Monitoring
ANIMAL HEALTH

Locomotion problems in broilers

Poultry veterinarians are being confronted in the field with locomotion problems in broilers, attributed to infection with the *Enterococcus cecorum* bacteria. The results of treatment with amoxicillin (an antibiotic commonly used to combat this bacteria) are often disappointing. This is possibly due to a shift in susceptibility of *E. cecorum* to amoxicillin. Another possible cause is the presence of other pathogens. Research conducted by GD into the susceptibility of *E. cecorum* shows that since 2015, there have been no perceptible shifts that indicate that the bacteria is becoming less susceptible to the antibiotic amoxicillin.

In necropsies on broilers where GD detected bacteria, *Escherichia coli* was isolated in 89 percent of the necropsies and *Enterococcus cecorum* in 29 percent. In 18 percent of the cases, GD detected both *E. coli* and *E. cecorum*. In contrast to *E. cecorum*, GD did find a shift in the susceptibility of *E. coli* to amoxicillin. GD established that over the past years, resistance of *E. coli* to amoxicillin increased from 35.7 percent in 2016 to 47 percent in 2019. Therefore, in practice, treatment with amoxicillin may be effective in combating *E. cecorum*, but less so in combating *E. coli*.

Dorsal cranial myopathy detected during necropsies

Dorsal cranial myopathy is a severe degeneration of the *musculus latissimus dorsi*, a back muscle in chickens. There are no indications that this is caused by an infection. The exact reason for its occurrence is as yet unknown, as is the incidence of the problem in the Netherlands, but it does not appear to be purely incidental.

Photo 1. The skin of these two carcasses has been opened: dorsal cranial myopathy can be seen in the underlying muscles of the left-hand carcass; the right-hand carcass shows no abnormalities (source: GD).

Salmonella Pullorum detected

At the end of May, at the farm where *Salmonella* Pullorum (S.P.) was detected last year, S.P. was detected again, this time in a group of layers in an adjacent house. This group was present at the time of the first outbreak and was vaccinated against *Salmonella* Gallinarum at the time. This S.P. was detected during routine screening of a number of diseased or dead hens.

Research into production drop in layers

During the period from December 2019 through March 2020, a production drop was established in multiple flocks of layers. No clear cause has been found so far. GD has therefore initiated a monitoring pilot to determine the most probable pathogen in the reported cases of production drop in layers. Or in any case to exclude known pathogens of production drop in the flocks in question. The affected flocks that participate in the pilot will be examined using necropsies and paired serological testing. We will keep you up to date on the results.

Early Warning System

Through the Early Warning System (EWS), GD keeps poultry veterinarians up-to-date on outbreaks of *Salmonella* Gallinarum (SG) and *Salmonella* Pullorum (SP), *Mycoplasma gallisepticum* (Mg), Coryza/AVP, Gumboro and infectious laryngotracheitis (ILT). Cases can be reported by the practitioner or GD (positive test results). Based on clinical symptoms and additional diagnostics, GD will consult with the vet and/or the poultry farmer to determine whether cases should be reported in the EWS. This concerns voluntary reports to GD. It therefore does not provide an overview of all outbreaks.
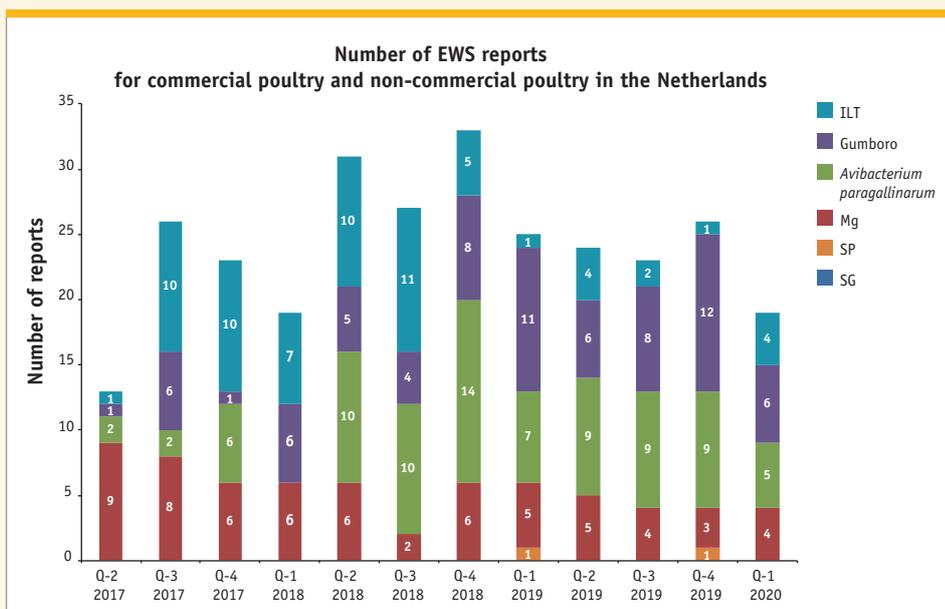
Figure 1. Number of EWS reports for *Salmonella Gallinarum/Salmonella Pullorum (SG/SP)*, *Mycoplasma gallisepticum (Mg)*, Avibacterium paragallinarum, Gumboro (IBD) and ILT in commercial poultry and non-commercial poultry in the Netherlands.

