



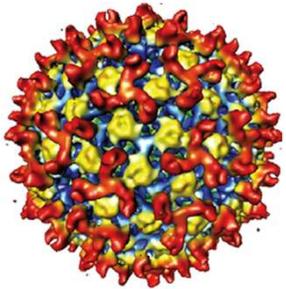
BLUETONGUE/EHD GENERAL OUTLINES OF THE 2023-2024 EPIDEMIC –

Christian Quinet



Bluetongue: introduction

Virus of Bluetongue



80 nm

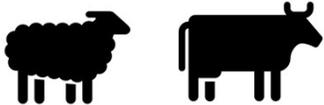
Genus *Orbivirus*

RNA Virus – antigenic drift +++

> 27 serotypes known

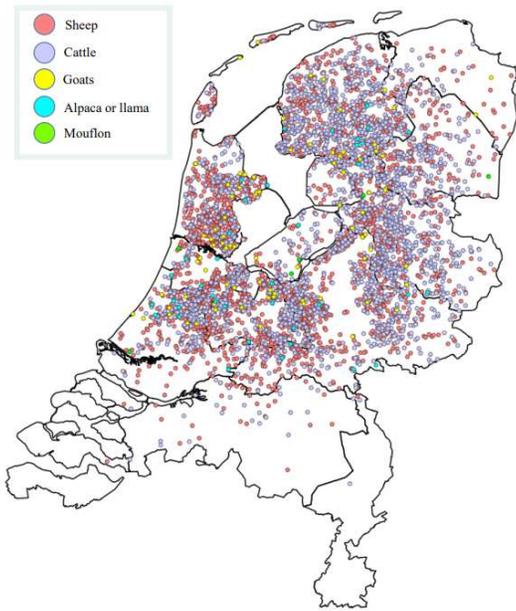
- **Vectorial disease → Culicoïdes**
- **Incubation time 5-12 D**
- **Variable viremia: 5-60 D (PCR detection 5-180 D)**
- **Pathogenicity varies according to serotype**
stunted growth, abortions and even mortality
- **No protection/cross-reactivity between serotypes**

Economic and health problems





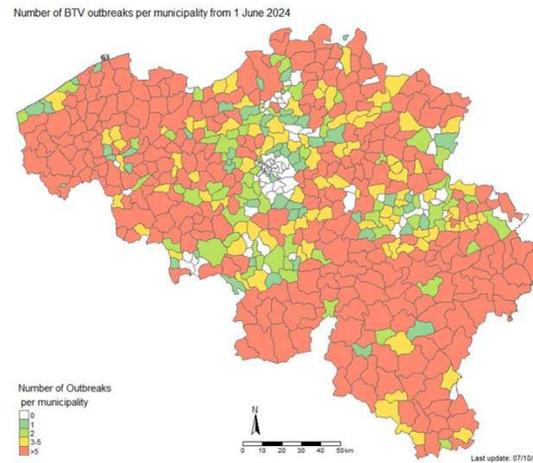
Bluetongue: introduction



04/12/23 : 3921 cas

- Sheep: 1890
- **Cattle: 1932**
- Goats: 69
- Alpaca/llama: 26
- Mouflon: 4

- ➔ September 2023: Bluetongue serotype 3 appears in the Netherlands
- ➔ Juillet 2024: massive spreading, notably in Belgium



Bluetongue: introduction



Holwerda et al., 2023

Clinical manifestations of BTV-3/NET2023 in sheep and cattle. (A) Hypersalivation and (B) erosion of the oral mucosal membranes and (C) bleeding of the lips are observed in sheep. In cattle are (D) ulceration on the oral mucosal membrane, (E) crust formation at the nostrils and (F) necrosis of the teats detected.

