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 |  |

| **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 | * *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 | |  |
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**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.*

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| **Name** | **Role** | **Responsibilities** |
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**STEP 5: Review**

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