



PLANT HEALTH AND PRODUCTION DIVISION, PLANT PRODUCTS DIRECTORATE, CANADIAN FOOD INSPECTION AGENCY 59 Camelot Drive Nepean, (Ontario), Canada K1A 0Y9 (Tel: 613-225-2342; FAX: 613-228-6602)	<b>D-96-02</b>
	<b>(EFFECTIVE DATE)</b>  October 7, 2002 <b>(1<sup>st</sup> Revision)</b>
<b>Title</b> <b>PLANT PROTECTION REQUIREMENTS TO PREVENT THE INTRODUCTION AND SPREAD OF APPLE ERMINE MOTH ON <i>MALUS</i> SPECIES</b>	

File

3525-10F1

## SUBJECT

The original version of this directive consolidated the Plant Protection import and domestic requirements to prevent the introduction and spread of apple ermine moth, *Yponomeuta malinellus*, on *Malus* species.

***This directive has been revised to include an audit program for shipping Malus stock free of apple ermine moth. This directive revision also changes the list of dormant season and post harvest treatments.***

Notwithstanding any requirement contained in this directive, the domestic movement and importation of *Malus* nursery stock are also subject to any requirements that may be specified in other directives eg. Apple Maggot D-00-07.

## Table of Contents

Review .....	3
Endorsement .....	3
Amendment Record .....	3
Distribution .....	3
Introduction .....	3
Scope .....	4
References .....	4
Definitions, Abbreviations and Acronyms .....	4
1. General Requirements .....	5
1.1 Legislative Authority .....	5
1.2 Fees .....	5
1.3 Regulated Pests .....	5
1.4 Regulated Commodities .....	5
1.5 Commodities Exempt .....	5
1.6 Regulated Areas .....	6
2. Specific Requirements .....	6
2.1 Import Requirements .....	6
2.2 Domestic Movement Requirements .....	7
3. Inspection Audit Procedures .....	8
3.1 Import .....	8
3.2 Domestic Movement .....	8
4. Non-Compliance .....	9
4.1 Import .....	9
4.2 Domestic Movement .....	9
5. Appendices .....	10
Appendix 1: Field Recognition of the Apple Ermine Moth in North American Populations .....	11
Appendix 2: Areas regulated for Apple Ermine Moth .....	12
Appendix 3: Requirements for growing season treatment of plant material for the control of Apple Ermine Moth .....	13
Appendix 4: Requirements for dormant season treatment of plants for the control of Apple Ermine Moth .....	14
Appendix 5: Requirements for the post harvest treatment of plants for the control of Apple Ermine Moth .....	15
Appendix 6: Application for Registration of Land as a Block under the Apple Ermine Moth Program .....	16

**Review**

This directive will be reviewed every 5 years. The next review date for this directive is October 7, 2006. The contact for this directive is Joanne Rousson. For further information or clarification, contact the Horticulture Section.

**Endorsement**

Approved by:

<p>_____</p> <p>Director Plant Health and Production Division</p>
---

**Amendment Record**

Amendments to this directive will be dated and distributed as outlined in the distribution below.

**Distribution**

1. Directive mail list (Regions, PHRA, USDA)
2. Provincial Government, Industry (via Regions)
3. National Industry Organizations (determined by Author)
4. Internet

**Introduction**

Apple ermine moth is widely distributed in temperate areas of the world. In infested areas, it can completely defoliate untreated apple trees.

In the United States (U.S.), apple ermine moth occurs in the states of Washington and Oregon. In Canada, apple ermine moth is established in the major apple production areas of the province of British Columbia, including the Okanagan Valley, the Fraser Valley, and southeastern Vancouver Island. For regulatory purposes, the entire province of British Columbia is considered infested (regulated). In Canada the apple ermine moth does not occur east of the Rocky Mountains.

**Scope:** This directive is intended for the use of Canadian Food Inspection Agency (CFIA) inspection staff, Canadian Customs and Revenue Agency (CCRA), and the growers of *Malus* in apple ermine moth infested (regulated) areas. The directive provides import requirements for *Malus* into all of Canada in relation to apple ermine moth. The directive also outlines the apple ermine moth audit program for movement allowance of regulated commodities from the infested (regulated) area of Canada to non-infested (non-regulated) areas of Canada.

**References** NAPPO Standard 978.008

Department of the Secretary of State of Canada. *The Canadian Style: A Guide to Writing and Editing*. Toronto, 1993.