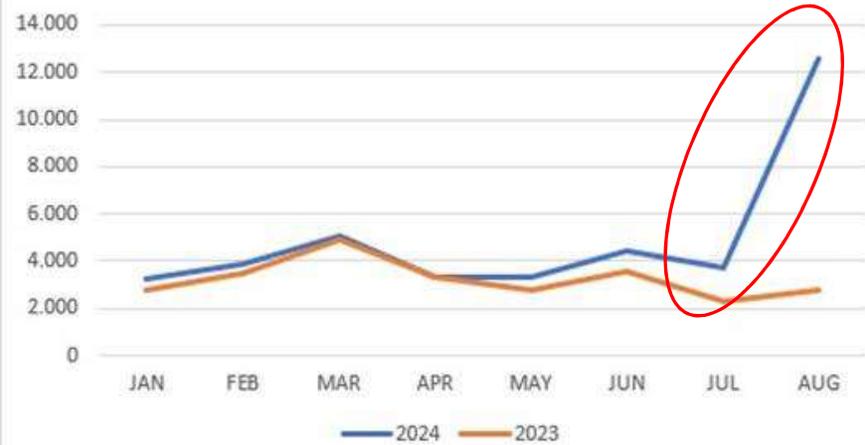


Bluetongue: introduction

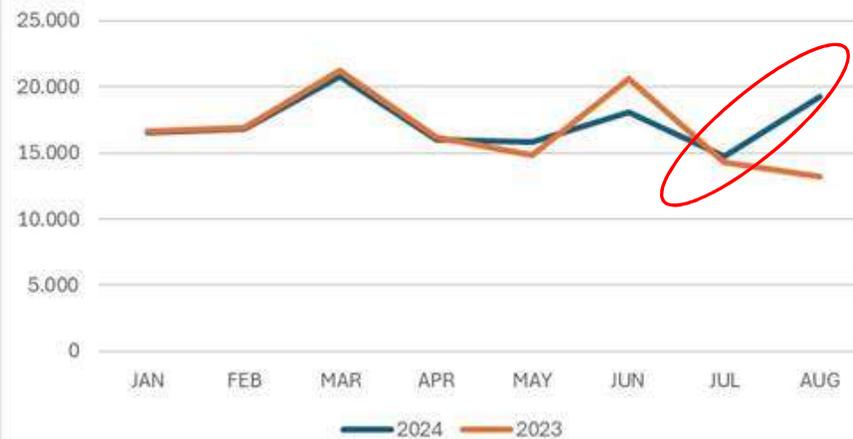


**Suddenly increase
of global
mortality !**

Fallen stock sheep-goats BE



Fallen stock Bovines Belgium



Bluetongue: introduction



Daily mortality rate (smoothed average over 15 days) - Cattle sector





Bluetongue: introduction

Surmortalité des bovins et ovins en 2024
enregistrements Rendac le 03/10/2024

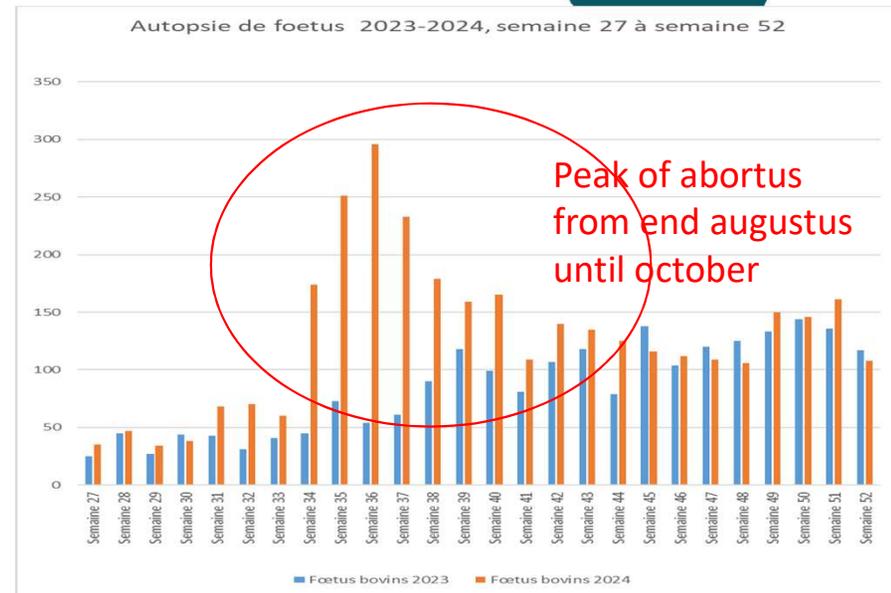
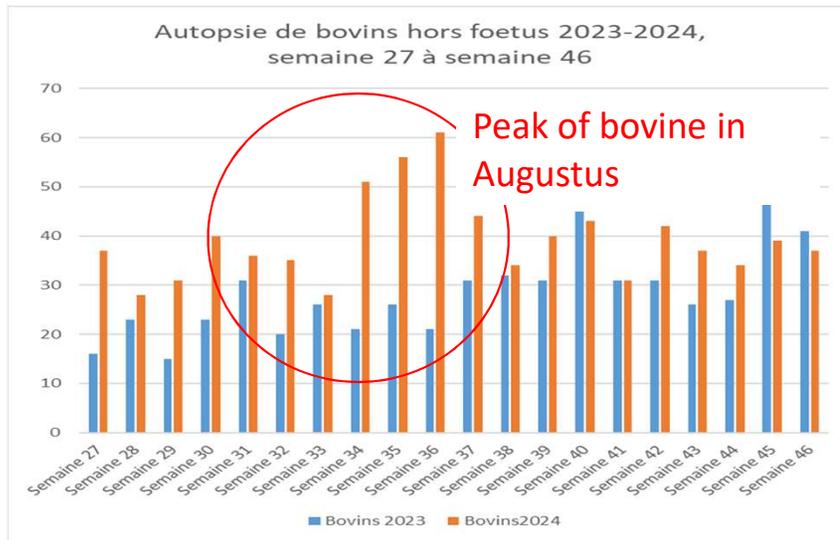
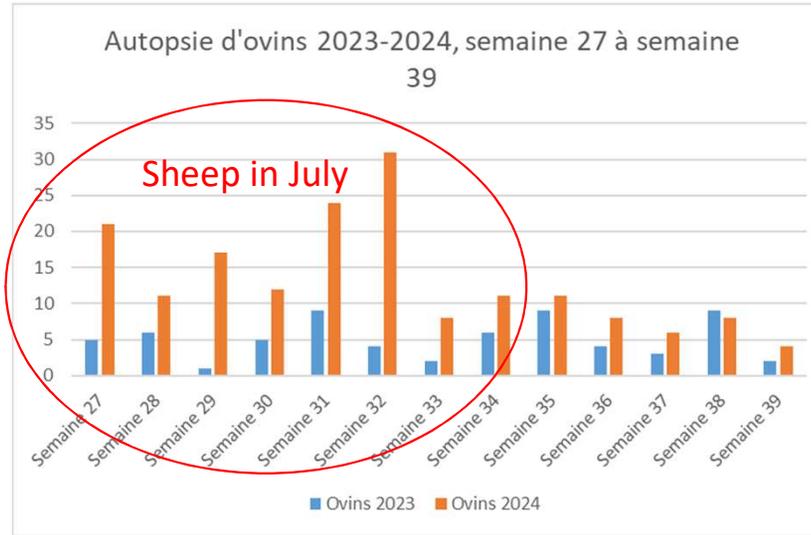


2023											
	rejected calf 10kg	calf 25 kg	calf 50 kg	bovine 150 kg	bovine 300kg	bovine 550 kg	bovine 800 kg	bovine total	lamb 10 kg	sheep 40kg	sheep total
aantal											
juli	580	1.140	7.583	855	1.106	2.191	397	13.852	997	2.313	3.310
augustus	632	1.167	7.598	903	1.245	2.310	360	14.215	1.219	3.308	4.527
september	605	1.169	7.956	1.018	1.488	2.314	361	14.911	1.060	3.351	4.411
totaal juli-september	1.817	3.476	23.137	2.776	3.839	6.815	1.118	42.978	3.276	8.972	12.248
2024											
	rejected calf 10kg	calf 25 kg	calf 50 kg	bovine 150 kg	bovine 300kg	bovine 550 kg	bovine 800 kg	bovine total	lamb 10 kg	sheep 40kg	sheep total
aantal											
juli	678	1.474	7.736	989	1.549	2.415	454	15.295	2.177	4.046	6.223
augustus	905	2.062	10.231	1.078	2.138	3.891	620	20.925	2.781	15.796	18.577
september	1.430	2.473	10.564	1.183	2.446	3.212	501	21.809	2.004	8.816	10.820
totaal juli-september	3.013	6.009	28.531	3.250	6.133	9.518	1.575	58.029	6.962	28.658	35.620
oversterfte 2024 - 2023	1.196	2.533	5.394	474	2.294	2.703	457	15.051	3.686	19.686	23.372
%	66%	73%	23%	17%	60%	40%	41%	35%	113%	219%	191%



