

PART 2

GROWER RESPONSIBILITIES

Described here are the principal areas of grower responsibility, in respect of export fruit, that can affect the wellbeing of the total industry.

These are:

EMS Requirement

- Registration. This involves furnishing a completed registration form to the Avocado Industry Council Ltd and payment of fees as outlined below. This includes the Food Safety Programme.

• If paid by 1 July	\$155.25	(GST incl)
• If paid by 1 August	\$184.00	(GST incl)
• If paid after 1 August	\$270.25	(GST incl)

- To arrange fruit supply through registered Packers and Exporters. List of those currently registered are located at the back of the EMS.
- Spray applications and spray diary maintenance.
- Maturity requirements.

Best Practice

- Harvesting and delivery to packer.

EMS Requirement

NB. Registered Exporters must only purchase from registered Growers who provide export quality fruit that complies with systems ensuring fruit is consistently of required quality, as outlined in the AIC Quality Management Programme, i.e. this Quality Manual.

AvoGreen®

For the 2011/2012 export season commencing 1 June 2011 all export fruit must be AvoGreen® compliant. This requires growers to have had their orchard monitored in accordance with the AvoGreen protocol from 1 November 2010. AvoGreen compliance will be verified at registration for export.

1.0 SPRAYS

EMS Requirement

No avocados are to be exported with residues in excess of industry standards (Section 4.2.4.17 of the EMS). The procedures outlined in this Quality Manual are designed to verify this. A failed residue test on USDA inspection will result in a five year ban for that grower exporting to the USA. Provisions exist under the EMS (Section 6) to deregister any grower that does not comply with their obligations under the EMS.

1.1 Registered Export Spray Chemicals

EMS Requirement

The Council will annually provide up-to-date guidance regarding spray chemicals. Registered export Growers must apply only registered chemicals/pesticides at no more than the recommended rates and observe all withholding periods and other requirements. Always check with your packer or exporter before applying any spray.

Observance of the withholding periods does not guarantee non-detectable residues. Specific chemicals of concern are chlorpyrifos (e.g Lorsban), taufluvinate (Mavrik), and pirimiphos methyl (Attack) as detectable residues may be present even when the withholding period has been observed. It is recommended that residue tests be carried out on any lines of fruit intended for export where any of these chemicals have been applied. For Malaysia, Singapore and Thailand, the use of chlorpyrifos, taufluvinate and pirimiphos methyl is not recommended.

Withholding Periods for export markets

Withholding periods for export markets are for guidance only and are based on the best available information, including residue decay curves. Observance of the withholding period for products with no MRL does **not** guarantee non-detectable residues.

Withholding Period “Not Set”

For some products it has not been possible to determine a withholding period that will provide fruit with no detectable residues. Those products with no MRL and a “not set” withholding period (e.g. Carbaryl, Mimic and Orthene) applied after flowering may require a residue test for some markets. **It is the grower’s responsibility to ensure that there are no detectable residues on the fruit by way of an appropriate residue test.**

Note: Quality Auditors on behalf of AIC will draw random fruit samples for laboratory analysis and these will verify that the system is functioning as required.

Best Practice

A copper fungicide should be applied at monthly intervals.

1.2 Electronic Spray Diary Requirements

EMS Requirement

Your electronic spray diary is an important legal document, which is covered by the Export Marketing Strategy (EMS). Please complete carefully. As the grower it is your responsibility to ensure that it is correctly filled in. A separate **electronic** spray diary must be completed for each property (P-Pin) or cluster of blocks, on behalf of the Grower, i.e. By the Grower, spray contractor or packer.

To comply with the EMS all requested information must be entered. Each property must prepare a spray plan to comply with the regional council air plans.

The spray diary must record all applications of fungicides and pesticides fully and accurately, in accordance with the instructions outlined on the login screen of the “AIC spray and fertilizer diary.” **NB. There is a requirement for foliar fertilizers to be recorded separately as part of the food safety programme. The electronic spray diary should be used to record fertilizer inputs.**

Written dispensation for use of non-registered chemicals maybe granted by the AIC under extenuating circumstances. Any conditions pertaining to the dispensation must be met and a copy of the dispensation supplied to the packer with the spray diary.

NB. HARVESTING CAN ONLY COMMENCE AFTER THE DIARY HAS BEEN VERIFIED BY THE PACKER. FAILURE TO OBSERVE THIS REQUIREMENT MAY PREVENT EXPORT OF YOUR FRUIT.

Use of the Electronic web-based diary

The Grower must obtain a username and password from the system administrator at the AIC (info@nzavocado.co.nz), to use the system. Only those growers with a valid PPIN will be able to register as a user. In most cases the username will be the Growers PPIN (including the preceding P).

To login follow the links from the industry website or go to <http://spraydiary.nzavocado.co.nz/login.aspx>. At the start of each season the Grower must register the diary for a new season. This is to provide up to date information on AvoGreen, calibration, spray plan and phosphorous acid use, amongst others.

