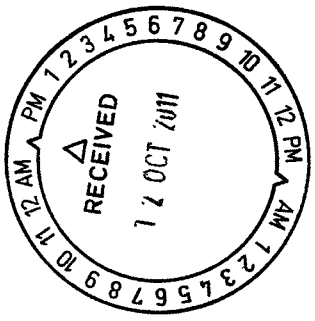
SUBMISSION

Proposal P1007
Primary Production & Processing Requirements for Raw Milk Products.

2nd Assessment Report



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Y. Webb.

FSANZ response (page 40) in the Summary of Submissions believes 'The drinking of raw milk is inherently risky, particularly for vulnerable groups such as young children and pregnant women and FSANZ will continue to communicate this risk.'

FSANZ clings to this position while the non English speaking world as well as part of the English speaking world, drink, and have drunk for centuries, unpasteurised milk, without any visible risk. A Hindu Indian cannot accept that "Mother cow's" milk is anything other than sacred and inherently safe. Indeed, many microbiologists and physiologists will argue that it is of benefit to children, rather than being a risk.

FSANZ remains part of an elite minority who *believe* that drinking raw milk is inherently dangerous without appropriate evidence. Historically when bovine tuberculosis and brucellosis were common it was thought that cattle were carriers and that it was easily transmitted to humans. No product testing was available then so all milk was treated as potentially contagious. That is no longer valid. So the argument has cleverly shifted to food spoilage organisms.

This second report does not clearly demarcate the dangers of those supposed early identified pathogens, pathogens that are regularly present in fresh raw milk, even human Mother's milk and the dangers of food spoilage organisms which are due to poor handling and may be similarly present in meat, eggs and other foods which have been poorly handled. The context has changed but the argument persists.

Therefore much which should be considered in such a document is omitted and much of what in included is contrived or not important.

Until the fact is accepted that raw milk is not sterile, (and neither is Mother's milk), but is not inherently dangerous, and consumers who travel see raw milk being available in many emerging countries as well as in Europe there will be continuing criticism of the Australian total or partial ban of raw milk and its products. Since one out of three Australians have a parent who was born overseas, there is one third at least of the population who have had contact with raw milk and its products if not having consumed it personally without detriment.

Why are raw milk yoghurts not considered here? In many places without refrigeration, if the raw milk is not consumed that day it is converted, without fuss, to yoghurt for keeping.

Comments on the Executive Summary

The Problem is about present processing and alternative processing. The question would more aptly be - whether processing of raw milk is required. Attachment 1 (rawMilk.org)

The objectives, as stated, are about maintaining an acceptable level of public health. Some people might argue that drinking raw milk helps improve the immune system and therefore would improve rather than just maintain health.

The assessment Framework is based on this *belief* that raw milk is inherently dangerous. Which, of course, it is not. Therefore categorisation is irrelevant.

The impact analysis is common sense. Of course Categories ! & 2 are safe, processed or not and in category 3 the level of risk cannot be reduced as stated, because if properly handled there is no risk.

The reasons for the Preferred Approach is all about elimination of pathogens. If dangerous pathogens are present in the milk then the animal is likely to be sick. If healthy, well maintained animals are used then their milk will also be inherently healthy without life threatening pathogens.

In the conclusion FSANZ quite rightly states that the current proposal is limited in scope. Why? What a pity.

1 Background to Proposal P1007.

It would have been illuminating to have had the background to support the Committee's views. In fact, it would have been useful to have a summary of the countries which have no restrictions on raw milk and its products,.those that have some restrictions of collection or processing and those where raw milk and its products are banned.

It is impossible to separate out raw milk from raw milk products. As Carlo Petrini from Slow Food International says 'Why are French and Italian bugs OK but not Australian?'

It is time to join the world. 'No further work will be done on Category 3 products' says FSANZ. Unbelievable. So time, money, resources etc will again have to be expended by the community to allow Category 3 in the future. These are the products generally made by the woman of the household in countries like India from Raw cow's milk and in Eastern European countries. These products are used for cooking in the original, traditional cheesecakes and cheese patties which, for most people, means that they are cooked in a domestic kitchen – and have been done so for centuries. In fact, good cookbooks from these countries usually include recipes for making yoghurts, curds and soft cheeses from Raw Cow's milk. Yet FSANZ has not included, at any stage, even one solid reference to argue that that is poor practice or statistics that that is dangerous.

