



## Annual CFIA Guidelines for Pest Monitoring and Pest Management in Registered British Columbia Cherry Orchards – A Systems Approach for Exports to Thailand, People’s Republic of China, Japan, Republic of Korea, European Union and United Kingdom

British Columbia (BC) cherry growers who wish to register cherry orchards with the Canadian Food Inspection Agency (CFIA) for the export of fresh BC cherries to Thailand, People’s Republic of China (PRC), Japan, Republic of Korea (Korea), European Union (EU) and United Kingdom (UK) are required to implement an Integrated Pest Management (IPM) program. A registered cherry orchard is an orchard that is registered by the CFIA under a single grower name or company. A registered cherry orchard may include multiple blocks/cherry varieties.

The pest monitoring and pest management activities specified in this document must be carried out by pest management consultants working for commercial IPM companies or by individuals who are qualified pest managers. The pest management consultants or the pest managers must be able to recognize the quarantine pests of concern to Thailand, PRC, Japan, Korea, EU and UK and must be able to implement all required pest monitoring and pest management activities in the registered orchards. The pest manager(s) may delegate tasks to personnel working under their supervision who are trained and familiar with the pest monitoring and pest management activities in the registered orchards, as specified in this document. The responsibility for pest monitoring, pest management and the documentation of all orchard activities remains with the designated IPM consultant or pest manager(s), named in the Grower Compliance Agreement.

The designated pest manager must maintain records which show when each pest monitoring activity was carried out and what pests were detected, in each registered cherry orchard. Pest monitoring results must be recorded using standardized forms provided by the CFIA. The pest monitoring data gathered by the pest manager will be used by the CFIA to verify whether the registered orchards meet the requirements for pest freedom/low pest prevalence for the pests of concern.

Registered growers under these export programs mentioned above must follow rigorous orchard sanitation practices, including regular removal of culls from the orchard. Good agricultural practices and a pesticide spray program must be carried out to ensure active prevention and control of pests of concern, in a timely manner, and as prescribed in the BC Tree Fruit Production Guide. Registered growers are also responsible for the safe use of Canadian pesticides and for respecting the importing country’s Maximum Residue Levels (MRLs). All pesticide spray records must be kept up to date. All pest monitoring and pesticide spray records must be available to the CFIA, upon request.

All cherry orchards registered by the CFIA to export fresh BC cherries to Thailand, PRC, Japan, Korea, EU and UK must comply with the appropriate pest monitoring and pest management activities outlined below. If these requirements are not met, the registered orchard(s) will be suspended and/or removed from the export program(s).

**Note:** The measures described in this document are subject to change. The CFIA will notify the IPM consultants or the designated pest managers that were identified in the Grower Compliance Agreement, if there are mid-season changes to the procedures.



## A. General Requirements for Orchard Management, Pest Monitoring, Pest Management and Record Keeping:

**Lists of Quarantine Pests of Concern:** Lists of quarantine pests of concern to Thailand, PRC, Japan, Korea, EU and UK are found in Appendix 1. All pests are known to be present in BC cherry orchards except for *Thaumatotibia leucotreta* (false codling moth), which is not known to be present in North America. Descriptions of the pest life cycles, including pest management practices, can be found in the BC Tree Fruit Production Guide (Website: <https://www.bctfpg.ca/>).

For exports of cherries to **Korea**, the BC Tree Fruit Production Guide does not include the pest life cycle or pest management practices for *Blumeriella jaapii* (Cherry leaf spot) and *Stigminta carpophila* (Gumspot of stone fruit). The management practices described in the BC Tree Fruit Production Guide for *Monolinia fructicola* (Brown rot), which is also a fungal disease, are applicable to *Blumeriella jaapii* (Cherry leaf spot) and *Stigminta carpophila* (Gumspot of stone fruit).

**Maps:** Maps must be kept on file by the grower or the pest manager and available to the CFIA or BC Cherry Association (BCCA) upon request. The map must show the physical location (physical address and Google Maps, if possible) of the orchard, names of specific blocks and varieties, and identification number of each trap that has been placed in the orchard to monitor for a specific pest.

**Orchard Management and Sanitation:** All registered orchards must follow orchard management practices, as prescribed by the BC Tree Fruit Production Guide. All culls must be removed from the orchard on a regular basis.

**Schedule for Pest Monitoring Activities:** All registered cherry orchards are required to implement the “Weekly Orchard Surveillance Monitoring Program for Quarantine Pests of Concern” as per Appendix 2. The pest monitoring activities must start at bud break and continue until the end of harvest, in each registered orchard. The pest management consultant or the pest manager must follow the specific pest monitoring procedures described in Appendix 2, for each quarantine pest of concern, in every registered orchard. In cases where a registered orchard includes multiple cherry varieties, with different harvest dates, monitoring must be carried out until the last variety has been harvested. The completed “Weekly Orchard Surveillance Monitoring Program for Quarantine Pests” forms must be available to the CFIA or BCCA, upon request, at any time, from the start until the end of the growing season.

**Identification of Pests:** The detection of the following pests: *Rhagoletis* spp. (fruit flies), *Acrobasis tricolorella* (pruneworm leafroller), *Grapholita packardi* (cherry fruitworm) and *G. prunivora* (lesser apple worm) **on fruit** during the weekly pest monitoring will result in removal of the orchard from the export program to **PRC**, for the remainder of the season.



To export cherries to **Korea**, orchards must be kept free from *Blumeriella jaapii* (Cherry leaf spot), *Stigmina carpophila* (Gumspot of stone fruit), *Rhagoletis pomonella* (Apple maggot) and *Argyrotaenia franciscana* (Orange tortrix moth). Monitoring and treatment records must show that if *Blumeriella jaapii*, *Stigmina carpophila* or signs of *Argyrotaenia franciscana* were detected in the orchard that appropriate controls were applied and there were zero detections during the next visual inspection of the orchard(s). If *Rhagoletis pomonella* is detected within the Pest Free Area of BC during the CFIA annual surveys, all exports of cherries from British Columbia to Korea will be suspended until further information and additional mitigation measures are provided to and accepted by the Animal and Plant Quarantine Agency (APQA) of Korea.