Once the Grower has registered in the system entries can be made in their spray diary. An instruction manual can be downloaded from the website. From the main page the options are to view a diary, add a spray or fertilizer or create a harvest line by adding an intended pick date.

To add an application click on the link and select the Growsafe number of the sprayer from the dropdown box, enter the date of application and the volume of water applied per hectare and tick the blocks to which the sprays have been applied (or select all). Finally select the product from the drop down box and enter the rate. As many blocks as required may be added.

Prior to harvest

The Grower must ensure that a ‘relationship’ with the packer has been set up on their electronic spray diary. This is to give the packer access to their diary to verify it prior to harvesting any fruit for export. The Grower or their agent must create a harvest line by adding the intended picking date and selecting the blocks to be harvested. The declaration regarding the accuracy of the information entered as a true and correct record must be completed by the Grower or their agent by ticking the check box. **In so doing the Grower implies that the relevant withholding periods have been met.** The clearance date (based on the withholding period of the sprays applied) will be automatically calculated by the diary for each block for each of the key markets. The Packer must verify that the line has been cleared to pick. **Picking can only commence after the Packer has verified the diary.**

Once verified by the Packer the diary remains valid for a period of 14 days. The Grower must not apply any sprays during this period to those blocks from which fruit is still being harvested. If harvesting has not been completed at the end of this period then the Grower must create another harvest line, even if no further sprays were applied. If you have any difficulties or would like any assistance then please contact the AIC office.

1.3 Spray Diary Form

AVOCADO INDUSTRY COUNCIL LTD EXPORT SPRAY DIARY

Created: 02/May/2011 02:21:44

Page: 1 of 2 Harvest 2011/2012



Registered Owner: Toni Elmsly
Blocks: lake, 2, 3, 4, 1, 5a

Orchard Name: avocado limited

Grower P-Pin: P12346

Date	Product Used	Applicator's Grower site Reg. No	Blocks Sprayed	Spray Rate			Wind		Weather	Neighbours Notified	
				Rate/ 100 Ltrs	Volume Ltrs / per ha	Kg/Ltrs formulation per ha	Volume Ltrs per ha	Aerial or Ground			Speed
2/11/10	Blue Shield DF	S12334	1, 2, 3, 4, lake	150 g	2500			Nil	None	Cloudy	Yes
2/11/10	Proclaim	S12334	1, 2, 3, 4, lake	100 g	2500			Nil	None	Cloudy	Yes
15/12/10	Dipel DF	S12334	1, 2, 3, 4, lake	50 g	2500			Nil	None	Fine	Yes
29/01/11	Blue Shield DF	S12334	1, 2, 3, 4, lake	150 g	2500			Nil	None	Fine	Yes
29/01/11	Prodigy	S12334	1, 2, 3, 4, lake	25 ml	2500			Nil	None	Fine	Yes
27/02/11	Cupric hydroxide 350SC	S12334	1, 2, 3, 4, lake	280 ml	2500			Nil	None	Cloudy	Yes
27/02/11	Success Naturalyte	S12334	1, 2, 3, 4, lake	40 ml	2500			Nil	None	Cloudy	Yes
7/03/11	Calypso	S12334	1, 2, 3, 4, lake	15 ml	2500			Low	SW	Cloudy	Yes
7/03/11	Cupric hydroxide 350SC	S12334	1, 2, 3, 4, lake	280 ml	2500			Low	SW	Cloudy	Yes
Calculated Earliest Pick Date											
Block	AUS	USA	NZ	KOR	JAP	SIN	HK				
1	21/03/2011	11/04/2011 *1	21/03/2011	11/04/2011	28/07/2011 *2	11/04/2011	11/04/2011				
2	21/03/2011	11/04/2011 *1	21/03/2011	11/04/2011	28/07/2011 *2	11/04/2011	11/04/2011				
3	21/03/2011	11/04/2011 *1	21/03/2011	11/04/2011	28/07/2011 *2	11/04/2011	11/04/2011				
4	21/03/2011	11/04/2011 *1	21/03/2011	11/04/2011	28/07/2011 *2	11/04/2011	11/04/2011				
5a	02/05/2011	02/05/2011	02/05/2011	02/05/2011	02/05/2011	02/05/2011	02/05/2011				
lake	21/03/2011	11/04/2011 *1	21/03/2011	11/04/2011	28/07/2011 *2	11/04/2011	11/04/2011				
Block	THA	MAL									
1	11/04/2011	11/04/2011									

AVOCADO INDUSTRY COUNCIL LTD EXPORT SPRAY DIARY

Created: 02/May/2011 02:21:46

Page: 2 of 2

Harvest
2011/2012



Registered Owner: Toni Elmsly

Orchard Name: avocado limited

Grower P-Pin: P12346

Blocks: lake, 2, 3, 4, 1, 5a

2	11/04/2011	11/04/2011							
3	11/04/2011	11/04/2011							
4	11/04/2011	11/04/2011							
5a	02/05/2011	02/05/2011							
lake	11/04/2011	11/04/2011							

Key	Product	Market	Disclaimer
*1	Proclaim	USA	Withholding period for the USA is for guidance only and is based on the best available information, including residue decay curves. Observance of the withholding period does NOT guarantee non-detectable residues.
*2	Proclaim	JAP	Withholding period for Japan is for guidance only and is based on the best available information, including residue decay curves. Observance of the withholding period does NOT guarantee non-detectable residues.

