Scientific Interpretive Summary

A systematic review of the human disease evidence associated with the consumption of raw milk and raw milk cheeses.

The New Zealand Food Safety Authority is proposing a framework that would allow a wider variety of raw milk products to be sold and produced in New Zealand. Raw milk products are inherently higher risk foods than pasteurised products, because they have not undergone enough heat treatment to kill pathogens such as *Listeria monocytogenes* and *E. coli*, which can cause foodborne illness. Products with high moisture levels can support the survival and growth of these pathogens and internationally illness caused by high numbers of *Listeria monocytogenes* and *E.coli* have been traced back to raw milk products.

To inform the Standard setting process and aid the development of a risk communication strategy, a systematic review of the available human mortality and morbidity evidence associated with the consumption of raw milk and raw milk cheeses and an agreed list of pathogens was commissioned from Massey University.

The appraisal process utilised standard systematic review approaches. It focused on publications reporting human illness linked to raw milk, raw milk chesses and other untreated products and by-products of raw milk of bovine, goat, sheep or buffalo origin contaminated with pathogens such as *B. cereus, Brucella* spp, *Campylobacter* spp, *C. burnetii*, *E. coli* spp, *L. monocytogenes, M . bovis, Salmonella* serovars, *Shigella* spp, *S. aureus, Streptococus* spp, *Yersinia* spp, and *Toxoplasma* spp.

It was not possible to determine a **strong** causal link between consumption of raw milk or dairy products made from raw milk and any of the pathogens reviewed. **Moderate** evidence supporting a causal link was demonstrated for *Camplyobacter* spp, *E coli* spp, *L. monocytogenes,* and *Salmonella* serovars. There was some evidence, albeit **weak**, to support a causal link with *Brucella* spp.

The lack of well designed studies precluded the use of meta-analysis to assess the available evidence.