**This Directive supersedes all previous directives on this subject, including D-96-02 (Original) dated May 3, 1996; D-94-29 dated October 13, 1994; D-93-07, dated March 12, 1993; D-91-16, dated November 19, 1991; D-91-05, dated February 19, 1991; T-90-04 dated May 14, 1990; Import Operational Directive No. 019-0, dated 19-02-90 (covering memo dated March 22, 1990); and D-88-28 dated November 21, 1988.**

#### Definitions, Abbreviations and Acronyms

**Audit** A systematic examination to determine whether activities and related results comply with the planned arrangements and whether these arrangements are implemented effectively and are suitable to achieve objectives (ISO 8402:1994)

**Block** A contiguous area of land that is registered for the purposes of apple ermine moth control in accordance with the terms of section 2.2.1.

**BCMAFF** British Columbia Ministry of Agriculture, Food and Fisheries

**Cultivate** In relation to plants, means to care for such plants or to promote or stimulate the growth of such plants and “cultivation” shall have a corresponding meaning.

**Grower** The owner/occupier/person having the possession, care or control of *Malus* stock, or the person responsible for managing it.

**Inspector** A person designated as an inspector pursuant to section 21 of the *Plant Protection Act*.

- PMRA** Pest Management Regulatory Agency of Health Canada
- Lot** A number of units of single commodity, identifiable by its homogeneity of composition, origin, etc. forming a part of a consignment (FAO, 1990).
- Find free** (In text - found free) To inspect a consignment, field or place of production and consider it to be free from a specific pest [FAO, 1990].

## 1. General Requirements

### 1.1 Legislative Authority

*The Plant Protection Act, s.c., 1990, c22*  
*The Plant Protection Regulations, SOR/95-212*  
*Canadian Food Inspection Agency Fees Notice, Canada Gazette, Part I (05/13/2000)*

### 1.2 Fees

The CFIA is charging fees in accordance with the *Plant Protection Cost Recovery Fees Order*. For information regarding fees associated with imported product, please contact the Import Service Centres (ISC) at the following phone numbers: Eastern ISC 1-877-493-0468; Central ISC 1-800-835-4486; Western ISC 1-888-732-6222. Anyone requiring other information regarding fees may contact any local CFIA office or CFIA's website at <http://www.inspection.gc.ca>.

### 1.3 Regulated Pests

Apple ermine moth, *Yponomeuta malinellus* Zeller.

For a field recognition guide see Appendix 1.

### 1.4 Regulated Commodities

*Malus* (apple) - All plants and plant parts of all species.

### 1.5 Commodities Exempt

*Malus* fruit, seeds, or plants grown in tissue culture.

## 1.6 Regulated Areas

Any region or territory where the apple ermine moth occurs. See Appendix 2.

## 2. Specific Requirements

The *Malus* material regulated by this directive shall not be imported, or moved into Canada (or within Canada) from any regulated area to any non-regulated area except in accordance with the provisions given below. *Malus* material may move into or within regulated areas of Canada without meeting the apple ermine moth requirements (note that restrictions related to other pests may apply).

### 2.1 Import Requirements

A Permit to Import shall be obtained from the CFIA prior to the importation of any *Malus* regulated material.

A Phytosanitary Certificate shall be issued by the national plant protection organization, within 14 days prior to shipment. The Certificate must accompany the consignment to Canada.

The Phytosanitary Certificate must bear one of the following additional declarations if the *Malus* is moving from a regulated area to a non-regulated area:

- 2.1.1 “The plants were cultivated in an area free of apple ermine moth (*Yponomeuta malinellus*) based on an official inspection and trapping program”;

**OR**

- 2.1.2 “The plants are free of apple ermine moth (*Yponomeuta malinellus*) based on a chemical control program”;

The control program shall be equivalent to that specified in the growing season or dormant season treatment requirements, set out in Appendix 3 or 4.

**OR**

- 2.1.3 A statement in the treatment box of the phytosanitary certificate that is in accordance with the post-harvest treatment requirements set out in Appendix 5, or that shows that a Methyl Bromide post-harvest fumigation has taken place as follows:

Enclosure	Rate	Duration	Temperature
Chamber or Tarp	3.5 lbs = 56 g/m <sup>3</sup>	3.5 hours	50-59 F 10-15 C
Chamber or Tarp	3 lbs = 48 g/m <sup>3</sup>	3.5 hours	60 F or above 15.5 C

## 2.2 Domestic Movement Requirements

Plants originating in regulated areas in Canada may move to non-regulated areas in Canada if each shipment is accompanied by a Movement Certificate issued by the CFIA.

