



**FRESH
PRODUCE
SAFETY
CONFERENCE**
11 AUGUST 2022

PROMOTING SKILLS,
SCIENCE, SYSTEMS
AND STANDARDS



Easy-to-follow Food Safety Guidelines for small-scale leafy vegetables and berry growers

By Patrick Ulloa

Record of the number of balls juggled?



Record of the number of balls juggled?



- Alex Barron (UK)
- 11 balls with 33 catches (juggled each ball three times)
- 14 balls with 14 catches (juggled each ball once)



Record of the number of balls juggled?

- Why not 15 balls?
- Why not 20?



There is a limit



There is a limit



There is a limit



There is a limit





Food Safety

Pest and Diseases

Biosecurity

Finances

Weather



Employees

Customers

Environment



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Food Safety Guidelines for small-scale growers

- Funded by DPI-NSW
- Address all the Primary Production and Processing Requirements
- One page per requirement (space for illustrations)
- Simple and direct language (few technical terms)
- Easy-to-implement practices



Why small-scale growers?

Medium/Large-Scale Growers



Small-Scale Growers



- Must comply with retailer food safety requirements
- Already certified to QA/Food Safety programs (SQF, Freshcare, HARPS)
- Already comply with most of the new standard requirements



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Small-Scale Growers



- Basic understanding of food safety systems



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- Little time to gather and analyse information



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- Basic understanding of food safety systems
- Little time to gather and analyse information
- Language barrier



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Small-Scale Growers

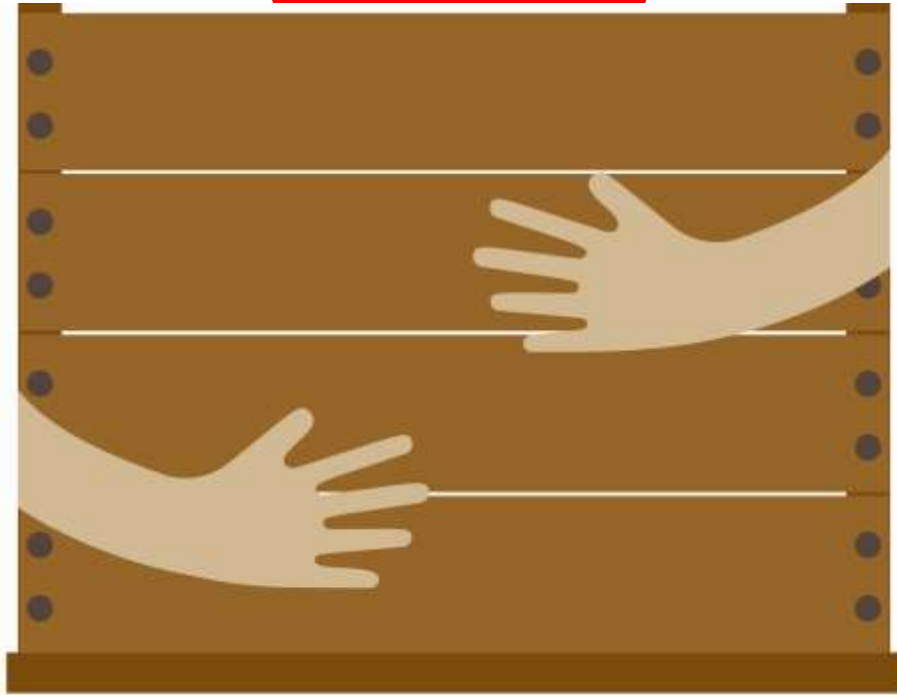


- Basic understanding of food safety systems
- Little time to gather and analyse information
- Language barrier
- Distrust of authority and regulators



