Eradication of Bovine Viral Diarrhea

High-Throughput qPCR Screening for BVD
Up to 10’000 samples per day

Project Outline
BVD is one of the most widespread and economically important cattle diseases, causing annual losses of >10M CHF in Switzerland. Therefore, the Swiss government set-up an eradication program which included the testing of the complete cattle livestock (first phase) and subsequently monitored all newborn calves during several years (second phase). Microsynth was successful to become one of a few laboratories which were accredited by the Swiss government to qualify for BVD testing. Further, Microsynth signed exclusive contracts with 5 Swiss cantons.

Project Realization
The challenges associated with the BVD eradication program was to establish a robust logistics covering the full process of (i) sample shipment over (ii) cost-efficient diagnosis of the BVD virus from ear notches including thorough QA/QC systems to (iii) upload of the results to federal databases with the possibility to screen up to 10,000 ear notches per day. In a first step, Microsynth joined round-robin testing of the Swiss Veterinary Office and has got accredited according to EN ISO17025 STS 429. It is worth mentioning that Microsynth has been one of the few labs that approached BVD testing by applying a highly sensitive qPCR assay. In a second step, the logistics for high-throughput diagnosis of BVD from ear notches including a QA/QC system for monitoring the quality and sensitivity of the diagnosis was set up. Finally, Microsynth obtained the responsibility for exclusively screening of BVD in 5 Swiss cantons for several years. Thereby, it became the lab that has analyzed by far the most ear notches during the initial and the monitoring phase of the eradication program.

Customer Feedback
„The eradication program for BVD which started in 2008 is bearing fruit. To trace and eliminate the remaining infected cattle (less than 0.2%), all newborn calves will be screened until sufficient certainty regarding eradication is achieved. This is a great success that would not have been possible without the excellent collaboration of the Swiss Veterinary Service with the selected laboratories that have been accredited for this type of testing. In this aspect it is fair to mention that Microsynth was by far the largest laboratory handling more than 800,000 samples up to now, and in peak times up to 10,000 samples per day; always in an excellent quality."

Dr. Elena Di Labio,
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