When the pest cannot be identified by the grower, samples must be immediately collected and submitted to the local CFIA office.

**Trap Placement, Labelling, Monitoring and Servicing:** Traps and appropriate lures must be placed, labeled, monitored and serviced as set, for each destination market (PRC, Japan, Korea, EU and UK). The specific trapping requirements for each pest are described below. Traps may be placed anywhere in the orchard but must be evenly distributed within the orchard or strategically placed (close to the neighbouring unsprayed orchards, or wild *Prunus* spp. trees, etc.) for early pest detection. Each trap must be uniquely numbered, and that number, along with the placement date, and the orchard registration number must be recorded on the outside, non-sticky part of the trap. When a trap is replaced, the trap number and date of re-placement must be noted on the new trap. Each registered orchard must keep a map indicating trap locations in the registered orchard. In addition, trap locations must be flagged at the end of the row to facilitate monitoring of the traps. Trap monitoring results must be recorded on the Pest Trap Monitoring Results Forms (*Rhagoletis* spp., *Cydia pomonella*, *Choristoneura rosaceana* and *Grapholita packardii*) provided by the CFIA (details below). The pest management consultant or the pest manager servicing the orchard must carry out the monitoring whilst following the prescribed re-entry times to the orchard in accordance with pesticide application in the registered orchard(s).

**Record Keeping and Reporting:** Pest Trap Monitoring Results must be recorded using the standardized forms provided by CFIA and reported *via* e-mail **TO** the CFIA ([cfia.trapmonitor-moniteurdepieges.acia@inspection.gc.ca](mailto:cfia.trapmonitor-moniteurdepieges.acia@inspection.gc.ca)) **AND** BCCA ([trapmonitor@bccherry.com](mailto:trapmonitor@bccherry.com)), as per the prescribed interval, for the specific pest of concern (*Rhagoletis* spp., *Cydia pomonella*, *Choristoneura rosaceana* and *Grapholita packardii*). These forms must be filled out clearly and completely. If a registered orchard is selected for an audit by the CFIA, a foreign auditor or the BCCA, a printed or electronic copy of the applicable trap monitoring records must be made available, at the time of the audit.



**Pesticides:** Pesticides applications must comply with Canadian pesticide labels in all registered orchards. Please reference the recommendations in the BC Tree Fruit Production Guide. All exporters are responsible for meeting the importing country's requirements with respect to MRLs.

**Pesticide Spray Records:** Pesticide spray records must be available for each registered orchard. All pesticide applications that target quarantine pests of concern to Thailand, PRC, Japan, Korea, EU and UK must be clearly identified. A spray program for *Rhagoletis spp.* is mandatory for all exports to PRC, Korea and EU. A spray program for *Grapholita packardii* is mandatory for all exports to EU and UK.

**To export to Korea, pesticide spray records must indicate when pesticides were applied to preventatively control *Blumeriella jaapii* and *Stigmata carpophila* before rainfall or in the event of high humidity.** Chemical control measures must be applied prior to rain events and may be needed more frequently during prolonged wet weather to prevent growth of *Blumeriella jaapii* and *Stigmata carpophila* during times of humidity. Details of fungicide treatments must be recorded in treatment records.

**Audits by CFIA, Foreign Auditor or BCCA:** CFIA, foreign or BCCA officials may audit any registered orchard at any time prior to, during or after the export season. The pest management consultant or the pest manager is responsible for keeping all records up-to-date and available for review at the time of audit.

## **B. Trapping program for *Rhagoletis spp.* – fruit flies (Exports to PRC and Korea)**

The yellow cardboard sticky traps and ammonium carbonate lures must be used for these programs and are provided to participants by the BCCA.

The traps must be placed in each registered orchard at the following density and replacement schedule: For registered orchards that are smaller than 10 acres, there must be 4 trap sites. For registered orchards that are from 10 to 40 acres in size, there must be 1 trap site for every 2 acres. Orchards larger than 40 acres must have 20 trap sites.

Traps must be replaced every **2 weeks**, AFTER examining them for *Rhagoletis spp.* and filling out the monitoring report every Monday (Appendix 4). Lures must be replaced every **4 weeks**. Remove leaves from around the trap to avoid having them getting stuck on the trap due to wind or spray activities.



Trap placement dates and requirements (3 or 4 months) must be determined based on location (South Okanagan & Similkameen **or** Central & North Okanagan and Creston) and cherry varieties (harvested before Lapins **or** with Lapins or later- in South Okanagan and Similkameen) grown in each registered orchard. If orchards are mixed with early and later varieties in a single block, trap requirements must be calculated for 4 months:

**For South Okanagan and Similkameen Locations**, traps must be placed in the orchards on **April 17, 2023**:

- **Orchards containing ONLY early varieties** (harvested before Lapins), April 17 - July 31, 2023 (or harvest): **3 months**
- **Orchards with ANY late varieties** (harvested with Lapins or later), April 17 - August 28, 2023 (or harvest): **4 months**

**For Central Okanagan, North Okanagan, and Creston Locations**, traps must be placed in the orchards on **May 1, 2023**:

- **All varieties**, May 1 - September 11, 2023 (or harvest): **4 months**

The guidelines for number of traps and lures required by registered orchards are described in Appendix 3. Trap and lure placement must start on the dates indicated above, **based on location**. Set the traps and lures as per manufacturer's instructions. Each trap must be clearly labelled with the CFIA grower and orchard registration number, trap number, and the placement date, on the outside non-sticky yellow part of the trap.