Compliance burden

Food Safety
Regulations



Medium/Large-Scale Growers



Small-Scale Growers





Fresh Produce Safety Centre

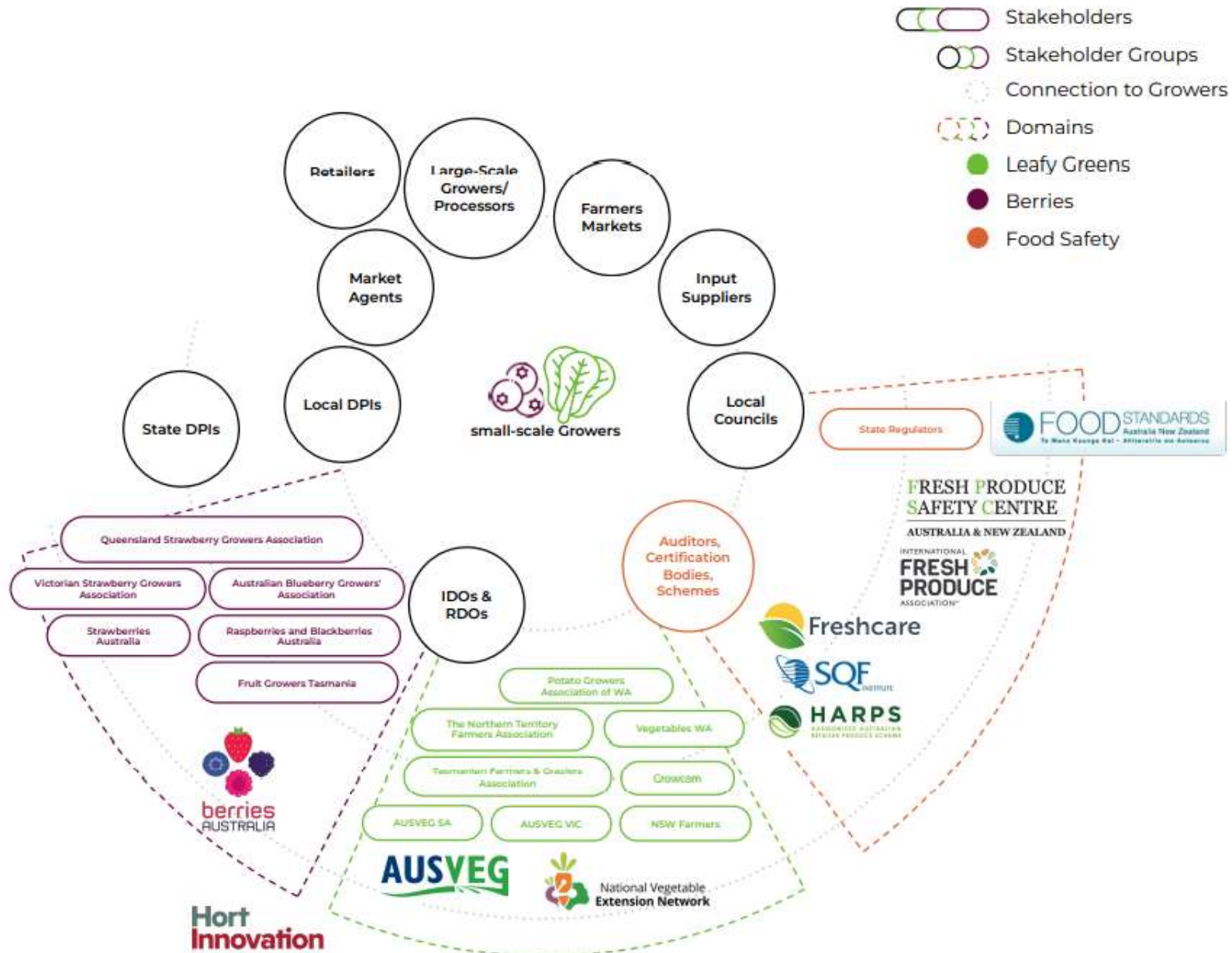
Food Safety Outreach Strategy

An Outreach Strategy to Improve Food Safety Adoption Among Small-scale Leafy Green and Berry Growers

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PROMOTING SKILLS, SCIENCE, SYSTEMS AND STANDARDS





Primary Production and Processing Requirements



Requirements	Berries	Leafy Vegetables
Notification to relevant authority*	Y	N
Traceability	Y	Y
Water safety	Y	Y
Inputs safety*	N	Y
Growing sites safety*	N	Y
Weather events*	N	Y
Premises and equipment	Y	Y
Temperature management*	N	Y
Product washing and sanitising*	N	Y
Animals and pests*	N	Y
Skills and knowledge	Y	Y
Health and hygiene	Y	Y
Sale of unacceptable product	Y	Y