Intended Pick Date	Blocks	Verified Date	Verified Packhouse	Grower Declaration
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>

I hereby declare that the information recorded in this spray diary is a true and correct record.

Grower name: Toni Elmsly Signed: _____ Date: _____

Cleared to Pack By Registered Packhouse: Yes: No:

Shed Manager: _____ Signed: _____ Date: _____

1.4 Growsafe Certification

EMS Requirement

All those applying sprays for each registered grower property (i.e. including growers and/or spray contractors) must be Growsafe registered. This will be verified by industry audit. Dependent on the classification of the chemical anyone storing, applying or disposing of a pesticide may need to be either an Approved Handler or under the direct supervision of an Approved Handler.

1.5a Registered Chemical List – Withholding periods

Active Ingredient	Withholding Period Australia (Days)	Suggested Withholding Period USA (Days)	Withholding Period NZ (Days)	Withholding Period Japan (Days)
Abamectin	14	28	14	28
Acephate	42	Not set	28	Not set
Bacillus thuringiensis	Nil	Nil	Nil	Nil
Carbaryl	1	Not set	1	7
Chlorantraniliprole	14	14	14	Not set
Chlorpyrifos	14	210	14	14
Copper–Bordeaux Mixture	Nil	Nil	Nil	Nil
Copper hydroxide	Nil	Nil	Nil	Nil
Copper oxychloride	Nil	Nil	Nil	Nil
Cuprous oxide	Nil	Nil	Nil	Nil
Diazinon	14	60	14	35
Emamectin benzoate	3	14	3	3
Etoxazole	14	14	14	90
Maldison	3	3	3	3
Methoxyfenozide	14	14	14	180
Milbemectin	14	28	14	28
Mineral oil	Nil	Nil	Nil	Nil
Paclobutrazol	180	180	180	180
Permethrin, Pirimiphos methyl	49	49	14	28
Phosphorous acid	Nil	Nil	Nil	Nil
Prochloraz	Nil	Not set	Nil	Nil
Pyrethrin	1	1	1	1
Silicon dioxide	Nil	Nil	Nil	Nil
Spinosad	3	3	3	3
Taufluvinate	14	120	14	120
Tebufozide	21	250	21	21
Thiacloprid	14	35	14	21
Uniconazole - P	14	Not set	14	14

Refer to the electronic spray diary for the most current list of registered chemicals

1.5b Registered Chemical List – Product and application rates

Chemical/Pesticide <i>F = fungicide</i> <i>I = insecticide</i> <i>G = growth regulator</i>	Active Ingredient (common name)	Product Rate g/100L ml/100L	Application Rate kg/ha L/ha	Observations
Alpasso (I)	Thiacloprid	15 ml	300 ml	
Altacor (I)	Chlorantraniliprole	9 g	Max. 270 g	+ non-ionic surfactant
Apostle (I)	Abamectin	37.5 ml		
Approve 70 WP (I)	Tebufenozide	8.6 g		
Approve 240 SC (I)	Tebufenozide	25 ml		
Attack (I)	Permethrin, Pirimiphos methyl	100 ml		
Avid (I)	Abamectin	37.5 ml		+ 500 ml Oil
Bactur 48 LC – Hortcare (I)	Bacillus thuringiensis	150 ml	Spray to run off	
Bactur WD - Hortcare (I)	Bacillus thuringiensis	50 g	Spray to run off	
Biobit DF (I)	Bacillus thuringiensis	50 g		
BioCrystal kurstaki	Bacillus thuringiensis	25 – 100 ml	0.5 – 2 L	
Blue Shield DF (F)	Copper hydroxide	150 – 200 g	Spray to run off	
Calypso (I)	Thiacloprid	15 ml	300 ml	
Carbaryl 50F (I)	Carbaryl	160 ml		+ 100g Diazinon 50W
Champ DP (F)	Copper hydroxide	107 – 140 g	Spray to run off	
Champ Formula 2 (F)	Copper hydroxide	130 – 170 ml	Spray to run off	
Chlorfos 480 (I)	Chlorpyrifos	50 – 75 ml	Spray to run off	Aerial: 1.7 L/ha
Chlorpyrifos 48EC (I)	Chlorpyrifos	50 – 75 ml	Spray to run off	Aerial: 1.7 L/ha
Chlorpyrifos 50EC – Hortcare (I)	Chlorpyrifos	50 – 75 ml	Spray to run off	Aerial: 1.6 L/ha
Comic (I)	Tebufenozide	8.6 g		
Copper – Headland (F)	Copper Oxychloride	1 Litre		
Copper Oxychloride 800 WP (F)	Copper Oxychloride	400 – 500 g		
Cupric Hydroxide 350 SC (F)	Copper hydroxide	200 – 280 ml		
D-C Tron Plus (I)	Spraying Oil	1 Litre	Spray to run off	
Delfin WG (I)	Bacillus thuringiensis	50 g	Spray to run off	Min 2000 L/ha water
Dew 600 (I)	Diazinon	80 ml	Spray to run off	+ Carbaryl at label rates
Diazinon 50 W (I)	Diazinon	100 g	Spray to run off	
Diazol (I)	Diazinon	100 ml	Spray to run off	
Dipel DF (I)	Bacillus thuringiensis	50 g	Spray to run off	Min 2000 L/ha
Entrust Naturalyte (I)	Spinosad	6 g		
Excel Oil (I)	Spraying Oil	1 Litre		
Foli-R-Fos 400 (F)	Phosphorous acid	See label		
Foschek (F)	Phosphorous acid	See label		
Fyfanon (I)	Maldison	340 ml		
Garlic and Pyrethrum (I)	Pyrethrins	See label		
HI PK (F)	Phosphorous acid	See label		
Insecta-Kill (I)	Silicon dioxide	See label	7 kg	
Islandzide (I)	Tebufenozide	8.6 g		
Key Pyrethrum (I)	Pyrethrins	500 ml		
Kocide 2000 (F)	Copper hydroxide	115 – 150 g	3.4 kg min	
Kocide 2000 DS (F)	Copper hydroxide	115 – 150 g	3.4 kg min	
Kocide 2000 LF (F)	Copper hydroxide	115 – 150 ml	3.4 L min	

