Monitoring ANIMAL HEALTH

Poultry | March 2020

High-pathogenic H5N8 outbreaks in Europe

As of the end of December, Europe is again facing outbreaks of high-pathogenic AI of the type H5N8. In recent months, the virus has been detected in various birds in several countries in Europe. Analyses show that the virus is closely related to the H5N8 virus that was responsible for 48 percent (89 cases) of the outbreaks in Europe in 2016 and 2017, including in the Netherlands. It is generally assumed that the virus was spread by migratory wild birds. Areas in Tatarstan, Kurgan and Lake Chany (Russia) played a central role in the ancestry of the H5N8 strain and its spread between the various birds. Scientists have concluded that the H5N8 virus is capable of exchanging genetic information with ease, thereby creating new strains. The H5N8 strain was first detected in Bulgaria, both in commercial ducks and in layers.

At the end of December 2019, an H5N8 infection was detected in commercial fattening turkeys in Poland at the border with Ukraine. After that, reports came in in rapid succession. Since early 2020, cases of H5N8 were reported in Poland, Germany, Hungary, Slovakia, Romania, the Czech Republic, Bulgaria and Ukraine. In mid-February 2020, Poland reported as many as twenty cases, in turkeys and layers as well as ducks and geese. Mortality can be as high as 26 percent. On 20 January, Germany reported that the virus had been detected in a wild goose near the border with Poland. On 6 February, the virus was also found to be present on a hobby farm with, among others, layers and waterbirds. The birds had mild respiratory symptoms and diarrhoea (enteritis).

The presence of the virus in northern Germany as well as in the Czech Republic, Slovakia, Hungary, Ukraine, Romania and Bulgaria suggests that the spread of the virus may occur via various transmission routes. As a result, the Dutch government issued a compulsory housing for commercial poultry as of 12 February 2020.

Results of Chicken Anaemia Virus (CAV) research

CAV causes blue wing disease in young chicks and can cause immunosuppression. Recent research has shown that CAV circulates in Polish broiler flocks and may have an immunosuppressive effect, as a result of which other diseases occur more frequently. In total, CAV was detected in 15 percent of the flocks. Among the flocks with health issues this percentage was 42, among the flocks without health issues it was 7 percent.

This research examined whether this difference in prevalence of CAV between healthy flocks and flocks with clinical symptoms is also found in the Netherlands. From March 2019 until the end of 2019, flocks of broilers submitted to GD for necropsy were sampled using cloacal or spleen swabs. Together with VMP*, healthy (control) flocks were collected.

In Dutch broilers the prevalence of CAV in flocks that had clinical symptoms is similar to the prevelance in apparently healthy flocks. CAV was detected by PCR in six out of sixty flocks with various clinical symptoms (10%) and in four out of 44 flocks without clinical symptoms (9%).

** Veterinary Monitoring Poultry (VMP) is a collaboration between poultry vets and GD.*

Early Warning System (EWS)

Through the EWS, GD keeps poultry veterinarians up-to-date on outbreaks of *Salmonella* Gallinarum (SG) and *Salmonella* Pullorum (SP), *Mycoplasma gallisepticum* (Mg), Gumboro (IBD), infectious laryngotracheitis (ILT) and infections with *Avibacterium paragallinarum* (the bacteria that causes Coryza). 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.