Traps must be monitored **once a week** from the time they are placed in the registered orchard until the week prior to harvest. Traps must be monitored **twice a week** starting the week prior to starting harvest until the end of harvest. Replace traps if sticky parts are covered with debris at the time of monitoring, even if traps are not due to be changed yet. Lures must be replaced every 4 weeks.

For each registered orchard, weekly records of the orchard trap monitoring, using the approved Excel form (South Okanagan & Similkameen or Central & North Okanagan and Creston – Appendix 4), must be maintained. For exports to the **PRC**, **these electronic records must be e-mailed TO the CFIA e-mail address: [cfia.trapmonitor-moniteurdepieges.acia@inspection.gc.ca](mailto:cfia.trapmonitor-moniteurdepieges.acia@inspection.gc.ca) AND the BCCA: [trapmonitor@bcccherry.com](mailto:trapmonitor@bcccherry.com)** by the end of the day **every Monday**, until 1 week before harvest, and by the end of the day **every Monday and Thursday**, starting 1 week before harvest, and continuing until harvest is complete (Appendix 8). **Send files as Excel or PDF e-mail attachments only. Files sent as jpegs or faxes or in Canada Post mail will not be accepted.**

**For exports to Korea, there is no requirement to submit these records to the CFIA or BCCA weekly.**



If any *Rhagoletis spp.* suspect flies (Appendix 5) are found on a trap at the time of monitoring, the total number of suspects must be reported on the appropriate electronic copy (South Okanagan & Similkameen **or** Central & North Okanagan and Creston) of the “2023 *Rhagoletis spp.* Trap Monitoring Record” (Appendix 4). Note that the wing patterns shown in Appendix 5 are magnified images. Use a hand lens to examine traps carefully.

Traps must be submitted to the BCCA for official identification of *Rhagoletis spp.*, as prescribed by BCCA (BCCA Trapping Tutorial). If a trap is submitted to the BCCA, it should be replaced immediately in the orchard site and labeled correctly. Be sure to re-attach the existing lure to the new trap.

Registered orchards will be removed from the export program to **PRC** when the *Rhagoletis indifferens* or *Rhagoletis fausta* threshold is reached in a registered orchard. The threshold is an average of **two (2) R. indifferens or R. fausta per trap, for two consecutive weeks.**

For exports to **Korea**, when the average trap catch is a minimum of two (2) *Rhagoletis spp.*, effective insecticides for the control of *Rhagoletis spp.* must be applied as soon as possible. Please retain a printed or electronic copy of “2023 *Rhagoletis spp.* Trap Monitoring Record” (Appendix 4) and make them available to the CFIA and the BCCA upon request.

All traps that have not been submitted to the BCCA must be stored as per the BCCA guidelines set in BCCA Trapping Tutorial and are subject to audit during or after the export season.

### **C. Trapping program for *Cydia pomonella* – Codling moth (Exports to Japan and Korea)**

Codling moth (CM) traps shall be placed in the registered orchard blocks prior to codling moth emergence (i.e., at 100 degree days or at the latest May 1, 2023). Pheromone lures shall be replaced every 4 weeks. Trap liners must be replaced at least once every 2 weeks – more often if the effectiveness of the adhesive is compromised. A minimum of 2 traps shall be placed within each registered orchard block. If the size of the orchard block exceeds 14 hectares (35 acres), one additional trap per 7 hectares (17 acres) shall be placed. The guidelines for total number of traps and lures required in a registered orchard for the growing season is described in Appendix 6. Traps shall be evenly distributed within the orchard block. If there is an adjacent walnut orchard, one of the traps must be placed on the border of the cherry orchard closest to the walnut orchard.

Traps shall be monitored and reported weekly (**every Monday**), starting on Monday **May 8, 2023** until final harvest. For orchards with multiple harvest dates, trap monitoring shall continue until the last variety in the orchard has been harvested. All wild codling moth trap catches shall be recorded on the “2023 Weekly Codling Moth (*Cydia pomonella*) Trapping Monitoring Record” spreadsheet (Appendix 7).



For exports to **Japan**, the codling moth trapping records must be submitted every week **TO** the CFIA e-mail address: [cfia.trapmonitor-moniteurdepieges.acia@inspection.gc.ca](mailto:cfia.trapmonitor-moniteurdepieges.acia@inspection.gc.ca) **AND** the BCCA: [trapmonitor@bcccherry.com](mailto:trapmonitor@bcccherry.com), by end of day, every Monday, starting on Monday **May 8, 2023**, and until the end of harvest (Appendix 8).

The registered orchard must notify the CFIA immediately if the average number of wild codling moths found in an orchard, in a single week, is 12 or higher (total number of wild codling moths found on all traps divided by the total number of traps placed in an orchard). The registered orchard will be removed from the export program to Japan for the remainder of the export season when the average trap threshold of 12 wild codling moths per trap per week is exceeded.

For exports to **Korea**, when a minimum of one (1) codling moth is detected on the trap, effective insecticides for the control of the moth must be applied as soon as possible.

Please retain a printed or electronic copy of “2023 Weekly Codling Moth (*Cydia pomonella*) Trap Monitoring Record” (Appendix 7) and make them available to CFIA and BCCA upon request.

**For exports to Korea, there is no requirement to submit these records to the CFIA or BCCA weekly.**

#### **D. Trapping program for *Grapholita packardi* Zeller. – Cherry fruitworm (Exports to Korea, EU and UK)**

All cherry orchards registered for export of BC cherries to Korea, EU and UK must monitor for the presence of *Grapholita packardi* (cherry fruitworm) using Delta or standard wing-type traps with appropriate pheromone lures, as recommended by the manufacturer. A minimum of one trap per 20 acres shall be placed in each registered orchard prior to moth emergence in the spring and at the latest by May 1, 2023. Traps must be placed about 5 feet in the cherry tree and trap openings must be free of obstructions. Pheromone lures must remain inside the traps between trap checks. Traps must be placed at least 15 metres from the edge of the orchard and at least 15 metres from other pheromone traps (e.g. away from codling moth traps or *Rhagoletis spp.* traps). Pheromone lures must be replaced at least every 4 weeks, more frequently if that is what the manufacturer recommends. Trap liners must be replaced when the effectiveness of the adhesive is compromised or at a minimum, the trap liners should be replaced at least every 4 weeks, when the pheromone lure is replaced.

