



Te Pou Oranga Kai o Aotearoa

TE KAI MANAWA ORA: MARAE FOOD SAFETY INITIATIVE SURVEY

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1 Executive summary

The New Zealand Food Safety Authority (NZFSA) has undertaken a survey to gather information to produce a food safety resource for marae. The resource would be non-regulatory. This paper provides a summary of the findings of the survey, and resulting recommendations.

NZFSA is responsible for protecting public health from risks that may arise from the consumption of food. To this end, NZFSA has established Te Kai Manawa Ora or the Marae Food Safety Initiative Group in May 2006. The purpose of Te Kai Manawa Ora is to promote food safety and suitability issues to Māori.

The survey is a 'snapshot' in time and is not intended to be statistically representative. It involved 18 marae; however, the method in conducting the survey ensured that the information gathered was of high quality (refer [appendix one](#) for survey methodology and results). The survey (refer [appendix two](#) for a copy of the survey) was delivered to marae in areas of New Zealand where members of Te Kai Manawa Ora are from. This meant that not all areas of New Zealand were covered.

The survey found that any food safety resource for marae would need to cover the wide range of activities occurring on a marae including the provision of food to pre-school children in kōhanga reo (refer [appendix three](#) for glossary of Māori words). The results showed that on a marae the source of food tended to be different from your typical food service operation with more food provided from gathering/hunting, or from friends and family.

Tikanga was shown to be important for all marae and the survey found many common practices. In the area of water supply on a marae, it was found that NZFSA needs to consider working closely with the Ministry of Health. The Ministry is running a marae project to improve water quality. The survey also found that food hygiene training is crucial to ensuring that there is safe food on the marae. Also while the marae surveyed were aware of NZFSA, a lack of knowledge was found on the Domestic Food Review and the Wild Food Review.

The survey results showed that the food preparation activities on a marae were mostly covered by a food control plan (FCP) that has been developed by NZFSA. The FCP could therefore be used as a base for the marae food safety resource with amendments as appropriate. Survey results showed that respondents were also keen to see the resource take a wider view than just the provision of written guidance material with suggestions such as posters, thermometers, aprons etc to be provided as resources.

In summary, the recommendations (informed by the survey results) are as follows:

- the FCP is to be used as a base for the food safety resource for marae. The resource would be non-regulatory and be extended to include gathering of wild foods, receiving of koha and traditional food prepared on the marae as identified in the survey
- ESR (Environmental Science and Research) and NZFSA scientific information and Māori tikanga are to be combined to write this guidance
- a water element is to be included in the resource. This will help ensure compliance with the proposed NZFSA water standard. NZFSA and Ministry of Health are to work closely together in the area of water safety on marae
- the FCP is to include provision to document policies on the hiring out of marae to whānau, hapu, iwi, and manuhiri. This provision would need to take account of the large variation in numbers marae may cater and safely produce food for
- food safety messages to whānau, hapu and iwi are to take into account vulnerable populations on the marae, including kaumātua and pre-school children
- NZFSA is to consider developing a training package that works alongside the resource. NZFSA is to work with external training agencies currently delivering training to marae to ensure that their messages are consistent
- NZFSA is to promote the Domestic Food Review and Wild Food Review to marae to increase their awareness of the possible affects of these reviews.

2 Background

Māori have cultural and spiritual obligations to provide food at hui, on marae and in a variety of settings throughout Aotearoa/New Zealand. The responsibility and obligation is to maintain the dignity and mana of kaumātua, whānau, hapu and iwi. This requires knowledge of tikanga regarding the sustaining the sanctity of kai by continually promoting food safety and suitability, safe food handling and food hygiene practices.

Despite efforts made to promote food safety and suitability, safe food handling and food hygiene practices foodborne illness outbreaks continue to occur on marae. There have been examples over the last few years of foodborne illness affecting Māori originating in a marae setting. The need to enhance and maintain good food safety practices on the marae is therefore critical, to reduce the risk

of foodborne illness from such gatherings, in order to maintain the mana and integrity of kaumātua, whānau, hapu and iwi.

Te Kai Manawa Ora includes representatives from NZFSA, Public Health Units, Te Hotu Manawa Māori¹ and the Ministry of Health Drinking - water Assistance Programme.

One of Te Kai Manawa Ora's main objectives is to produce a food safety resource for marae that incorporates safety and suitability concepts and is culturally appropriate. In April and May 2007 Te Kai Manawa Ora undertook a survey of 18 marae throughout New Zealand to gather information for the development of the marae food safety resource.