A Movement Certificate may be issued if the plant material and the grower meets the following requirements:

- 2.2.1 The plant material is grown in block(s) registered under the apple ermine moth program. See Appendix 6 for an application form for registration of the apple ermine moth block(s). An individual grower can register all blocks designated for the apple ermine moth program on one registration form. The registration will be submitted to CFIA annually by April 1. A copy will be retained in the growers' file.

The grower has a copy of the current apple ermine moth directive, and has an understanding of the contents.

The grower registered must train the staff who are working within the designated block(s). The training will include: how to identify apple ermine moth (a field recognition guide is available on the CFIA website (see Appendix 1 for the web address) as a pest fact sheet)); how to report suspects to the registered grower; and explanation of the apple ermine moth program which is applied at the facility. The trainees and the date will be recorded.

The grower must maintain a pest monitoring record of the registered block(s).

The grower must maintain a pesticide application record of the registered block(s). The pesticide application record will reflect one of the following treatment options:

The growing season treatments described in Appendix 3

**OR**

One of the dormant season treatments described in Appendix 4

**OR**

The post-harvest treatment described in Appendix 5.

**3. Inspection Audit Procedures****3.1 Import**

Imported consignments are subject to inspection by the CFIA upon arrival in Canada and must be found free of any life stage of apple ermine moth if imported into a non-regulated area. Refer to the Plant Protection Import sampling guidelines.

**3.2 Domestic Movement**

CFIA officials reserve the right to inspect any shipment prior to issuing a Movement Certificate.

- 3.2.1 The CFIA inspector will audit the requirements outlined in 2.2.1 at least once annually, timed for when the cocoons and larvae are visible. Other audits may be carried out before issuing a Movement Certificate. The audit(s) will include: ensuring the block(s) registration and current copy of the apple ermine moth directive are on file at the growers premises, inspection of plant material for life stages of apple ermine moth, interviews with staff, observations of activities, and examination of the monitoring and pesticide spray records. An audit report will be generated; one copy given to the grower, and one copy retained in the CFIA apple ermine moth file. When findings ensure the plant material is free of apple ermine moth, Movement Certificates will be issued.

Growers must request a Movement Certificate at least 2 days in advance of shipping. A single master certificate can be issued for all lots from one registered grower being sent to a single province. This single certificate will be valid for fourteen (14) days from issuance. Each lot shipped must be accompanied by a photocopy of the certificate. The photocopy of the certificate must be given to the consignee at destination. The grower must submit a list of all destinations during a month, within 10 days following the end of the month, to the local CFIA office that issued the master certificate. The local office will then forward the master certificate and the destinations to the local CFIA office in the province of destination by the end of that month.



## 4. Non-Compliance

### 4.1 Import

Those shipments which do not meet the entry requirements will be refused entry. Shipments found to be infested with any quarantine pests will be refused entry, returned to origin, or disposed of at the importer's expense. If determined feasible by CFIA, the shipments will be safeguarded and treated when appropriate.

### 4.2 Domestic Movement

4.2.1 Shipments found infested with quarantine pests in a non-regulated area will be destroyed; or will be safeguarded and treated if determined feasible by CFIA.

4.2.2 Non-compliances for the apple ermine moth audit program will be divided into three classifications called minor, major and critical non-conformances. The examples of non-conformances provided are a guide only, and are not limited to those listed below.

Minor non-conformance - a task if performed unsatisfactorily does not significantly affect the integrity of the apple ermine moth program. For example: monitoring paperwork maintained by grower exists but is not up to date, and/or application to register the blocks is submitted later than April 1.

Three or more minor non-conformances during an audit will elevate the non-conformance status to a Major non-conformance.

Movement Certificates can be issued if non-conformances are minor.

Major non-conformance - one isolated incident having no direct impact on the integrity of the apple ermine moth program providing that remedial action is taken within three days. For example: No training of staff.

Two or more major non-conformances change to a Critical Non-Conformance.

Movement Certificates can be issued after remedial action has been taken on the major non-conformance.

