



Food safety for native plant foods

John Faragher, The Patch, Victoria.
Robert Premier, Department of Primary Industries, Knoxfield, Victoria.
July 2007

Food safety is important

Food safety is important because food poisoning can cause illness and death. It is also bad for business; new industries need good publicity not bad. A food supplier is legally required to supply safe food and there is a range of state laws that govern safe handling of food. Most importantly, buyers demand safe food and are increasingly demanding that food suppliers are registered as a food business and have a food safety program.

What makes food unsafe?

The main food safety risks are contamination with microbes that cause human diseases, with chemicals such as agricultural and cleaning chemicals and with physical items such as glass, stones and band-aids. In addition, some plants contain natural compounds that make them poisonous.

How to keep food safe

- Avoid contamination with disease microbes from infected workers, animal manure, contaminated water or soil, or unclean equipment.
- Use good personal hygiene and cleaning and sanitising programs.
- If there is any risk of food being contaminated with disease microbes, it is critical that the microbes are either killed by cooking or inhibited from multiplying by keeping the food cold (less than 5°C).
- Avoid contaminating clean food, with potentially contaminated food, e.g. dirty herbs.
- Use registered agricultural chemicals according to the label.
- Avoid contaminating food with cleaning chemicals or physical items e.g. stones.
- Use food safety guidelines and a food safety program.

Are native plant foods naturally safe?

Some plants are known to be naturally poisonous (e.g. green potatoes and some fungi). Some native plants are poisonous (e.g. fruit of some *Solanum* species, bracken fern tips and seeds of at least two *Acacia* species). Some native foods require processing or cooking to be safe (e.g. some nuts). Others are tolerated in small amounts but cause adverse reactions in large amounts (e.g. unripe

fruits). It is important to know the identity of plants that are to be used as food and that the plant is safe. There is a range of books and references on the safety of native plant foods. Some plants are prohibited for food use by the Food Standards Australia and New Zealand (FSANZ) Standard 1.4.4, including some *Solanum* species (nightshade, kangaroo apple) and *Pteridium* (bracken fern). Some buyers, both overseas and in Australia, may require evidence of the safety of unknown foods. The native foods industry and the Rural Industries Research & Development Corporation (RIRDC) are working with FSANZ and international bodies to make formal assessments of the safety of a range of native plant foods.

Food safety legislation

The legislation and its management are complex. Practical aspects of food safety are managed by the local council's Environmental Health Officers, who see that food businesses abide by their state's food laws. State food laws are based on the national Food Standards Code, produced by FSANZ. This Code includes general food standards that all suppliers of food, including primary producers, must meet (e.g. chemical residues and labelling) and food safety standards. The food safety standards must be met by all registered food businesses. These standards include the design and materials of premises, water supply, cleaning, waste disposal, personal hygiene, keeping food cold, skills and knowledge of staff, the presence of a food safety supervisor and the use of food safety programs. Food safety programs are detailed written programs that a business can use to manage its food safety risks. The only state that currently requires all food businesses to have a food safety program is Victoria. Other states require them for high-risk businesses. New South Wales requires them for high risk horticultural businesses (see following section). In future primary production standards for food safety will require growers and wild harvesters to meet a range of formal standards.

Do you need to be registered as a food business?

It is critical that businesses determine whether they need to be registered as a food business and hence meet food safety standards. Primary producers must register as a food business if they sell direct to the public, transform



(process) food, pack or treat food for others, or use food that has been bought in (to re-sell or to make other food products). Selling direct to the public includes markets, roadside stalls and bartering. Transforming, or processing, includes making juice, jams and pickles. It does not include washing, peeling, cutting, freezing, grinding or milling. States vary in their definitions of food businesses and primary producers, so it's important to talk to your local council, or state food safety authority (Health Department) about what they require. Some particular state requirements are listed below:

Victoria: transforming includes drying and roasting; all food businesses are required to use an approved food safety program.

New South Wales: businesses that produce high risk products (freshcut fruit and vegetables, unpasteurised juices, seed sprouts and vegetables in oil) must be registered as a food business and use an approved food safety program.

South Australia: on-farm processing is not a food business.

