

A barrier for preventing pathogenic bacterial growth in cheese from non-pasteurised milk – Safecheese Project



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Safecheese is a three year project funded by European Commissions 6th Framework Research Programme combining an international consortium of SME Cheesemakers and research institutes Pera and Matforsk.

Thousands of small and medium-sized European enterprises make cheese from unpasteurised (raw) milk which has a unique taste and quality and is appreciated by consumers all over the world. Many producers maintain that the taste is not the same when they use pasteurised milk. The majority of cheese however, is made from pasteurised milk because the perception is that heat treatment offers an additional barrier to eliminate pathogenic bacteria. Current EU legislation is requiring measures to ensure

all food made available to consumers should be safe to eat. When producing cheese from non-pasteurised milk, there is no barrier available for preventing growth of pathogenic bacteria other than Good Manufacturing Practice. In Europe, cheese will continue to be made from unpasteurised milk by approximately 110,000 SME producers and there is a need for a robust barrier that can prevent pathogenic bacteria growth in raw milk cheese without adversely affecting the distinctive taste and quality.

The objective of the SafeCheese Project is to develop a naturally occurring protective culture of lactic acid bacteria originating from raw milk cheese. This protective culture would subsequently prevent pathogen survival whilst generating the lactic acid that is essential in the first step of cheesemaking. Lactic acid bacteria are everyday constituents of food and are responsible for the taste and texture of dairy products like yogurt and cheese and also for certain meat products like salami. Preliminary work by the Norwegian centre for food research, Matforsk, has shown that some lactic acid bacteria can kill the pathogens such as Salmonella, Listeria and *E. coli* which might be contaminants of unpasteurised milk. The Safecheese project will examine lactic acid bacteria used by cheesemakers across European countries and test their ability not only to prevent the growth of pathogens, but also to kill undesirable bacteria during cheese maturation. The project will expand the current understanding of microbiological growth of both lactic acid bacteria and unwanted pathogenic bacteria in raw milk cheeses. This information will contribute to food safety and help SMEs in the milk and cheese sector to become more competitive by reducing costs, adding value and boosting consumer confidence.