

Advice 03-2017 of the Scientific Committee of the FASFC on bovine viral diarrhoea (BVD) control

Background & Terms of reference

Bovine viral diarrhoea (BVD) is an endemic viral disease of Belgian cattle herds and from most other European countries, with both high health and economic impacts. The epidemiology of the disease is based on transient or persistent infections of animals whatever the age. Persistent infections only occur when foetuses are infected during a particular window of the gestation period (40 to 120 days) and lead to 'PI' (persistently infected) calves. These calves are mainly at the origin of the persistent nature of the infection in a herd or even in a region. Control plans are currently implemented in different European countries or regions (Belgium, Switzerland, Austria, Ireland, Scotland). Other countries are disease free since more than two decades (Denmark, Sweden, Finland, Norway).

The royal decree of June 18th, 2014, amended by the royal decree of January 20th, 2015 laid down the legal basis for a BVD control plan in Belgium. In the royal decree the start of this control plan was foreseen on January 1st, 2015. In preparing this plan by the Technical Working Group "BVD" of the Sanitary Fund it was also foreseen to gradually introduce supplementary control measures depending on the progress of the plan (time phasing of control measures). Based on the German model, the first stage of this plan involved the early detection of PI animals at birth through the use of ear-notches and the blocking of infected animals.

After two years of BVD control, the results of the follow up of the plan, as provided by both ARSIA and DGZ-Vlaanderen, show a significant decrease in the prevalence of newborn calves with a PI status. A draft royal decree introducing some of the planned supplementary control measures, including a time-lapse for PI animal culling/slaughtering and introduction of herd BVD status certification, was therefore elaborated.

The Scientific Committee is requested to evaluate the new draft royal decree which abrogates the existing one (royal decree of June 18th, 2014).

In addition, the following specific question concerning one of the new measures introduced by the royal decree is addressed to the Scientific Committee:

"In the case that a PI bovine is present in a herd, is it relevant or proportionate, from a sanitary point of view, to block all cattle of that herd until the PI bovine has been removed?"

Methodology

The opinion of the Scientific Committee is based on scientific literature data, on field data related to the evolution of the BVD-control plan and on BVD expert opinion.

Results and conclusions

The Scientific Committee approves the draft royal decree in regard to BVD control. The advice is based on the reduction of the prevalence of newborn PI calves and on other favorable results communicated by the regional associations for animal health (ARSIA and DGZ-Vlaanderen) in regard to the BVD control plan initiated in Belgium since January 1st, 2015. Furthermore, the Scientific committee presents recommendations to be introduced at short, medium or long term according to the objectives achieved in the control plan.

Short-term recommendations relate to:

- the slaughtering of PI animals as soon as possible (the 45-days term currently provided in the draft royal decree is accepted in consideration of the possibility left to the owner/holder to confirm the PI status of his animal by a second test);
- the improvement of biosecurity measures on farms, with particular attention paid to certain types of speculations at risk (e.g. fattening cattle);
- the reasoned use of vaccination, in particular because of its possible interference with serological monitoring;
- the establishment and systematic monitoring of epidemiological performance indicators of the BVD control plan.

Medium-term recommendations concern development and implementation of decision trees:

- for the management and follow-up of unfavorable monitoring results;
- to support livestock farmers in the subsequent sanitation of their herd;
- as well as to the preparation of epidemiological surveys to be carried out during the final stages of the control plan.

Long-term recommendations relate to:

- the immediate blocking of animals in a holding in which either a PI animal or PI-suspected animal has been detected;
- risk assessment targeting the less frequent causes of reintroduction of the virus within herds/regions: other susceptible species (pigs, small ruminants), wildlife, zoological parks, private doses of bovine sperm.

The Scientific Committee further recommends to rapidly finalize the analysis of the 'equivalent guarantees' for animals originating from the international trade and to develop epidemiological indicators for the evaluation of the control plan. These indicators will help to better follow up the results of the control plan in function of the planning. They will also support future modifications in the control plan which are actually foreseen in the draft royal decree.

To the question "in the case that a PI bovine is present in a herd, is it relevant or proportionate, from a sanitary point of view, to block all cattle of that herd until the PI bovine has been removed?" the Scientific Committee replies as following.

The Scientific Committee is of the opinion that the measure is relevant, considering the most important risk factors in regard to reinfection (trade and animal movements). The proportionality is respected by the application of a term (45 days) prior to blocking of the herd. This timeperiod allows the herd manager to confirm the IPI status of the animal by a second test. However, on a medium or long time, the Scientific Committee recommends to consider implementing an immediate blocking based on evaluation of the results of epidemiological indicators of the control plan.

The full text is available on this website in dutch and in french.