Traps shall be monitored weekly (**every Monday**) starting on Monday **May 8, 2023**, until final harvest. For orchards with multiple harvest dates, trap monitoring shall continue until the last variety in the orchard has been harvested. Trap catches must be recorded on the “2023 Weekly *Grapholita packardi* Trapping Monitoring Record” (Appendix 9). When one (1) suspect cherry fruitworm moth is detected on the trap, effective insecticides for the control of this moth must be applied as soon as possible. Please retain a printed



or electronic copy of “2023 Weekly *Grapholita packardi* Trapping Monitoring Record” and make them available to CFIA and BCCA upon request.

**For exports to Korea, EU and UK, there is no requirement to submit these records to the CFIA or BCCA weekly.**

#### **E. Trapping program for *Choristoneura rosaceana* – Oblique-banded leafroller (Exports to Korea only)**

All cherry orchards registered for export of BC cherries to Korea must monitor for the presence of *Choristoneura rosaceana* (Oblique-banded leafroller) using Delta or standard wing-type traps with appropriate pheromone lures, as recommended by the manufacturer. A minimum of one trap per 20 acres shall be placed in each registered orchard prior to moth emergence in the spring and at the latest by May 1, 2023. Traps must be placed about 5 feet in the cherry tree and trap openings must be free of obstructions. Pheromone lures must remain inside the traps between trap checks. Traps must be placed at least 15 metres from the edge of the orchard and at least 15 metres from other pheromone traps (e.g. away from codling moth traps or *Rhagoletis spp.* traps). Pheromone lures must be replaced at least every 4 weeks, more frequently if that is what the manufacturer recommends. Trap liners must be replaced when the effectiveness of the adhesive is compromised or at a minimum, the trap liners should be replaced at least every 4 weeks, when the pheromone lure is replaced.

Traps shall be monitored weekly (**every Monday**) starting on Monday **May 8, 2023**, until final harvest. For orchards with multiple harvest dates, trap monitoring shall continue until the last variety in the orchard has been harvested. Trap catches must be recorded on the “2023 Weekly *Choristoneura rosaceana* Trapping Monitoring Record” (Appendix 10). When one (1) suspect oblique-banded leafroller is detected on the trap, effective insecticides for the control of this moth must be applied as soon as possible. Please retain a printed or electronic copy of “2023 Weekly *Choristoneura rosaceana* Trapping Monitoring Record” and make them available to CFIA and BCCA upon request.

**For exports to Korea, there is no requirement to submit these records to the CFIA or BCCA weekly.**

#### **F. Non-Compliance**

Failure to meet any of the import requirements of a country, as signed and agreed upon under the Grower Compliance Agreement, may result in suspension, pending receipt of corrective actions, or removal of the grower from any or all export programs or may prevent the CFIA from issuing Phytosanitary Certificates for certain destinations.





## APPENDIX 1 – LISTS OF QUARANTINE PESTS FOR THAILAND, PRC, JAPAN, KOREA EU and UK

### List of Quarantine Pests of Concern to Thailand

*Monilinia fructigena* (brown rot of fruit)  
*Phytophthora cryptogea* (tomato fruit rot)  
*Phytophthora megasperma* (crown rot of apple)  
*Parthenolecanium corni* (European brown scale)  
*Phenacoccus aceris* (apple mealybug)  
*Diaspidiotus ostreaeformis* (pear oyster scale)  
*Lepidosaphes ulmi* (oystershell scale)  
*Hyphantria cunea* (mulberry moth)  
*Peridroma saucia* (pearly underwing moth)

### List of Quarantine Pests of Concern to People's Republic of China

*Monilinia fructicola* (brown rot)  
*Pseudomonas syringae* pv. *morsprunorum* (bacterial canker)  
Little Cherry virus (and associated vector *Phenacoccus aceris*, apple mealybug)  
*Acrobasis tricolorella* (pruneworm leafroller)  
*Grapholita packardi* (cherry fruitworm)  
*Grapholita prunivora* (lesser appleworm)  
*Archips podana* (large fruit tree tortrix)  
*Choristoneura rosaceana* (oblique-banded leafroller)  
*Hedya nubiferana* (marbled orchard tortrix)  
*Platynota idaeusalis* (tufted apple budmoth)  
*Myzus cerasi* (black cherry aphid)  
*Rhagoletis fausta* (black cherry fruit fly)  
*Rhagoletis indifferens* (western cherry fruit fly)  
*Rhagoletis pomonella* (apple maggot)

**Also of concern:** *Drosophila suzukii* (spotted wing drosophila)



## APPENDIX 1 (Ctd.)

### List of Quarantine Pests of Concern to Japan

*Cydia pomonella* (codling moth)  
*Grapholita packardi* (cherry fruitworm)  
*Grapholita prunivora* (lesser appleworm)  
*Anarsia lineatella* (peach twig borer)  
*Choristoneura rosaceana* (oblique-banded leafroller)  
*Archips argyrospila* (fruit tree leafroller)  
*Rhagoletis fausta* (black cherry fruit fly)  
*Rhagoletis indifferens* (western cherry fruit fly)

### List of Quarantine Pests of Concern to the Republic of Korea

#### Pathogens (3 species)

*Blumeriella jaapii* (Cherry leaf spot)\*  
*Stigmia carpophila* (Gumspot of stone fruit)\*  
*Prune dwarf virus* (Cherry ring mottle)

