

Advice 24-2010 of the Scientific Committee of the FASFC concerning the evaluation of a program for surveillance, prevention and control of *Coxiella burnetii* in small ruminants

It is asked to the Scientific Committee to evaluate a program of surveillance, prevention and control of *Coxiella burnetii* in small ruminants, and to answer several specific questions. The program is based on the urgent advice 01-2010 and on the rapid advice 08-2010 of the Scientific Committee.

The aim of the program is to control the spread of *Coxiella burnetii* in small ruminants and to limit the transmission of the bacteria to humans. The main source of infection for humans is by inhalation of with *Coxiella burnetii* contaminated dust or aerosols. These aerosols are mainly formed by the excretion of the bacteria during parturition or abortion, and/or via excreta of infected animals.

The Scientific Committee approves the differentiation of the exploitations in 4 types following the risk level and the number of animals.

Concerning the surveillance, the Committee approves the use of the RT-PCR test, but insists on the necessity to establish a positive threshold value for the test, which is essential for the follow-up of the positive exploitations and for the evaluation of the efficacy of the measures taken.

The Committee draws attention to the seasonal character of the lambing and to the importance of taking this into account for the periodical sampling of tank milk. It recommends to perform regular sensibilization campaigns to draw the attention of the farmers to the mandatory notification of abortion.

Ideally, the vaccination should have to be applied as a preventive measure to protect animals which are not yet infected by *Coxiella burnetii* at the time of the vaccination. Taking into account only a limited availability of the vaccine in 2010, a compulsory vaccination is recommended in the following priority goat farms:

(1) farms of type III (pedagogical farms, touristic farms, zoos, parks, etc.), due to the high risk of zoonotic transmission to the public. It is recommended to vaccinate all the goats on these farms. It is also recommended to serologically test the animals of these farms before the vaccination with an ELISA test to get to know their status. The purpose thereof is to be able, on positive farms, to forbid contact with the public of pregnant animals and of animals having given birth or having aborted.

(2) exposed (ELISA positive) farms of types I and II (farms with more than 50 small ruminants, whether or not producing milk). Due to the actual impossibility to distinguish non infected from infected goats, it is recommended to vaccinate all the goats of these exploitations, before pregnancy to obtain a better protection against abortion.

The vaccination of non-priority negative farms of types I and II and in the farms of type IV (less than 50 small ruminants), should be applied on a voluntary basis but only if enough vaccine doses remain after having vaccinated priority farms.

To be efficient, this vaccination campaign has to be finished before the animals become pregnant, i.e. before the start of the breeding season.

The application of the vaccination to sheep in 2010 is not yet taken into consideration because data on the efficacy of the vaccine in this species still lack and because there is, at the present time, no temporary authorization to bring the vaccine on the market for this species.

The Scientific Committee approves the proposed control measures of the program.

Concerning the evolution of Q fever in Belgium, recent epidemiological data indicate that the incidence of the disease in humans did not change since several years, and that there are no indications for an increased risk after the epidemic in The Netherlands. Because people are mainly infected by inhalation of with *Coxiella burnetii* contaminated dust and aerosols formed during the excretion of the bacteria during parturition or abortion and/or via excreta from infected animals, most of attention has to be drawn on the correct elimination of the foetal membranes or abortion products and on a controlled spreading of the manure, under circumstances with minimal risk of dispersion of infected dust or aerosol.

Based on scientific reports, the public health risk of disease after consumption of raw milk is considered to be "weak to negligible", except for the people at risk, for which the risk has to

be considered to “be real” (young children, old persons, immunodeficient persons, immunodepressed persons (chemotherapeutic treatment, systemic treatment with corticosteroids, etc.), pregnant women, and persons suffering from cardiac disease or valvulopathie). It is advised against the consumption of raw milk or raw milk products by these persons at risk. Pasteurization is an effective measure by which all the vegetative germs of the milk, including *Coxiella burnetii*, are killed. Pasteurisation of the milk from infected exploitations is a management measure aiming at protecting the people against infection by a certain number of pathogens, including *Coxiella burnetii*.

The full text is available on this website in dutch and in french, respectively under the section “Wetenschappelijk Comité/Adviezen” and “Comité scientifique/Avis”.