NZFSA is currently developing food safety resources for commercial food businesses called 'Off the Peg' (template) FCPs, including the food service (café, restaurants) sector, to help food business produce safe food. It was intended that the marae survey be used to help identify whether the FCP would be relevant to the marae environment and what changes would be required to tailor the resource for marae. As a first step the resource will be developed more as non-regulatory advice. It will be designed so it is capable of being upgraded to a regulatory FCP if a marae chooses to go into the business of selling food.

Other dimensions will be added to the food safety resource to support a training programme, for example, utilising nutrition and activity messages of the HEHA Implementation Plan 2004-2010 and the Ministry of Health 'Drinking – water Assistance Programme'. It will be supported by culturally appropriate guidance material taking into account tikanga Māori protocols, the Ministry of Health Māori Health Strategy – He Korowai Oranga, the Māori Health Action Plan – Whakatātaka 2006-2011 and NZFSA's Domestic Food Review training and education strategies. It may also include messages from other, associated agencies; eg, the Ministry of Health Drinking-water Assistance Programme and Te Hotu Manawa Māori.

3 Survey findings and discussion

The survey set out to gain information on producing a food safety resource for marae that is non-regulatory.

¹ Te Hotu Manawa Māori (THMM); is a non-government organisation that delivers health services 'by Māori for Māori', providing solutions tailored to meet the needs of Māori. THMM reinforces the principles and values of both tikanga and kaupapa Māori imperatives.

The survey is a 'snapshot' in time and is not intended to be statistically representative. It involved a small number of marae; however, the method in conducting the survey ensured that the information gathered was of a high quality. The survey was delivered to marae in areas of New Zealand that members of Te Kai Manawa Ora project team were from. This meant that not all areas of Aotearoa/New Zealand were covered.

3.1 Tikanga Māori

Tikanga around the preparation and gathering of food is an integral part of Māori culture. It is important that any resource developed for the marae includes the most common tikanga practices and is also flexible enough to allow marae to document their own tikanga.

Tikanga practiced by all marae included:

- sitting on tables is not permitted
- food containers not used for any other purpose
- soap used for washing dishes is not used for washing clothes for the body
- food basins are not used for washing hands or the body
- separate preparation areas for different food types.

An indication that tikanga can perhaps change over time is the practice of not serving leftover food to guests, only 62% of the marae interviewed practiced this. There is an increased food safety risk involved in serving leftovers as the food has to be stored at the right temperature and reheated adequately.

3.2 Marae activities

The survey found there was a wide range of activities/events based at a marae. These activities were permanent on-going programmes including kōhanga reo (69%), tourist venues (8%), school visits (11%) and educational programmes (11%). Other activities included events such as weddings, birthday celebrations, tangi, unveilings, wānanga, workshops, land meetings and civil defence meetings. Meetings would appear to occur at regular intervals on marae with marae reporting an average of six events per month. The number of people at an event ranged from six to over 1000.

The survey found that 92% of marae were available for hire with most only requesting a koha for use. It would seem that when a marae is hired that the preparation of food and the responsibility for the safe handling and preparation of food is shared between whānau, hapu and iwi.

In commercial operations foodborne illness outbreaks have been known to occur when businesses cater for numbers beyond their normal operating capacity. This is because kitchen facilities can lack sufficient space to store food at the right temperature and/or staff make mistakes in judging cooking and reheating times as they fail to take into account the increased volumes of food. These factors would need to be considered when developing a food safety resource for marae.

The presence of a kōhanga reo on a marae has implications for food safety as pre-school children are considered a vulnerable population. While most kōhanga reo (67% of the 13 marae that operate a kōhanga reo in the sample) required tamariki to bring their own kai from home consideration to the correct storage and handling of food is still needed. Any resource developed for a marae needs to ensure that food safety information is specifically provided for this population. This would include advice on the storage and reheating of expressed breast milk and milk formula.

It is believed that some marae have accommodation for kaumātua on the marae and that the food is prepared in the marae kitchen; however, this question was not included in the survey. Kaumātua living on the marae would also be considered a vulnerable population.

Just over half of the marae surveyed prepared food for sale to the public for fundraising ventures and 38% were registered with the local Council under the Food Hygiene Regulations 1974. While most marae said they had no plans to go commercial there is also a need to remember that they are involved in activities like tourist operations, kōhanga reo, and school visits where a fee can be charged for a service that often includes the provision of food.