Queensland: businesses that only sell whole fruit and vegetables, seeds, spices or dried herbs appear to be exempt from being licensed as a food business; packing unprocessed primary produce does not constitute a food business.

Northern Territory: packing or treating food for other businesses does not constitute a food business; processors are considered on a case-by-case basis.

What do your buyers require?

Buyers are increasingly demanding evidence that food safety and quality management systems are used in food production. They may require registration as a food business, evidence of a food safety program being used, or membership of a commercial food safety and/or quality assurance scheme.

What do you need to do about food safety?

- Find out about what is required, talk to the local council Environmental Health Officer and your buyers. The state food safety authority (e.g. the Health Department) can help.
- Attend a training course to obtain the required skills and knowledge (e.g. through the council or TAFE).
- Register as a food business if necessary, with the local council.
- Use food safety guidelines (e.g. the guidelines in "Food safety standards and labelling for native plant foods", or those produced by the Australian Department of Agriculture Fisheries and Forestry and state food safety/health authorities).
- Develop a food safety program, even if it's not mandatory in your state (use the model food safety program in "Food safety standards and labelling for native plant foods", or models produced by the state food safety/health authorities).
- Join a commercial food safety scheme if necessary (e.g. Freshcare, SQF, FoodSafe, Tas QA).
- Promote the food as safe and meeting certain standards.
- Still obtain liability insurance!

Further information

Web sites:

- Food Standards Australia and New Zealand (FSANZ): www.foodstandards.gov.au
- Food Standards Code (FSANZ): www.foodstandards.gov.au/thecode/foodstandardscode.cfm
- CSIRO's native plant food site: www.cse.csiro.au/research/nativefoods/

RIRDC publications:

- "Food Safety of Australian Plant Bushfoods" by M and E Hegarty and R Wills, 2001, Pub. No. 01/28 (www.rirdc.gov.au/reports/NPP/01-28.pdf)
- "Food safety standards and labelling for native plant foods" by J. Faragher, M. Parsons and R. Premier, 2008, www.rirdc.gov.au/fullreports/npp.html. This includes food safety guidelines and a model food safety program.
- "Food safety issues for the Australian native plant food and herb industries" by J. Faragher, 2004, in RIRDC Pub. No. 04/059 2004. (www.rirdc.gov.au/reports/EOI/04-059.pdf).

Other publications:

- "Food Standards Code", from FSANZ, Phone (02) 6271 2222, e-mail info@foodstandards.gov.au
- "Prohibited and restricted plants and fungi", FSANZ Standard 1.4.4 (www.foodstandards.gov.au/_srcfiles/Standard_1_4_4_Prohib_plants_v74.pdf), or from FSANZ as above.
- "Guidelines for On-Farm Food Safety for Fresh Produce", Agriculture Fisheries and Forestry Australia, 2004, (<http://www.daff.gov.au/agriculture-food/food/publications/farm-food-safety>) or from DAFF, Phone (02) 6272 3933.

Contacts:

- Your local council Environmental Health Officer
- State food safety authorities (usually within health departments)
- Food Standards Australia and New Zealand (FSANZ): Phone: (02) 6271 2222, e-mail: info@foodstandards.gov.au
- Some state Departments of Agriculture/Primary Industries have food safety experts.
- Robert Premier, Department of Primary Industries, Knoxfield, Victoria. Private Bag 15, Ferntree Gully Delivery Centre, Victoria 3156. Phone (03) 9210 9225.

Acknowledgments

This fact sheet is an updated and expanded version of DPI Victoria's Agriculture Note AG 1220, 2005. The original research project was jointly funded by DPI Victoria and RIRDC (RIRDC Project No DAV-211A).

The information contained in this publication is intended for general use to assist public knowledge and discussion and to help improve the development of sustainable industries. The information should not be relied upon for the purpose of a particular matter. Specialist and/or appropriate legal advice should be obtained before any action or decision is taken on the basis of any material in this document. The Commonwealth of Australia, Rural Industries Research and Development Corporation, the authors or contributors do not assume liability of any kind whatsoever resulting from any person's use or reliance upon the content of this document.