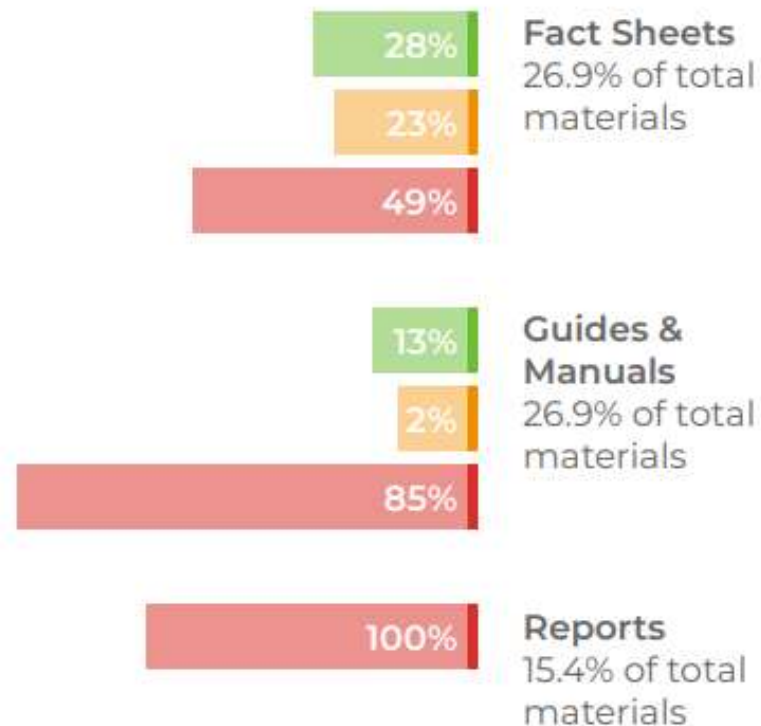
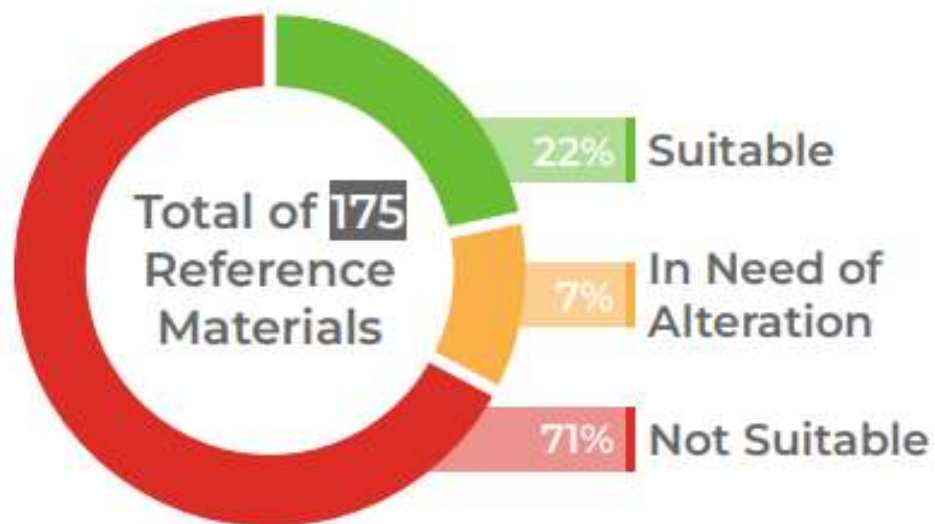




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Resource mapping



Grower Guides



FPSC
AUSTRALIA &
NEW ZEALAND

Food Safety Grower Guides

13 Illustrated Guides on Food Safety



Be prepared for the new food safety standards

Food Safety for Small-Scale Growers



All fresh produce businesses, regardless of their size, can help keep food safe.



Always sell safe products

Fresh produce safety

Always protect fresh produce from contamination. That way people can continue to enjoy all that great food you grow.

Contamination can take many forms. There are dangerous food poisoning microbes (pathogens) that can make people sick. Chemicals can be dangerous if not used carefully. Small pieces of glass or metal can injure consumers.

Never sell or supply products that may be unsafe to consumers.

Most of the time, fresh produce is delivered safely for consumers to enjoy. But, on occasions, there have been cases when contamination was not prevented, and people became ill.

Regulations

Sometimes, regulations are needed to ensure everyone understands what must be done to protect consumers.

In response to new regulations, this set of grower guides explains the basic food safety actions that should be taken by all growers.

Initially, regulations will cover leafy vegetables, berries, and melons. But these guides will also help other fresh produce growers to adopt these good practices.

Some growers will be expected to provide extra information to relevant authorities.

The information needed will include contact details, a description of the activities carried out by the business, and the locations of each production and processing site.



Regulations clarify what needs to be done



Let everyone check these guides

Grower guides

Ensure that everyone has knowledge of food safety and food hygiene matters. Everyone should be able to follow these good practices daily.

If everyone adopts these practices, the chances of product contamination will be very low, and your business will continue to offer your great products to eager consumers.



The Growth Drivers



Traceability

Customers and consumers want to know more about how, where, and by whom the food they buy has been produced. Traceability helps growers demonstrate their products are safe and responsibly grown.



Keep notes of important activities

Record keeping

Our memory is limited. We cannot remember everything we do to each box of produce. Keep notes of important activities during the season.

