7.3 Vaccination: BVD is problematic

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Whereas BVD vaccination is very popular in the US (the number of vaccines currently registered appears to be more than 150, nevertheless the epidemiological situation in the US has not noticeably improved), Europeans tend to be a bit more reluctant with BVD vaccines. This has to to with a questionable efficiency and safety of available vaccines as well as with widespread misapplication.

- A BVD vaccine is supposed to protect an individual from disease as well as to protect a foetus from intrauterine infection and prevent fertility problems. Protection from disease is good these days with modern vaccines, however foetal protection is not complete and neither is protection against reduced fertility.
- BVDV occurs in a multiplicity of antigenetically very different variations. The efficiency of approved vaccines in Switzerland is doubtful.
- Modified live vaccines contain cp BVDV. This means, the vaccine is unable to produce PI animals. However, modified live vaccines have been known to trigger Mucosal Disease in PI animals. Hence, vaccinating PI animals is not only useless, it’s even risky.
- Modified live vaccines may have a similar immunosuppressive effect as their respective field strains. This means a higher susceptibility to other pathogens or a possible aggravation of an existing medical condition.
- Killed vaccines are safer to use than live vaccines. However, they tend to be substantially less effective than live vaccines and require frequent boosters (twice a year minimum).

Conclusion

BVD vaccines are most effective in preventing acute disease, but their benefit is doubtful as far as foetal protection and prevention of fertility disorders is concerned. However, the latter two factors happen to have the greatest impact on economic losses due to BVDV, whereas acute BVD infections produce no symptoms in 70 - 90% of all cases, anyway. Considering again the possible side effects of BVD vaccines, their value may indeed be questioned. At any rate, vaccination can not be the only measure taken against BVD. If need be, animals at risk (virus- and antibody-negative cattle prior to their first insemination) may be vaccinated. However, the vaccination should be accompanied by other more efficient measures (herd screening, eliminating PI animals, biosafety on the farm, avoiding possible exposition and risky behaviour of staff and animals etc.).