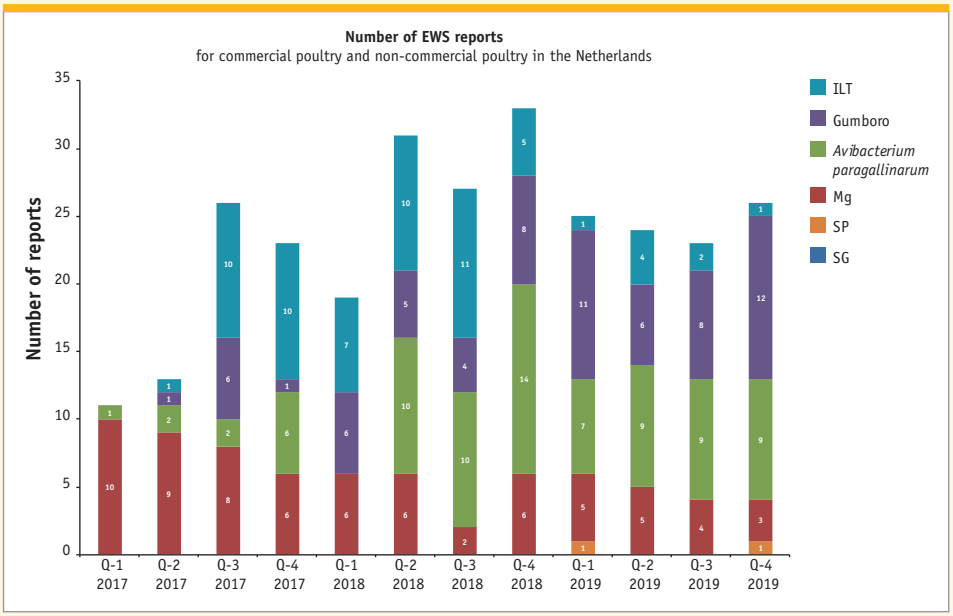

Figure 1. Number of EWS reports for Salmonella *Gallinarum/*Salmonella *Pullorum (SG/SP),* Mycoplasma gallisepticum *(Mg),* Avibacterium paragallinarum, *Gumboro (IBD) and ILT in commercial poultry and non-commercial poultry in the Netherlands.*
(This concerns voluntary reports to GD. Therefore, this is not an overview of all outbreaks of the diseases shown.)

Animal health barometer for Dutch poultry 2019

VETERINARY DISEASES		1st QUARTER 2019	2nd QUARTER 2019	3rd QUARTER 2019	4th QUARTER 2019	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	Not detected	Not detected	Not detected	↓
	LPAI (H5/H7):	Not detected	Not detected	Not detected	Not detected	↓
	Serology (new flocks): *(Antibodies for H5/H7)*	1 flock	1 flock	0 flocks	0 flocks	↓
Avian influenza in Europe (H5/H7) (Source: OIE)	**HPAI (H5/H7):**	Bulgaria: H5N8 Russia: H5	Bulgaria: H5N8	No OIE reports	Poland: H5N8	↓
	LPAI (H5/H7):	Denmark: H5 and H7N7	Denmark: H5	No OIE reports	France: H5	↓
ND in the Netherlands (Source: GD, OIE)	Commercial poultry	Not detected	Not detected	Not detected	Not detected	-
ND in Europe (Source: GD, OIE)	Commercial poultry	No OIE reports	No OIE reports	No OIE reports	Romania: 1x	↓
M. gallisepticum[A] (Source: GD)	**Serological monitoring by GD:**					
	Reproduction sector:	0 farms	0 farms	0 farms	0 farms	-
	Layer pullets:	0 farms	0 farms	0 farms	0 farms	-
	Layers:					↓
	- *not vaccinated and infected:*	0 farms	1 farm	1 farm	0 farms	↑
	- *vaccinated and infected:*	4 farms	5 farms	5 farms	3 farms	-
	Turkeys:	0 farms	0 farms	0 farms	0 farms	
	Reports in EWS[C] based on positive serology and/or voluntary PCR testing:					
	Layers:	5 farms	5 farms	3 farms	3 farms	-
	Backyard poultry	-	-	1x	-	-