Critical non-conformance - an audit finding that jeopardizes the integrity of this program. For example: the control requirements for apple ermine moth in Appendix 3, 4, or 5 have not been applied.

This non-conformance will damage the integrity of the certificate, and/or directly affect markets.

Movement Certificates can not be issued if a critical non-conformance is found, and will result in the grower participation in the program being suspended.

## **5. Appendices**

- Appendix 1: Field Recognition of the apple ermine moth in North American Populations
- Appendix 2: Areas Regulated for apple ermine moth
- Appendix 3: Requirements for Growing Season Treatment of Plant Material for the Control of apple ermine moth
- Appendix 4: Requirements for Dormant Season Treatment of Plants for the Control of apple ermine moth
- Appendix 5: Requirements for Post Harvest Treatment of Plants for the Control of apple ermine moth
- Appendix 6: Application for Registration of Land as a Block under the apple ermine moth Program

**APPENDIX 1**

**FIELD RECOGNITION OF THE APPLE ERMINE MOTH IN NORTH AMERICAN  
POPULATIONS**

<http://www.inspection.gc.ca/english/ppc/science/pps/pfse.shtml#Y>

## APPENDIX 2

## AREAS REGULATED FOR APPLE ERMINE MOTH\*

**CANADA:** British Columbia

**UNITED STATES:** Washington  
Oregon

**OTHER COUNTRIES:**

Afghanistan	Germany	Norway
Albania	Georgia	Pakistan
Armenia	Greece	Poland
Austria	Hungary	Romania
Azerbaijan	Iran	Russia
Belgium	Ireland	Sardinia
Bulgaria	Italy	Sicily
China	Japan	Slovakia
Corsica	Kazakhstan	Spain
Crete	Korea DPR	Sweden
Cyprus	Korea Republic	Switzerland
Czech Republic	Latvia	Tajikistan
Denmark	Lithuania	Turkey
Estonia	Luxembourg	Ukraine
Finland	Moldova	United Kingdom
France	Netherlands	Uzbekistan
		Yugoslavia

\*If other areas not listed are found to be partly or generally infested, those areas are also regulated.

**APPENDIX 3****REQUIREMENTS FOR GROWING SEASON TREATMENT OF PLANT MATERIAL FOR THE CONTROL OF APPLE ERMINE MOTH****1. SCOPE**

These requirements shall apply to plants that are shipped after adult apple ermine moth emergence and prior to leaf abscission (approximately June 20 - October 15) that have not otherwise been treated according to Appendix 4 or 5. Plants cultivated in accordance with these requirements do not require any additional dormant season, or post-harvest treatment.

**2. REQUIREMENTS**

2.1 Plants established on a block shall be treated according to the following:

2.1.1 A larvicide treatment, using an insecticide registered for use on lepidopterous insect larvae, shall be applied at the time of larval emergence, or prior to June 1, whichever is earlier. This treatment shall not be contingent on the observation of apple ermine moth tents.

**AND**

2.1.2 A minimum of four adulticide treatments shall be applied during the adult flight period and beginning in July, or at the time of the first appearance of adult moths. The treatments shall be applied every two to three weeks during the adult flight period, which in British Columbia extends until mid-September.

In British Columbia, pesticides for the above treatments are recommended by the British Columbia Ministry of Agriculture, Food and Fisheries (BCMAFF) and the BC Landscape & Nursery Association in the Nursery & Landscape Pest Management & Production Guide Revised 2002.

**APPENDIX 4****REQUIREMENTS FOR DORMANT SEASON TREATMENT OF PLANTS FOR THE CONTROL OF APPLE ERMINE MOTH****1. SCOPE**

These requirements shall apply to any plants that have not been subjected to growing season treatments as prescribed in Appendix 3, or post-harvest treatment as prescribed in Appendix 5.

**2. REQUIREMENTS**

2.1 Plants established on a block shall be subjected to one of the following insecticidal treatments using an approved product as specified in subsection 3.1 of this Appendix in a dormant oil spray:

2.1.1 Two (2) ground applications with air-blast or hydraulic spray equipment applied at least one (1) week apart, and after October 1;

**Or**

2.1.2 Two (2) aerial applications according to the following schedule:

2.1.2.1 Application 1 - after 90 percent leaf drop has been achieved.

2.1.2.2 Application 2 - seven (7) to fourteen (14) days after the first application.

**3. RECOMMENDED INSECTICIDES**

3.1 Formulations of some insecticides with the following active ingredients are considered to be effective against apple ermine moth in accordance with the requirements of section 2 of this Appendix:

**Active Ingredient**

\*Chlorpyrifos

\*Permethrin

**\* Insecticides with these active ingredients may not be registered for this use in Canada.** It is the grower's responsibility to ensure that only registered products are used. To initiate the registration process, application may be made in BC through the BCMAFF for the User Requested Minor Use Label Expansion (URMULE) Program. Applications will be reviewed by the Pest Management Regulatory Agency (PMRA) of Health Canada.

