

# Monitoring

ANIMAL HEALTH

## Udder infection: sometimes more than simply a skin inflammation

Since early 2019, pathological examination has shown that a striking number of dairy cows have died from the complications of udder cleft dermatitis (UCD). Pathologist Klaas Peperkamp explains what he sees during a necropsy of such a cow.

"In 2019, we've already seen ten cows on the necropsy table, with complications of UCD, in which lesions are seen in the udder skin at the front of the udder or between the two front quarters. In these serious cases, the infection in the udder skin spreads via the branches of the mammary vein to the lungs, with fatal consequences. In the case of UCD

complications, these blood vessels are involved in the inflammation process, resulting in thrombophlebitis. Blood clots containing bacteria (emboli) travel via the mammary vein and the heart to the lung, where they cause metastasized pneumonia. This pneumonia is a complication of the udder skin inflammation. The cows became feverish, suffered respiratory problems, produced less milk and died, despite treatment with antibiotics. In nine of the ten cases, the UCD had not been clinically detected. Furthermore, we also conducted necropsies on ten dairy cattle with uncomplicated UCD this year. In these cases,



infected udder skin sores were detected, but were not related to the cause of death. However, the complications clearly show that what starts as a small lesion on the udder skin can be deceptive and can result in serious metastasized pneumonia."

The pathologists and the udder health team recommend that dairy farmers remain alert to any form of lesions on the udder. A prompt therapy increases the chance of quick healing, thereby reducing the chance of complications.



Figure 1. Udder skin with affected branch of the mammary vein

**Klaas Peperkamp**  
Pathologist



## Follow up on signals of copper accumulation in adult dairy cows

Authors: Sanne Carp - van Dijken and Saskia van der Drift

In recent years, GD received signals from the field that (overly) high concentrations of copper were increasingly found in the livers of adult cattle. As a result of these findings, GD contacted a number of animal feed manufacturers in the Netherlands, and discussed the possible issue of excess copper supply in dairy cattle, in an open dialogue.

This year, this was followed by a number of meetings between Dutch experts of Schothorst Feed Research, the Faculty of Veterinary Medicine, Wageningen University & Research and GD, in order to discuss copper levels in cattle. These meetings resulted in a joint memorandum regarding advice on copper supply in dairy cattle. It was agreed that the participating parties would continue to collaborate in terms of communication on this

subject in the future. Another result is that the technical committee of the CVB will be contacted ([www.cvbdiervoeding.nl/pagina/10100/kerntaken.aspx](http://www.cvbdiervoeding.nl/pagina/10100/kerntaken.aspx)), to discuss whether the advisory text of the CVB on standards for trace elements should be revised. GD contacts have shown that in the meantime, many animal feed manufacturers have reduced the copper content in their rations for dairy cattle.

# Control programmes for endemic cattle diseases

Author: Inge Berends

The Netherlands has control programmes for a number of endemic diseases in cattle. At present, there is little or no regulation of such diseases by the European Union (EU). This means that each country determines independently whether disease control programmes are developed, and how to implement these dairy programmes.

The programmes for BVD, IBR, salmonella and paratuberculosis are examples of animal disease control programmes. The Netherlands is not the only European country to combat endemic diseases in cattle. The Netherlands is a participant in the SOUND-control programme, which includes an inventory of the endemic cattle disease control programmes executed by each participating country (Figure 1). All participating countries execute a control programme for at least one endemic disease that is not regulated at the European level. There are a total of 25 cattle diseases for which at least one participating country is executing a control programme. On average, each country has a control programme for seven animal diseases. Finland is the country with the highest number of control programmes (for eighteen different diseases). Norway is free from the highest number of cattle diseases (eleven different diseases).

The cattle diseases for which most of the countries have a control programme are IBR (23 of the 26 countries for which information is available), enzootic leucosis (22 countries) and BVD (22 countries). The Netherlands also has control programmes for these three diseases. There is a great deal of variation between the countries in terms of the way of various control programmes are implemented and which test strategies are applied, but basically the programmes are comparable (for BVD for example, the focus lies on detection and culling of carrier animals). This is due to

the infrastructure in a country, the risk profile such as the animal density and the number of contact moments between animals, as well as the animal disease status (commonly occurring, occasionally occurring, sporadically occurring or free status). Countries with a high cattle density where a disease still occurs will often have stricter programme rules than countries with a lower cattle density or a free status.

More information on SOUND-control can be found at [www.sound-control.eu](http://www.sound-control.eu).

