

Dairy Calibration Exercise 2008

Subject: Wood in Manufacturing Areas

This document results from a calibration exercise undertaken with industry, verifier and NZFSA representatives on 1/08/08. The calibration exercise was designed to achieve agreement/understanding on the acceptability of various building conditions throughout the dairy industry, based on food safety risk and relevant legislation, within the manufacturing environment. In this case the calibration further clarifies interpretation and application of the following regulatory requirements with respect to the acceptability of wood in the dairy manufacturing environment:

Animal Products (Dairy Processing Specifications) Notice 2006

Specification 24 Manufacture of dairy products

A risk management programme covering the manufacture of dairy products must document the systems and procedures that are in place to ensure that—...

- (g) the manufacturing and storage areas, and all equipment and product contact surfaces are maintained and cleaned;
- (h) only clean, non-toxic, non-contaminating materials are used for packaging;
- (i) the manufacturing process is protected from the entry of, or contamination from, foreign matter;

Specification 35 Additional requirements of dairy factories

(1) In addition to the generic requirements listed in clause 33, the risk management programme must ensure that premises used to manufacture dairy products meet the following minimum requirements—

- (i) the premises, equipment, facilities, and the manufacturing environment are designed, constructed, and maintained so as to avoid hygiene hazards and to permit easy and thorough cleaning, disinfection, and visual inspection;...

DPC3: Approved Criteria for the Manufacturing of Dairy Material and Products

Section 11, Pathogen Management, Commentary:

The pathogen management systems will be used to minimise the opportunities for pathogens to gain entry to the manufacturing premises. The system includes control of people, equipment and consumables. The system defines what materials may be introduced into critical hygiene areas and how each is handled safely. **The introduction of wood into critical hygiene areas is avoided where possible. If wood is introduced, the risk management programme and HACCP plan must demonstrate how the associated risks are managed.**

This document is presented in three parts:



Section 1: Calibration Findings/Decisions




Section 2: Additional Discussion captured during calibration exercise.




Section 3: Matters arising subsequent to the calibration exercise.


Section 1: Calibration Findings/Decisions

Note: Zone definitions referred to in this document are as per section 3.4 of the [Pathogen Management Plan Guidance Material](#) on the NZFSA website. Alternative zone definitions may be used by operators providing these are captured within the relevant Risk Management Programme (RMP) or Food Safety Programme (FSP) and agreed with the evaluator or NZFSA during the registration/approval process.

Example Photo	Findings/Decisions
	<p>Wood inside Zone 3</p> <p>Existing wood is permitted within Zone 3 areas provided it is smooth, preferably impervious (eg painted or varnished) and easily cleanable. There should be a hygiene monitoring programme in place to measure the effectiveness of controls.</p> <p>Monitoring should occur to ensure product falling/working its way through joins is regularly removed from any underfloor cavities.</p> <p>Wood must remain dry at all times.</p> <p>New plants proposing to use wood will required to demonstrate consideration of the questions asked in section 2.1 below.</p>
	<p>Temporary Wooden Scaffolding</p> <p>It is acceptable for temporary wooden scaffolding to be in place within Zone 3 areas provided the scaffolding is clean and sanitised and enters through a controlled airlock. The scaffolding should also be checked for potential foreign matter hazards (eg splinters or flaking paint) and these removed prior to entry. The operator must have records to demonstrate the entry controls that were applied.</p> <p>It is preferable, wherever possible, to use alternative scaffolding materials (eg fibreglass or aluminium</p>