#### Insects (14 species)

*Rhagoletis fausta* (Black cherry fruit fly)\*  
*Rhagoletis indifferens* (Western cherry fruit fly)\*  
*Rhagoletis pomonella* (Apple maggot)\*  
*Argyrotaenia franciscana* (Orange tortrix moth)\*  
*Choristoneura rosaceana* (Oblique-banded leafroller)\*  
*Cydia pomonella* (Codling moth)\*  
*Grapholita packardi* (Cherry fruitworm)\*  
*Grapholita prunivora* (Lesser apple worm)\*  
*Anarsia lineatella* (Peach twig borer)\*  
*Anthonomus quadrigibbus* (Apple curculio)  
*Archips argyrospila* (Fruit tree leafroller)  
*Archips podana* (Fruit tree tortrix)  
*Pandemis cerasana* (Common twist moth)  
*Pandemis limitatai* (Three-lined leafroller)

\* The 11 pests require specific risk mitigation measures



## APPENDIX 1 (Ctd.)

### List of Quarantine Pests of Concern to the European Union

*Grapholita packardi* (cherry fruitworm)

*Rhagoletis indifferens* (western cherry fruit fly)

*Rhagoletis fausta* (black cherry fruit fly)

*Thaumatotibia leucotreta* (false codling moth), not present in BC

### List of Quarantine Pests of Concern to the United Kingdom

*Grapholita packardi* (cherry fruitworm)



## APPENDIX 2 – 2023 WEEKLY ORCHARD SURVEILLANCE – QUARANTINE PESTS MONITORING RECORD FOR EXPORTS OF BC CHERRIES TO THAILAND, PRC, JAPAN, KOREA, EU and UK

2023 Weekly Orchard Surveillance - Quarantine Pests Monitoring Record for Exports of BC Cherries  
CFIA REGISTRATION #:

DATE:

	Growth Stage <sup>1</sup>	Quarantine pest	Observations	Actions		
Monitor from bud break until end of harvest		<b>Fungi</b>				
		Brown Rot ( <i>Monilinia fructicola</i> or <i>Monilinia fructigena</i> )				
		Tomato Fruit Rot ( <i>Phytophthora cryptogea</i> )				
		Crown Rot of Apple ( <i>Phytophthora megasperma</i> )				
		<b>Bacteria</b>				
		Bacterial Canker ( <i>Pseudomonas syringae</i> pv. <i>morsprunorum</i> )				
		<b>Viruses</b>				
		Little Cherry Virus (LCV)				
		<b>Scale Insects</b>				
		Apple Mealybug ( <i>Phenacoccus aceris</i> ), vector for LCV				
		European Brown Scale ( <i>Parthenolecanium corni</i> )				
		Pear Oyster Scale ( <i>Diaspidiotus ostreaeformis</i> )				
		Oystershell Scale ( <i>Lepidosaphes ulmi</i> )				
Monitor from blossom until end of harvest		<b>Lepidoptera (moths and caterpillars)</b>				
		Pruneworm Leafroller ( <i>Acrobasis tricolorella</i> ) <sup>2</sup>				
		Cherry Fruitworm ( <i>Grapholita packardii</i> ) <sup>2</sup>				
		Lesser Apple Worm ( <i>Grapholita prunivora</i> ) <sup>2</sup>				
		Large Fruit Tree Tortrix ( <i>Archips podana</i> )				
		Oblique-Banded Leafroller ( <i>Choristoneura rosaceana</i> )				
		Marbled Orchard Tortrix ( <i>Hedya nubiferana</i> )				
		Tufted Apple Bud Moth ( <i>Platynota idaeusalis</i> )				
		Mulberry Moth ( <i>Hyphantria cunea</i> )				
		Pearly Underwing Moth ( <i>Peridroma saucia</i> )				
		Codling Moth ( <i>Cydia pomonella</i> )				
		Peach Twig Borer ( <i>Anarsia lineatella</i> )				
		Fruit Tree Leafroller ( <i>Archips argyrospila</i> )				
		<b>Aphids</b>				
		Black Cherry Aphid ( <i>Myzus cerasi</i> )				
		Monitor from fruit set until end of harvest		<b>Fruit flies<sup>2</sup></b>		
				Western Cherry Fruit Fly ( <i>Rhagoletis indifferens</i> )		
Black Cherry Fruit Fly ( <i>Rhagoletis fausta</i> )						
Apple Maggot ( <i>Rhagoletis pomonella</i> )						

<sup>1</sup> Growth Stage: Indicates the growth stage of bud or tree development i.e. dormant, green tip, blossom, summer etc.

<sup>2</sup> If these pests are found on the fruit in the orchard, notify the CFIA immediately. The orchard will be suspended from the PRC export program for the remainder of the season.