2 Scope of the Proposal

The Code definition of raw milk products under the Code seem to be eminently more sensible than that crafted by FSANZ for this document. However, it is worthwhile listing the animals producing milk drunk by humans. It is a pity that they are not referred to again in more specificity other than goat.

The Problem

Surely the first problem should be to ascertain whether the FSANZ knows something that the wider world doesn't – whether raw milk is inherently safe or dangerous. Both microbiology and epidemiology provide the solid answer.

I would have thought that of the 3 drivers listed 2 are not drivers but a consequence of drivers. Surely the driver to the whole exercise is to demonstrate that raw milk and its products are safe. That would then ensure that there is 'an efficient and competitive food industry.' And it would provide' national consistency in legislative requirements.'

Objectives

No countries import fresh raw milk. It is not practical nor safe to do so. A greater range of products will be available to the consumer if there is no restriction on appropriate raw milk and raw milk products.

Why is a listed objective all about competition about imported versus domestic products. Fair competition on the other hand, as a first step is to remove the silly limitations. Taste emanating from 'terroir' is one of the precious and prized qualities of various raw milk cheeses. Competition occurs only so far as, for example, the white wines of the Barossa differ from those from Stanthorpe and differ from the French or German ones. An objective should be to open up the opportunity for small dairy farmers to produce a unique product to be available in their local community. That would be an income source, sorely needed in these times.

2.1 Statutory Considerations

2.1.1 In the list provided 'the need for standards to be based on risk analysis using the best available scientific evidence' has arguably not been complied with nor has 'the promotion of consistency between domestic and international food standards'
The promotion of Fair Trading in food is applauded but there is little if any evidence of that being promoted in this document. In fact, the case is put (elsewhere in this document) that consumers are willing to pay a higher price for raw milk. Why would it be more expensive as it requires less handling and no processing. It is cheap which is why the poor of the world consume it. The same would occur here unless it is proposed that government charges would inflate the costs thereby not making it a 'Fair Trade,'

5.2.2 Policy Guidelines

'Any regulatory measures developed should be commensurate with risk and not impose unnecessary additional economic burden on the dairy industry.' Making raw milk and raw milk products available to individual consumers by small dairy farmers at source will not impact on any way on 'supermarket' sold milks. Indeed large companies should not have contact with, nor influence in, this boutique industry of local importance. This activity is likely to enhance local economies rather than be a burden to anyone.

3 Assessment Framework

Since the original views of early 20th century used the word pathogens to mean tuberculosis etc which were unarguably dangerous, if transmitted to humans rather than food spoilage organisms, it would be more meaningful if E.coli etc were termed food spoilage organisms here since they are present in any food in contact with poor hygiene. The case put forward would similarly apply and does for meat, fish, eggs and fruits and vegetables. Unwashed salad vegetables have, unequivocally, caused problems around the world but are not banned. The E coli problem of eggs particularly in Europe is well documented. Yet they are not all banned! Eggs are sold raw!

No one is denying the need for hygienic production, but no more than the average woman uses in her kitchen when preparing food for her family or chefs in kitchens elsewhere. That is not a specific argument on why raw milk and raw milk products should be banned while the other products are not. To say that potential producers don't have the skills is arrogant because, if they have been overseas, they probably do.

To further weaken the case put for the banning of Category 3, most of these cheeses made from raw milk have a very short life and in cultural practices are generally cooked eg in cheesecakes and fried and other baked. It is legend how decades of Eastern European migrants have complained that they can't get 'suitable' cheese for the real

cheesecakes in Australia. It appears that if this proposal goes ahead they will still not be able to.

The whole argument is based on pathogens being present. They don't have to be!

4 Risk Management Options

As stated, most of the discussion presented just reiterates previous pages.

Yet the risk management options should be based on ensuring good hygiene practices and to have good identification procedures as in other primary produce for those rare occasions when things may go wrong.

The options should be:

1) To have the raw milk produced identified in batches with no mixing of batches

2) It should only be small scale production with perhaps a definition of small scale

3) It should only be available locally from the producer (as in England), not from Supermarkets.

4) equipment used should not be used for any other purpose

5) Producers could be licensed after attending a one day course on hygienic production and marketing. The licence number would be on all their products.

6) The producer would provide all containers required.

7) The producer would have the option of converting the milk to yoghurts or cheeses.

The EU although having no limits on the production has a few sensible conditions worth considering.

