

# Monitoring

## ANIMAL HEALTH



## Trends in the monitor: Online Monitor results

As part of the Online Monitor, every month pig veterinarians report whether there are any health issues at 3,100 farms on average. Since 2018, around 200 veterinarians from 90 different practices have reported each month. The number of reports remains fairly stable over time. Health issues were reported at approximately 35 percent of the farms visited. Most of the health issues relate to weaned piglets (51%) and only 14% of the reports

relate to sows. The interactive Online Monitor dashboard became available to veterinarians from July 2020. It enables the vets to make their own analysis of the health issues and probability diagnoses that have been reported at farms within their own practice, versus the region and the rest of the Netherlands. Individual farmers receive a monthly overview of the situation at their farm versus the region and the rest of the Netherlands.



## PRRS trend

The pathogen on which the Veekijker telephone service receives the most questions is PRRS; it accounts for nearly 20 percent of the pathogen related questions. Following an earlier decline, numbers are once again rising in recent years.

The Online Monitor shows that veterinarians indicate the PRRS virus to be the most probable cause of 2.5 to 4 percent of all health issues. This is a rising trend. Health issues attributed to PRRS mainly concern respiratory problems in various age categories, but especially in weaned piglets (see figure). In necropsy examinations, the GD pathologist diagnoses PRRS in 1.5 to 2 percent of submitted cases. There is no clear trend here since early 2018. The percentage was slightly higher in previous years. Pathology mainly shows PRRS virus to be present in aborted or stillborn foetuses or in pigs with pneumonia or a general infection. The pathogen is found

relatively often during the winter period (January – February). The same pattern is visible in the fluctuating number of notifications in the Online Monitor. Although PRRS is not the most important health issue in pigs, it does however raise

many questions. According to veterinarians, the number of cases has been gradually increasing in recent years. This may be related to the development of new virus variants due to recombination between existing field strains and sometimes vaccine strains.

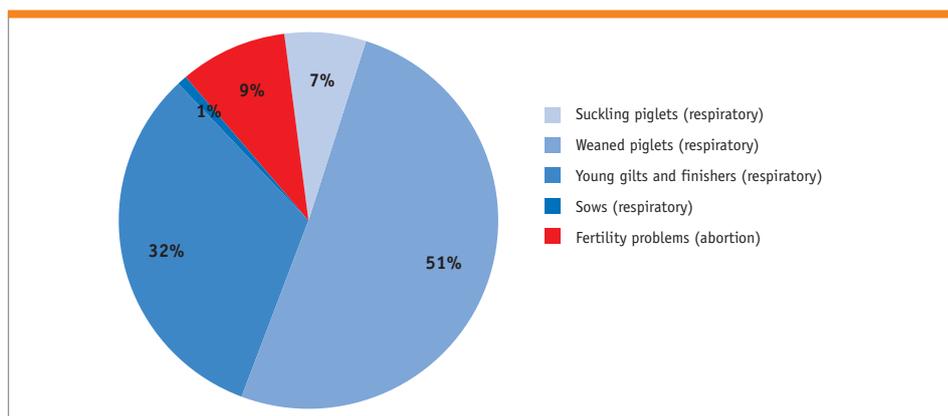


Figure. Distribution of health issues attributed to PRRS infections (Online Monitor)

# Abnormal findings

## Vitamin supply and resistance to disease

At a sow farm, there was a large number of runts among the weaned piglets. Piglets aged 7 to 10 weeks were submitted for pathological examination. The older piglets had pneumonia, shown to be caused by a variety of pathogens (*Streptococcus suis*, influenza virus and *Mycoplasma hyopneumoniae*). In the younger piglets, there were no signs of infectious disease, though they did have chronic navel inflammation. These results suggest that the animals had poor (general) resistance to disease. Following analysis of the colostrum intake, the decision was taken to monitor the nutrients in the blood of a group of finishers, at the start of the fattening period and at six weeks into the fattening period, to determine whether they had nutritional deficiencies. At the start of the fattening period, the pigs had quite low concentrations of copper, selenium and zinc in their blood. They were deficient in vitamins E and D3. In the six-week-old pigs, the levels of minerals and vitamins E were good, but the vitamin D3 deficiency had increased even further. The required minimum level for vitamin D3 in serum is 75 nmol/L, and in this case the concentrations were below 30 nmol/L. When

