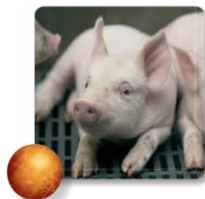


Quantitative risk-analysis studying the reintroduction of BTV-8 through cattle imports

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Background

- Since February 15, 2012 NL is BTV-8 free
- Consequences for imports:
 - only immunized ruminants originating from BTV infected areas are permitted
- Exact risk of reintroduction is unknown.
- Quantification gave the opportunity to include different outbreak and prevention scenario's.

Aim of the study

To quantify the risk of cattle imports in 2012 for the BTV-8 free status of the Netherlands.

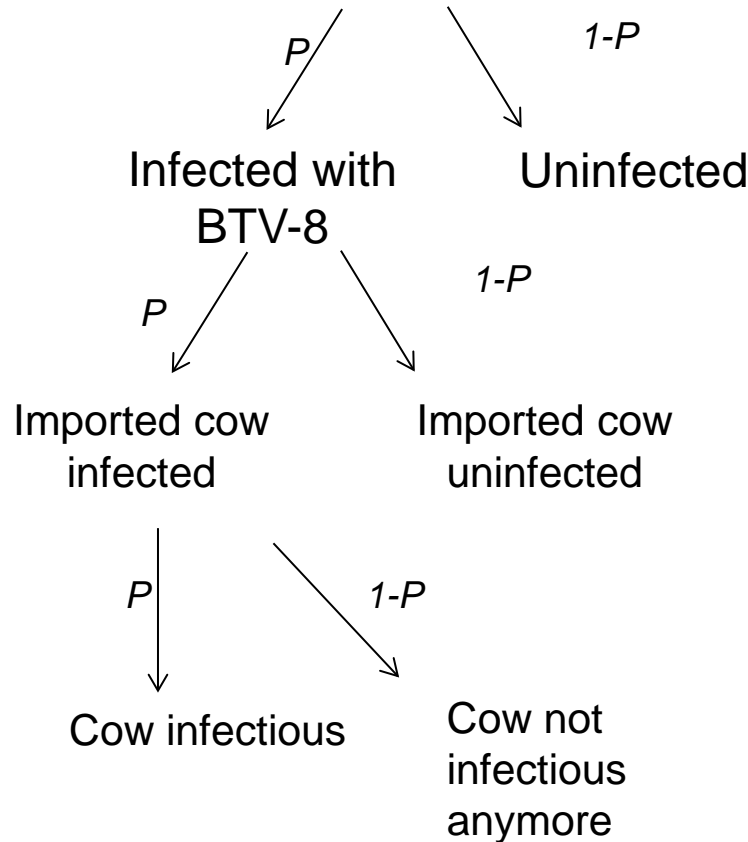
For veal calves, rose calves and other cattle separately