8) Large milk companies should not be allowed to buy out the small raw milk producer. That would influence the value of the business but the producer would be acquainted with that and make his business decisions based on that fact.

Impact Analysis

1) This industry would enrich country Australia, provide gourmet tourist opportunities and provide to our ever increasing migrant and visitor populations a familiar product.

2) It provides struggling dairy farmers with income opportunities

3) It may in the future provide an export opportunity as individual producers develop their own unique terroir products. I would love to have the equivalent of the cooked caramelised raw milk yoghurts of Finland and Russia. An unknown treat for most Australians!

It is a pity that the impact analysis spends most space evaluating 'risk'. The same arguments could be put forward for not selling raw fish or raw meats. Much has been

assessed from modelling. So if the 'givens' are not necessarily valid then the assessment will be similarly flawed.

There is no doubt that E coli can be a risk – as much as for other raw foods! That is not a case for banning the product. It is a case for hygiene requirements! Most homemakers do not have regulations to satisfy before cooking for themselves or their families.

Even though the raw milk produced is safe, there is still the potential in any of the 3 categories that the product can be unwrapped, put in the boot of a hot car, unrefrigerated, and taken home and contaminated. As for any other foods. But it usually doesn't happen.

6 Control Measure

The control need to be based on small scale production, identification of all product, a fast recall or notification system as occurs for most food produced in this country.

If the milk and its products are only available locally, this limits spoilage related to long distance travelled and poor storage by transporters.

If it is not available on supermarket shelves then it can't be forgotten long past its shelf life.

The sellers should be obliged to label that it is a Raw Milk Product.

Many food spoilage organisms in food result in a change of taste, appearance, smell and/or texture and therefore can be identified.. Those of us who have stood transfixed at the cheeses in a French fromagerie which traditionally did not even have refrigeration, will be perplexed at why FSANZ is seeking such control. After all, cheeses were invented as a safe way to carry raw milk long distances over a long time,

7 Affected Parties

Existing industry should be minimally affected if at all. It is unlikely their business will increase or decrease.
Raw milk producer will be a new entity and affect small dairy farmers positively.
Consumers will have the opportunity of choosing more culturally relevant milks and may benefit from farmer/ producers entrepreneurship. But city consumers will have to travel to source the products.
Governments and others will be able to relax requirements. Imports of raw milk cheeses should be allowed without limit provided they are suitably identified and comply with other regulations required. Raw milk itself cannot be imported nor should it be. That should be the only restriction.

7.1 Consultation and Implementation.

The cost of my proposal is low cost which is where it should be rather than yet another ineffectual expensive bureaucracy as proposed. There is really nothing to be done other than to decide the level of identity required and where this identity will be housed.

8 Risk Management Decision

I propose the EU system. Also Denmark and UK are relevant.

Table 1 is generic rather than specific. It applies to meat and meat products also. So it really doesn't have a message

The impact on affected parties is based on the *belief* that raw milk is inherently dangerous. If it is not, then those arguments of industry and government do not apply.

* Aspects Not Considered in the Proposal

Health of the Animals

Recent scientific research has uncovered the powerful role of Vitamin D on the immune system. The usual source of Vitamin D is from the action of ultra violet light on the fatty secretions of the skin. It can therefore be extrapolated that a cow which gets exposure to sunlight will have a strong immune system, thus enabling it to resist pathogens Concomitantly, the antibodies which will be found in the milk will be available for ingestion by whatever animal drinks that milk. Since it is now being thought that some causes of asthma and other afflictions may be caused by a lack of exposure to a variety of antigens, milk which contains such molecules could be considered as valuable in building up resistance in children. Hence, conversely, to the term' vulnerable groups' in the document, children may be a group who specifically will benefit from raw milk. Allergies to food and the environment are almost unknown in non English speaking countries.

Vitamin D is a fat soluble vitamin and is therefore found in the fat of milk. This then provides Vitamin D benefits to the individual drinker.

Nothing is known about the Vitamin D status of those early cattle with tuberculosis and brucellosis. One recent study shows that in humans with active tuberculosis, 86% were Vitamin D deficient. Several studies have shown an association between low serum Vitamin D and increased risk for both active tuberculosis progression and susceptibility . Therefore animals used to produce milk should be exposed to some sunlight each day where possible. And for a whole lot of other reasons as well as ethically the animals must be healthy.

