Participation and compliance to a voluntary BVDV control scheme

INRA

**Christine Fourichon[1], Laure L'Hotel[1],
Brigitte Frappat[2], Dominique Pécaud[3]**

*Vet. School
NANTES*

[1]UMR1300, Modelling and Decision in Animal Health, Veterinary School, INRA, BP 40706, 44307 Nantes cedex 03, France
[2]Institut de l'Elevage, Paris, France
[3]Group Vulnerability and Risk, Institut de l'Homme et de la Technologie, University of Nantes, France

INTRODUCTION

Voluntary schemes are proposed to farmers to control endemic transmissible diseases. Understanding how and why farmers decide to enter in and comply to such schemes is important to achieve their successful implementation. The objectives of this study were to describe participation and compliance to a voluntary BVDV control scheme in a region of France where it has been proposed recently, and to investigate the determinants of farmers decisions and the motivations and obstacles they put forward.

DESCRIPTION OF THE CONTROL SCHEME AND PARTICIPATION

Surveillance and control plans

A collective control programme has been implemented in the region Deux-Sèvres (France) since 2004.
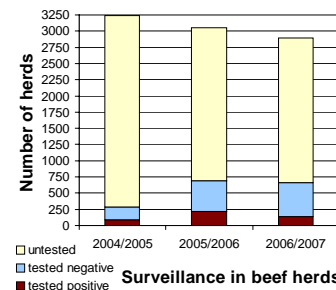
Surveillance

- In beef herds: Ab ELISA in sera of 5 animals (8to18 mo) every year *[voluntary, subsidised]*
- In dairy herds: Ab ELISA in bulk milk every 4 months *[systematic, subsidised]*
- For all animal movements to farms: Ag ELISA or PCR in blood *[systematic, subsidised]*

Control in positive herds *[voluntary]*

- Systematic testing to detect present PI animals + culling of all PI
- Systematic testing of new-born calves at the next calving season + culling of all PI *[Financial incentives if voluntary plan fully implemented]*
- Decision to vaccinate is discussed with the veterinary practitioner *[not subsidised]*

Detection of infected herds and enrolment in the voluntary scheme

untested / tested negative / tested positive
Surveillance in beef herds

Surveillance in dairy herds

Implementation and results of surveillance

After 3 years, 23% of the beef herds and 90% of the dairy herds are monitored for BVDV. The prevalence of Ab-Elisa positive herds is 21% and 54%, respectively.
262 PI animals were detected among 92'489 movements to farms (3 PI per 1000 animal movements).

Number of farmers enrolling

After 3 years, only 153 farmers have enrolled in the voluntary control programme.
It is less than 1 out of 3 detected positive beef herd and less than 1 out of 6 detected positive dairy herd.

Origin of enrolment

In dairy farms, the most frequent reason to step into the control scheme was positive result of the systematic sampling, whereas in beef farms, it was clinical disease.

Origin of enrolment	Dairy herds *(n=75)*	Beef herds *(n=78)*
Herd surveillance	80%	32%
Animal movements	1%	9%
Clinical suspicion	17%	51%
Unknown	2%	8%
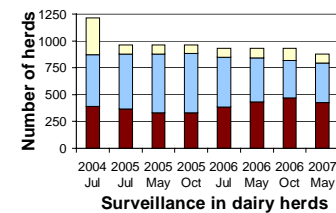
## FARMERS MOTIVATIONS, OBSTACLES AND COMPLIANCE

Study design

Among detected BVDV positive farms, 20 farmers were selected (14 who had enrolled and 6 who had refused to enrol).
In order to obtain a large variety of situations, 4 criteria were combined: dairy or beef herd, and, for enrolled farms, implementation shorter or longer than 9 months, PI detected or not, control plan achieved or still on-going.

Interview and data collection

Semi-directive interviews of the farmers were conducted by a unique interviewer and tape-recorded. The full transcription of the discussion was written down to analyse the text content.
Compliance to the control plan, motivations and obstacles were looked for assuming the existence of social interactions.

Assumptions
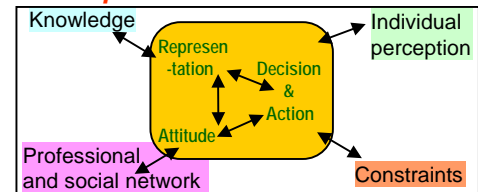
Results

Motivations and obstacles *(to enrol or to comply)*

Knowledge
No interest in the disease before being infected
Poor knowledge or misunderstanding of the control plan
Poor knowledge on the risk of virus introduction
Misunderstanding of the test results
Poor knowledge of the disease
Misunderstanding of the farm or animal qualifications

Professional or social network
Active in searching information
Strictly follow advice of the vet (to do or not to do)
Trust in the veterinary practitioner
Dense network and many exchanges of information
Trust in the animal health service
Multiple sources but variable and inconsistent advice
Isolated – no social network
No exchange of information with the neighbours
No trust or no discussion about diseases with neighbours

Individual perception
Cattle production important in the farm
Future of the farm (a new farmer is known)
Other responsibilities
Anxious about possible consequences in the herd
Experienced losses due to BVD
Experienced losses due to another disease
Willingness to limit risks for other farmers
Willingness to transmit a healthy herd
Market issue to sell animals
Preventive measures for other diseases
No visible losses
Useless
Doubts on the efficiency

Constraints
Easy to implement
Costs of measures too high
Lack of time
Will retire soon

Errors, gaps of knowledge and misunderstanding…

Are very frequent in farmers, both enrolled or not, on:
- The risks of virus introduction
- The transmission of the virus
- The preventive measures
- The clinical signs of the disease
- The existence of PI animals
- The tests results

Non compliance declared by farmers enrolled in the plan about:

- Implementation of systematic testing
- Culling the detected PI animals
- Vaccination although recommended by the vet

CONCLUSIONS

Despite a lot of efforts in surveillance and availability of financial incentives, only a few farmers have enrolled in the proposed voluntary surveillance and control scheme. Our qualitative survey in a sample of farms detected as BVDV positive showed that motivations to enrol in and comply to the plan rely more on individual perceptions of the farmers on farming and health and on their social and professional network than on their knowledge of the disease which is poor (even after having enrolled).
Improvements of the control scheme could focus on promoting the scheme to farm advisors and vets, on giving tools to farmers and advisors to assess losses due to the disease, on showing results that can be obtained from efficient control, on enhancing knowledge about risks of virus introduction, and on improving the consistency of recommendations by different advisors.