Material and methods

BTV-8 status country of origin



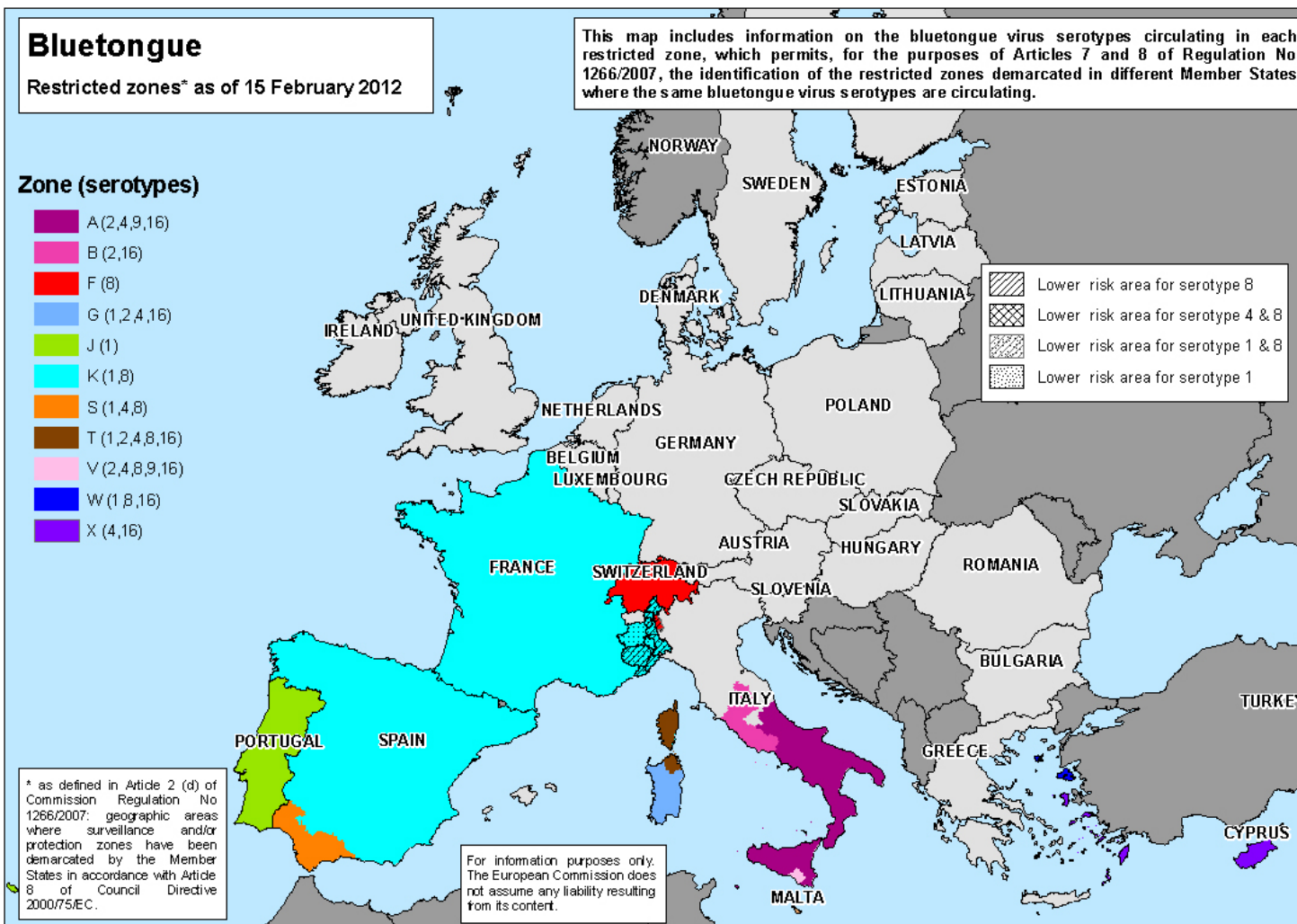
OIE

Virus prevalence
Vertical transmission
Horizontal transmission
Colostrum intake

Age at import
Infectious period

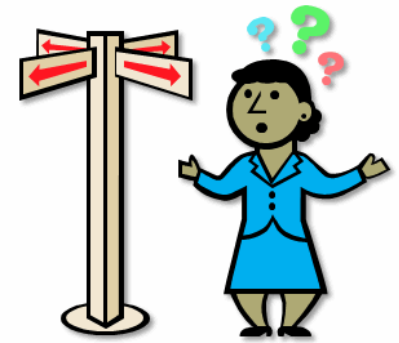
P re-introduction = P BTV-8 virus positive cow * imported cattle

BTV-8 status country of origin



Scenario's

- Only imports between March and November are a risk
- All BTV serotypes are a risk
- All imports from Italy are a risk
- Risk of vertical transmission is reduced 95% with sufficient colostrum intake.



Where is this going?



Other assumptions

- It is assumed that there are no restriction measures in place
- When values of parameters were uncertain a safe value was chosen with a wide confidence interval



