

## **Advice 13-2016 of the Scientific Committee of the FASFC on risk assessment and risk management measures of certain types of milk products for use in animal feed**

### **Background & Terms of reference**

European legislation (Regulation (EC) No 1069/2009 and Regulation (EU) No 142/2011) provides specific requirement for use of by-products not intended for human consumption (category 3 material) in animal feed to prevent disease outbreaks.

Regulation No 142/2011, annex X, Chapter II, Section 4 defines the specific requirements for milk and milk products for animal feed. Depending on the intensity of the heat treatment, the legislation allows the use of milk, milk-based products and milk-derived products throughout the European Union (Part I of the annex) or restriction of use in animal feed on the territory of the Member State (part II of the annex). Some milk-derived products having undergone a treatment referred to in paragraph 3. a i, ii, and iii of Part II, Chapter II, Section 4 of Annex X may be distributed throughout the Member State's territory.

Regulation No 142/2011, Annex X, Chapter II, Section 4, Part II, Item 3 b, I and ii allows the placing on the national market of two categories of dairy products most at risk (derived product of pasteurized milk and whey and raw milk products) under certain requirement. These requirements include a limited number of animal holdings, fixed on the basis of a risk assessment for the best and worst case scenarios carried out in preparation of the contingency plans for epidemic diseases, in particular foot- and-mouth disease (FMD).

The request for an opinion concerns specifically the latter two categories of dairy products, namely derived product of pasteurized milk and whey on one hand and raw milk products on the other hand. The Scientific Committee is requested to verify the risk assessment carried out in 2005 by the administration for placing on the Belgian market under "national requirement" of certain types of milk products for direct feeding of animals' livestock and evaluate the management measures implemented. It is more particularly asked whether the management measures based on a limitation to the pig species (pigs farms holding only), geographical limitation and limitation of the number of farms to which these byproducts may be intended, can be eased, among other things, to allow the mixed pig farms (i.e. farm holding several animal species) to use certain milk products for the feeding of pigs.

### **Methodology**

The Scientific Committee has conducted a qualitative risk assessment to identify relevant pathogens to animal health which may be transmitted via the two categories of dairy products most at risk listed in Annex X, Chapter II, Section 4, Part II, Item 3, b, i and ii of Regulation (EC) No 142/2011.

### **Results**

Foot-and-mouth disease (FMD), paratuberculosis and diseases caused by clostridia are identified as infectious diseases that can be transmitted to pigs via pasteurized milk derivatives and whey. Q fever, vesicular stomatitis, bovine viral diarrhoea (BVD), tuberculosis and brucellosis in addition to foot-and-mouth disease, paratuberculosis, and diseases caused by clostridia, are infectious diseases that can be transmitted to pigs via raw dairy products (included raw milk and white water).

The risk assessment of agents that could be transmitted to pigs through the most at risk categories of dairy products (one hand products derived from pasteurized milk and whey and the other hand raw dairy products) leads to the following conclusions :

- Belgium is officially free of foot-and-mouth disease (CFMD). The risk appears then in case of introduction of infection in the country. In case of an acute infection the foot-and-mouth disease virus would not be completely killed by pasteurization. The virus can infect pigs and infected pigs excrete large amounts of the virus in the form of aerosol. In case of contamination of raw or pasteurized dairy products by the foot-and-mouth disease virus, the risk of transmission of the disease is real and infected pigs can excrete the virus and be a source of spreading of the disease.

