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Qualitative comparison of BVDV control programmes in Europe to substantiate freedom from infection

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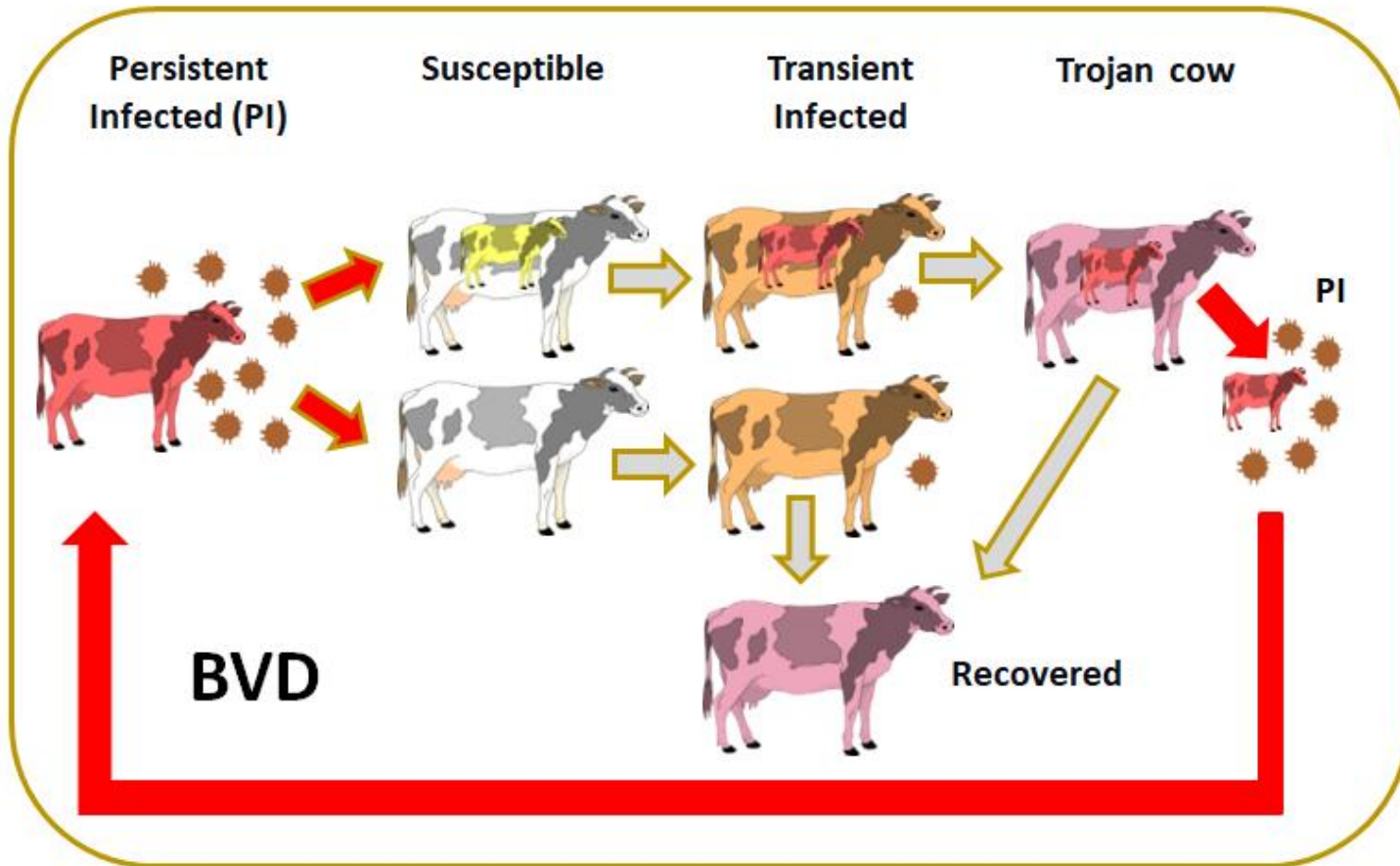


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Bovine Viral Diarrhoea Virus





Description of BVDV control programmes



<https://survtools.org/wiki/surveillance-design-framework/doku.php>



1 Surveillance System

The RISKSUR tool has been developed to design and evaluate surveillance for specific systems . A system is defined by:

- 1) The hazard: the disease for which surveillance is being designed
- 2) The surveillance objective (see 1.2 in the next screen)
- 3) Geographical area covered

Having defined your system you can also enter information that will be useful to inform the design including:

- 4) The susceptible population (species)
- 5) The risk characteristics associated with the previous 3 points

Please name your surveillance system (to differentiate from other systems you may design using this tool):

BVDV - Netherlands nov 2017

1.1 Hazard

Please write the hazard name in the box below:

BVD virus

If you need to take into account multiple hazards, please visit the **MULTIPLE HAZARDS** re-design page