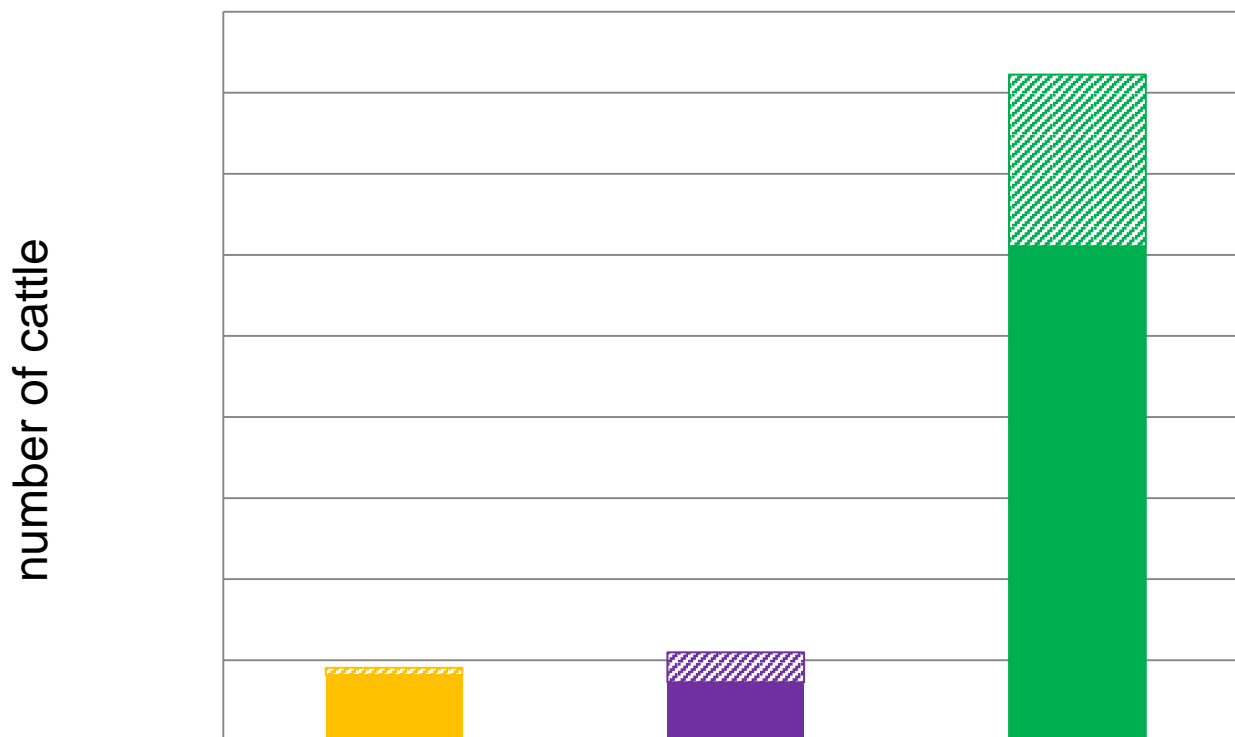


Results: descriptives

	Veal calves	Rose calves	Other cattle production types
<i>Number herds</i>	943	1,125	37,312
<i>Number of cattle</i>	691,761	394,180	3,201,186
<i>Herd size</i>	734	350	86
<i>Yearly imports</i>	581,374	304,977	57,295
<i>imports from BTV-8 infected countries</i>	160 (67-252)	186 (83-285)	2,557 (2,417-2,692)