3.3 Sources of food preparation

The sources of food for a marae can greatly differ from your typical commercial food service operation. While the marae use local suppliers that would be registered for their grocery items (especially the dry goods) there is also food sourced from home or friends and food gathered from the wild. 92% of marae reported receiving food as a koha. Types of food provided as a koha included fruit and vegetables, kaimoana, meat, and milk.

Wild foods gathered included pūha, watercress and a wide range of shellfish, fish, and parengo/karengo, wild animals including deer, goat and pigs. Marae raised the issue of the use of sprays near watercress and pūha including the Regional Council pesticide drops. The results found that 69% of marae had some guidelines on the buying or sourcing of food from safe sources to guide the purchase of food from locally registered providers and checking labels and expiry dates. For wild foods over half the marae interviewed had guidelines on when not to gather kaimoana. However, for other types of wild food it seemed to be based on an element of trust that the food gatherer knew where to get safe food.

The Māori focus group involved in the NZFSA review of non-commercial wild food in New Zealand (July 2005) found that the best way to minimise foodborne illness amongst Māori people resulting from the consumption of wild food is to empower Māori as kaitiaki to address the associated food safety issues. They also noted regaining a tikanga perspective is considered a high priority and that Māori needed to re-emphasise knowledge of traditional foods and food gathering practices. The NZFSA development of a marae food safety resource provides opportunity to make sure information is readily available on how to use traditional and wild foods safely.

3.4 Types of food preparation on the marae

Some questions in the survey were designed to find out what type of preparation was carried out on a marae so that this could be compared with the scope of the FCP. The survey showed that all areas of food preparation included in the FCP were carried out on the marae but there was also traditional food and methods of its preparation on the marae that may not be adequately covered by the FCP for example:

- toroi
- tītī
- kanga kōpiro
- kina
- hāngi.

Some food safety information on traditional Māori foods is available from the Ministry of Health and ESR projects and the NZFSA resource on food safety practices in preparing and cooking a hāngi. It would be useful to conduct a review of this work to determine if there are any necessary controls, in the preparation of the above foods, which could be adopted for use in the food safety resource.

3.5 Water supply

Ensuring adequate and safe water supply is an important issue for many marae. Over half the marae surveyed were on their own water supply (ie not supplied by a reticulated Territorial Authority or private water supply). Those on their own supply indicated that they had at least two sources of water. In all cases one source was a roof supply. A roof water supply needs to be carefully set up to ensure the potential for contamination is reduced. The results of the survey show that only 38% are treated and that a third (of the 38%) of those supplies are treated by boiling the water. Further that only 31% of those that treat their water test for E.coli. The survey results would tend to indicate potential safety issues with the water on marae due to the low level of treatment.

Sixty nine percent of marae surveyed had some form of water storage. Storage tanks can help with problems associated with a shortage of water especially for those marae solely reliant on roof water, however, there does need to be a maintenance programme for the tanks. Thirty-one percent of the marae surveyed indicated that they did not have an adequate supply of water. This is a food safety risk.

The Ministry of Health has a comprehensive assistance programme in place to improve the safety of water supply through a capital and technical assistance programme. This programme is available to marae. There is opportunity for NZFSA to work closely with the Ministry to improve the safety of water on marae.

An adequate and safe water supply is a basic factor in food safety especially with the type of foods prepared on the marae. Water is likely to be used as an ingredient in food, used to wash ready to eat foods like fruit and vegetables, hand washing, cleaning of the kitchen and equipment. NZFSA is developing a water standard for processing water. Marae selling food will be required to meet this standard. Any resource developed for marae will need to include an element on water supply and in particular, outline controls for roof water supply.

3.6 Food hygiene training

The number of people involved in food preparation on a marae appears to vary according to the size of the hui (with any available person potentially being called in to help with food preparation if the hui is large). It is likely that most marae would have a core group of catering staff who should be trained first.

Those surveyed indicated that just under half of their food handlers/cooks had completed some form of food hygiene training. Fifty percent of those trained had completed their training as food industry employees. There was a high level of interest in the marae workers or cooks completing food hygiene training in the future. However, a mixed response was received on the question on the type of training needed with some wanting formal training and others more informal training. Appropriate food safety training is crucial to providing safe food and marae selling food will be required to have mandatory training as part of their FCP. The results from the survey show that there is a need and desire for food safety training for marae. This training could be focused around the resource by developing a training package that works alongside it. It would also be beneficial to work with external training agencies currently delivering training to marae to ensure that their messages are consistent with those in the resource for marae.