	<p>planks).</p> <p>Where wooden scaffolding is used it is also preferable to know the history of use and to exclude scaffolding previously used in high risk situations.</p>
	<p>Permanent Wooden Scaffolding</p> <p>It is not acceptable for permanent wooden scaffolding to be housed within Zone 3 production areas. If a plant requires permanent scaffolding in place, then alternate materials must be sourced.</p>
	<p>Wooden Shelving</p> <p>Wooden shelving is acceptable within a zone 2 area, provided the area remains dry, and the wood is smooth and impervious. The wood also must not pose any foreign matter risk.</p> <p>There should be a hygiene monitoring programme in place to measure the effectiveness of controls.</p>
	<p>Cork/Chipboard Panel Ceilings</p> <p>A cork/chipboard panel ceiling is acceptable within a Zone 2 dry area. The ceiling must not have any foreign matter falling from it.</p> <p>No new plants will be approved with this in Zone 2 or 3.</p> <p>It is not permitted in Zone 3.</p>

	<p><i>Wooden Stairways</i></p> <p>Exposed existing wood is permitted within Zone 2 or 3 areas provided it is smooth, impervious and easily cleanable. There should be a hygiene monitoring programme in place to measure the effectiveness of controls.</p> <p>Wood must remain dry at all times.</p> <p>No new plants will be approved with wooden stairs.</p>
	<p><i>Exposed Wooden Ceiling Beams</i></p> <p>Exposed existing wood is permitted within Zone 2 or 3 areas provided it is smooth, preferably impervious and easily cleanable.</p> <p>Wood must remain dry at all times.</p> <p>No new plants will be approved with exposed wood in Zone 2 and 3 areas.</p>
	<p><i>Wooden Packaging or packaging components</i></p> <p>Wooden packaging or packaging components (eg bin bases, cheese presentation boxes) are acceptable within a Zone 2 or 3 environment provided all surfaces these items rest on are dry and clean.</p> <p>Control programmes should be in place to minimise the potential for wood chipping and to ensure the suppliers of such operate in clean hygienic facilities.</p> <p>See also section 3.</p>

	<p>Wooden Pallets</p> <p>Wooden pallets are acceptable within Zone 2 or 3 areas provided the pallets are clean, dry, and owned and used by the operator from new (eg no Chep pallets allowed).</p> <p>Control programmes should be in place to minimise the potential for the pallets to become wet at any stage, to minimise potential for wood chipping and to ensure the suppliers of such operate in clean hygienic facilities.</p>

Section 2: Additional Discussion captured during calibration exercise.

2.1 Risk Management – Wood

Before approving (or continuing) the use of wood in zone 2 or 3 areas the following questions should be asked:

- Is there an alternative? (If yes, it is preferable to use the alternative)
- Are the risks manageable/acceptable? (If not, find an alternative or accept the proposed activity is not safe and cannot be carried out)
- Are the (manageable) risks being managed? (If not, document and implement effective controls immediately).

Should it become apparent that wood in any area has become contaminated with pathogens potential control measures may include fumigation, or removal of the contaminated wood (replacement material should not be wood unless there is clear demonstration that previously unmanaged risks (that resulted in contamination of the wood) can be managed/controlled).

2.2 Wood in Wet Areas

The calibration team were in general agreement that, while wood may be necessary in some dry manufacturing areas (eg where there is significant vibration relating to use of mills/sifters), wood is considered to present a significant/unacceptable risk to food safety in wet areas. The calibration team considered wood should not be used in any wet area, eg shelves in a cheese maturing room. See section 3 below.

Section 3: Matters arising subsequent to the calibration exercise.

Following the calibration exercise it was noted by an industry representative that some dairy operators currently operating under a registered RMP or approved FSP are using wood in 'wet' areas (see below photo of cheese maturation in a New Zealand cheese making operation).



This matter was brought to the attention of NZFSA representatives from the NZ Standards, Export Standards, Approvals and Compliance and Investigation groups, who noted that wood is commonly found in food processing and handling environments (eg ice cream sticks, skewers, bamboo steamers, packing crates etc). Therefore there are additional, broader, risk management considerations that need to be made with respect to the use of wood in food manufacturing across all industries, and this matter has been added to the Standards work plan.

Until further work is completed by NZFSA standards groups, the questions outlined in section 2.1 will apply to any situation where wood is used in the dairy industry.