

EU comments on the First assessment report on primary production and processing requirements for raw milk products (Australia only) - P1007

The European Union (EU) would like to thank Australia for this opportunity to comment on the first assessment report on primary production and processing requirements for raw milk products (Australia only), issued by Food Standards Australia New Zealand (FSANZ). The EU recalls that, as an interested party, it has already commented on the discussion paper released in August 2008 at the previous stage of this process.

The EU encourages Australia to continue the process of reviewing its requirements for raw milk products, since the current requirements seem unnecessarily strict. Moreover, the EU considers that this review would offer an excellent opportunity for bringing Australian requirements fully in line with the relevant international standards, and in particular those set by the Codex Alimentarius Commission as regards microbiological criteria.

Like Australia, the EU adopted a high level of protection with respect to public health and food safety. At the same time, the EU is a major producer of high quality raw milk products, notably raw milk cheeses which are manufactured by traditional processes. This helped the EU to develop a comprehensive technical and scientific background on food safety and technology related with raw-milk products. When reviewing its standards for raw milk products, Australia might benefit from considering the EU experience.

In this first assessment report, FSANZ suggests the adoption of the so called "Option 3", that is, to amend the current dairy processing requirements in order to extend the permission for placing on the Australian market of raw milk products that meet the definition of "Category 2". Thus, it would allow products which can be shown to meet:

- on-farm controls to achieve very low (not detectable) levels of pathogens in the raw milk;
- processing controls that do not allow for the net growth of pathogens and have final product properties that do not support their growth

In this regards, FSANZ also states that the microbiological limits specified in Standard 1.6.1 *Microbiological Limits for Food* for unpasteurised milk and raw milk products will be reviewed as part of this Proposal in line with the product categories.

The EU would like to underline that it basically agrees with the principles stated by FSANZ, that would lead to a system-risk based approach for set microbiological criteria for raw milk products, rather than a burdensome system of case by case applications that does not reflect the currently available scientific data and developments on food safety.

The EU also expects that this process will be used to review Australia's microbiological standards for raw milk products so as to bring them in line with best international practice and with Codex Alimentarius standards.

However, the EU would like to point out that for the classification of safety of certain raw cheese products, it is not enough to base such classification on a selection of several "cheese styles" (in this case, cheddar, blue, feta and camembert), and consider a probabilistic model for each one. The extreme variety of cheeses and cheese types, and their inherent

characteristics and processing factors which impact upon the growth and survival of microbiological hazards, limits the validity of such modelling. This would carry the risk that Australia would ban from its market specific European products solely for the fact that they do not correspond to standardised production methods assumed for the selected cheese styles.

Thus, the EU suggests Australia to consider a broader approach, as described below.

In EU cheese production, the safety of each cheese product is mainly ensured by a preventive approach, such as implementation of good hygiene practice and application of procedures based on hazard analysis and critical control point (HACCP) principles. Microbiological criteria can be used in validation and verification of HACCP procedures and other hygiene control measures, in several key steps of the production and distribution chain.

The validation of systems based on such principles should be the basis for approval of products and establishments producing them also for import of cheese into Australia.

If Australia is willing to undertake and adopt new requirements for producing and processing raw milk products, then it should consider, not only the technological processing control measures itself (e.g. acidification, ripening period, temperature, pH, salt in moisture...), but also a chain of validation analysis and controls distributed over key points of production and distribution. Furthermore the EU considers this principle valid not only as regard raw milk chesses, but also cheeses manufactured with heat treated milk, as it is a powerful science based provision addressed to prevent food safety hazards.

In the case of the EU, there is a wide range of raw milk products that can be safely released on the market, as their production relies on a range of factors that include:

- The control of raw milk coming from the primary production, including the sanitary control of the herds, the regular control of the milking animals for screening of subclinical mastitis, the strict good hygiene practice measures applied during milking, transport and deliver on the establishment;
- Implementing a selection procedure for receiving raw milk in the establishment, including regular testing requirements and quality valorisation for payment to the producers, and also the rejection of low quality milk from the production chain;
- Application of good hygiene practice and application of HACCP principles on the establishment, including the use of microbiological criteria for validation and verification of procedures and for defining the acceptability of the processes in each relevant key steps;
- The conduct of monitoring analyses, not only during the final stage of its commercial life time but also trough the distribution chain;
- The implementation of corrective actions, in accordance with food law, the instructions given by the competent authority and also the above referred HACCP principles.

For such products, the risk of presenting levels of pathogens likely to cause food poisoning outbreaks is very low. Therefore, EU raw milk products should be placed under category 2 according to the criteria defined by FSANZ.

Furthermore, the EU considers that not enough consideration has been taken to all relevant processing factors that may influence on the likelihood that certain pathogens might grow or even survive in raw milk products.

For example, the report states that the probabilistic modelling developed by the *Microbiological Risk Assessment of Raw Milk Cheese* indicated the importance of certain parameters that determine whether certain pathogens can survive or grow (use of high microbiological quality milk, rapid acidification, minimum ripening period and temperature, inhibitory pH/salt in moisture profile) and, therefore, the level of risk presented.

The EU considers that the role of the competitive microflora factor is underestimated in such conclusions. The competition with other bacteria plays an important role in most raw milk products, beginning with the early stages of the process (addition of starter cultures). This is also considered in the Code of Hygienic Practice for Milk and Milk Products (CAC/RCP 57-2004) of the Codex Alimentarius Commission, which states this factor as an example of a microbiocidal control measure.

Further, it should be noted that a combination of factors is generally more effective in controlling the risk, rather than each individual measure considered by itself, notably for certain pathogens, including *Listeria monocytogenes*.

The EU considers that both role of the competitive microflora and the impact of a combination of factors needs to be fully taken account of in the probabilistic modelling.

The EU also does not subscribe to the concept in the report that the milk itself is the main contaminating factor of milk products, or that raw milk cheeses are more likely to support the grow of pathogens than heat treated milk products. On the contrary, for pathogens like *VTEC* and *L. monocytogenes*, faecal or environmental contamination is a major transition route, especially when considering milk collected from healthy animals. Moreover, it has also been observed that *L. monocytogenes* in naturally contaminated food grows slower than in artificially contaminated foods (Dalgaard and Jørgensen 1998).

Finally, it should also be noted that the value of some microbiological criteria relies on the monitoring of certain risk factors leading to corrective actions, rather than the detection of pathogens itself. This is the case, for example, in the detection of levels of *E. coli*, which might be used as an indicator of faecal contamination. Also the detection of *S. aureus*, might also indicate the potential presence of staphylococcal enterotoxins, which possess a higher pathogenic potential than the bacteria itself. Such analyses might have great value when performed in early stages of raw milk production as indicators of contamination of raw milk, but poses limited value if performed on a cheese made of pasteurised milk, as the microorganisms would have disappeared during heat treatment, although the toxins might persist due to their heat stability. In this case, the heat treatment suppresses an indicator, but not the hazard itself.