3.7 Future direction

Sixty-five percent of the marae interviewed were aware of NZFSA; however, they were not well informed on NZFSA initiatives that could affect marae. Only 15% knew about the Domestic Food Review and only 23% had knowledge about the Wild Food Review. This low figure was a little surprising since 38% of marae in the survey are registered food premises. There would appear to be a need for better communication of the Domestic Food Review and Wild Food Review to Māori and how the changes could impact on them.

All marae surveyed were interested in a resource covering food safety in a marae setting; however, their ideas around what a resource should include were varied and went further than written guidance material. Suggestions included:

- posters
- aprons
- thermometers
- charts
- pamphlets
- fridge magnets.

3.8 Conclusion

Any food safety resource for marae would need to cover the wide range of activities occurring on a marae. It will be important to ensure that the scope of activities and range in numbers of people to be catered for is clearly defined for individual marae and that there is a clear policy covering food safety when a marae is hired out. The resource would also need to manage the risk including food safety messages around the provision of food to pre-school children in kōhanga reo as this is a vulnerable population.

The results of this survey show that the food preparation activities on a marae are mostly covered by the FCP therefore the FCP could be used as a base for the marae food safety resource. The FCP would have to be amended so it was more suitable as a non-regulatory resource. This could be done perhaps with the simplification of messages and removal of need to record information like temperatures. Some traditional foods and their preparation methods would need to be included in the cooking section of the resource in particular:

- hāngi
 - kanga kōpiro
-

- toroi
- tītī
- kina.

The source of food also tended to be different from your typical food service operation with more food provided from gathering/hunting or from friends and family. Any marae resource would need to acknowledge this and include food safety messages on:

- home-kill meat
- wild food safety messages for gathering/hunting. Main food types in cover would be watercress, pūha, wild animals: goat, deer, pig, duck, and kaimoana including eel
- unpasteurised milk.

Those surveyed were also keen to see the resource take a wider view than just the provision of written guidance material with the suggestion of posters, pamphlets, thermometers, aprons etc to be provided as resources.

Tikanga is important for all marae and resource must include tikanga common to most marae along with the basic food safety messages from the FCP. There should also be provision to allow the marae to record their tikanga and traditional food preparation methods if different from NZFSA marae resource.

In the area of water supply on a marae, NZFSA needs to ensure it works closely with the Ministry of Health who currently has a marae project to improve water quality. The implementation of any food safety strategies will take time as the sector would appear to have had limited exposure to regulatory inspections with only 38% of marae surveyed registered.

Food Hygiene Training is crucial to ensuring that there is safe food on the marae. This could be achieved through developing a training package around the NZFSA marae food safety resource and working with external providers of food hygiene training to marae to ensure our messages are consistent.

While the marae surveyed were aware of NZFSA there was a lack of knowledge on the Domestic Food Review. As 38% of the 18 marae surveyed, are registered food premises (and over half are selling food) it would seem important that they are fully informed on the likely effects of the Domestic Food Review on marae. It is therefore important that Te Kai Manawa Ora includes the promotion of this information to marae.

4 Recommendations

Taking into account the survey results the following recommendations are proposed for the marae food safety resource.

4.1 Policy position

The FCP is to be used as a base for the food safety resource for marae. The FCP would be non-regulatory and extended to include the gathering of wild foods, receiving of koha and traditional food prepared on the marae as identified in the survey.

ESR and NZFSA scientific information and Māori tikanga are to be combined to write this guidance.

A water element is to be included in the resource to help ensure compliance with the proposed NZFSA water standard. NZFSA and Ministry of Health are to work closely together in the area of water safety on marae.

The resource is to enable a marae to document policies on the hiring out of the marae to whānau, hapu, iwi and manuhiri, taking into consideration the large variation in numbers marae may cater and safely produce food for.

Food safety messages to whānau, hapu and iwi are to take into account vulnerable populations on the marae, including pre-school children and kaumātua.

NZFSA is to consider developing a training package that works alongside the food safety resource for marae. Further NZFSA is to work with external training agencies currently delivering training to marae to ensure that their messages are consistent with those in the resource for marae.

NZFSA is to promote the Domestic Food Review and Wild Food Review to marae to increase their awareness of the possible effects of these reviews.

4.2 Timelines

Te Kai Manawa Ora is a running a pilot project to test the marae food safety resource. It is expected that the finalised resource will be made available to all marae in 2009.