1.5b Registered Chemical List – Product and application rates (continued)

Chemical/Pesticide <i>F = fungicide</i> <i>I = insecticide</i> <i>G = growth regulator</i>	Active Ingredient (common name)	Product Rate g/100L ml/100L	Application Rate kg/ha L/ha	Observations
Kocide Opti (F)	Copper hydroxide	90 g	2 kg	
Lancer 750 DF (I)	Acephate	100 g	Spray to run off	
Liquicop (F)	Copper	500 ml	18.6 L	
Lorsban 50 EC (I)	Chlorpyrifos	50 – 75 ml	Spray to run off	Aerial: 1.6 L/ha
Lorsban 750 WG (I)	Chlorpyrifos	33 – 50 g	Spray to run off	Aerial: 1.33 kg/ha
Malathion 50 EC (I)	Maldison	300 ml		
Mantissa Choice (F)	Copper hydroxide	60 – 77 ml		
Mavrik Aquaflo (I)	Taufluvialinate	20 ml		
Mimic 700 WP (I)	Tebufenozide	8.6 g	Spray to run off	+ 500 ml Oil
Mirage 450 (F)	Prochloraz	55 ml		
Mit-E-Mec (I)	Milbemectin	75 ml		
Nordox 75 WG (F)	Cuprous oxide	55 - 70 g	1.6 kg min	
Nordox Oleo 40 (F)	Cuprous oxide	150 ml	1.8 L min	
Nursery Success Naturalyte (I)	Spinosad	50 ml/10 L		
Orthene WSG (I)	Acephate	80 g	Spray to run off	
Paramite (I)	Etoxazole	35 ml		
Payback (G)	Paclobutrazol	See label		
Phosa (F)	Phosphorous acid	See label		
Phosgard (F)	Phosphorous acid	See label		
Phyta (F)	Phosphorous acid	See label		
Proclaim (I)	Emamectin benzoate	4 g		
Prodigy (I)	Methoxyfenozide	25 ml	Spray to run off	
Prolan 240SC (I)	Tebufenozide	25 ml		
Pychlorex 48 EC (I)	Chlorpyrifos	50 – 75 ml	Spray to run off	Aerial: 1.7 L/ha
Pyganic	Pyrethrins	100 ml		
Pyradym (I)	Pyrethrins	50 ml		
Pyrinex (I)	Chlorpyrifos	50 – 75 ml	Spray to run off	Aerial: 1.7 L/ha
Rampage	Chlorpyrifos	100 – 150 ml	3.2 L	
Sevin Flo (I)	Carbaryl	160 ml	Spray to run off	
Sportak (F)	Prochloraz	55 ml		
Stemshot AV-1 (F)	Phosphorous acid	See label		
Success Naturalyte (I)	Spinosad	40 ml		
Sunny (G)	Uniconazole-P	0.5 – 1 L		
Toppel (I)	Chlorpyrifos	50 – 75 ml	Spray to run off	Aerial: 1.7 L/ha
Topstar (I)	Thiacloprid	15 ml	300 ml	
Tree Doc (I)	Phosphorous acid	See label		
Vantal (I)	Abamectin	37.5 ml	750 ml	+500 ml oil
Verdex (I)	Abamectin	37.5 ml	750 ml	+500 ml oil
Vitis (I)	Emamectin benzoate	4 g		
Zelam Prochloraz 450 (F)	Prochloraz	55 ml		

Refer to the electronic spray diary for the most current list of registered chemicals

Growers may under extenuating circumstances, for example pest outbreaks, apply in writing to the AIC for dispensation to use a non-registered chemical appropriate to the situation. The procedure for applying for a dispensation is outlined in the EMS section 4.2.4.18. Approval for the dispensation is at the discretion of the AIC.