- Most *Mycobacterium avium* subsp. *Paratuberculosis* (MAP) strains are inactivated by pasteurization. The disease occurs mainly in ruminants. Domesticated pigs could possibly be infected by the oral route, but for this there is little information. The risk of transmission to pigs from raw or pasteurized dairy products is not known but is estimated to be low.
- In regard to *Coxiella burnetii*, agent responsible for Q fever, the possibility of an infection of pigs by the oral route cannot be excluded but is considered to be very low. In case of contamination of raw dairy products by *Coxiella burnetii*, the risk of transmission to pigs is therefore assessed to be very low. Given that *Coxiella burnetii* is killed by pasteurization, there is no risk of transmission to pigs via pasteurized dairy products.
- Spores of *Clostridium perfringens* and *Clostridium botulinum* are not killed by pasteurization. There is no evidence that transmission of *C. perfringens* from dairy cattle products to pigs form a risk. As a result, in case of contamination of raw or pasteurized dairy products by *C. perfringens*, the risk of transmission is estimated low. Pigs are susceptible, but less sensitive to the toxins of *Clostridium botulinum* than bovine. Swine botulism is rare in pigs. In case of contamination of raw or pasteurized dairy products by *Clostridium botulinum*, the risk of transmission of botulism is estimated to be low.
- Belgium is officially free of vesicular stomatitis. The infection is not declared in Eurasia and the risk of introduction is assessed as lower than for the FMD virus. The virus is transmitted through transcutaneous and transmucosal way. Given the very limited risk of introduction in Belgium, the risk of transmission of vesicular stomatitis to pigs through raw dairy products is considered low. Given that the virus is killed by pasteurization, there is no risk of transmission to pigs through pasteurized dairy products.
- Bovine Viral Diarrhea virus (BVDV) can infect pigs ; the virus can be transmitted through the milk of persistently infected (PI)-cows but the prevalence of lactating PI-animals is decreasing. The virus is killed by pasteurization. Infected pigs do not show clinical symptoms and it is unlikely that they will further spread the virus. In case of contamination of raw dairy products by BVDV, the risk of transmission is considered low.
- Belgium is officially free of bovine tuberculosis. Tuberculosis is rare in domestic swine in those countries that have implemented a tuberculosis control program successfully. Pasteurization of milk significantly reduces or eliminates the possibility of transmission of the pathogen. Tuberculosis from *M. bovis* is not particularly contagious in pigs. The risk of transmission to pig in case of contamination of raw dairy products is currently considered low considering the officially free status of Belgium for bovine tuberculosis since 2003. Given that *M. bovis* is killed by pasteurization, there is no risk of transmission through pasteurized dairy products.
- Belgium is officially free of bovine brucellosis and currently there are no outbreaks of brucellosis in Belgium. *Brucella* is killed by pasteurization. Brucellosis from *B. abortus* (the species that causes bovine brucellosis) is not common in pigs. *B. abortus* would not be transferred from one pig to another. The risk of transmission to pigs through raw dairy products is considered to be low. Given that *Brucella* bacteria are killed by pasteurization, there is no risk of transmission through pasteurized dairy products.

FMD virus is highly contagious and is considered as the most relevant pathogen for animal health which can be transmitted via the two most risky categories of dairy products. This risk is only relevant in case of an outbreak of FMD.

### Conclusions

The Scientific Committee agreed that the two most risky categories of dairy product, listed in Annex X, Chapter II, Section 4, Part II, Item 3, b, I and ii of Regulation (EC) No 142/2011, namely derived products of pasteurized milk and whey and raw milk products subject to national requirement may be used for feeding pigs in mixed farms as far as these two most risky categories of dairy products are only fed to pigs.

The Scientific Committee is of opinion that it is not necessary to apply a geographical limitation smaller than the national territory given that other more important routes of transmission of FMD are not subject to this limitation.

Traceability being one of the best risk management measures, it is important that the two most risky categories of dairy products can be quickly traced. It is therefore justified to subject the use of these products to specific authorization and to limit the number of farms that can get these products from dairy establishment or on-farm milk processing establishment. Thus, the number of farms that can receive products derived from pasteurized milk and whey (listed in Annex X, Chapter II, Section 4, Part II, Item 3, b, i of Regulation (EC) No 142/2011) remains limited to 10 per dairy establishment or on-farm milk processing establishment and the number of farms that can receive raw dairy products (listed in Annex X, Chapter II, Section 4, Part II, Item 3, b, ii of Regulation (EC) No 142/2011) remains limited to 2 per dairy establishment or on-farm milk processing establishment.

The Scientific Committee recommends to:

- check the traceability of these milk products at risk during food chain incident simulation exercises,
- sensitize farmers to recognize clinical signs of FMD,
- check if milk and milk products are mentioned as a route of contamination in the "operational manual for FMD" of the crisis cell of the FASFC, and
- immediately ban the use of these two most risky categories of dairy product in pig feeding in case of increase of the risk of introduction of FMD.

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