**APPENDIX 5**

**REQUIREMENTS FOR POST HARVEST TREATMENT OF PLANTS FOR THE CONTROL OF APPLE ERMINE MOTH**

1. **SCOPE**

These requirements shall apply to harvested plants that have not been subjected to either growing season treatment as prescribed in Appendix 3, or dormant season treatment as prescribed in Appendix 4. These requirements do not replace or supersede any requirements that may be prescribed for other pests.

2. **REQUIREMENTS**

2.1 Plants shall be subject to treatment with a horticultural oil/water solution in the following manner:

2.1.1 The treatment solution shall be prepared by following label instructions to make an appropriate volume of a registered horticultural oil.

Trees shall be treated singly or in bundles of ten (10) or fewer.

Each bare-rooted tree shall be submerged in the oil/water solution so that all branches and the trunk to the soil line of the plant are fully covered by the treatment solution.

In order to ensure complete wetting of all surfaces, trees shall then be removed from the treatment solution and immersed a second time in the treatment solution to the soil line.

Contact the BCMAFF or the PMRA (1-800-267-6315 or 604 666 2891) for recommendations for registered products.

**APPENDIX 6**

**Application for Registration of Land Block(s)  
under the apple ermine moth Program**

Name of Nursery: _____	Telephone: (     ) _____ - _____						
<b>Grower's Name:</b> _____	Facsimile : (     ) _____ - _____						
<b>Address:</b> _____							
_____							
<input type="checkbox"/> (Y/N) Local map clearly indicating where the area(s) of land are situated is enclosed. <input type="checkbox"/> (Y/N) If plants are currently established on the land; genus, species and variety, and a planting plan are enclosed.							
<p>I, _____ the person in whose favour this application for registration is being submitted, hereby acknowledge that I have read and understood all of the stated conditions and obligations by which plants cultivated on the land described herein may be certified by the Canadian Food Inspection Agency for domestic movement in accordance with the Plant Health and Production Division Directive D-96-02 1<sup>st</sup> Revision.</p> <p>Further, I am and shall be responsible and shall indemnify and save harmless Her Majesty the Queen in Right of Canada, including the Canadian Food Inspection Agency, Her Officers, Servants, Employees, Successors and Assigns, from and against all manners of actions, causes of action, claims, demands, loss, costs, damages, actions or other proceedings by whomsoever made, sustained, brought or prosecuted in any manner based upon, caused by, arising out of, attributable to or with respect to any failure, inadvertent or otherwise, by act or omission, to fully comply with the said conditions.</p> <p>Dated _____ at _____ Province of _____</p> <p>_____ Applicant's Signature</p>							
<table style="width: 100%; border: none;"> <tr> <td style="width: 50%;"><b>For CFIA Office Use Only</b></td> <td style="width: 50%;">Date of receipt of Application: _____</td> </tr> <tr> <td colspan="2" style="padding: 5px;"> <input type="checkbox"/> (Y/N) If there are conditions which mitigate against registration as a block, please specify;            _____            _____         </td> </tr> <tr> <td colspan="2" style="padding: 5px;"> <input type="checkbox"/> (Y/N) Registration approved, and assigned the following registration number: _____         </td> </tr> </table>		<b>For CFIA Office Use Only</b>	Date of receipt of Application: _____	<input type="checkbox"/> (Y/N) If there are conditions which mitigate against registration as a block, please specify; _____ _____		<input type="checkbox"/> (Y/N) Registration approved, and assigned the following registration number: _____	
<b>For CFIA Office Use Only</b>	Date of receipt of Application: _____						
<input type="checkbox"/> (Y/N) If there are conditions which mitigate against registration as a block, please specify; _____ _____							
<input type="checkbox"/> (Y/N) Registration approved, and assigned the following registration number: _____							
For the Canadian Food Inspection Agency _____	Date _____						