2.0 HARVESTING

2.1 Relative fruit maturity

EMS Requirement

The Grower must comply with industry maturity testing requirements. Before fruit is harvested for the first time, from any orchard, the Packer must obtain a maturity clearance to pick showing that the fruit meets industry minimum standards for export. A clearance to pick will be issued by an independent auditor on behalf of the AIC. This clearance must be retained for audit purposes and made available to the AIC if requested. A blanket dispensation, which may be by region, may be issued by the AIC.

Only fruit from orchards that achieve minimum requirements are to be harvested.

- The average across the 20 fruit must achieve 24% dry matter content.
- At least 18 out of 20 fruit from each sample must achieve 20.8% dry matter content.

Best Practice

2.2 AvoGreen Quarantine monitoring

A pre-harvest monitoring round no more than 7 days before the intended harvest should be undertaken for leafrollers. Fruit should be examined for both leafroller caterpillars and egg rafts, and these recorded separately. The number of fruit sites examined should be at least the number monitored in the standard AvoGreen monitoring for Leafrollers.

Action threshold level for quarantine monitoring:

Any find of a leafroller caterpillar or egg raft.

Action to be taken:

Discuss what options are available, both in the field and after harvest, with your packer and exporter.

2.3 Harvest Conditions

Fruit should **not** be harvested when:

- More than 5mm of rain has fallen in the previous 24 hours. Picking should only recommence when fruit are dry to the touch. Rainfall data for the 24 hours preceding harvest should be recorded and forwarded to your Packer.

Wet soils lead to increased turgor in fruit, and this may increase handling damage and subsequent rot development. This has been confirmed both through field experimentation and with the industry library tray database.

EMS Requirement

- It has fallen to the ground. The grower must ensure that under no conditions are windfall fruit collected and packed for export.

- It is excessively hot. Harvesting should be done at temperatures less than 30°C, and certainly should be curtailed at 35°C. NB. Fruit picked at higher temperatures will:
 - Lose up to 10% more weight
 - Respire at a much higher rate whilst hot, and
 - Take significantly longer to cool

It is recommended that exposed fruit at tops of trees be harvested first, to avoid sunburn/colouring that will show later in the season.

2.4 Handling into Bins

1. Bins are to be marked with:
 - P-Pin Grower registration number.
 - Block number (if only part of the orchard has received a maturity clearance or where spray programmes vary across blocks).
 - Date of picking
2. All stalks should be carefully cut to 5 mm or less. NB long or poorly cut stems may become dislodged and/or cause damage to other fruits during handling.

3. Fruit should be placed carefully into bins to avoid damage. Fruit accidentally dropped should be discarded.
4. Bins should not be overfilled as this will lead to fruit damage when double stacked.

2.5 Holding On-Orchard

To maximise post-harvest life and to minimise weight-loss and sun-burn:

Every effort shall be made to deliver fruit to the Packer on the day that harvesting occurs. In all cases harvested fruit is to be delivered to the Packer within 24 hours of harvesting.

The Grower may apply to the AIC in writing for a dispensation to hold fruit in a suitable storage facility when delivery to the Packer exceeds 24 hours. A suitable facility is defined as a coolstorage facility with the demonstrated ability to draw down avocado fruit flesh temperatures to 4-6 °C within 24 hours. It is the Growers responsibility to demonstrate the suitability of the proposed facility as part of the dispensation request.

Fruit held on orchard awaiting transportation to the packhouse should be:

- Held in shade under cool conditions.
- Moved in regular batches to the Packer.

2.6 Library trays

EMS Requirement

Library trays are the only opportunity for growers to receive direct feedback on their fruit quality. For this reason, library trays shall be collected for each grower (PPIN) packing fruit for export. A library tray shall consist of a sample of at least 20 fruit. Packhouse managers shall take responsibility for ensuring library trays are collected and assessed and that reports are issued to growers. A sample shall comprise a minimum of 1 tray of at least 20 fruit per line. One tray shall be collected at every picking round per PPIN, or once every 28 days for PPINs where that property is continuously picked.

3.0 FOOD SAFETY - GROWING

EMS Requirement

Each grower supplying product within the Avocado Industry Council Food Safety programme is responsible for providing a Grower Declaration of Food Safety. This shall be submitted to the Registered Packer prior to the first submission of avocados for packing each season, from each property or cluster of blocks. This Declaration shall confirm compliance with the requirements of the AIC Food Safety Programme growing requirements as detailed below.