If you buy produce from other growers, keep copies of purchase receipts that indicate what products were purchased, and the date of purchase.

Consider keeping a notebook with the name of the supplier that sold you the product, the products that were purchased, and the date of purchase. Also include to whom the product was sold and when.

At least keep copies of receipts/invoices that show to whom you sold produce and when.

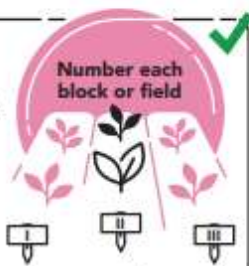
Crop markers

Consider dividing your production areas into blocks. Name or number each block.

Every time you do some work in each block, record it in your notebook. Make notes of any application of fertilisers, soil amendment, and pesticides.

At harvest, keep notes of the block harvested, the product harvested, and the date of harvest.

If you wash and/or pack the product, keep notes of the dates of processing, the block where the product comes from, and any chemical used during processing (e.g., chlorine).



Use a date code

Marking boxes

If you wash and/or pack product from another grower, keep a note of that in your washing/packing notebook.

Consider marking each box with a date code so you know exactly when the product was washed/packed.

If you mark the packed boxes, you can better respond in case there is a customer complaint.

Or, if you get good comments about the quality of the product, the marking on the boxes will help you identify the product correctly.

Preharvest Water Use

Water is used for many important activities in the field. In some situations, water can spread dangerous microbes that may cause health problems to consumers.



is a safe supply

Water supply & sources

There are different sources of water, and each water source should be restricted to specific uses.

Town water is considered safe and can be used for all types of agricultural activities.

Bore water is often safe, but the bore must be properly constructed and maintained. Test bore water at least once a year to ensure that water remains clean and safe.

Animal contamination and water use

Dangerous microbes in water often come from human and animal waste (faeces), sewage water discharges, animal production sites, and manure piles.

Prevent animal access to water sources. Be aware of uncontrolled wildlife that can also contaminate water sources.

Only use town water (or similar quality) for pesticide and foliar applications. Tested bore water is also acceptable.

Only use town water (or similar quality) for drinking and handwashing.



Postharvest Water Use

Often, produce is washed before it is ready for sale. Washing water must be clean and safe to avoid product contamination.



Water supply and use

Untreated surface water (e.g., rivers, creeks, ponds) should not be used for postharvest activities.

Only town water (or similar water quality) should be used for drinking, handwashing, cleaning, washing, and cooling.

If you use town water, then single-pass spray bar systems or washing hoses do not need further water treatment.



Washing

Discard products contaminated with excessive dirt, or with bird or animal waste. If you try to wash that product you will only spread the contamination to clean products.

If you use washing tanks or recycle washing water, use antimicrobial chemicals (e.g., chlorine, PAA) to keep the water safe.

Seek technical support to select and run an antimicrobial chemical system for the washing water.



Single-pass town water is safe

System management

Ask the local chemical reseller to help you select the best system, and to provide written instructions on how to use and monitor that system.

Antimicrobial chemicals are dangerous, so make sure everyone handling those chemicals follow the safety instructions on the label.

Most antimicrobial chemicals work better in clean water. Change the water when it becomes too cloudy.

Add more chemicals to the tank before the antimicrobial levels decrease too much.

Monitor the chemical levels several times during the day. Follow the instructions provided by the chemical reseller.

Keep a record of the chemical levels during the day, and the quantities that are added every time the levels are too low.



Antimicrobials keep water safe

Soil Amendments & Fertilisers

Growers use inputs such as seeds, seedlings, soil, soil amendments and fertilisers. Soil amendments and fertilisers that contain manure may represent a food safety risk.



Suitable soil amendments



Soil amendments include products such as manure, animal by-products (e.g., bone, blood, feather meal, fish emulsion), agricultural teas, chemical fertilisers, and compost.

Chemical fertilisers and treated animal by-products are of lower risk of containing dangerous microbes (pathogens).

Only use agricultural teas made from properly composted materials and safe water. Teas made from untreated animal materials and/or contaminated water are high risk.

Most treated soil amendments are safe

Untreated amendments

Never apply human waste to crops. The risk of contamination is very high. Biosolids are not allowed to be used to grow fruits and vegetables either.

Untreated soil amendments made from manure often contain dangerous microbes (pathogens) that can make people sick.

Untreated manure should be incorporated into the soil 90-120 days before harvest. Raw manure should not be used to grow short-term crops such as leafy vegetables and herbs.

Raw manure should be stored away from fields and produce handling facilities.

Proper composting ensures the reduction of dangerous microbes. Composting requires heat, aeration/turning, moisture, and time.