## APPENDIX 2 (Ctd.)

### 2023 Orchard Surveillance Monitoring Program for Quarantine Pests of Concern

<p><b>Brown Rot</b> <i>Monilinia fructicola</i> or <i>Monilinia fructigena</i></p>	<p><b>Weekly</b> monitoring from <b>bud break<sup>1</sup> to harvest</b> for the presence of symptoms indicative of this disease including canker spots on flowers and young branches; and grey rotten areas of fruit. Follow recommendations for prevention and control as outlined in the BC Tree Fruit Production Guide. If any symptoms consistent with this pathogen are detected, samples must be taken for lab identification. If infection is confirmed through lab analysis, apply control measures as outlined in the BC Tree Fruit Production Guide.</p>
<p><b>Tomato Fruit Rot</b> <i>Phytophthora cryptogea</i></p>	<p><b>Weekly</b> monitoring from <b>bud break<sup>1</sup> to harvest</b> for the presence of symptoms indicative of this disease including brown discolouration of the bark; lesions and rotting leaves; chlorotic spotting and premature shedding of leaves; and wilting and dieback of stems. Follow recommendations for prevention and control as outlined in the BC Fruit Production Guide. If any symptoms consistent with this pathogen are detected, samples must be taken for lab identification. If infection is confirmed through lab analysis, apply control measures as outlined in the BC Tree Fruit Production Guide.</p>
<p><b>Crown Rot of Apple</b> <i>Phytophthora megasperma</i></p>	<p><b>Weekly</b> monitoring from <b>bud break<sup>1</sup> to harvest</b> for the presence of symptoms indicative of this disease including lesions; soft and dark brown bark; and purple-red colouration of leaves. Follow recommendations for prevention and control as outlined in the BC Tree Fruit Production Guide. If any symptoms consistent with this pathogen are detected, samples must be taken for lab identification. If infection is confirmed through lab analysis, apply control measures as outlined in the BC Tree Fruit Production Guide.</p>
<p><b>Bacterial Canker</b> <i>Pseudomonas syringae pv morsprunorum</i></p>	<p><b>Weekly</b> monitoring from <b>bud break<sup>1</sup> to harvest</b> for the presence of symptoms indicative of this disease including brown spots on leaves, branches and fruit. Follow recommendations for prevention and control outlined in the BC Tree Fruit Production Guide. If any symptoms consistent with this pathogen are detected, samples must be taken for lab identification. If infection is confirmed through lab analysis, apply control measures as outlined in the BC Tree Fruit Production Guide.</p>
<p><b>Scale Insects</b></p>	<p><b>Weekly</b> monitoring from <b>bud break<sup>1</sup> to harvest</b> for the presence of symptoms indicative of this disease including the presence of scales; small areas of discolouration; honeydew and black sooty mould on fruit and leaves; chlorotic spotting and premature shedding of leaves; and wilting and dieback of stems. Follow recommendations for prevention and control as outlined in the BC Tree Fruit Production Guide or other relevant BC Production Guides. If any symptoms consistent with this pathogen are detected, samples must be taken for lab identification. If infection is confirmed through lab analysis, apply control measures as outlined in the Production Guides.</p>
<p><b>Little cherry virus and its vector:</b> <i>Phenacoccus aceris</i> (apple mealybug)</p>	<p><b>Weekly</b> monitoring from <b>bud break<sup>1</sup> to harvest</b> for the presence of symptoms indicative of this disease including fruit that is small, misshapen, and does not develop dark color at maturation; and red colouration of leaves. Samples must be taken for lab identification. <b>Weekly</b> monitoring for the presence of the <i>Phenacoccus aceris</i> (apple mealybug) vector. If detected, follow pest management recommendations as outlined in the BC Tree Fruit Production Guide.</p>
<p><b>Lepidoptera (moths &amp; caterpillars)</b></p>	<p><b>Weekly</b> monitoring from <b>blossom to harvest</b> for the presence of rolled leaves; webbing on shoots, leaves, flower buds; chewing traces on young fruit; and frass and/or exit holes indicative of these insects. Cutworms often cut through the stems of young seedlings just above ground, leaving a short stump. If detected, follow appropriate pest management practices and controls outlined in the BC Tree Fruit Production Guide or other relevant BC Production Guides. <b>If any of these 3 pests, <i>Acrobasis tricolorella</i> (pruneworm leafroller), <i>Grapholita packardi</i> (cherry fruitworm) and <i>G. prunivora</i> (lesser apple worm) are found on the cherry fruit, notify the CFIA immediately. The orchard will be suspended from the export program to PRC for the remainder of the season.</b></p>
<p><b>Black cherry aphid</b> <i>Myzus cerasi</i></p>	<p><b>Weekly</b> monitoring from <b>blossom to harvest</b> for the presence of this insect on the leaves, sunken areas of branches and on fruit. If detected, follow appropriate pest management practices and controls as outlined in the BC Tree Fruit Production Guide.</p>
<p><b>Fruit Flies</b> <i>Rhagoletis</i> spp.</p>	<p><b>Weekly</b> fruit monitoring from <b>fruit set to harvest</b> for the presence of depressions, and/or exit holes indicative of these insects. <b>If detected through fruit monitoring, notify the CFIA immediately. The orchard will be suspended from the export program to PRC for the remainder of the season. A mandatory season-long chemical control program must be carried out as outlined in the the BC Tree Fruit Production Guide.</b></p>

<sup>1</sup> Bud break - refers to initiation of growth from a bud, where bud is no longer dormant.



## APPENDIX 3 – GUIDELINES FOR NUMBER OF *Rhagoletis* spp. TRAPS AND LURES FOR EXPORTS OF BC CHERRIES TO PRC AND KOREA

**3 months:** South Okanagan and Similkameen Locations **only**, for blocks containing **only early varieties (harvested before Lapins)**. If you have varieties harvested with Lapins/Skeena, **OR** if you are outside the Regional District of the Okanagan-Similkameen, you **MUST** select the 4 months trapping option.

Acres	0-9	10-11	12-13	14-15	16-17	18-19	20-21	22-23	24-25	26-27	28-29	30-31	32-33	34-35	36-37	38-39	40 +
# Trap sites in orchard	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Total # traps for 3 months	28	35	42	49	56	63	70	77	84	91	98	105	112	119	126	133	140
Total # lures for 3 months	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60

**4 months:** Everyone else

Acres	0-9	10-11	12-13	14-15	16-17	18-19	20-21	22-23	24-25	26-27	28-29	30-31	32-33	34-35	36-37	38-39	40 +
# Trap sites in orchard	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Total # traps for 4 months	36	45	54	63	72	81	90	99	108	117	126	135	144	153	162	171	180
Total # lures for 4 months	16	20	24	28	32	36	40	44	48	52	56	60	64	68	72	76	80



