

FOOD SAFETY RISK ASSESSMENT FORM

RISK ASSESSMENT for: 3390/8000
Konayuki / Makaira

KPIN/s:

GENERAL

STEP 1: Identify Hazards		STEP 2: RISK (High, Medium, Low)	STEP 3: Control Hazards (Eliminate, Isolate Or Minimise)				STEP 4: Continuous Improvement
Source	Hazard	Risk	E	I	M	Hazard Control	✓
People							
Staff lack of training	<ul style="list-style-type: none"> Failure to prevent contamination of fruit Lack of awareness of rules / not following hygiene rules Failure to report illness or contamination of body fluids (e.g. blood) 	L			<ul style="list-style-type: none"> ✓ ✓ ✓ 	<ul style="list-style-type: none"> Staff training to include hygiene rules Monitor staff while working Staff made aware of notification rules 	
Staff transmissible disease	<ul style="list-style-type: none"> Spread of disease to other people Contamination of fruit 	L			<ul style="list-style-type: none"> ✓ ✓ ✓ ✓ ✓ 	<ul style="list-style-type: none"> Staff training to include hygiene rules Staff made aware of notification rules Traceability procedures in place Evaluating if workers are fit to return to work after illness Following on orchard COVID guidelines (e.g. NZKGI guidelines) 	

STEP 1: Identify Hazards		STEP 2: RISK (High, Medium, Low)	STEP 3: Control Hazards (Eliminate, Isolate Or Minimise)				STEP 4: Continuous Improvement
Source	Hazard	Risk	E	I	M	Hazard Control	✓
Indirect contamination by staff from contact with external sources	<ul style="list-style-type: none"> Contact with animals Contact with other sites Contact with other produce 	L			✓	<ul style="list-style-type: none"> Staff made aware of all possible sources of contamination 	
Equipment							
Bins (previous use)	<ul style="list-style-type: none"> Biological contamination Chemical contamination Physical contamination 	L			✓ ✓	<ul style="list-style-type: none"> Check bins prior to use Check bins are not damaged in any way 	
Picking bags (previous use)	<ul style="list-style-type: none"> Biological contamination Chemical contamination Physical contamination 	L			✓ ✓ ✓	<ul style="list-style-type: none"> Check bags prior to use Cleaning schedule in place Check for damage / fraying bags 	
Unclean/damaged gloves	<ul style="list-style-type: none"> Biological contamination Chemical contamination Physical contamination 	L			✓ ✓	<ul style="list-style-type: none"> Train staff to ask for replacements Check gloves prior to issuing to staff (i.e. old / fraying) 	
Equipment stored in unhygienic conditions	<ul style="list-style-type: none"> Pest access Damp encourages bacterial growth Deterioration of condition of equipment 	L			✓ ✓	<ul style="list-style-type: none"> Ensure all equipment stored in a clean, dry place Cleaning schedule 	
Sanitizing procedures (wrong chemicals, poor rinsing)	<ul style="list-style-type: none"> Biological contamination Chemical contamination 	L			✓	<ul style="list-style-type: none"> Staff training 	

STEP 1: Identify Hazards		STEP 2: RISK (High, Medium, Low)	STEP 3: Control Hazards (Eliminate, Isolate Or Minimise)				STEP 4: Continuous Improvement
Source	Hazard	Risk	E	I	M	Hazard Control	✓
Unclean vehicles	<ul style="list-style-type: none"> • <i>Biological contamination</i> • <i>Chemical contamination</i> • <i>Physical contamination</i> • 	L			✓	<ul style="list-style-type: none"> • Check vehicles before use 	