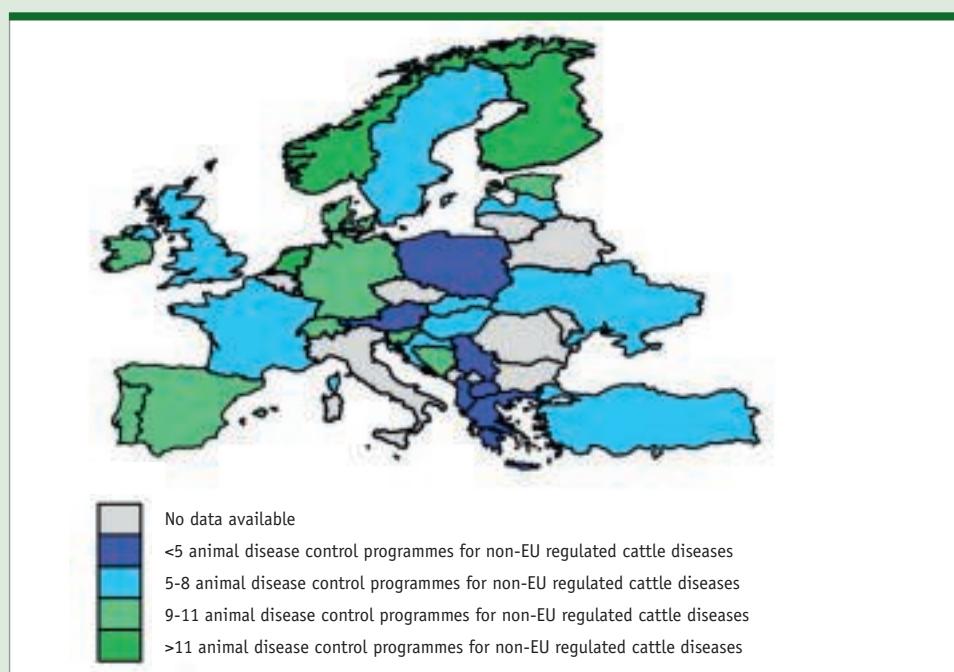


Figure 1. Number of animal disease control programmes per country for cattle diseases not regulated by the European Union (EU).

## Recurrence of bleeding calf syndrome and haemorrhagic diathesis

Author: Linda van Wijckhuise

Over the past three months, the Veenkijker received nine calls regarding calves with



Figure 2. Diffuse bleeding in the skin of a young calf

increased tendency to bleed. This clinical condition had been absent for many years. Through contact with colleagues of the European Veterinary Surveillance Network (EVSN), it was noticed or detected that the number of notifications in Belgium had also increased. In 2008, there was an 'outbreak' of bovine neonatal pancytopenia (BNP) among three-week old calves, in Europe. International research showed that the cause was a combination of genetic disposition and the mother having been vaccinated with the Pregsure® BVD vaccine. Following colostrum intake, an immunological reaction caused the calves to destroy their own blood cells. The

vaccine was taken off the market, after which the clinical condition disappeared after a number of years.

Over the past three months, the pathology department has diagnosed this condition as the cause of death twice. In the Veenkijker contacts, not all the calves were younger than three weeks. Further investigation is necessary in order to determine whether the underlying cause of the previous cases has re-occurred. Other possible causes are sepsis and acute BVD infections. Reason enough for GD to initiate a pilot study into the causes of the clinical condition, in which they will appreciate international collaboration.

