

Opinion 07-2022 of the Scientific Committee established at the FASFC on the draft royal decree on the surveillance of bovine, ovine and caprine brucellosis

Background & Terms of reference

Belgium is officially free of brucellosis in cattle, sheep and goats. Nevertheless, several outbreaks were detected in cattle between 2010 and 2013. In order to maintain its status, Belgium is organising a surveillance programme coordinated by the FASFC in cooperation with the animal health associations.

The present draft Royal Decree takes into account the recommendations formulated in the 02-2018 advice of the Scientific Committee of the FASFC. Moreover, the Belgian legislation on brucellosis control needs to be adapted due to the introduction of the new European Animal Health Law (AHL).

Given the epidemiological situation in Belgium and Europe, the Scientific Committee is requested to assess the relevance of the different measures of the surveillance programme mentioned in the draft Royal Decree.

Method

This risk assessment was carried out on the basis of expert opinion and available and relevant data in the scientific literature.

Conclusions

After examination of the draft Royal Decree and of the surveillance programme, the Scientific Committee makes the following comments:

Animal parks are not taken into account in the current Royal Decree on the surveillance of bovine brucellosis. The Scientific Committee recommends that surveillance for brucellosis should also be organised in animal parks. Furthermore, these animal parks have frequent international exchanges of animals and can therefore represent an increased risk of a possible introduction of brucellosis.

The draft royal decree only applies to cattle, sheep and goats. The Scientific Committee is of the opinion that other animal species, in particular camelidae (e.g. camels, llamas, alpacas,...) and suidae (e.g. pigs), should also be included in the surveillance programme.

Farms which are under suspicion should sample all animals present in the holding within 8 days. The Committee points out that the development of a detectable immune response after infection can be as long as more than 8 days. It should therefore be taken into account that if samples are taken within 8 days after the holding being placed under suspicion, recently infected animals will not (yet) be detected.

The Committee recommends specifying the criteria to base the decision to proceed with total or partial culling in case of a confirmed outbreak. An important criterion in this respect is the species of *Brucella* detected:

- *B. abortus*: Total culling of the animals present in the farm must always be carried out.
- *B. melitensis*: In case of detection of *B. melitensis* in small ruminants, total culling must always be carried out. However, *B. melitensis* is less easily transmitted between cattle and the infection is usually not maintained in the herd. Therefore, the decision for total or partial culling in cattle is mainly depending on the proportion of seropositive animals.
- *B. suis* biovar 2: *B. suis* biovar 2 is primarily a pathogen of pigs, which are not the subject of this draft Royal Decree. Infection with *B. suis* biovar 2 in cattle is almost always a 'spill-over' infection originating from wild boar and involving only one or a few cattle in a herd. Moreover, the bacterium does not spread between different cattle. It is therefore recommended to only slaughter the positive animals and not the entire herd.

The draft Royal Decree provides the possibility of moving male calves younger than 6 months from infected dairy farms to a fattening farm. From an epidemiological point of view, the Scientific Committee does not recommend to move potentially positive animals to another farm. Not even considering that such young animals are not highly infectious (even if (latently) infected) for other animals (OIE, 2018; Saegerman et al., 2010). Indeed, the transport of animals always entails risks of spreading the disease through possible indirect contact with other farms (e.g. cattle traders who buy up young calves often visit several farms during one day).

Up to now, the surveillance for brucellosis in sheep and goats is based on blood samples taken in the voluntary Visna-Maedi & Caprine Arthritis and Encephalitis (CAE) surveillance programmes. However, the Scientific Committee is of the opinion that this sampling is not representative of the small ruminants population in Belgium. It is therefore recommended to design a more representative sampling.

The Scientific Committee also notes that the number of reports of abortion in sheep and goats is low compared to the proportion of reports in cattle. It is recommended to raise awareness among sheep and goat keepers and that measures be put in force to further encourage abortion reports.

As regards with measures in case of a confirmed outbreak, it is recommended (1) to destroy any semen and colostrum collected and present on the farm; (2) to consider a possible infection of farmers and caretakers and to consult public health authorities; and (3) to submit pet animals (mainly dogs and to a much lesser extent cats) present on the farm to a diagnostic test for brucellosis. It is appropriate to consider euthanasia for infected dogs and cats that are present on an infected farm. Euthanasia eliminates any risk of (re)infection of animals and humans. If infected dogs and cats are allowed to live, it is recommended to sterilise them and treat them with long-action antimicrobials. However, no treatment is 100% effective and the infection often recurs in animals that have been treated with apparent success. It is therefore recommended to monitor these animals throughout their entire live to check that there is no flare-up of the infection.

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