Do not use raw manure

Safety and precautions



Wear gloves when handling soil amendments

Acceptable compost should be treated in accordance with the Australian Standard AS4454-2012.

Keep composted materials covered and away from waste and rubbish to prevent recontamination by birds or rodents.

Apply properly composted materials during pre-planting or in the early stages of growth. Apply near the roots and incorporate the material into the soil.

Wear gloves during the application of soil amendments and always wash your hands after application.

Keep notes of what, where, and how much soil amendment you apply for each application.



Chemical & Pesticide Use

Chemicals are important inputs in many farms. Handle all chemicals carefully to avoid any accidents or produce contamination.



Handling chemicals and pesticides

Handle all chemicals carefully



Handle all cleaning chemicals and pesticides carefully. Always store them away from produce, containers, and packaging material.

Anyone who applies chemicals must complete a chemical users course (e.g., ChemCert).

The best way to ensure you meet the MRL (maximum residue levels) is to follow all chemical label instructions.

Only purchase pesticides from approved chemical resellers (e.g., Agsafe). Never purchase secondhand pesticides.

Transporting food and chemicals

Never transport pesticides with people, food, or animal feeds.

The pesticide storage must be properly identified, lockable, away from children, animals, and water sources. It must provide a way of containing any spills or leaks. It must be well ventilated and must have enough light. Provide a safety shower and eyewash facility.

Calibrate the sprayer at least annually to ensure it will spray the right amount of pesticide.

Wear protective clothing and equipment (e.g., gloves, safety goggles, long trousers, long sleeves, boots, hat, etc.).



Never transport pesticides and food together

Application and record keeping



Record all chemical applications

Ensure the water used is town water quality (free of dangerous microbes).

Pesticides should be applied exactly as indicated in the product label or permits. Do not spray pesticides during windy conditions, or when it is raining.

Observe re-entry rules for covered cropping.

Do not harvest any product until all withholding periods have been met.

Take a shower immediately after washing and storing the sprayers.

Keep records of all applications including date, location, the pesticide used, rate of application, the quantity applied, weather conditions, and name of operator.

Suitability of Growing Areas

Growers need to assess production areas to identify potential sources of contamination. Take action to eliminate or reduce those sources of contamination.



Food safety risks

Assess the potential food safety risks in your farm and indoor growing facilities (e.g., greenhouses, hydroponics).

Food safety risks can include dangerous microbes (pathogens), chemical contamination (e.g., pesticides), or physical materials (e.g., glass, metal, wood).

If your farm is near a town or on the main road, you may find that rubbish needs to be removed from some fields before harvest.

Make a note of areas of the farms that attract more wildlife. Animals can contaminate produce, the soil, and water sources.



Risk prevention

Fence fields to prevent livestock from entering fruit and vegetable production sites.

Ensure septic tanks are well maintained and located away from water sources.

Check that piles of soil amendments are stored in safe locations.

Dispose of rubbish promptly. Do not allow piles of rubbish to accumulate anywhere on the farm.



Do not pile rubbish



Some chemicals can persist in the soil for a long time

Land contamination

Find out if your land was previously used for animal production. Check if the soil may still be contaminated.

Land that was previously used for rubbish disposal or as a waste management site may contain all types of contaminants.

Some chemicals may remain in the soil a long time after application. Those chemicals can contaminate produce grown in contact with the soil.

If neighbouring properties are used for animal grazing, as a feedlot, or for poultry production, those properties could become a source of contamination for your products.



Severe Weather Events

Severe weather events can be expected from time to time. Those events can potentially cause product contamination.



Floods, dust storms and droughts



Establish windbreaks where you can

Floods, dust storms, and droughts increase the risk of fresh produce contamination.

If necessary, establish windbreaks to reduce wind speed and decrease the impact of dust storms.

Droughts often reduce the quality and safety of water sources.

During drought events, increase the frequency of water tests.

Severe flooding when runoff from rivers or streams runs onto the fields will result in produce contamination.

Contaminated flood water

Floodwaters can carry chemicals, dangerous microbes (pathogens), and a number of physical contaminants (e.g., plastic, glass, metal, wood).

Floodwaters often carry contamination from sewage/septic systems, manure storage, industrial chemical storage, pesticide or fertiliser storage, and more.

As soon as it is safe, place markers at the high-water line so you can identify the areas where crops were in contact with flood waters.

Place a second set of markers 10 metres from the high-water line to create a buffer zone. That buffer should be sufficient to allow equipment to turn around without touching the flooded area.

Keep everyone and all equipment away from the flooded areas to avoid spreading contamination to the rest of the farm.