# APPENDIX 4 – EXAMPLES OF 2023 *Rhagoletis* spp. TRAP MONITORING RECORDS FOR EXPORTS OF BC CHERRIES TO PRC AND KOREA

## 2023 *Rhagoletis* spp. Trap Monitoring Record for each Registered Orchard - South Okanagan and Similkameen

Total Acres:  Total Traps in Orchard:

CFIA Registration Number:   
Contact Person:   
Company Name:   
Email address:   
Contact Phone Number:   
Orchard address:

Page #  of

Monitor weekly and report every Monday until 2 weeks before harvest.  
Monitor weekly and report every Monday and Thursday\*, starting 1 week before harvest commences.  
When monitoring is not yet required twice a week, place an asterisk \* on the Thursday of that week.  
As required, please e-mail [cfia\\_trapmonitor@mit.eur.deplages.acia@inspection.gc.ca](mailto:cfia_trapmonitor@mit.eur.deplages.acia@inspection.gc.ca) and [trapmonitor@bccherry.com](mailto:trapmonitor@bccherry.com) as outlined in Appendix 8 of the Annual CFIA Guidelines for Pest Monitoring and Pest Management in Registered British Columbia Cherry Orchards.  
Traps should be uniquely numbered and clearly labeled and mapped.  
Replace traps every 2 weeks. Replace lures every 4 weeks. Indicate "R" in the blue column when replaced.  
When ANY *Rhagoletis* spp. are found on a trap, indicate the count # and submit the trap to the Trap Monitoring Coordinator.

Date	Traps (indicate trap number in blue)																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Monday July 24	Count #	Count #	Count #	Count #	Count #	Count #	Count #	Count #	Count #	Count #	Count #	Count #	Count #	Count #	Count #	Count #	Count #	Count #	Count #	Count #
Monday July 25																				
Monday July 26																				
Monday July 27																				
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## 2023 *Rhagoletis* spp. Trap Monitoring Record for each Registered Orchard - Central and North Okanagan, Creston

Total Acres:  Total Traps in Orchard:

CFIA Registration Number:   
Contact Person:   
Company Name:   
Email address:   
Contact Phone Number:   
Orchard address:

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Monitor weekly and report every Monday until 2 weeks before harvest.  
Monitor weekly and report every Monday and Thursday\*, starting 1 week before harvest commences.  
When monitoring is not yet required twice a week, place an asterisk \* on the Thursday of that week.  
As required, please e-mail [cfia\\_trapmonitor@mit.eur.deplages.acia@inspection.gc.ca](mailto:cfia_trapmonitor@mit.eur.deplages.acia@inspection.gc.ca) and [trapmonitor@bccherry.com](mailto:trapmonitor@bccherry.com) as outlined in Appendix 8 of the Annual CFIA Guidelines for Pest Monitoring and Pest Management in Registered British Columbia Cherry Orchards.  
Traps should be uniquely numbered and clearly labeled and mapped.  
Replace traps every 2 weeks. Replace lures every 4 weeks. Indicate "R" in the blue column when replaced.  
When ANY *Rhagoletis* spp. are found on a trap, indicate the count # and submit the trap to the Trap Monitoring Coordinator.

Date	Traps (indicate trap number in blue)																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Monday July 24	Count #	Count #	Count #	Count #	Count #	Count #	Count #	Count #	Count #	Count #	Count #	Count #	Count #	Count #	Count #	Count #	Count #	Count #	Count #	Count #
Monday July 25																				
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## APPENDIX 5 – *Rhagoletis* spp. WING PATTERNS FOUND IN BC INTERIOR\*\*



**Any find on a trap that has similar *Rhagoletis* spp. wing pattern as per above must be submitted to the BCCA for identification. Please note that these pictures of flies and the various wing patterns are larger than the actual size of the flies and the wings. The wing patterns of flies stuck to the traps must be looked at with a magnifying lens.**

\*\*Images courtesy of Dr. Howard Thistlewood laboratory, Summerland Research and Development Centre, Agriculture and Agri-Food Canada, Summerland, BC.





## APPENDIX 6 – GUIDELINES FOR NUMBER OF *Cydia pomonella* TRAPS AND LURES FOR EXPORTS OF BC CHERRIES TO JAPAN AND KOREA

# Acres	< 35	35-52	53-69	70-87	88-104	105-121
# Trap Sites	2	3	4	5	6	7
Total # traps	2	3	4	5	6	7
Total # trap liners for 3 months	12	18	24	30	36	42
Total # lures for 3 months	6	9	12	15	18	21
Total # trap liners for 4 months	16	24	32	40	48	56
Total # lures for 4 months	8	12	16	20	24	28



# APPENDIX 7 – 2023 WEEKLY CODLING MOTH (*Cydia pomonella*) TRAP MONITORING RECORD FOR EXPORTS OF BC CHERRIES TO JAPAN AND KOREA

**2023 Weekly Codling Moth (*Cydia pomonella*) Trap Monitoring Record**

Total Acres: \_\_\_\_\_ CFIA Registration Number: \_\_\_\_\_  
 Contact Person: \_\_\_\_\_  
 Contact Phone Number: \_\_\_\_\_  
 Email Address: \_\_\_\_\_  
 Orchard Address: \_\_\_\_\_  
 Name of IPM Company: \_\_\_\_\_

As required, please e-mail [cfia\\_trapmonitor-moniteurdepieges.acia@inspection.gc.ca](mailto:cfia_trapmonitor-moniteurdepieges.acia@inspection.gc.ca) and [trapmonitor@bcherry.com](mailto:trapmonitor@bcherry.com) as outlined in Appendix 8 of the Annual CFIA Guidelines for Pest Monitoring and Pest Management in Registered British Columbia Cherry Orchards.