Animal health barometer for poultry 1st quarter 2020

Veterinary diseases	Brief description (numbers at farm level)	1st quarter 2020	2nd quarter 2020	3rd quarter 2020	4th quarter 2020	Trend (Over 2 years)
Article 15 GWWD (Health & Welfare Act) diseases (diseases named in articles 3 and 7 of the 'Rules for prevention, control and monitoring of infectious animal diseases and zoonoses and TSEs')						
Avian influenza in the Netherlands (H5/H7) (Source: GD, WBVR, national government)	**HPAI (H5/H7):**	Not detected				-
	LPAI (H5/H7):	Not detected				-
	Serology (new flocks): *(Antibodies for H5/H7)*	2 flocks				-
Avian influenza in Europe (H5/H7) (Source: OIE)	**HPAI (H5/H7):**	**H5N8:** Various countries* **H5:** Ukraine				⬆
	LPAI (H5/H7):	**H5N1:** Denmark				-
ND in the Netherlands (Source: GD, OIE)	Commercial poultry	Not detected				-
ND in Europe (Source: GD, OIE)	Commercial poultry	No OIE reports				⬇

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A Based on serological monitoring
B Based on serological monitoring and/or the DIVA M.s.-PCR
C Early Warning System

⬆ Increase or strong increase
⬆ Limited increase
– Situation unchanged
⬇ Limited decrease
⬇ Decrease or strong decrease

* Bulgaria, Germany, Hungary, Poland, Romania, Slovakia, Czech Republic

Veterinary diseases	Brief description (numbers at farm level)	1st quarter 2020	2nd quarter 2020	3rd quarter 2020	4th quarter 2020	Trend (Over 2 years)
M. gallisepticum[A] (Source: GD)	**Serological monitoring by GD:**					
	Reproduction sector:	0 farms				-
	Layer pullets:	0 farms				-
	Layers:					
	- *not vaccinated and infected:*	3 farms				-
	- *vaccinated and infected:*	1 farm				⬆
	Turkeys:	0 farms				-
	Reports in EWS[C] based on positive serology and/or voluntary PCR testing:					
	Layers:	4 farms				-
	Backyard poultry	-				⬇
M. synoviae[B] (Source: GD)	**Serological monitoring and/or dPCR by GD:**	**% of positive farms versus farms tested**				
	Grandparent stock (incl. pullets) (meat):	0%				-
	Broiler breeder pullets:	8%				-
	Broiler breeders:	26%				⬆
	Reproduction sector - laying (incl. layer reproduction pullets):	0%				-
	Parent stock (layer):	3%				-
	Layer pullets:	35%				⬆
	Layers:	76%				-
	Turkeys:	10%				-
Salmonellosis (non-zoonotic salmonella) (Source: GD)						
Salmonella arizonae		N/A				N/A
Salmonella Gallinarum (SG)		Not detected				-
Salmonella Pullorum (SP)		Not detected				-
Article 100 GWWD (Health & Welfare Act) diseases (diseases named in article 10 of the 'Rules for prevention, control and monitoring of infectious animal diseases, zoonoses and TSEs')						
Campylobacteriosis	No data available	-	-	-		N/A
Salmonellosis (zoonotic salmonella) (at the flock level) (Source: NVWA)						
S. Enteritidis	Reproduction:	9 flocks				⬆
	Layer pullets:	0 flocks				-
	Layers:	10 flocks				⬆
S. Typhimurium	Reproduction:	1 flock				-
	Layer pullets:	0 flocks				-
	Layers:	0 flocks				-
Other types of salmonella (*S.* Hadar, *S.* Infantis, *S.* Java, *S.* Virchow)	Reproduction:	0 flocks				-

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Royal GD
Arnsbergstraat 7
P.O. Box 9, 7400 AA Deventer, The

Netherlands
T. +31 (0)570-63 33 91
info@gdanimalhealth.com

www.gdanimalhealth.com

Table continuation

Disease/disorder/ health characteristic	Brief description (numbers at farm level)	1st quarter 2020	2nd quarter 2020	3rd quarter 2020	4th quarter 2020	Trend (OVER 2 YEARS)
Other OIE-list poultry diseases in the Netherlands subject to compulsory notification						
Avian chlamydia (Source: GD)		Not detected				-
Gumboro (IBD) (Source: GD; EWS)	**Reported in EWS[c]:** Broilers:	6 farms				⬆
Infectious bronchitis (IB) (Source: GD)	**Types most commonly detected by GD:** Broilers: Layers:	D388 4-91/D388/ D181				⬆ -/-/-
Infectious laryngotracheitis (ILT) (Source: GD; EWS)	**Reported in EWS[c]:** Broiler breeders: Layers: Backyard poultry:	2 farms 1 farm 1 case				- - -
Turkey Rhinotracheitis (TRT) (Source: GD)	**Detected by GD:** Broilers:	1 farm				
Other poultry diseases						
Avibacterium paragallinarum (Source: GD; EWS)	**Reported in EWS[c]:** Layers: Backyard poultry:	4 farms 1 case				- -
Erysipelas (*Erysipelothrix rhusiopathiae*) (Source: GD)	**Detected by GD:** (new infections): Layers:	6 farms				⬆
Pasteurella multocida (Source: GD)	Detected upon necropsy: Layers: **No reports to the NVWA**	5 farms				⬆
Histomonosis (Source: GD)	**Detected by GD:** Reproduction (meat sector): Reproduction (layer sector): Layers:	2 farms 1 farm 1 farm				⬆ - -

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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 Royal 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.

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