Floodwaters spread contamination

Contaminated produce



Discard produce touched by flood waters

Thoroughly clean protective clothing (e.g., rubber boots, rubber gloves) and all equipment before work begins again in the clean areas of the farm.

Do not harvest produce touched by floodwater. Do not harvest produce from the buffer zone either. All that product must be discarded.

Over time, contamination of the flooded site will naturally decrease. Ask the local agronomist to organise soil tests to check the level of contamination still present in the flooded fields before replanting.

Wait at least 60 days before replanting. The soil must be sufficiently dried out.

Premises & Equipment

Farm buildings and equipment that are poorly constructed and maintained can increase the chances of product contamination.



Farm buildings

The purpose of farm buildings and facilities is to protect products and inputs from damage and contamination and to allow growers to handle products efficiently.

Many small-scale operations use simple and partly open buildings and facilities that can assist in protecting products and inputs, but fully enclosed sheds with concrete floors provide better protection and are easier to clean and maintain.

Regardless of the type of buildings and facilities used, ensure buildings and facilities are well designed, constructed, and maintained to minimise the chances of damage to products and contamination.



An enclosed shed is better

Equipment safety

Keep chemicals, fuel, oil, grease, fertilisers, and manure-based products stored in locations separate from produce, produce handling equipment, and packaging material. The mechanical and repairs workshop must be separate from produce handling and storage areas.

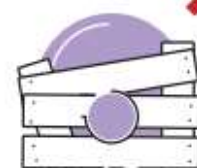
Check, clean, and disinfect water storage tanks at least once a year.

Knives must have solid blades. Never use breakable blades (e.g., Stanley knives). Wash all harvesting tools daily with a soap solution.



Do not use knives with breakable blades

Broken equipment



Repair or discard broken containers

Repair or discard all broken containers and equipment to avoid contamination with pieces of plastic, metal, or wood.

Pay particular attention to all surfaces that come in direct contact with produce (e.g., crates, washing tanks, packing lines). Those surfaces should be made from materials such as plastics, stainless steel, or other food-grade materials that are easy to clean.

In the cool room, ensure that the cooling unit does not drip water on produce. If necessary, add a drip pan to drain the water out of the room.

At least once a month check all facilities and equipment and make a list of all the repairs and maintenance that are needed.



Cleaning & Sanitising

Clean farms, facilities, and equipment ensure fresh produce remains safe for consumers.



Remove rubbish and waste often

Rubbish & waste

The easiest way to clean a farm and its facilities is to keep things clean and orderly in the first place.

Remove rubbish and waste from the farm often.

Clean vehicles, trolleys, bins, and boots before they are brought into the packing facility to reduce the amount of dirt and mud that accumulates inside.

Cleaning tools and facilities

Knives and harvest crates must be cleaned, sanitised, and securely stored at the end of each day.

Inside the facilities clean floors, rubbish and waste bins, storage areas, toilets, and meal areas on a regular basis. During peak season, clean those areas often.

Surfaces that touch produce (e.g., washing tables and tanks, conveyor belts, sorting tables, brushes) must be thoroughly cleaned and sanitised daily, or more often if needed.

Water used for cleaning and sanitising must be town water quality.

First, remove gross dirt and debris from equipment surfaces using a brush and/or water to rinse off the debris.



Place cleaning tools where they are needed

Cleaning chemical use



Only use approved detergents and sanitisers

Apply detergent and scrub the surfaces. Select a detergent that works well with fruit and vegetable residues.

Rinse the surfaces with clean water. Make sure all produce residues and detergent are removed.

Finally, apply an approved sanitizer to reduce the presence of microbes on the surfaces. Check the label to make sure the sanitiser is used correctly.

Don't forget to keep the transport vehicles clean as well.

Temperature Management

Keeping produce cool maintains quality and reduces risks to consumers.



Keep processed produce between 0 and 5 degrees

Food temperature risks

Minimally processed products (e.g., salads) must be kept between 0 and 5 degrees to avoid food safety risks.

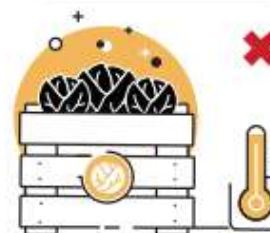
The food safety risk for whole produce is lower, but temperature abuses affect product quality and increase waste. Reduce produce temperature as soon as possible after harvest.

Products such as leafy greens and berries last longer if kept between 0 and 4 degrees. Others such as tomatoes and cucumbers perform better at a range between 7 and 10 degrees.

High temperature and shading

Trees can provide good shade but keep some distance between trees and buildings to avoid attracting pests.