My Conclusions

- Raw milk & raw milk products be available to the public from the small scale producer
- The animals should roam in the sunshine.
- Dairy families will be able to supplement their incomes. Not physically demanding
- Different areas will have milk, yoghurts and cheeses of differing tastes thus promoting gourmet tourism
- It should remain a boutique industry with each batch of milk uniquely identified.
- Large milk suppliers should not be allowed to buy into the raw milk industry nor to have a controlling interest nor to influence it in any way.
- Governments may wish to have a register of suppliers.

Pasteurisation was first used for raw milk in the US in the 1890's when it was thought that bovine tuberculosis and brucellosis were transmitted to humans through the drinking of raw milk. No product testing was available then so all milk was treated as potentially dangerous. However, pasteurisation did not affect the rates of these diseases and it was modern antibiotics that eliminated them. These diseases were present in some Australian cattle long after all milk was mandated to be pasteurised. ***The idea that raw milk is inherently dangerous has a historical genesis which bears little reality to fact.*** At another time it was thought that Mother's milk was always sterile. That too has been found to be false. Early literature presumed that raw milk was THE problem and post production received little, if any, investigation. In pre Industrial England there was only raw milk to drink and no refrigeration. Yet it was identified as a suitable food for infants. This continued and continues today in many parts of the world.

In Europe all raw milk products are legal and considered safe for human consumption and can be sold without any price, variety or quantity restrictions. In EU countries some have sanitary testing and quality testing.

In the UK raw milk sales are legal in England, Wales and Northern Ireland but it must be sold direct to the public and therefore cannot be bought in the High Street.

In the US 28 states do not prohibit sales of raw milk

In Australia, NZ and Canada raw milk sales for human consumption are illegal.

Elsewhere in non English speaking countries around the world raw milk and raw milk products are not banned yet deaths DO NOT occur.

Slow Food International Supports the Irish Raw Milk Campaign

President of Slow Food, Carlo Petrini has released a declaration in support of the campaign.
……Current regulations and innovative techniques, added to the traditional crafts and knowledge used to produce this high quality milk, makes it a safe and tasty product, which can help small scale farms survive in this era of pasteurisation.

(Slow Food International website) September 2011

Attachment 1

N Yorkshire, BD23 3AE

RawMilk.org

There are several elements in this country which advocate that all milk used for the production of cheese should be pasteurized initially. For example, a recent statement from the IFST has recommended that milk used in the production of cheese should undergo full pasteurization (1). In the document the author analyzed 16 outbreaks since 1980 in which cheese was considered to be the source of the pathogens. Of those, 13 were using unpasteurized milk. In reaching the conclusion on pasteurization, the authors noted that raw milk cannot be guaranteed to be free from pathogenic bacteria.

A detailed examination of the case presented in the IFST document reveals some serious flaws in the argument:

1. The outbreak linked to Listeria monocytogenes Vacherin Mont D'Or in Switzerland between 1983-87 was responsible for at least 122 cases, including 34 deaths (2). However, it has been clearly established that the contamination with L. monocytogenes was not due to its presence in the milk before production, but arose because of contamination in the dairies and cellars where the cheese was stored (Bille, personal communication). Thus the suggestion of pasteurization is irrelevant and, in any event, ineffective in this case.

2. In an outbreak in Canada (3) of Salmonella typhimurium in cheese, the IFST document attributes this to unpasteurized cheese. In fact the author cited by the IFST stated that the cheese had been manufactured from either pasteurized milk (16 secs. at 73.80 deg C) or a lower un-pasteurization heat treatment (16 secs. at 66.70 deg C). The authors of the IFST document are wrong to categorize this as non-pasteurized, when it is impossible to distinguish between cheeses made from milk treated in different ways. Thus the milk may or may not have been raised to pasteurization temperature, but it certainly was heat treated.

3. In 1983, an outbreak of entero-toxigenic E. coli which caused over 3000 cases (0 deaths) in Denmark, the Netherlands, Sweden and the USA, brie cheese was implicated (4). The IFST include this as one of the 13 outbreaks associated with cheese made from unpasteurized milk even though it accepts that only some of the brie cheese was made from un-pasteurized milk at the time. Again, conclusions are being drawn which cannot be justified. The authors point out that, in the USA, cheese from the implicated lots were distributed to 16 states but illness was reported in only 5 cases. The uneven distribution is consistent with post-production contamination.