Possible risks in the event of deficiencies of the following nutrients in the blood are:

Copper:	neural tissue damage, paddling gait, anaemia;
Zinc:	poor appetite and growth, crusty skin, poor claw development;
Vitamin E:	reduced resistance to pathogens, increased risk of muscle weakness, anaemia, liver necrosis, myocardium damage and stomach ulcers;
Selenium:	comparable with the effects of a low level of vitamin E;
Vitamin D3:	inadequate absorption of calcium, deficient bone development, poor development of the immune system;

there is a suspected lack of immunological resistance to disease, monitoring of a number of essential nutrients can provide starting points for improvement, alongside analysis of the colostrum intake (see box).

## Pinpoint haemorrhaging in the skin: 'suspicion of swine fever'

A commonly occurring reason for suspecting swine fever is when pigs display extensive pinpoint haemorrhaging in the skin. This is a symptom seen relatively often in piglets aged approximately two weeks. They often have septicaemia, though it is regularly impossible to actually find the cause. In order to gain more insight into the situation, GD conducted a pilot study in autumn 2020. Pinpoint

haemorrhaging is generally the result of malfunctioning blood platelets. Besides being necessary for coagulation, blood platelets also play an active role in the defence against infections. This study has clarified the role of blood platelets in infections. This offers perspectives for diagnosing piglets suffering from pinpoint haemorrhaging, thus reducing the number of farms requiring visits by veterinary experts in the future, when there is a suspicion of swine fever. This will not only save costs but particularly also significantly reduce stress for the farms and veterinarians involved.

## Animal health of pigs in the Netherlands

Disease/disorder/health characteristic	Situation in the Netherlands/Europe
<b>Article 15 diseases (compulsory notification and eradication)</b>	
Foot and mouth disease (FMD)	The Netherlands has been disease-free since 2001. No outbreaks in Europe in 2020, but an outbreak in Turkey.
Classical Swine Fever (CSF)	The Netherlands has been disease-free since 1997. No outbreaks in Europe in 2020.
African Swine Fever (ASF)	The Netherlands has been disease-free since 1986. Very frequent outbreaks in Eastern Europe in 2020, but also in Germany. Belgium is once again officially ASF-free.
Swine Vesicular Disease (SVD)	The Netherlands has been disease-free since 1994. No outbreaks in Europe in 2020.
Brucellosis	The Netherlands has been disease-free since 1969. No outbreaks in Europe in 2020.
Aujeszky's disease	The Netherlands has been disease-free since 2007 (vaccination is prohibited). An outbreak in France in early 2020.
<b>Article 100 diseases (compulsory notification)</b>	
Salmonella	Shown sporadically upon pathological examination and in faeces samples.
<b>Monitoring: Veekijker</b>	
PRRS	Disease about which the most questions are posed (particularly about diagnostics)
Losses / mortality	Many questions, including about losses due to gastric torsion
Influenza	Relatively many questions, also about the various types
Lameness	Very many questions, particularly in young pigs and, for example, about osteochondrosis
<b>Monitoring: pathological examination</b>	
Locomotion problems	Diagnosed relatively often in sows
<i>Streptococcus suis</i>	Very commonly occurring cause of various pathologies
<b>Online Monitoring</b>	
PRRS	More reports during the winter period
Losses (in sows)	More reports during the summer period, but fewer than in 2019



### Animal health monitoring

Since 2002, Royal GD has been responsible for animal health monitoring in the Netherlands, in close collaboration with the veterinary sectors, the business community, the Ministry of Agriculture, Nature and Food Quality, vets and farmers. The information used for the surveillance programme is gathered in various ways, whereby the initiative comes in part from vets and farmers, and partly from GD Animal Health. This information is fully interpreted to achieve the objectives of the surveillance programme – rapid identification of health issues on the one hand and monitoring trends and developments on the other. Together, we team up for animal health, in the interests of animals, their owners and society at large.