*Monitor Traps Weekly until the end of harvest*  
*Replace lures every 4 weeks*  
 CFIA must be notified if the average number of wild codling moths found in an orchard in a single week is 12 or higher (total number of moths/number of traps)

Trap #	Week 1 - Date:		Week 2 - Date:		Week 3 - Date:		Week 4 - Date:		Lure Change		Week 5 - Date:		Week 6 - Date:		Week 7 - Date:		Week 8 - Date:		Lure Change		Week 9 - Date:		Week 10 - Date:		Week 11 - Date:		Week 12 - Date:		Lure Change		Week 13 - Date:		Week 14 - Date:		Week 15 - Date:		Week 16 - Date:		Lure Change		Week 17 - Date:		Week 18 - Date:		Week 19 - Date:	
	Count#	Count#	Count#	Count#	Count#	Count#	Count#	Count#	Count#	Count#	Count#	Count#	Count#	Count#	Count#	Count#	Count#	Count#	Count#	Count#	Count#	Count#	Count#	Count#	Count#	Count#	Count#	Count#	Count#	Count#	Count#	Count#	Count#	Count#	Count#	Count#	Count#	Count#	Count#	Count#	Count#	Count#				
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## APPENDIX 8 – SCHEDULE FOR SUBMISSION OF TRAP MONITORING RECORDS FOR EXPORTS OF BC CHERRIES TO PRC AND JAPAN

To export cherries to the PRC and Japan, trap reports should be submitted weekly by e-mail to the following e-mail addresses:

[cfia.trapmonitor-moniteurdepieges.acia@inspection.gc.ca](mailto:cfia.trapmonitor-moniteurdepieges.acia@inspection.gc.ca); [trapmonitor@bccherry.com](mailto:trapmonitor@bccherry.com)

Trap reports should be submitted weekly using the following schedule:

Quarantine Pest of Concern	Weekly Trap Record Submission Days	Destination of Export
<i>Rhagoletis</i> spp.	Every Monday until 2 weeks before harvest  Every Monday and Tuesday starting 1 week before harvest commences	China
Codling Moth ( <i>Cydia pomonella</i> )	Every Monday until the end of harvest	Japan



# APPENDIX 9 – 2023 Weekly *Grapholita packardii* TRAP MONITORING RECORD FOR EXPORTS OF BC CHERRIES TO KOREA, EU AND UK

**\*There is no requirement to submit these records to the CFIA or BCCA weekly.\***

2023 Weekly <i>Grapholita packardii</i> Trap Monitoring Record																								
Total Acres:	CFIA Registration Number:																							
Contact Person:																								
Contact Phone Number:																								
Email Address:	<i>Monitor Traps Weekly until the end of harvest - Spray specific insecticides for the control of this moth when a minimum of 1 moth is found on trap(s).</i>																							
Orchard Address:	<i>Replace trap bottoms and lures every 4 weeks.</i>																							
Name of IPM Company:	<i>Please retain a printed or electronic copy of Grapholita packardii weekly trapping records. Refer to Appendix 9 of the Annual CFIA Guidelines for Pest Monitoring and Pest Management in Registered British Columbia Cherry Orchards.</i>																							
Trap Placement Date: May 1, 2023	Week 1 - Date:	Week 2 - Date:	Week 3 - Date:	Week 4 - Date:	Trap Bottom and Lure Change		Week 6 - Date:	Week 7 - Date:	Week 8 - Date:	Trap Bottom and Lure Change		Week 10 - Date:	Week 11 - Date:	Week 12 - Date:	Trap Bottom and Lure Change		Week 14 - Date:	Week 15 - Date:	Week 16 - Date:	Trap Bottom and Lure Change		Week 18 - Date:	Week 19 - Date:	Week 20 - Date:
	Initials of person checking the traps																							
Trap #	Count#	Count#	Count#	Count#	Count#	Count#	Count#	Count#	Count#	Count#	Count#	Count#	Count#	Count#	Count#	Count#	Count#	Count#	Count#	Count#	Count#	Count#	Count#	Count#
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# APPENDIX 10 – 2022 WEEKLY *Choristoneura rosaceana* TRAP MONITORING RECORD FOR EXPORTS OF BC CHERRIES TO KOREA

**\*There is no requirement to submit these records to the CFIA or BCCA weekly.\***

2023 Weekly <i>Choristoneura rosaceana</i> Trap Monitoring Record																												
Total Acres:		CFIA Registration Number:																										
Contact Person:																												
Contact Phone Number:																												
Email Address:		Monitor Traps Weekly until the end of harvest - Spray specific insecticides for the control of this moth when a minimum of 1 moth is found on trap(s).																										
Orchard Address:		Replace trap liners and lures every 4 weeks.																										
Name of Designated Pest Manager/IPM Company:		Please retain a printed or electronic copy of <i>Choristoneura rosaceana</i> weekly trapping records. Refer to Appendix 10 of the Annual CFIA Guidelines for Pest Monitoring and Pest Management in Registered British Columbia Cherry Orchards.																										
Trap Placement Date: May 1, 2023	Week 1 - Date:	Week 2 - Date:	Week 3 - Date:	Week 4 - Date:	Trap liner and lure change		Week 5 - Date:	Week 6 - Date:	Week 7 - Date:	Week 8 - Date:	Trap liner and lure change		Week 9 - Date:	Week 10 - Date:	Week 11 - Date:	Week 12 - Date:	Trap liner and lure change		Week 13 - Date:	Week 14 - Date:	Week 15 - Date:	Week 16 - Date:	Trap liner and lure change		Week 17 - Date:	Week 18 - Date:	Week 19 - Date:	Week 20 - Date:
	Initials of person checking the traps																											
Trap #	Count#	Count#	Count#	Count#	Y or N	Count#	Count#	Count#	Count#	Y or N	Count#	Count#	Count#	Count#	Y or N	Count#	Count#	Count#	Count#	Y or N	Count#	Count#	Count#	Count#	Count#	Count#	Count#	Count#
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