Harvest early in the morning or at night when the product temperature is lower. During the day, keep the harvested product under shade (e.g., using a light-coloured canvas).



Don't leave harvested produce exposed to the sun



Only use town water to make ice

Water safety

Using cold water can be effective on many water-tolerant products. Remember that only town water (or similar water quality) should be used for product cooling.

Bore water is often cooler than ambient temperature so it can help reduce product temperature.

If water is used in a tank or recirculated, you need to add an antimicrobial chemical (sanitiser) to the water.

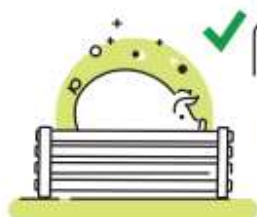
Ice can be applied to water, or it can be used crushed or flaked when packing water-tolerant products. Ice must be produced using town water (or similar quality).

Use well-insulated and well-ventilated transport vehicles. If you only have an open-air vehicle, load it so that air can pass through the load. Also, place a light-coloured canvas to shade the product. Whenever you can, travel at night or early in the morning.



Animals & Pests

All animals and pests can contaminate produce with dangerous microbes. Control animals and pests as much as possible.



Keep animals away from production areas

Animals and Production Areas

All animals, including wildlife, cattle, sheep, pets, and pests can spread dangerous microbes to produce, soil, water, equipment, and people.

Animals can also introduce physical contaminants such as hair, feathers, and nesting materials.

If wildlife is a challenge in your region, consider practices such as using decoys, fencing, netting, noise deterrents, ultrasonic devices, reflective tape, inflatable air figures, and balloons.

Discourage animal presence in the field by removing damaged or rotten produce, and by preventing standing water.

Contaminated Produce

Exclude all domestic animals from areas where produce is harvested, packed, and stored.

Keep pets away from produce fields and packing areas. They can carry dangerous microbes, as well as transfer soil, dirt, hair, and pests to the facilities.

Check fields prior to harvest to determine whether the produce has been contaminated by animals. Inform the whole harvest team that contaminated products must not be harvested.

Do not allow birds to roost near where produce or packing materials are handled or stored.

Keep facilities clean and free of harborage for pests. Your pest control program should cover all areas and facilities where pests can find shelter.



Don't harvest contaminated produce



Keep bait blocks enclosed

Baits and Traps

Only use approved baits and traps for pest control. Ensure bait blocks are inside containers to minimise the risk of accidental spread of chemicals.

Show the location of each bait station on a facility plan and monitor the stations often. Keep a record of the number of bait blocks replaced in each station so you can identify areas where pests are more active.

Health & Hygiene

Follow good health and hygiene practices every day to reduce food safety risks



Provide clean toilets

Toilet Facilities

People can carry and spread dangerous microbes. They do this when they touch produce or surfaces with dirty hands and clothing.

Provide suitable toilets for workers and visitors. Locate toilets away from water sources or places likely to be flooded.

Provide handwashing facilities near toilets. They should include running town water (or similar quality water), liquid soap, and paper towels.

Handwashing

Provide first aid kits and keep them handy (e.g. packing facility, harvest vehicles, chemical storage area).

Display signs to remind people about good health and hygiene practices.

Monitor toilets, lunch areas, and first aid kits regularly to ensure they remain clean and well-stocked.

Remind everyone they must wash their hands after using the toilet, before starting or returning to work, after eating and smoking, after touching animals or animal waste, and after any time hands become contaminated.



Wash hands often



Sick people must not handle produce

Food Contamination

Do not allow smoking, spitting, chewing gum, eating, sneezing, or coughing near unprotected produce. Ask everyone to remove jewellery, except for plain wedding bands.

Do not allow people with symptoms including nausea, vomiting, diarrhea, fever, or jaundice to handle fresh produce. People that are not feeling well may be reassigned to different duties.

Cuts, minor wounds, and sores must be securely covered with bandages and dressings. Discard any product that may be contaminated with blood.

Visitors must also follow all health and hygiene policies and practices.



Postharvest Water Use

Often, produce is washed before it is ready for sale. Washing water must be clean and safe to avoid product contamination.



Water supply and use

Untreated surface water (e.g., rivers, creeks, ponds) should not be used for postharvest activities.

Only town water (or similar water quality) should be used for drinking, handwashing, cleaning, washing, and cooling.

If you use town water, then single-pass spray bar systems or washing hoses do not need further water treatment.



Washing

Discard products contaminated with excessive dirt, or with bird or animal waste. If you try to wash that product you will only spread the contamination to clean products.

If you use washing tanks or recycle washing water, use antimicrobial chemicals (e.g., chlorine, PAA) to keep the water safe.

