FOOD SAFETY RISK ASSESSMENT FORM

**RISK ASSESSMENT for:**

**KPIN/s:**

|  |
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| **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 | * *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)*
 |  |  |  |  | * Staff training to include hygiene rules
* Monitor staff while working
* Staff made aware of notification rules
 |  |
| Staff transmissible disease | * *Spread of disease to other people*
* *Contamination of fruit*
 |  |  |  |  | * 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)
 |  |
| Indirect contamination by staff from contact with external sources | * *Contact with animals*
* *Contact with other sites*
* *Contact with other produce*
 |  |  |  |  | * Staff made aware of all possible sources of contamination
 |  |
|  ***Equipment*** |
| Bins (previous use) | * *Biological contamination*
* *Chemical contamination*
* *Physical contamination*
 |  |  |  |  | * Check bins prior to use
* Check bins are not damaged in any way
 |  |
| Picking bags (previous use)  | * *Biological contamination*
* *Chemical contamination*
* *Physical contamination*
 |  |  |  |  | * Check bags prior to use
* Cleaning schedule in place
* Check for damage / fraying bags
 |  |
| Unclean/ damaged gloves  | * *Biological contamination*
* *Chemical contamination*
* *Physical contamination*
 |  |  |  |  | * Train staff to ask for replacements
* Check gloves prior to issuing to staff (i.e. old / fraying)
 |  |
| Equipment stored in unhygienic conditions | * *Pest access*
* *Damp encourages bacterial growth*
* *Deterioration of condition of equipment*
 |  |  |  |  | * Ensure all equipment stored in a clean, dry place
* Cleaning schedule
 |  |
| Sanitizing procedures (wrong chemicals, poor rinsing) | * *Biological contamination*
* *Chemical contamination*
 |  |  |  |  | * Staff training
 |  |
| Unclean vehicles  | * *Biological contamination*
* *Chemical contamination*
* *Physical contamination*
 |  |  |  |  | * Check vehicles before use
 |  |

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| --- | --- | --- | --- |
| **Source** | **Hazard** | **Risk** | **E** | **I** | **M** | **Hazard Control** | **✓** |
|  ***Facilities*** |
| Toilet and handwash facilities unavailable  | * *Staff unable to use facilities/ wash their hands*
* *Biological contamination of fruit*
* *Spread of illness*
 |  |  |  |  | * Visual check of all hygiene facilities prior to picking
 |  |
| Toilet and handwash facilities unclean/poorly maintained  | * *Cross-contamination from unhygienic facilities*
* *Biological contamination of fruit*
* *Spread of illness*
 |  |  |  |  | * Ensure clean water for handwashing
* Visual check of all hygiene facilities prior to picking
 |  |
| No signage for handwashing present | * *Hand-washing procedures not followed*
* *Biological contamination of fruit*
* *Spread of illness*
 |  |  |  |  | * Annual GAP audit
* Visual check of all hygiene facilities prior to picking
 |  |
| Cross contamination to or from eating areas | * *Unwell staff*
* *Contaminated fruit*
 |  |  |  |  | * Staff training
* Hygiene signage present
* Facilities for handwashing provided
 |  |
| Wash-down facilities for equipment not available | * *Equipment not cleaned properly – potential for cross contamination*
 |  |  |  |  |  |  |
|  ***Water Use*** |
| Water for handwashing not potable | * *Unwell staff*
* *Contaminated fruit*
 |  |  |  |  | * Water tested
* Sanitiser provided as well as soap and water
 |  |
| Water for drinking/ cooking not potable |  |  |  |  |  | * Water tested
* Water from another source provided
 |  |
|  ***Grounds*** |
| Product fallen to ground or dropped | * *Biological contamination of fruit*
* *Chemical contamination of fruit*
* *Physical contamination*
 |  |  |  |  | * 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
 |  |
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| **WATER QUALITY** |