STEP 1: Identify Hazards		STEP 2: RISK (High, Medium, Low)	STEP 3: Control Hazards (Eliminate, Isolate Or Minimise)				STEP 4: Continuous Improvement
Source	Hazard	Risk	E	I	M	Hazard Control	✓
Facilities							
Toilet and handwash facilities unavailable	<ul style="list-style-type: none"> • Staff unable to use facilities/ wash their hands • Biological contamination of fruit • Spread of illness 	L			<ul style="list-style-type: none"> ✓ ✓ 	<ul style="list-style-type: none"> • Visual check of all hygiene facilities prior to picking • 	
Toilet and handwash facilities unclean/poorly maintained	<ul style="list-style-type: none"> • Cross-contamination from unhygienic facilities • Biological contamination of fruit • Spread of illness • 	L			<ul style="list-style-type: none"> ✓ ✓ 	<ul style="list-style-type: none"> • Ensure clean water for handwashing • Visual check of all hygiene facilities prior to picking • 	
No signage for handwashing present	<ul style="list-style-type: none"> • Hand-washing procedures not followed • Biological contamination of fruit • Spread of illness • 	L			<ul style="list-style-type: none"> ✓ ✓ 	<ul style="list-style-type: none"> • Annual GAP audit • Visual check of all hygiene facilities prior to picking • 	
Cross contamination to or from eating areas	<ul style="list-style-type: none"> • Unwell staff • Contaminated fruit • 	L			<ul style="list-style-type: none"> ✓ ✓ ✓ 	<ul style="list-style-type: none"> • Staff training • Hygiene signage present • Facilities for handwashing provided • 	
Wash-down facilities for equipment not available	<ul style="list-style-type: none"> • Equipment not cleaned properly - potential for cross contamination • • 	L					
Water Use							

STEP 1: Identify Hazards		STEP 2: RISK (High, Medium, Low)	STEP 3: Control Hazards (Eliminate, Isolate Or Minimise)				STEP 4: Continuous Improvement
Source	Hazard	Risk	E	I	M	Hazard Control	✓
Water for handwashing not potable	<ul style="list-style-type: none"> • <i>Unwell staff</i> • <i>Contaminated fruit</i> 	L			<ul style="list-style-type: none"> ✓ ✓ 	<ul style="list-style-type: none"> • Water tested • Sanitiser provided as well as soap and water 	
Water for drinking/ cooking not potable		L			<ul style="list-style-type: none"> ✓ ✓ 	<ul style="list-style-type: none"> • Water tested • Water from another source provided 	
Grounds							
Product fallen to ground or dropped	<ul style="list-style-type: none"> • <i>Biological contamination of fruit</i> • <i>Chemical contamination of fruit</i> • <i>Physical contamination</i> 	L			<ul style="list-style-type: none"> ✓ ✓ ✓ 	<ul style="list-style-type: none"> • Kiwifruit in contact with the ground should be separated from picked fruit • Kiwifruit in contact with ground to not be picked up • Level of possible chemical and/or biological contamination determined 	

WATER QUALITY

STEP 1: Identify Hazards		STEP 2: RISK <small>(High, Medium, Low)</small>	STEP 3: Control Hazards (Eliminate, Isolate Or Minimise)				STEP 4: Continuous Improvement
Source	Hazard	Risk	E	I	M	Hazard Control	✓
<i>Contamination Sources</i>							
Contaminated source water in contact with crop	<ul style="list-style-type: none"> • <i>Contaminated irrigation, spray, frost protection or wash water applied or splashed onto crop</i> 	L				<ul style="list-style-type: none"> ✓ Identify and control water sources e.g. on map ✓ Test water supply as per water testing procedures, only use potable water close to harvest ✓ Do not use high risk water for handwashing, watering crop, washing food contact equipment, or drinking ✓ Never use chemically contaminated water ✓ Avoid irrigation water contact with fruit as much as possible (e.g. through use of drip/under-vine emitters) to avoid contamination by water ✓ Run water for at least 5 minutes before contact with crop (to wash out as much stagnant water as possible) 	
Poor tank/irrigation system condition	<ul style="list-style-type: none"> • <i>Physical: rust flakes etc. cause contamination of fruit</i> • <i>Biological: Stagnant areas within the system</i> • <i>Chemical contamination</i> - leaching from plastic or other material related to storage or equipment • 	L				<ul style="list-style-type: none"> ✓ Maintain water tanks / regularly check condition ✓ Repair and replace when needed ✓ Clean/replace water filters 	