Seek technical support to select and run an antimicrobial chemical system for the washing water.



System management

Ask the local chemical reseller to help you select the best system, and to provide written instructions on how to use and monitor that system.

Antimicrobial chemicals are dangerous, so make sure everyone handling those chemicals follow the safety instructions on the label.

Most antimicrobial chemicals work better in clean water. Change the water when it becomes too cloudy.

Add more chemicals to the tank before the antimicrobial levels decrease too much.

Monitor the chemical levels several times during the day. Follow the instructions provided by the chemical reseller.

Keep a record of the chemical levels during the day, and the quantities that are added every time the levels are too low.



Antimicrobials
keep water safe

- Do not use untreated surface water
- Town water ok for all uses
- Single-pass town water does not need water treatment
- Discard contaminated product (do not try to wash it to save it)
- Washing tanks or water recycling systems need antimicrobial chemicals
- Seek technical support to install an antimicrobial system for water
- Monitor chemical levels during the day



- Store chemicals away from produce, containers, and packaging materials
- Complete chemical users' course
- Follow label instructions
- Never transport pesticides with people, food, or animal feeds
- Calibrate sprayer at least annually
- Wear protective clothing and equipment
- Water used must be town water quality
- Keep records

Chemical & Pesticide Use

Chemicals are important inputs in many farms. Handle all chemicals carefully to avoid any accidents or produce contamination.



Handling chemicals and pesticides

Handle all chemicals carefully

Handle all cleaning chemicals and pesticides carefully. Always store them away from produce, containers, and packaging material.



Anyone who applies chemicals must complete a chemical users course (e.g., ChemCert).

The best way to ensure you meet the MRL (maximum residue levels) is to follow all chemical label instructions.

Only purchase pesticides from approved chemical resellers (e.g., Agsafe). Never purchase secondhand pesticides.



Transporting food and chemicals

Never transport pesticides with people, food, or animal feeds.

The pesticide storage must be properly identified, lockable, away from children, animals, and water sources. It must provide a way of containing any spills or leaks. It must be well ventilated and must have enough light. Provide a safety shower and eyewash facility.

Calibrate the sprayer at least annually to ensure it will spray the right amount of pesticide.

Wear protective clothing and equipment (e.g., gloves, safety goggles, long trousers, long sleeves, boots, hat, etc.).



Never transport pesticides and food together



Record all chemical applications

Application and record keeping

Ensure the water used is town water quality (free of dangerous microbes).

Pesticides should be applied exactly as indicated in the product label or permits. Do not spray pesticides during windy conditions, or when it is raining.

Observe re-entry rules for covered cropping.

Do not harvest any product until all withholding periods have been met.

Take a shower immediately after washing and storing the sprayers.

Keep records of all applications including date, location, the pesticide used, rate of application, the quantity applied, weather conditions, and name of operator.



Temperature Management

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Food temperature risks



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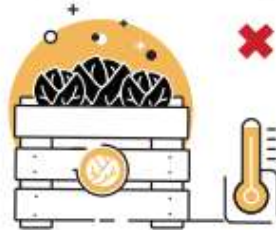
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High temperature and shading

Trees can provide good shade but keep some distance between trees and buildings to avoid attracting pests.

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Don't leave harvested produce exposed to the sun

Water safety



Only use town water to make ice

Using cold water can be effective on many water-tolerant products. Remember that only town water (or similar water quality) should be used for product cooling.

Bore water is often cooler than ambient temperature so it can help reduce product temperature.

If water is used in a tank or recirculated, you need to add an antimicrobial chemical (sanitiser) to the water.

Ice can be applied to water, or it can be used crushed or flaked when packing water-tolerant products. Ice must be produced using town water (or similar quality).

Use well-insulated and well-ventilated transport vehicles. If you only have an open-air vehicle, load it so that air can pass through the load. Also, place a light-coloured canvas to shade the product. Whenever you can, travel at night or early in the morning.

- Keep salads between 0 and 5 degrees
- Reduce produce temperature as soon as possible after harvest
- Leafy greens and berries last longer if kept between 0 and 4 degrees
- Tomatoes and cucumbers perform better between 7 and 10 degrees
- Keep harvested product under the shade
- Cold water can be effective on many water-tolerant products



Benefits

- Easier for growers to meet regulations
- Basic practices are sufficient
- Prepared to move to formal certification later (if they see a market opportunity)
- Opportunity to establish a link with the small-scale grower community





FRESH PRODUCE SAFETY CONFERENCE
11 AUGUST 2022
PROMOTING SKILLS, SCIENCE, SYSTEMS AND STANDARDS