|  **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** | **✓** |
|  ***Contamination Sources*** |
| Contaminated source water in contact with crop | * *Contaminated irrigation, spray, frost protection or wash water applied or splashed onto crop*
 |  |  |  |  | * 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 | * *Physical: rust flakes etc. cause contamination of fruit*
* *Biological: Stagnant areas within the system*
* *Chemical contamination –* leaching from plastic or other material related to storage or equipment
 |  |  |  |  | * Maintain water tanks / regularly check condition
* Repair and replace when needed
* Clean/replace water filters
 |  |
| Poor tank/ irrigation system design | * *Pipes etc. have areas of stagnating water that may breed bacterial*
 |  |  |  |  | * Check and maintain good design of water transport system in the orchard
 |  |
| Water storage facilities (cisterns, tanks or containers) | * *Physical: unclean surfaces, damaged storage facilities, debris*
* *Biological: if not covered, stored water can be contaminated by outside biological debris and nutrients (e.g., leaf litter, insects, bacteria)*
* *Chemical: risk of leaching from plastic or other material the storage facility is made of*
 |  |  |  |  | * 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  | * *Physical: soil particles on fruit*
* *Biological: nutrients for bacteria growth resulting in contaminated fruit*
* *Chemical: build-up of chemicals/nutrients in sediment*
 |  |  |  |  | * Monitor and clean tanks, ponds and filters regularly
* Vegetation around open water sources
* Control run-off
* Run water before fruit contact
 |  |
| Inputs (Agrichemicals / Fertilisers) | * *Chemical: Pesticide contamination*
* *Chemical: Nutrient contamination from fertilisers (loss of nutrient control)*
* *Biological: Nitrates, phosphates etc. support bacterial growth in water*
* *Physical: Nitrates, phosphates etc. support algal growth in water*
* *Chemical: Excess minerals affect soil quality/structure*
 |  |  |  |  | * 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
 |  |
| Animal contamination | * *Biological: droppings or dead animals in water supply causing bacterial contamination on fruit*
* *Chemical: pest control activities contaminating water and hence fruit*
 |  |  |  |  | * 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 | * *Previous use residues (physical, chemical, biological)*
* *Contamination while in transport*
 |  |  |  |  | * 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  | * *Industrial, farming, horticultural, construction contamination of water*
 |  |  |  |  | * Water testing
* Change water source (within constraints of consent requirements and permitted activities)
* Be aware of upstream activities
 |  |
| Neighbours activities | * *All types: e.g. land activities causing spray drift*
 |  |  |  |  | * Property Spray Plan in place
* Be aware of neighbour activities
 |  |
| Sewerage storage or distribution | * *Entering waterways*
* *Physical: Organic matter*
* *Biological: Bacterial contamination*
* *Chemical: Chemicals in sewerage*
 |  |  |  |  | * Monitor condition of sewerage or distribution systems
* Ensure toilets comply with regulatory/ council requirements
 |  |
|  ***Variation Of Water Quality*** |
| Historic water quality issues | * *Historic test results indicate potential contamination not addressed*
 |  |  |  |  | * Respond to any adverse test results – identify source and record corrective action taken
 |  |
| Low water levels | * *Low water levels concentrating contamination*
 |  |  |  |  | * Identify any new potential risks and address them as appropriate (e.g. change water source, extra testing)
 |  |
| Significant events (sudden heavy rain or drought) | * *High water levels washing in extra contaminants*
* *Drought (concentrates contaminants)*
 |  |  |  |  | * 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 | * *Chemical reaction with plant protection products affecting their effectiveness.*
 |  |  |  |  | * Check labels of input chemicals/fertilisers to identify potential effects and select water source as appropriate
 |  |
|  ***Equipment/Transfer*** |
| Contamination from storage/ machinery  | * *Rust, paint, equipment breakdown*
* *Chemical: oil, chemicals leak from equipment*
 |  |  |  |  | * Equipment maintenance procedure as per GAP requirements
 |  |
| Cracks, leaks in transfer pipes | * *Physical: Debris/ bacteria/ chemicals enters irrigation system via cracks*
 |  |  |  |  | * Equipment maintenance procedure as per GAP requirements
 |  |
| Storage vessel condition | * *All: Debris/ bacteria/ chemicals/animals enters irrigation system via cracks/holes*
 |  |  |  |  | * Ensure tanks or other storage vessels are clean & sealed. Maintain and water quality monitored
 |  |
| Long storage periods | * *Physical: algae growth*
* *Biological: Bacterial growth*
 |  |  |  |  | * Monitor tanks, open water conditions for stagnation/ deterioration
* Monitor and clean as appropriate
 |  |
| Filter conditions | * *Biological: past use-by – fails to filter bacteria, bacterial growth in filters*
* *Chemical: past use-by – fails to filter chemicals*
 |  |  |  |  | * Equipment maintenance procedure
 |  |
|  |  |  |  |  |  |  |  |
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| **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** | **✓** |
|  ***Source / Composition*** |
| Heavy metal / Pesticide contaminated ingredients  | * *Poor plant growth*
* *Residue in fruit*
* *Environmental contamination*
 |   |   |   |   | * Purchase from a reputable source
* Ensure complete break-down
 |  |
| Animal sourced compost content  | * *Bacterial contamination*
 |   |   |   |   | * Purchase from a reputable source
* Ensure complete break-down
 |  |
| Poorly broken down – poor structure  | * *Poor plant growth*
* *Environmental contamination*
* *Bacterial contamination*
 |   |   |   |   | * Purchase from a reputable source
* Ensure complete break-down
 |  |
|  ***Transport*** |
| Spillage from vehicle  | * *Environmental contamination*
* *Bacterial contamination*
 |   |   |   |   | * Transport by qualified people only
* Notification procedures in place in event of spillage
 |  |
|  ***Storage*** |
| Poor storage conditions   | * *Bacterial growth*
* *Poor quality organic matter*
* *chemical contamination i.e. storing chemicals near fruit*
 |   |   |   |   | * Comply with GAP storage requirements
* Store in dry, clean area
 |  |
| Pest access  | * *Contamination by pests*
* *Pest proliferation*
 |   |   |   |   | * Comply with GAP storage requirements
* Store in dry, clean area
* Inspect before use
 |  |
| Cross-contamination   | * *Incorrect fertilizer applied*
* *Residue results*
* *Poor plant growth*
 |   |   |   |   | * Comply with GAP storage requirements
* Store in dry, clean area
* Inspect before use
 |  |
|  ***Use*** |
| Poor application timing  | * *Bacterial contamination of crop*
* *Washes away (environmental contamination)*
 |   |   |   |   | * Don’t apply close to harvest
* Monitor weather conditions to select appropriate timing
 |  |
| Incorrect quantities/type applied  | * *Waste of organic mater*
* *Environmental contamination*
* *Poor plant growth*
 |   |   |   |   | * 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** |
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|  |  |  |
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|  |  |  |

**STEP 5: Review**

|  |  |  |  |
| --- | --- | --- | --- |
| Date: | Sign: | Date: | Sign: |
| Date: | Sign: | Date: | Sign: |
| Date: | Sign: | Date: | Sign: |