

Research project IZSve 01/14

Presence of BVDV type 3 virus in the cattle population of North-Eastern Italy: diffusion, clinical impact, pathogenesis in pregnant cows and strain characterization

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BVDV type 3 virus (BVDV-3) has been found in foetal calf serum batches, mostly of South American origin and it has been sporadically associated with clinical diseases in cattle and buffaloes.

In Italy the recent description of a clinical outbreak related to a BVDV type 3 infection as well as the identification of a BVDV-3 strain in archival samples coming from a cattle herd displaying respiratory diseases poses the issue of its presence and significance in the cattle population. Many questions regarding the BVDV-3 infection have still to be replied, e.g.

- Incidence of the infection
- Clinical impact
- Foetal transmission and abortogenic potential
- Cross-protection after BVDV vaccination (taking into account that BVDV vaccines licensed in Italy do not contain neither BVDV-2 nor BVDV-3 strains)

The availability of

- A very large group of samples (>90.000 / year), mainly collected in the framework of regional BVDV control programme ongoing in North – Eastern Italy, makes possible a population-wide survey aiming at assessing the incidence of infection and the clinical impact at field level.
- An Italian non-cytopathogenic BVDV-3 isolate enables to carry out an experimental infection in pregnant cows aiming at assessing foetal transmission and abortogenic potential as well as clinical and immunological parameters