Growing Requirements

3.1 Pest and Disease Control

EMS Requirement

- 3.1.1 A valid Growsafe registration is required for each applicator applying sprays and for each supplying property (i.e. includes all growers and/or spray contractors).
- 3.1.2 In accordance with Growsafe:
- Chemicals held on the property shall be stored in a locked storage facility with appropriate hazard signage.
 - Disposal should be by an approved method.
- 3.1.3 Sprays shall be applied in compliance with the Registered Chemical List as described in this Quality Manual (i.e. Apply no other sprays than specified on this list).
- 3.1.4 An electronic spray diary of all spray applications shall be kept, in accordance with requirements as specified in 1.2 of Part 2 of this Quality Manual. NB In respect of this Food Safety programme, foliar fertilizers shall also be recorded in separate fertilizer diary.
- 3.1.5 The electronic spray diary shall be linked to the registered packer to allow them to complete the spray diary verification prior to harvest as specified in Part 2: Grower Responsibilities, 1.0 Sprays).

Best Practice

- 3.1.6 It is recommended there be appropriate boundary shelter to minimise spray drift onto the property.

3.2 Fertilizers

Best Practice

- 3.2.1 A plan should be in place for the use and application of fertilizer (e.g. consultant's recommendation). This should include soil, water, and leaf tests, as applicable from a testing laboratory on an annual basis.
- 3.2.2 Only fertilizers known to be safe for use on Avocado fruit should be applied. This includes any product currently commercially available in New Zealand

EMS Requirement

- 3.2.3 Each grower shall record fertilizer applications in a fertilizer diary in an approved format and provide a copy to the Packer.
- 3.2.4 A completed fertilizer diary shall be submitted to the Registered Packer (in compliance with points listed below), with each picking round.

3.3 Hygiene

Best Practice

- 3.3.1 Outside of the harvest period toilet facilities should be provided on the property for any orchard workers who could potentially handle the avocado fruit.

EMS Requirement

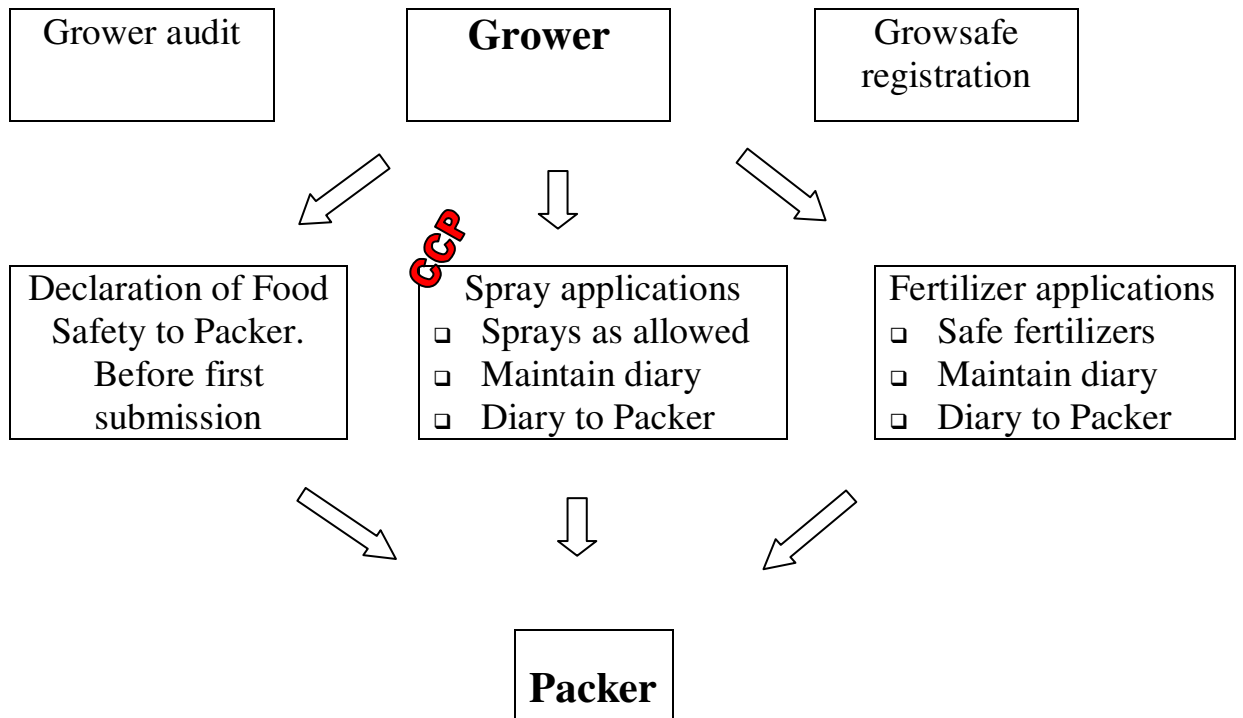
- 3.3.2 During the harvest period toilet and washing facilities shall be provided for, and used by, harvesting staff.

3.4 Other

EMS Requirement

- 3.4.1 The Grower shall complete a Grower Declaration of Food Safety and submit this to the Registered Packer prior to the first submission of avocados for packing each season, from each property or cluster of blocks. Note: only one submission per property is required on an annual basis. Growers who are accredited to any of the industry recognized food safety programmes (e.g. GlobalGAP, NZGAP, SQF1000 etc) are exempt from the requirement to produce a grower declaration.
- 3.4.2 Any casual labour employed by the Grower shall be given sufficient training to ensure that they comply with the requirements of this programme e.g. hygiene
- 3.4.3 The grower shall be available for audit under the AIC Food Safety programme of the Avocado Industry Council, as and when required.

