

BVDV Status in Portugal

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Bovine virus diarrhoea virus (BVDV) is a widely spread cattle pathogen with marked economical impact in cattle industry causing bovine viral diarrhoea and mucosal disease. The losses due to various forms of BVDV infection include reduced milk production, reduced conception rate, abortions, congenital defects, growth retardation, calf mortality, respiratory disorders, and other diseases; in addition, foetal infection leads to PI calves who can develop the fatal mucosal disease. Bovine virus diarrhoea virus (BVDV) is most obviously introduced into a susceptible herd by purchase of a Persistently Infected animal (PI) or pregnant animals carrying a PI foetus, but also, by purchase of a transiently infected animal. Contact with cattle from other herds such as pasturing at close distance, animal shows, etc, can also be important for transmission of BVDV infection. PI animals are potentially important means by which BVDV infection can be maintained in herds. The prevalence of such animals in herds is 1 to 3 %.

For BVDV antibody detection, ELISA methods are the most popular and currently used, but virus seroneutralization test can also be used. The virus can be detected, easily, by ELISA methods or PCR-RT in blood, milk or by virus isolation in cell cultures. In Portugal, the existing commercial vaccines are inactivated vaccines.

During the last decade, control strategies found in literature concentrated either on eradication and vaccination. Between 1990 and 1995, some European Countries like Norway, Sweden, Denmark and Netherlands start BVDV eradication programs without vaccination; in Germany, the strategy was to vaccinate initially and to eradicate in a second step.

In 1997, UCADESA (a Farmer Animal Health Association) have financed several studies in dairy farms of the Northwestern Region of Portugal, to characterize the BVDV infection status and to evaluate the interest of the farmers and the veterinarians to engage in voluntary BVD control program. The results of the studies suggest that the prevalence of herds with BVDV was around 10% and the presence of the virus in herds is responsible for important reproductive disorders and calf mortality as well as premature culling.

Based on the results of the study and of the programmes already in place, it was proposed a control and eradication program for the region, designed in three stages. In the

first, called characterization (duration of 2 years), bulk tank milk antibody detection and individual virus and or/antibody detection are performed to all animals in the herd and to new animals and the PI animals are removed. In the second and third phases, called, respectively, qualification and certification stages, periodic monitorization of bulk tank milk, virus detection prior to animal introduction and a group of young animals are tested for blood antibodies. A vaccination program, with inactivated vaccines, could be performed, but only in the characterization and qualification phases. The herds who want to be certified need to have biosecurity measures, periodic bulk tank milk and animals testing and suspende vaccination .

This program was tested in two municipalities in the north of in 2000 and was temporaly suspended in 2002 to make some ajustments.