FESASS

What happens in Necropsy room in Arsia (Belgium)



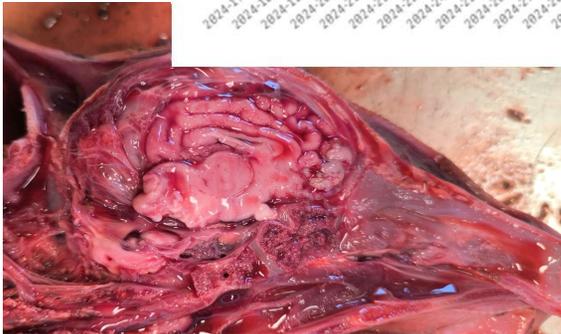
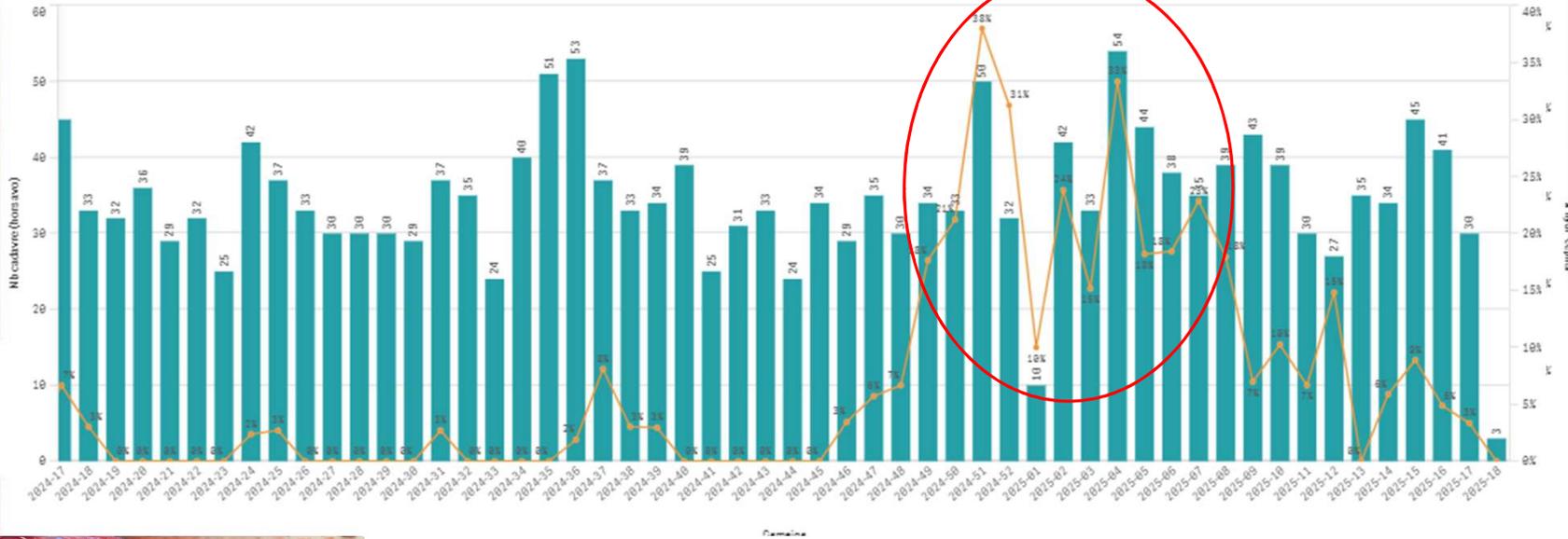