STEP 1: Identify Hazards		STEP 2: RISK (High, Medium, Low)	STEP 3: Control Hazards (Eliminate, Isolate Or Minimise)			STEP 4: Continuous Improvement	
Source	Hazard	Risk	E	I	M	Hazard Control	✓
Poor tank/ irrigation system design	<ul style="list-style-type: none"> <i>Pipes etc. have areas of stagnating water that may breed bacterial</i> 					<ul style="list-style-type: none"> Check and maintain good design of water transport system in the orchard 	
Water storage facilities (cisterns, tanks or containers)	<ul style="list-style-type: none"> <i>Physical: unclean surfaces, damaged storage facilities, debris</i> <i>Biological: if not covered, stored water can be contaminated by outside biological debris and nutrients (e.g., leaf litter, insects, bacteria)</i> <i>Chemical: risk of leaching from plastic or other material the storage facility is made of</i> 					<ul style="list-style-type: none"> Maintain water storage facilities to ensure stored water is not a source of contamination to produce. Where possible, water storage facilities are covered and have appropriate (and clean) filter and treatment systems if/where needed. Tank, cistern or container is able to be cleaned and well maintained to reduce risk of contamination to water quality. 	
Sedimentation (both tanks and surface water) from past and present	<ul style="list-style-type: none"> <i>Physical: soil particles on fruit</i> <i>Biological: nutrients for bacteria growth resulting in contaminated fruit</i> <i>Chemical: build-up of chemicals/ nutrients in sediment</i> 					<ul style="list-style-type: none"> Monitor and clean tanks, ponds and filters regularly Vegetation around open water sources Control run-off Run water before fruit contact 	
Inputs (Agrichemicals / Fertilisers)	<ul style="list-style-type: none"> <i>Chemical: Pesticide contamination</i> <i>Chemical: Nutrient contamination from fertilisers (loss of nutrient control)</i> <i>Biological: Nitrates, phosphates etc. support bacterial growth in water</i> <i>Physical: Nitrates, phosphates etc. support algal growth in water</i> <i>Chemical: Excess minerals affect soil quality/structure</i> 					<ul style="list-style-type: none"> Secure water supply Trained applicators Spray in correct weather conditions No mixing near water sources Comply with GAP storage requirements / secure input storage Appropriate time of application Appropriate volume of application Control run-off 	

STEP 1: Identify Hazards		STEP 2: RISK (High, Medium, Low)	STEP 3: Control Hazards (Eliminate, Isolate Or Minimise)			STEP 4: Continuous Improvement	
Source	Hazard	Risk	E	I	M	Hazard Control	✓
Animal contamination	<ul style="list-style-type: none"> • <i>Biological: droppings or dead animals in water supply causing bacterial contamination on fruit</i> • <i>Chemical: pest control activities contaminating water and hence fruit</i> • 	L			<ul style="list-style-type: none"> ✓ ✓ ✓ ✓ ✓ 	<ul style="list-style-type: none"> • Secure water supply • Check water supply regularly • Restrict animal access • Fence off waterways (if livestock present) • Have appropriate filter and treatment systems if/where needed. 	
Transport	<ul style="list-style-type: none"> • <i>Previous use residues (physical, chemical, biological)</i> • <i>Contamination while in transport</i> • 	L			<ul style="list-style-type: none"> ✓ ✓ ✓ ✓ 	<ul style="list-style-type: none"> • Use clean trucks • Use approved suppliers • Transport tanks sealed and in good condition • Check on previous use of trucks delivering water 	
Surrounding Activities							
Activities upstream	<ul style="list-style-type: none"> • <i>Industrial, farming, horticultural, construction contamination of water</i> • 	L			<ul style="list-style-type: none"> ✓ ✓ ✓ 	<ul style="list-style-type: none"> • Water testing • Change water source (within constraints of consent requirements and permitted activities) • Be aware of upstream activities 	
Neighbours activities	<ul style="list-style-type: none"> • <i>All types: e.g. land activities causing spray drift</i> 	L			<ul style="list-style-type: none"> ✓ ✓ 	<ul style="list-style-type: none"> • Property Spray Plan in place • Be aware of neighbour activities 	
Sewerage storage or distribution	<ul style="list-style-type: none"> • <i>Entering waterways</i> • <i>Physical: Organic matter</i> • <i>Biological: Bacterial contamination</i> • <i>Chemical: Chemicals in sewerage</i> 	L			<ul style="list-style-type: none"> ✓ ✓ 	<ul style="list-style-type: none"> • Monitor condition of sewerage or distribution systems • Ensure toilets comply with regulatory/ council requirements 	

