



## Food safety for native plant foods

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### 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](http://www.foodstandards.gov.au)
- Food Standards Code (FSANZ): [www.foodstandards.gov.au/thecode/foodstandardscode.cfm](http://www.foodstandards.gov.au/thecode/foodstandardscode.cfm)
- CSIRO's native plant food site: [www.cse.csiro.au/research/nativefoods/](http://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](http://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](http://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](http://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](mailto: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](http://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](mailto: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.

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### Food safety is important

Food poisoning makes people sick and kills people. The food supplier is legally required to supply safe food and there is a range of State laws that govern safe handling of food. Food poisoning is also bad for business and new industries need good publicity, not bad. Most importantly, your buyers demand and have a right to expect that they are buying safe food. Your buyers may insist that you are registered as a food business, have a food safety program in place and have food safety training.

### Food safety legislation

The national Food Standards Code is produced by Food Standards Australia and New Zealand (FSANZ). This includes general food standards that all suppliers of food, including primary producers, must meet. Food safety standards must be met by registered food businesses. Standards for primary producers are also being introduced over the next few years.

State laws spell out food safety requirements for registered food businesses. Requirements for food safety practices include things such as hand washing, keeping food cold, the skills and knowledge of staff and the presence of a food safety supervisor. Requirements for food premises include the design and materials of premises, water supply, cleaning and waste disposal. Food safety programs are the programs that each business uses to manage food safety risks. The only State that demands this for all food businesses at the moment is Victoria. Most importantly, the practical aspects of food safety are managed by the local Council's Environmental Health Officers.

### Do you need to register as a food business?

Primary producers must register as a food business and meet the food safety standards 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 and in Victoria it includes drying and roasting. It does not include peeling, cutting, freezing, grinding or milling. States vary in their interpretation of these requirements, so it's important to talk to your local

Council, or State food safety authority, about what they require. Most importantly, if your buyers demand that you register as a food business, it would be wise to do so.

### 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* and *Dianella* species, bracken fern tips and at least two *Acacia* species. Some 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 the plants you are using as food and that the plant is safe. There is a range of books and references on the safety of native plant foods (see below). Some plants are prohibited for food use by the FSANZ Standard 1.4.4. These include some *Solanum* species (nightshade, kangaroo apple), *Pteridium* (bracken fern) and *Melia azedarach* (white cedar). If in doubt about its safety, don't use the plant as food!

### Novel foods

Novel foods are new foods which have not been traditionally used in Australia or New Zealand and for which there is insufficient knowledge in the broad community to ensure safe use. Those foods are required to pass a food safety assessment by FSANZ. This can lead to foods being approved as regular foods, as novel foods (e.g. with special information on the label), or being prohibited. FSANZ is presently considering the safety issues involved in native plant foods and how to deal with them. There may be advantages in obtaining formal assessments and approvals if your buyers require it.

### What can cause food to be unsafe?

The main safety risks are contamination with microbes that cause human diseases, chemicals such as agricultural and cleaning chemicals and physical items such as glass, stones and band-aids.

### How do you keep food safe?

It is important to avoid contamination with disease microbes from infected workers, animal manure, contaminated water or soil, or unclean equipment. Good personal hygiene and cleaning and sanitising programs are essential. Registered agricultural chemicals should be

used according to the label. Care should be taken to avoid contamination of food with cleaning chemicals and physical items. A simple, food safety program and plan can help the business achieve these things.

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). If contaminated food is left in conditions where disease microbes can multiply, for example where there is moisture from sauces and at moderate temperatures such as room temperature, then there is a high risk of food poisoning. It's also important to avoid contaminating clean food, with potentially contaminated food such as dirty herbs.

### What you need to do about food safety?

- Find out as much as you can about what is required of you and what you can do. See "Further information" below.
- Talk to the local Council Environmental Health Officer
- Talk to your buyers
- Register as a food business if necessary - with your local council
- Attend a training course to obtain the required skills and knowledge
- Develop a food safety program (required of food businesses in Victoria)
- Join a commercial food safety scheme if necessary
- Promote your food as safe!

### Further information

#### Web sites

- Food Standards Australia and New Zealand (FSANZ): [www.foodstandards.gov.au](http://www.foodstandards.gov.au)
- Food Safety Victoria:  
<http://www.health.vic.gov.au/foodsafety/>
- CSIRO's native plant food web site:  
[http://www.clw.csiro.au/nativefoods/documents/nativefoods\\_website.pdf](http://www.clw.csiro.au/nativefoods/documents/nativefoods_website.pdf)

#### RIRDC publications

- 2001 "Food Safety of Australian Plant Bushfoods" by M and E Hegarty and R Wills, Pub. No. 01/28 (<http://www.rirdc.gov.au/reports/NPP/01-28.pdf>)

#### Other publications

- "Food Safety Standards", Ch 3 of the Australia NZ Food Standards Code ([http://www.foodstandards.gov.au/foodstandardscode/index.cfm#\\_FSCchapter3](http://www.foodstandards.gov.au/foodstandardscode/index.cfm#_FSCchapter3))
- "Prohibited and restricted plants and fungi", FSANZ Standard 1.4.4 ([http://www.foodstandards.gov.au/srcfiles/Standard\\_1\\_4\\_4\\_Prohib\\_plants\\_v74.pdf](http://www.foodstandards.gov.au/srcfiles/Standard_1_4_4_Prohib_plants_v74.pdf))

- "Guidelines for On-Farm Food Safety for Fresh Produce", Agriculture Fisheries and Forestry – Australia, 2004.  
([http://www.daff.gov.au/corporate\\_docs/publications/pdf/food/nfis/guidelines\\_onfarm\\_food\\_safety\\_fresh\\_produce\\_2004.pdf](http://www.daff.gov.au/corporate_docs/publications/pdf/food/nfis/guidelines_onfarm_food_safety_fresh_produce_2004.pdf))  
Or from Horticulture Australia at: ([www.horticulture.com.au](http://www.horticulture.com.au))  
Or from Richard Bennett, E-mail: ([richard.bennett@horticulture.com.au](mailto:richard.bennett@horticulture.com.au))  
Phone (03) 5825 3753.
- Faragher, John, 2004 "Food safety issues for the Australian native plant food and herb industries" in RIRDC Pub. No. 04/059 2004.  
(<http://www.rirdc.gov.au/reports/EOI/04-059.pdf>)
- Native food, DPI Information Note (AG 0686), 2002 (<http://www.dpi.vic.gov.au/dpi>) and go to Notes Information Series and search for AG0686)

#### Contacts

- Your local Council Environmental Health Officer
- Food Standards Australia and New Zealand (FSANZ):  
E-mail: [advice@foodstandards.gov.au](mailto:advice@foodstandards.gov.au) Phone: 1300 652 166
- Food Safety Victoria: Phone 1300 364 352
- Department of Primary Industries Victoria, Dr Robert Premier, Phone (03) 9210 9225,  
E-mail: [Robert.Premier@dpi.vic.gov.au](mailto:Robert.Premier@dpi.vic.gov.au)

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