FESASS

A lot of hydrocephaly in bovine



Autopsie hors avo : %hydr*cephal* et Nb Cadavre



Abortion and hydrocephaly in bovine

- ✓ Different stages over time
- ✓ Less visible but abortion and hydrocephaly have the greatest impact
- ✓ Long term impact

Augustus: a lot of abortions without any lesions on fetuses

September until January: a lot of abortus with hydrocephaly

December until march: a lot of calves with hydrocephaly

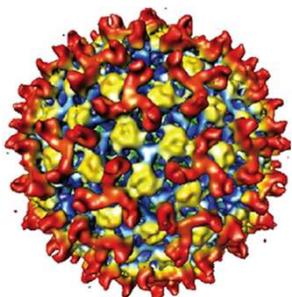
- ➔ Less calves (\searrow 15%)
- ➔ Less milk



Epizootic hemorrhagic disease (EHD)



Virus of EHD



80 nm

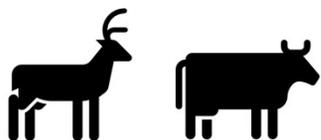


Genus *Orbivirus*

RNA Virus – antigenic drift +++

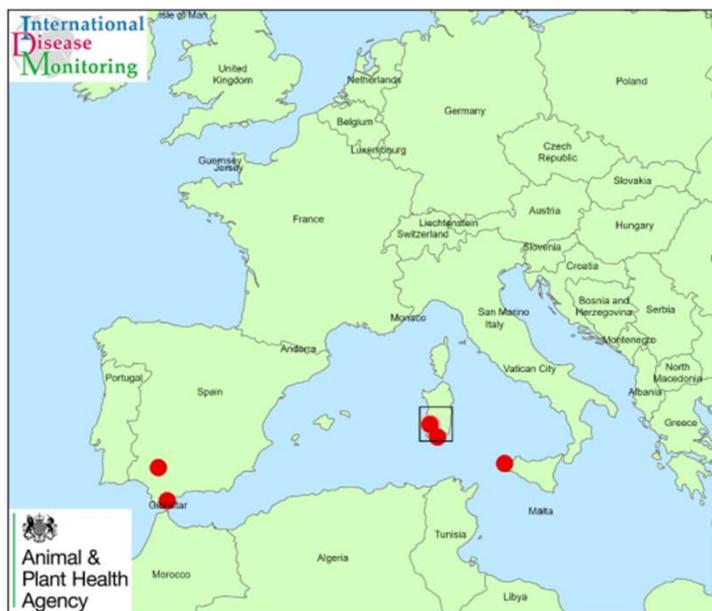
7 serotypes knowed (EHDV-1,2,4,5,6,7,8)

- Vectorial disease → Culicoïdes
- Incubation time 2-10 D
- Variable viremia: 2-16 D
- Pathogenicity varies according to serotype
- No protection/cross-reactivity between serotypes



Economic and health problems

Epizootic hemorrhagic disease (EHD)



Map Prepared by IDM
Date: 24/11/2022
Absolute Scale: 1:21,000,000

Epizootic Haemorrhagic Disease
in Southern Europe
November 2022



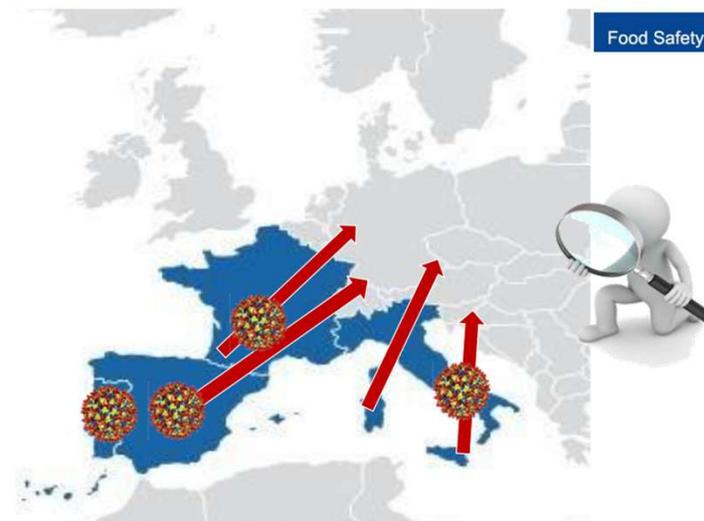
More than 3000 outbreaks of EHDV to date. The epidemic is still ongoing