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Table continuation

VETERINARY DISEASES		1st QUARTER 2019	2nd QUARTER 2019	3rd QUARTER 2019	4th QUARTER 2019	TREND (OVER 2 YEARS)
M. synoviae[B] (Source: GD)	**Serological monitoring and/or dPCR by GD:**		**% of positive farms versus farms tested**			
	Grandparent stock (incl. pullets) (meat):	0%	0%	0%	0%	-
	Broiler breeder pullets:	2%	2%	7%	7%	↓
	Broiler breeders:	14%	17%	17%	18%	-
	Reproduction sector - laying (incl. rearing, except rearing layers):	0%	0%	0%	0%	-
	Parent stock (layer):	11%	9%	12%	6%	↑
	Layer pullets:	13%	12%	22%	32%	↑
	Layers:	77%	72%	70%	78%	-
	Turkeys:	18%	11%	14%	9%	↑
Salmonellosis (non-zoonotic salmonella) (Source: GD)						
Salmonella arizonae		N/A	N/A	N/A	N/A	N/A
Salmonella Gallinarum (SG)		Not detected	Not detected	Not detected	Not detected	-
Salmonella Pullorum (SP)		1 case detected in backyard chickens	Not detected	Not detected	Layers: 1x	↑
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:	1 flock	1 flock	0 flocks	5 flocks	↑
	Layer pullets:	0 flocks	0 flocks	0 flocks	0 flocks	-
	Layers:	10 flocks	5 flocks	24 flocks	9 flocks	↑
S. Typhimurium	Reproduction:	0 flocks	1 flock	0 flocks	0 flocks	-
	Layer pullets:	0 flocks	0 flocks	0 flocks	0 flocks	-
	Layers:	0 flocks	0 flocks	0 flocks	3 flocks	-
Other types of salmonella (*S. Hadar*, *S. Infantis*, *S. Java*, *S. Virchow*)	Reproduction:	S.I. detected in 1 flock	0 flocks	0 flocks	0 flocks	-
Other OIE-list poultry diseases in the Netherlands subject to compulsory notification						
Avian chlamydia (Source: GD)		Not detected by GD	Not detected by GD	Not detected by GD	Not detected by GD	-
Gumboro (IBD) (Source: GD; EWS)	**Reported in EWS[C]:**					
	Broilers:	11 farms	6 farms	7 farms	12 farms	↑
	Layer pullets:	-	-	1 farm	-	-
Infectious bronchitis (IB) (Source: GD)	**Types most commonly detected by GD:**					
	Broilers:	D388	D388	D388	D388	↑
	Layers:	4-91/D181/ D388	4-91/D181/ D388	4-91/D181/ D388	4-91/D388/ D181	↓/-/-
Infectious laryngotracheitis (ILT) (Source: GD; EWS)	**Reported in EWS[C]:**					
	Parent stock (layer):	-	1 farm	-	-	-
	Layer pullets	-	-	1 farm	-	-
	Layers:	-	2 farms	-	-	↓
	Broilers:	1 farm	1 farm	-	-	↓
	Backyard poultry:	-	-	1x	1x	-
Turkey Rhinotracheitis (TRT) (Source: GD)	**Detected by GD:**					
	Parent stock (layer):	1 farm	-	-	-	
	Layers	-	-	3 farms	-	
	Broilers:	2 farms	3 farms	1 farm	4 farms	

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Table continuation

VETERINARY DISEASES		1st QUARTER 2019	2nd QUARTER 2019	3rd QUARTER 2019	4th QUARTER 2019	TREND (OVER 2 YEARS)
Other poultry diseases						
Avibacterium paragallinarum (Source: GD; EWS)	**Reported in EWS[C]:**					
	Broiler breeders:	-	-	-	1 farm	-
	Layers:	5 farms	7 farms	8 farms	6 farms	⬆
	Backyard poultry:	2 cases	2 cases	1 case	2 cases	-
Erysipelas *(Erysipelothrix rhusiopathiae)* (Source: GD)	**Detected by GD: (new infections):**					
	Layers:	2 farms	1 farm	1 farm	5 farms	-
Pasteurella multocida (Source: GD)	**Detected upon necropsy:**					
	Layers:	-	1 farm	1 farm	5 farms	⬆
	No reports to the NVWA					
Histomonosis (Source: GD)	**Detected by GD:**					
	Reproduction (meat sector):	5 farms	4 farms	5 farms	7 farms	⬆
	Reproduction (layer sector):	-	-	1 farm	1 farm	-
	Layer pullets	-	-	-	1 farm	-
	Layers:	1 farm	1 farm	3 farms	-	-
	Turkeys:	1 farm	-	1 farm	1 farm	-
	Backyard poultry:	-	-	1 case	-	-

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

Monitoring ANIMAL HEALTH

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.