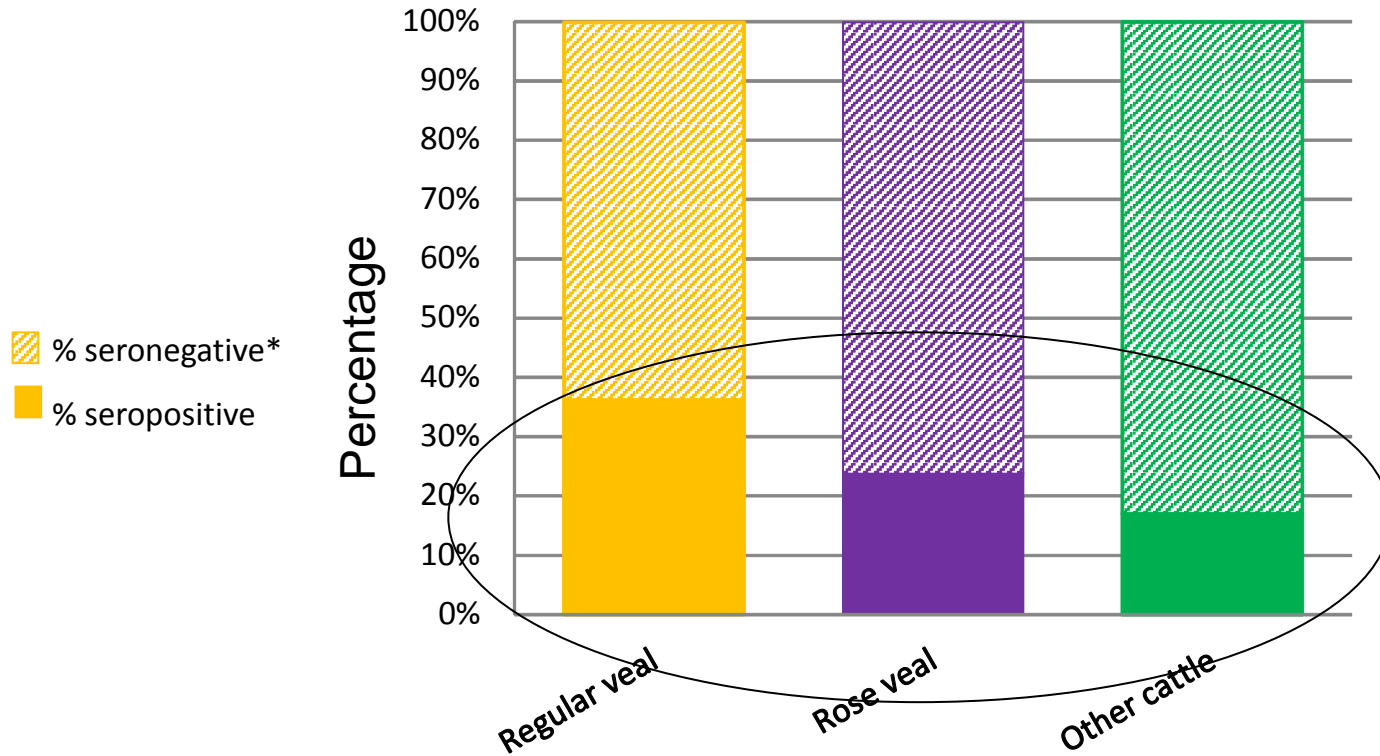
Results



Regular veal: 1 calf per 5.6 year

Rose veal: 1 calf per 4.5 year

Other cattle: 1.65 cow per year



% BTV-8 seronegative

63.7%

76.1%

82.9%

% BTV-8 seropositive

36.2%

23.8%

17.1%

% PCR positive and infectious

0.1%

0.1%

0.06%

Results scenario's

	Mean (90% confidence interval) for the number of BTV-8 infectious cattle		
	Veal calves	Rose calves	Other cattle
Basic scenario	0.18 (0.04-0.39)	0.22 (0.05-0.47)	1.65 (0.24-3.72)
Sc. 1 winter imports are no risk	0.16 (0.03-0.37)	0.15 (0.03-0.33)	1.2 (0.19-2.74)
Sc.2: all serotypes are a risk	0.29 (0.06-0.63)	0.38 (0.08-0.86)	3.25 (0.39-7.49)
Sc. 3: Sc 2. and all imports from Italy are a risk	6.13 (0.67-12.34)	2.46 (0.32-5.40)	5.75 (0.60-13.33)
Sc. 4: Risk of vert. transmission is reduced 95%	0.10 (0.02-0.23)	0.12 (0.02-0.29)	1.55 (0.16-3.61)

Discussion

- The estimated risk is an over estimation rather than an underestimation because:

- Virus prevalence in Non-free countries may be overestimated

- Imports in winter months are no risk

- Colostrum intake may decrease risk

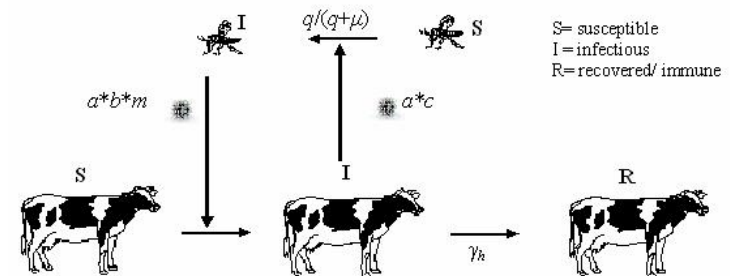


- Results are only valid in current situation

Conclusion

If no preventive measures are taken, the risk of re-introduction of BTV-8 through imports in 2012:

- of veal calves is fairly low
- of cattle is higher



The risk will become smaller in 2013 because other countries also regained their free status

Thank you for your attention



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