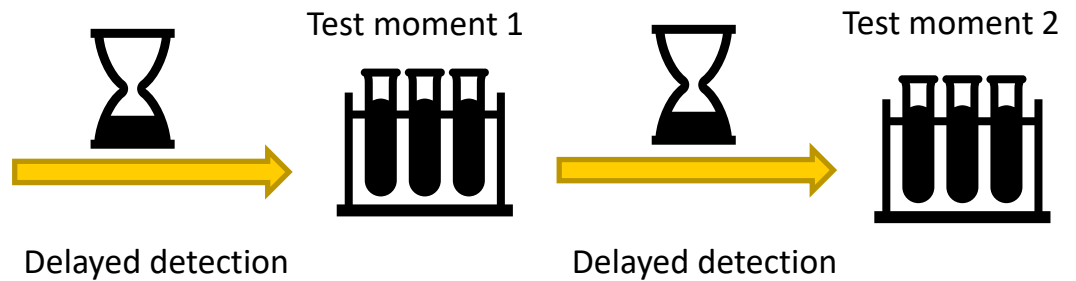
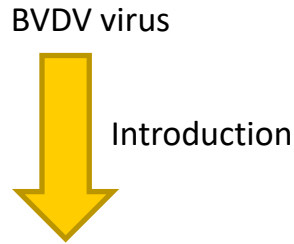
- 1. Surveillance System**
 - 1.1 Hazard
 - 1.2 Surveillance objective
 - 1.3 Geographical area covered
 - 1.4 Susceptible population
 - 1.5 Risk characteristics
 - Surv. system overview
- 2. Surveill. components overview
- 3. Target population
- 4. Disease suspicion
- 5. Enhancements
- 6. Testing protocol
- 7. Study design
- 8. Sampling strategy
- 9. Data generation/ sampling
- 10. Transfer means
- 11. Data/ sample analyses
- 12. Epidemiological analyses
- 13. Dissemination
- 14. Surveillance review

Click to navigate directly to a specific step

Surv. REDESIGN



Freedom from infection resulting from BVDV control programmes





Comparative ranking of confidence of freedom

Rank 1 - - - - - > Rank 6

Lowest risk of
introduction/transmission
or
highest likelihood of
detection

= **Lowest uncertainty
around the prob of
freedom**

Highest risk of
introduction/transmission
or
lowest likelihood of
detection

= **Highest uncertainty
around the prob of
freedom**

Context

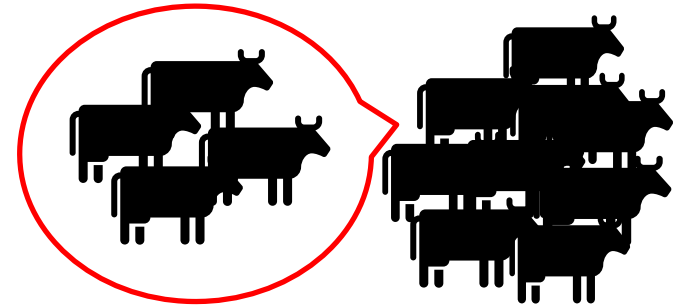
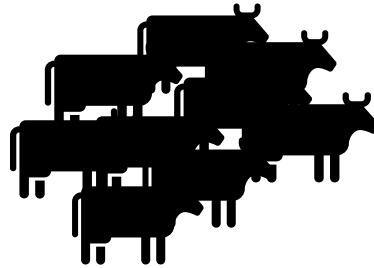
	DE		FR (Brittany)		IE		NL		SE		UK (Scotland)	
BVDV situation												
Herd level prev. of BVDV in breeding herds	2	0.08%	6	Unknown	3	2%	4	9%	1	0%	5	10%
Programme (CP) information												
CP level	-	Animal	-	Herd	-	Animal	-	Herd	-	Herd	-	Herd
Mandatory or voluntary CP	1	M	2	M/V	1	M	3	V	1	M	1	M
Demographic information												
No. of import in 2017	5	75k	4	52k	2	6k	6	918k	1	11	3	11k
Etc.												

BVD diagnostic testing

Ear notch

Bulk milk

Spot testing



Virus

Virus

Ab

Ab

newborns

Dairy cattle

Selection # of
cattle per age
group



Intake

	DE	FR (Brittany)	IE	NL	SE	UK (Scotland)
Initial screening		2 Bulk milk/spot test		1 Bulk milk/individual blood		2 Spot testing
Trade						
Testing of import		2 Recommendation to test before or after		1 Mandatory to test after arrival		2 Recommendation to test before or after
Etc.						





Surveillance

	DE	FR (Brittany)	IE	NL	SE	UK (Scotland)
Test protocol	Virus - ear notch	Ab - bulk milk; Ab - spot test	Virus - ear notch	Virus - ear notch/blood; Ab spot test	Ab - bulk milk; Ab - at slaughter	Ab - spot test
Time until testing since birth	1 Just after birth	3 Quarterly or after 24-36 mo.	1 Just after birth	2 Just after birth, 1 mo after birth or 8 to 12 mo	- Quarterly or at slaughter	4 Once or twice a year
Probability of false-neg. test result	1 Ear notch	3 Bulk milk or spot test	1 Ear notch	2 Ear notch/blood or spot test	- Bulk milk or blood	2 Spot test
Etc.						





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Discussion

- Data availability and comparability
- Relationship between context, intake and surveillance
- Different phases of control

Need for output based framework to calculate confidence of freedom





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Bundesforschungsinstitut für Tiergesundheit
Federal Research Institute for Animal Health