4. A survey by Nooitgedagt and Hartog (5) on brie and camembert showed that a considerable proportion of these cheeses are contaminated with undesirable bacteria, especially E. coli. They also recorded temperature abuse during storage which in their view indicated a failure of Good Manufacturing Practice (GMP) and poor distribution practice.

5. In 1984, there was an outbreak in Grampian involving verocytotoxin-forming E. coli with over 20 cases (0 deaths) (6). The investigators of this outbreak have clearly concluded that this was due to post-production contamination and not to the use of raw milk per se.

Malta has an active policy of slaughtering affected herds - the herds involved with this outbreak were identified and slaughtered Brucellosis due to B. melitensis has never been reported in animals in Great Britain. An outbreak of brucellosis due to B. abortus occurred in 1993 but this was eliminated by slaughter of the infected cattle and tracing of contacts.

An outbreak of Brucella melitensis in Malta between 1992 and 1994 was linked to the contamination of cheese made from unpasteurized milk from sheep and goats (7). Two of the people involved were from the UK. The relevance of this is extremely dubious because

1. In 1985, Mexican-style cheese was linked to over 142 cases (48 deaths) of L. monocytogenes (8), which occurred in California. The investigation concluded that L. monocytogenes was most likely introduced into the cheese by a failure of the pasteurization process so that milk which had already been pasteurized was contaminated. The investigators felt that this contamination most likely came from

contaminated raw milk although there was no conclusive proof that this actually occurred. In fact the authors of the report recognized that the introduction of the organism could have been due to the contamination of the plant environment. It should also be noted that the presence of any listeria organism could not be found in dairy herds that supplied raw milk to the manufacturing plant.

2. In 1995, there were 6 cases of listeriosis in France which were linked to Brie de Meaux, a soft cheese made from raw milk (9). The investigation was unable to identify the precise cause, although the actual source of production was identified. Disinfection and control measures were reinforced at production level, which suggests that the investigators suspected post-production contamination had been occurring. It is also worth recording that the authors of the investigation stated this was the first outbreak of listeriosis of a raw-milk cheese documented in France.

3. Between December 1984 and February 1985, there were 13 cases of staphylococcal poisoning amongst guests attending a Hogmanay dinner in Ayrshire (10). This was linked to sheep milk cheese made from raw milk. The investigation found that milk from sheep with clinical mastitis was incorporated into the supply for cheese production. It was also found that the starter culture was contaminated with E. coli. When these issues were addressed, production was re-started in June 1985 still using raw milk. Although the authors advocate the use of pasteurized milk for cheese production, there were apparently no further problems recorded, even though the investigation report was not published until 1989.

4. It is relevant to make reference to an outbreak of listeriosis which occurred in Massachusetts in 1983, that was linked to pasteurized milk from a single plant. All milk was processed with the same equipment and was pasteurized at times and temperatures which exceeded the FDA regulations at the time (11).

5. Investigations by the authors performed both before and after the managers of the plant had been notified of a possible problem, revealed that the facility was clean, modern and well run. No defect that could have resulted in improper pasteurization and no source of contamination were identified. Records on temperatures and phosphatase testing during the outbreak period were consistent with proper pasteurization. The authors of the investigation concluded that intrinsic contamination of the milk and survival of some organisms despite adequate pasteurization is both consistent with the results of the investigation and biologically plausible.

Therefore pasteurization is not effective for what it has been claimed to be - a preventative for bacteria contamination.

DISCUSSION

It should be clear from the above analysis that the logic employed in the IFS document is somewhat flawed with respect to the recommendations on pasteurization of milk for cheese production.

The argument adopted by the IFST seems to be - as there have been a few outbreaks of food poisoning linked to cheese made from raw milk, it follows that all milk should be pasteurized for the production of cheese.

My analysis clearly demonstrates that this reasoning cannot be substantiated. First of all, in many of the outbreaks investigated the presence of pathogens in the milk **has not been the cause of the outbreak**. Secondly, pasteurization itself is no guarantee of safety since there can be failure of the process, which can result in large numbers of cases. It should also be noted that in some outbreaks the IFST has **wrongly interpreted** reports of investigations and assumed that unpasteurized milk has been used, in the absence of unequivocal evidence to this effect. In reality, cheese is rarely involved in outbreaks of food poisoning (12) as it is a low risk food. Furthermore, the most frequent causative factor in cheese-related outbreaks is post-production contamination (13). It is extremely