mode of Transmission

### Between Herds

The infection of PRRS virus can take place when virus positive animals are traded from infected herds, can be transmitted with semen from newly infected boars, or can be transmitted by humans. The PRRS virus can be airborne over short distances; however, the importance of this transmission is still uncertain.

### Within the Herd

PRRS virus is transmitted among pigs through nose secretion, manure, and semen. The incubation period of the virus is usually 4-7 days, but it can vary from 3-28 days. The virus is usually present in the blood during a period of 4-6 weeks, during which time it can be excreted though nose secretion, manure, semen, and urine and thereby infect other pigs.

The infection is often maintained in the herd by young stock being infected. In herds where the weaning unit is not sectioned, the weaned pigs are infected in this unit, whereas weaners in sectioned weaning units are usually not infected until they are mixed with others through continuous transfer.

## Diagnosis

In order to diagnose correctly, it is necessary to examine whether the blood contains antibodies against the PRRS virus.

The blood test examination helps determine which PRRS virus is present in the herd. The test can determine with great certainty whether a European PRRS virus, an American virus, or both types are present in the herd.

A blood test profile is run in order to clarify where in the herd the transmission takes place. In this case, blood tests are made from a minimum of five animals belonging to different age groups. Antibodies against the PRRS virus can be detected in the blood test approximately eight days after the animals have been infected.

## Immunity

Pigs that have been infected with the PRRS virus once are usually protected against reinfection and illness for the rest of their lives, but can easily be infected with another type of PRRS.

When purchasing new animals it is very important to consider along with your veterinarian whether to buy PRRS negative or PRRS positive animals, and make a plan for introducing the animals to the herd.



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## *Treatment and Prevention*

PRRS is a viral disease and therefore it cannot be treated with antibiotics. However, in newly infected herds there are different precautions that can be taken in order to reduce losses.

| *Age group* | Preventive measures |
|---|---|
| *Sows* | • Use A.I. in the acute phase and consider mating extra sows.<br>• Show extra caution when carrying out gestation control<br>• Farrowing induction should be stopped<br>• Increase surveillance at farrowing, and euthanize all piglets that are clearly born weak. |
| *Piglets* | • Ensure that all newborn piglets get colostrum<br>• Increase surveillance and euthanize unthriving piglets.<br>• Only perform cross-fostering within the first 24 hours<br>• Keep handling of the piglets to an absolute minimum, especially during the first days after birth.<br>• Wean the pigs simultaneously. |
| *Weaners and Finishers* | • Consequently use batch operations – all in / all out in sectioned units.<br>• Euthanize weak pigs or gather them in a separate hospital pen.<br>• Optimize the housing climate<br>• Attend to the pigs twice a day and treat diseased pigs. |

## *Vaccination*

It is possible to vaccinate against PRRS (if you have PRRS in the herd). Whether to initiate vaccination should be considered in consultation with your veterinarian. If you choose to vaccinate, it is important that you use a vaccine containing the type of virus found in the herd, European, American, or in some herds both types.

Likewise, it is important to design the vaccination programme so that it suits management practices, housing conditions and purchasing patterns.

## *Complications in Connection with other Diseases in the Herd*

PRRS can develop entirely without symptoms if there are no other diseases in the herd, but since a PRRS infection makes the pigs more liable to catch other (bacterial and viral) diseases, a PRRS infection will often lead to other outbreaks of disease that are more serious than they otherwise would have been.

[1]Source: Pilegård Larsen, L & Bækbo, P. (2005). Sundhed & sygdom hos svin. Landbrugsforlaget. 288 pp.

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