Four countries affected

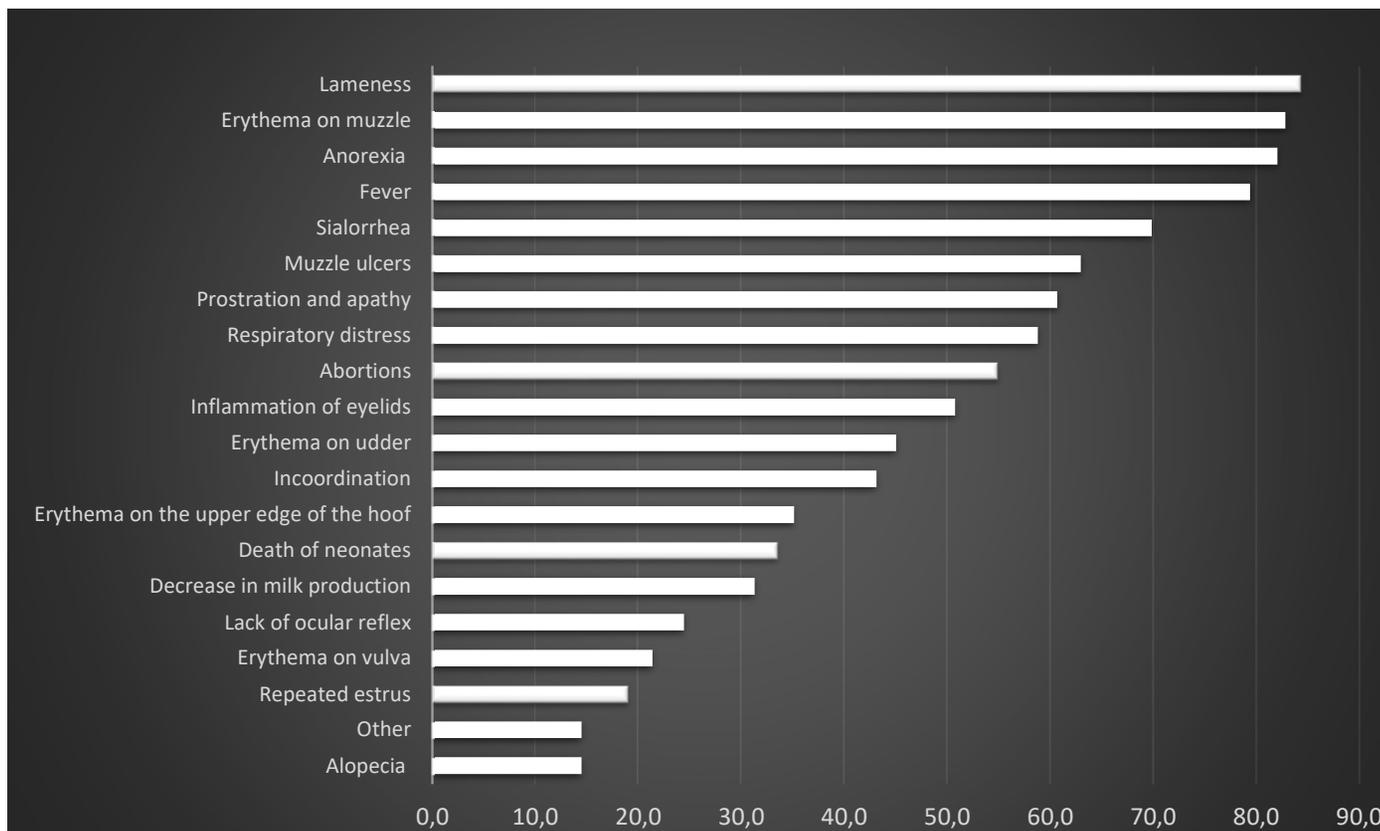
- ✓ France
- ✓ Italy
- ✓ Portugal
- ✓ Spain

Animal Disease Information System (ADIS) 

Food Safety



Epizootic hemorrhagic disease (EHD)





Thanks for your attention !