STEP 1: Identify Hazards		STEP 2: RISK (High, Medium, Low)	STEP 3: Control Hazards (Eliminate, Isolate Or Minimise)				STEP 4: Continuous Improvement
Source	Hazard	Risk	E	I	M	Hazard Control	✓
Variation Of Water Quality							
Historic water quality issues	<ul style="list-style-type: none"> Historic test results indicate potential contamination not addressed 	L			✓	<ul style="list-style-type: none"> Respond to any adverse test results - identify source and record corrective action taken 	
Low water levels	<ul style="list-style-type: none"> Low water levels concentrating contamination 	L			✓	<ul style="list-style-type: none"> Identify any new potential risks and address them as appropriate (e.g. change water source, extra testing) 	
Significant events (sudden heavy rain or drought)	<ul style="list-style-type: none"> High water levels washing in extra contaminants Drought (concentrates contaminants) 	L			✓ ✓	<ul style="list-style-type: none"> Identify any new potential risks and address them as appropriate (e.g. change water source, extra testing) Monitor water condition after drought or flood 	
Condition of water used for plant protection	<ul style="list-style-type: none"> Chemical reaction with plant protection products affecting their effectiveness. 	L			✓	<ul style="list-style-type: none"> Check labels of input chemicals/ fertilisers to identify potential effects and select water source as appropriate 	
Equipment/Transfer							
Contamination from storage/ machinery	<ul style="list-style-type: none"> Rust, paint, equipment breakdown Chemical: oil, chemicals leak from equipment 	L			✓	<ul style="list-style-type: none"> Equipment maintenance procedure as per GAP requirements 	
Cracks, leaks in transfer pipes	<ul style="list-style-type: none"> Physical: Debris/ bacteria/ chemicals enters irrigation system via cracks 	NA				<ul style="list-style-type: none"> Equipment maintenance procedure as per GAP requirements 	
Storage vessel condition	<ul style="list-style-type: none"> All: Debris/ bacteria/ chemicals/ animals enters irrigation system via cracks/ holes 	L			✓	<ul style="list-style-type: none"> Ensure tanks or other storage vessels are clean & sealed. Maintain and water quality monitored 	

STEP 1: Identify Hazards		STEP 2: RISK (High, Medium, Low)	STEP 3: Control Hazards (Eliminate, Isolate Or Minimise)				STEP 4: Continuous Improvement
Source	Hazard	Risk	E	I	M	Hazard Control	✓
Long storage periods	<ul style="list-style-type: none"> Physical: algae growth Biological: Bacterial growth 	L			<ul style="list-style-type: none"> ✓ ✓ 	<ul style="list-style-type: none"> Monitor tanks, open water conditions for stagnation/ deterioration Monitor and clean as appropriate 	
Filter conditions	<ul style="list-style-type: none"> Biological: past use-by - fails to filter bacteria, bacterial growth in filters Chemical: past use-by - fails to filter chemicals 	L			<ul style="list-style-type: none"> ✓ 	<ul style="list-style-type: none"> Equipment maintenance procedure 	