# Animal health barometer for cattle, third quarter 2019

VETERINARY DISEASES	SITUATION IN THE NETHERLANDS	Surveillance – Highlights Third Quarter 2019
<b>Article 15 GWWD (Health &amp; Welfare Act) compulsory reportable and treatable diseases (diseases named in article 2 of the 'Rules for prevention, control and monitoring of infectious animal diseases and zoonoses and TSEs')</b>		
<b>Bluetongue (BT)</b>	Viral infection. The Netherlands has been officially disease-free since 2012 (all serotypes). Annual screening.	The Netherlands is BTV-free. Two suspicions, no infections detected.
<b>Brucellosis</b> (zoonosis, infection via animal contact or inadequately prepared food)	Bacterial infection. The Netherlands has been officially disease-free since 1999. Monitoring via antibody testing of blood samples from aborting cows.	No infections detected.
<b>Bovine Spongiform Encephalopathy (BSE)</b>	Prion infection. The Netherlands has OIE status 'negligible risk'. No cases detected upon monitoring since 2010 (total 88 cases between 1997-2009).	No infections detected.
<b>Enzootic Leucosis (EBL)</b>	Viral infection. The Netherlands has been officially disease-free since 1999. Monitoring via antibody testing of bulk milk and blood samples of slaughtered cattle.	No infections detected.
<b>Lumpy Skin Disease (LSD)</b>	Viral infection. The Netherlands is officially disease-free.	Infections have never been detected.
<b>Anthrax</b> (zoonosis, infection via animal contact)	Bacterial infection. Not detected in the Netherlands since 1994. Monitoring via blood smears from fallen stock.	No infections detected.
<b>Foot and Mouth Disease (FMD)</b>	Viral infection. The Netherlands has been officially disease-free since 2001.	No infections detected.
<b>Rabies</b> (zoonosis, infection via bite or scratch wounds)	Viral infection. The Netherlands has been officially disease-free since 2012 (illegally imported dog).	No infections detected.
<b>Bovine Tuberculosis (TB)</b> (zoonosis, infection via animal contact or inadequately prepared food)	Bacterial infection. The Netherlands has been officially disease-free since 1999. Monitoring via slaughtered cattle.	No infections detected.
<b>Article 100 GWWD (Health &amp; Welfare Act) compulsory reportable diseases (diseases named in article 10 of the 'Rules for prevention, control and monitoring of infectious animal diseases and zoonoses and TSEs')</b>		
<b>Campylobacter fetus ssp. <i>venerealis</i> and <i>Tritrichomonas foetus</i></b>	Bacterial infection. The Netherlands has been disease-free since 2009. Monitoring of AI and embryo stations, and in animals for export.	No infections detected.
<b>Leptospirosis</b> (zoonosis, infection via animal contact or inadequately prepared food)	Bacterial infection. Control programme compulsory for dairy farms, voluntary for non-dairy farms.	98 percent of dairy farms had the <i>L. hardjo</i> -free status. Two infections detected upon bulk milk monitoring (import).
<b>Listeriosis</b> (zoonosis, infection via inadequately prepared food)	Bacterial infection. Occasional infection detected in cattle.	Three infections detected at necropsy. No infection detected in milk samples.
<b>Salmonellosis</b> (zoonosis, infection via animal contact or inadequately prepared food)	Bacterial infection. Control programme compulsory for dairy farms, voluntary for non-dairy farms.	97 percent of dairy farms had unsuspected status in the second trimester of 2019.
<b>Yersiniosis</b> (zoonosis, infection via animal contact or inadequately prepared food)	Bacterial infection. Detected occasionally in cattle, mostly in aborted foetuses.	No infections detected.

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Table continuation

VETERINARY DISEASES	SITUATION IN THE NETHERLANDS	Surveillance – Highlights Third Quarter 2019
<b>Bovine Viral Diarrhoea (BVD)</b>	Viral infection. Control programme compulsory for dairy farms, voluntary for non-dairy farms.	73 percent of dairy farms have BVD-free or BVD-unsuspected status. This is 15 percent among voluntarily participating non-dairy farms.
<b>Infectious Bovine Rhinotracheïtis (IBR)</b>	Viral infection. Control programme compulsory for dairy farms, voluntary for non-dairy farms.	75 percent of dairy farms have IBR-free or IBR-unsuspected status. This is 20 percent among voluntarily participating non-dairy farms. Nasal swabs from 34 farms: field strain detected at two farms (IBR status: vaccinated)
<b>Paratuberculosis</b>	Bacterial infection. Control programme compulsory for Dutch dairy farms. 99 percent has PPN status.	77 percent of dairy farms have Paratuberculosis Programme Netherlands (PPN) status A (unsuspected).
<b>Tick borne diseases</b>	Vector borne diseases. Ticks infected with <i>Babesia divergens</i> and <i>Anaplasma phagocytophilia</i> are present in the Netherlands. <i>Mycoplasma wenyonii</i> present in the Netherlands.	One outbreak of <i>Babesia divergens</i> detected.
<b>Other infectious diseases in cattle</b>		
<b>Malignant Catarrhal Fever (MCF)</b>	Viral infection. Infections with Ovine herpes virus type 2 occur occasionally in the Netherlands.	Three infections detected at necropsy.
<b>Liver fluke</b>	Parasite. Liver fluke is present in the Netherlands, particularly in wetland areas.	Infections detected at six farms (low prevalence).
<b>Neosporosis</b>	Parasite. An infectious cause of abortion in the Netherlands.	Infection detected in ten submitted aborted foetuses.
<b>Q-fever</b> (zoonosis, infection via dust or inadequately prepared food)	Bacterial infection. In the Netherlands, a different strain in cattle to that found on goat farms, with no established relationship to human illness.	No infection was detected in submitted aborted foetuses.
<b>From monitoring</b>		<b>Brief summary</b>
<b>Haemoglobin uraemia pilot study</b>	In the summer of 2019, there were numerous cases of fresh cows passing reddish-brown urine, sometimes resulting in death. A pilot study into the cases reported at the time indicates that insufficient phosphorus intake may have been the cause.	



## 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. This information is fully interpreted to achieve the objectives of the surveillance programme – rapid identification of health problems 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.