FLOW DIAGRAM OF GROWER RESPONSIBILITIES



CCP = critical control point

GROWER DECLARATION OF FOOD SAFETY

This declaration shall be submitted to the Registered Packer prior to the first submission of avocados for packing in each season, from each property or cluster of blocks.

Orchard/block name(s): P-Pin number

Orchard/block(s) address:

Checks successfully verifying compliance have been completed as indicated below:

- | | | |
|----|---|---|
| 1. | Pest & disease control
Spray applications in accordance with Growsafe
Chemical storage/disposal
Only approved chemicals applied
Spray diary kept & copies submitted to Packer | <i>Tick box</i>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/> |
| 2. | Fertilizers
Approved fertilizers applied
Fertilizer diary maintained | <input type="checkbox"/>
<input type="checkbox"/> |
| 3. | Orchard materials & services
Records of receivals maintained (e.g. GST records) | <input type="checkbox"/> |
| 4. | Hygiene
Adequate toilet and wash facilities | <input type="checkbox"/> |
| 5. | Training
Appropriate training provided as required | <input type="checkbox"/> |

Statement:

- *I declare that the avocados to be submitted for packing in the coming season currently meet requirements of the Food Safety programme of the Avocado Industry Council.*
- *If at any time during this harvest season the avocados fail to meet these requirements, then the Registered Packer will be advised in writing prior to any further fruit submission.*
- *We are available for audit under the Food Safety programme of the Avocado Industry Council, as and when required.*

Signature: Date:

Name:

4.0 FOOD SAFETY - HARVESTING

Each harvester handling avocados within the Avocado Industry Council Food Safety programme is responsible for providing a Harvester Declaration of Food Safety. (NB This shall apply whether harvesting is performed by the grower, the Pack-house or an independent contractor). The Harvester Declaration of Food Safety shall be submitted to the Registered Packer with each consignment of avocados for packing. This Declaration shall confirm compliance with the requirements of the AIC Food Safety Programme harvesting requirements as detailed below.

Harvesting Requirements

4.1 Fruit Handling

EMS Requirement

- 4.1.1 All fruit shall be handled as described in the Part 2, Section 2 of the Quality Manual.
- 4.1.2 Physical damage at any point shall be minimised. Cuticle damage may expose the fruit to pathogens and other contaminants.
- 4.1.3 At no point in the harvesting process shall fruit be allowed to come into contact with an unprotected ground surface.
- 4.1.4 Harvest bins are to be clean and free of sources of contamination such as foreign matter. Stained bins are acceptable provided they are free of contaminants. Bins shall be maintained in such a condition that physical damage is minimised.
- 4.1.5 Bins used for holding and transporting fruit (whether empty or full) shall be handled in such a manner that contamination does not occur (e.g. where bins are held in the shade under natural shelter, other than an avocado tree, a protective cover should be placed over the top of the bins).

4.2 Staff Hygiene

EMS Requirement

- 4.2.1 Toilet and washing facilities shall be provided for, and used by, harvesting staff.
- 4.2.2 Any fruit contaminated by blood shall be removed.
- 4.2.3 Latex gloves shall be used where the picker has open hand wounds.

Best Practice

- 4.2.4 Any staff handling fruit should have closely trimmed fingernails.