ORGANIC MATTER

STEP 1: Identify Hazards		STEP 2: RISK (High, Medium, Low)	STEP 3: Control Hazards (Eliminate, Isolate Or Minimise)				STEP 4: Continuous Improvement
Source	Hazard	Risk	E	I	M	Hazard Control	✓
<i>Source / Composition</i>							
Heavy metal / Pesticide contaminated ingredients	<ul style="list-style-type: none"> Poor plant growth Residue in fruit Environmental contamination 	L			✓ ✓	<ul style="list-style-type: none"> Purchase from a reputable source Ensure complete break-down 	
Animal sourced compost content	<ul style="list-style-type: none"> Bacterial contamination 	L			✓ ✓	<ul style="list-style-type: none"> Purchase from a reputable source Ensure complete break-down 	
Poorly broken down - poor structure	<ul style="list-style-type: none"> Poor plant growth Environmental contamination Bacterial contamination 	L			✓ ✓	<ul style="list-style-type: none"> Purchase from a reputable source Ensure complete break-down 	
<i>Transport</i>							
Spillage from vehicle	<ul style="list-style-type: none"> Environmental contamination Bacterial contamination 	L			✓ ✓	<ul style="list-style-type: none"> Transport by qualified people only Notification procedures in place in event of spillage 	
<i>Storage</i>							
Poor storage conditions	<ul style="list-style-type: none"> Bacterial growth Poor quality organic matter chemical contamination i.e. storing chemicals near fruit 	L			✓ ✓	<ul style="list-style-type: none"> Comply with GAP storage requirements Store in dry, clean area 	

STEP 1: Identify Hazards		STEP 2: RISK (High, Medium, Low)	STEP 3: Control Hazards (Eliminate, Isolate Or Minimise)			STEP 4: Continuous Improvement	
Source	Hazard	Risk	E	I	M	Hazard Control	✓
Pest access	<ul style="list-style-type: none"> Contamination by pests Pest proliferation 	L			<ul style="list-style-type: none"> ✓ ✓ ✓ 	<ul style="list-style-type: none"> Comply with GAP storage requirements Store in dry, clean area Inspect before use 	
Cross-contamination	<ul style="list-style-type: none"> Incorrect fertilizer applied Residue results Poor plant growth 	L			<ul style="list-style-type: none"> ✓ ✓ ✓ 	<ul style="list-style-type: none"> Comply with GAP storage requirements Store in dry, clean area Inspect before use 	
Use							
Poor application timing	<ul style="list-style-type: none"> Bacterial contamination of crop Washes away (environmental contamination) 	L			<ul style="list-style-type: none"> ✓ ✓ 	<ul style="list-style-type: none"> Don't apply close to harvest Monitor weather conditions to select appropriate timing 	
Incorrect quantities/type applied	<ul style="list-style-type: none"> Waste of organic mater Environmental contamination Poor plant growth 	L			<ul style="list-style-type: none"> ✓ ✓ 	<ul style="list-style-type: none"> Qualified / competent applicators only Records of application reviewed 	


CONTINUOUS IMPROVEMENT PLAN:

- Tick (✓) in the CI column any actions that you may plan to do or have identified as an opportunity for improvement. Move only action(s) you intend to act on in the next 1-3 years to your continuous improvement plan form (The continuous Improvement plan is in Part B: Section 1.6 of the Grower Manual).
- See Site Risk Assessment (1.1.1), Waste and Pollution Management Plan (4.4.1), Soil Management Plan (3.1.1) and the Environmental Water Risk Assessment (4.3.1) for additional food safety risks and controls.

List in the table below individuals whose role and responsibilities on your orchard may impact food safety. i.e. they are responsible for a process or activity that, if not managed correctly, could pose a risk of fruit contamination.

Name	Role	Responsibilities
Chloe King	Health and Safety	Ensure staff training
Scott Ellison	Spray	Ensure correct procedures followed

STEP 5: Review

Date: 18/10/2023	Sign: 	Date:	Sign:
Date:	Sign:	Date:	Sign:
Date:	Sign:	Date:	Sign: