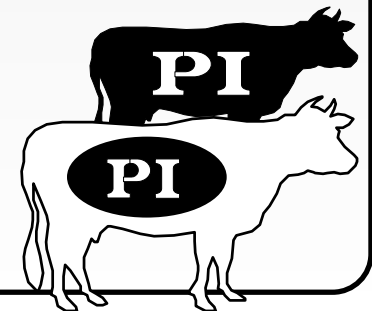


Work package 2

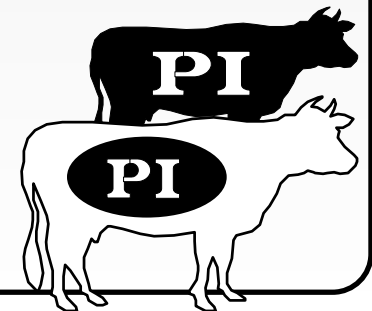
Epidemiology and risks

**Main issues
and
challenges**



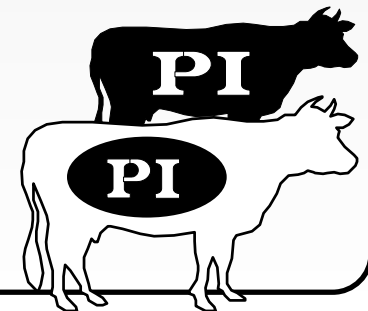
General challenges

- Identify knowledge gaps
- Coordinate ongoing and future research
- Propose guidelines and actions for future evolution



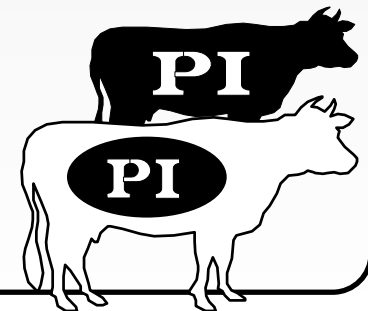
Main issues and challenges 1

- Describe the BVDV situation through out Europe
 - Harmonised (or at least transparent) measures of prevalence and incidence
 - Keep it updated



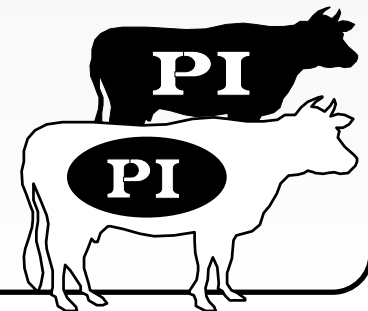
Main issues and challenges 2

- What are the best-bet options for BVDV control, given any local/regional/national preconditions that are predictive of its success?
 - Identify important predictors and collect the data
 - Visualise variability
 - Provide decision support



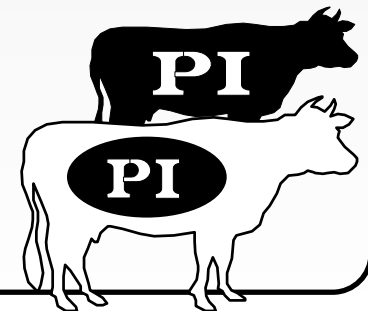
Main issues and challenges 3

- What are the risk factors for BVDV introduction? How do they change in relative importance during an eradication campaign?
 - Tracing is difficult - time from introduction to detection may be very long
 - Memory is short
 - The source of the infection may no longer have it
 - Can we use molecular epidemiology to establish the link between the source and the case?



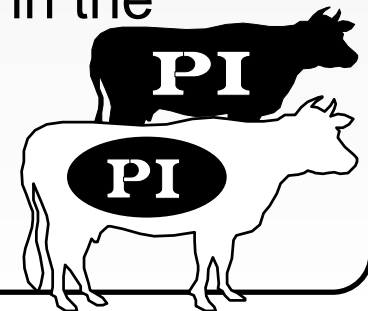
Main issues and challenges 4

- How can we use mathematical transmission models to provide decision support for strategical decisions on how to control BVDV?
 - existing models not always very transparent
 - not always able to capture the stochastic nature of BVDV infection
 - not always very well validated
 - do not address between-herd transmission



Main issues and challenges 5

- How does BVDV infection interfere with production, reproduction and disease incidence, given the production system?
 - Quantify the effect of BVDV on production - difficult!
 - Very variable between herds and over time. Dependent on means of introduction, herd immunity, reproductive states, housing system, general herd health and more...
 - Difficult to correlate production data with case criteria at the herd level.
 - Many other factors that affect these outcomes - how do we quantify them so that they can be accounted for in the analysis?



..and the ultimate challenge...

- **Making things happen** - What buttons should be pressed? What messages should be communicated, to whom, when and how? Where are the bottlenecks? Where are the openings?
- Understanding the decision process at all levels

**How do we make
people do what we
want them to do?**