4.3 Traceability

EMS Requirement

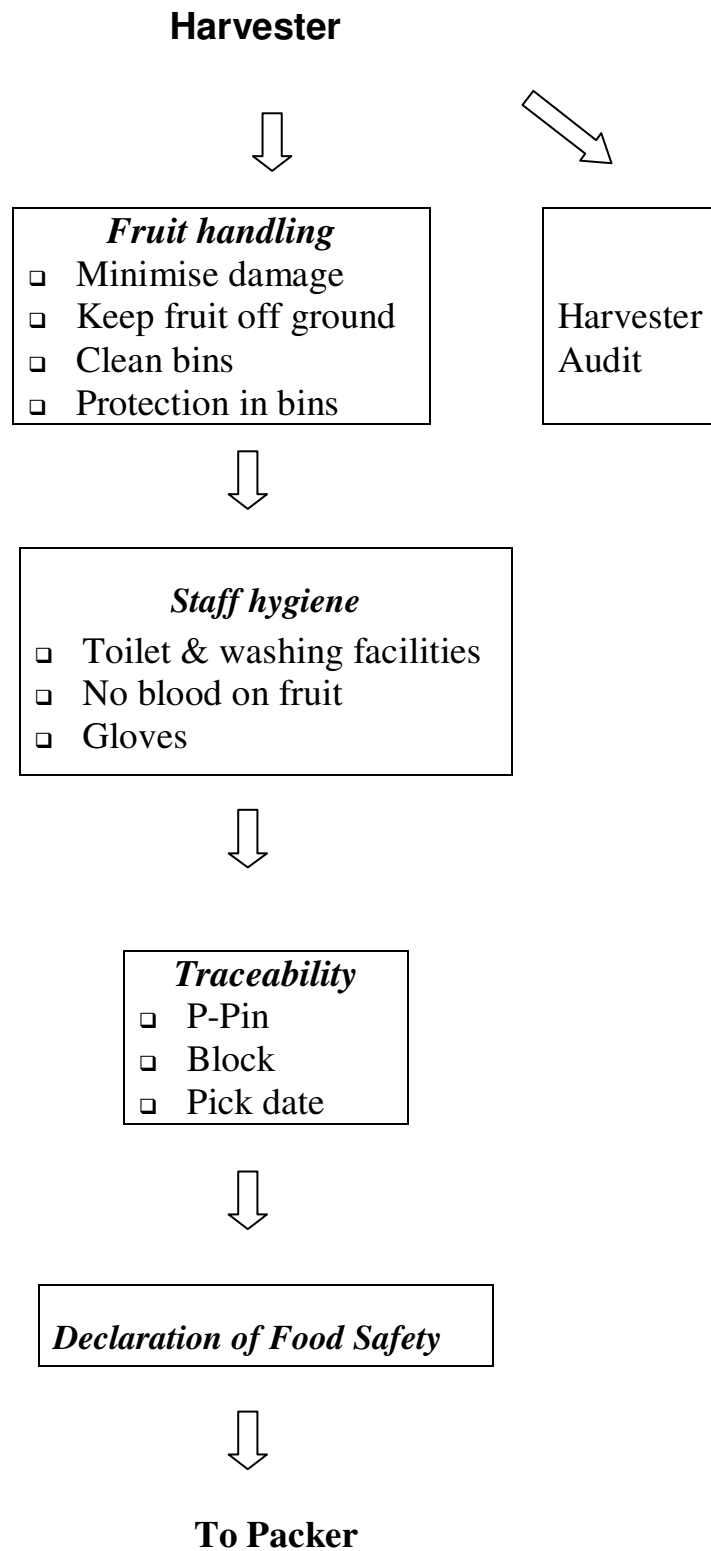
- 4.3.1 All bins shall be marked in the manner described in this Quality Manual i.e.
- P-Pin Grower registration number
 - Block number (where different programmes have been applied to the various blocks).
 - Date of picking.
- 4.3.2 The Harvester shall complete a Harvester Declaration of Food Safety and submit this to the Registered Packer with each consignment of avocados for packing. Growers who are accredited to any of the industry recognized food safety programmes (e.g. GlobalGAP, NZGAP, SQF1000 etc) and harvesting their own fruit are exempt from the requirement to produce a harvester declaration with each consignment of fruit.
- 4.3.3 Growers using a contract harvester need to ensure that the contractor is accredited to the AIC Food Safety Programme (unless the contractor is exempted through accreditation to an independently audited, recognized third party food safety programme).
- 4.3.4 A consignment is defined as a continuous pick from a single property of no more than 5 days duration. The harvester declaration must accompany the first days consignment to the packer. This declaration shall be added to by attaching truck delivery notes for the remaining duration of the validity period.
- 4.3.5 The harvester shall be available for audit under the Avocado Industry Council Food Safety programme, as and when required (NB Aspects of harvester audits may be covered at the packhouse through the season). Advance notice of at least 24 hours shall be provided in the event that a harvester is selected for audit.

4.4 Training

EMS Requirement

- 4.4.1 Any casual labour employed by the Harvester shall be provided with any necessary training required to ensure they understand and comply with the requirements of Section 4 “Food Safety – Harvesting Requirements” of this manual.

FLOW DIAGRAM OF HARVESTER RESPONSIBILITIES



HARVESTER DECLARATION OF FOOD SAFETY

This declaration shall be submitted to the Registered Packer with each consignment of avocados for packing, describing the details of fruit from each property or cluster of blocks.

P-Pin number	Block number(s)	Date of Picking	Number of bins
Total			

Checks successfully verifying compliance have been completed as indicated below:

- | | |
|--|---|
| <p>1. Fruit handling</p> <p style="padding-left: 20px;">Physical damage minimised</p> <p style="padding-left: 20px;">No ground contact with any fruit</p> <p style="padding-left: 20px;">Clean (uncontaminated) bins</p> <p style="padding-left: 20px;">Fruit in bins not exposed to contamination</p> | <p><i>Tick box</i></p> <input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/> |
| <p>2. Staff hygiene</p> <p style="padding-left: 20px;">Adequate toilet/washing facilities</p> | <input type="checkbox"/> |
| <p>3. Traceability</p> <p style="padding-left: 20px;">Each bin is marked with P-Pin, block and pick date</p> | <input type="checkbox"/> |
| <p>4. Training</p> <p style="padding-left: 20px;">Appropriate training provided as required</p> | <input type="checkbox"/> |

Statement:

- *I declare that these avocados have been harvested in compliance with requirements of the Food Safety programme of the Avocado Industry Council.*
- *We are available for audit under the Food Safety programme of the Avocado Industry Council, as and when required.*

Name: Signature Date: