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	(EFFECTIVE DATE) August 16, 2010 (4 th Revision)
Title Systems Approach Based Oriental Fruit Moth Certification Program	

SUBJECT:

This directive outlines an alternative certification program for importing fresh fruit of peach, nectarine, plum and apricot, as well as genetic crosses of apricot such as pluot and plumcot from the United States (U.S.) into British Columbia (BC) to prevent the introduction of Oriental fruit moth. The existing requirements remain an option.

This directive is being updated to allow shipments from the states of Idaho and Oregon.

Note: Fresh fruit of plum and quince are also regulated for Oriental fruit moth. The import requirements for plum and quince, as well as the other hosts of Oriental fruit moth are outlined in directive D-87-29 (please contact your local Canadian Food Inspection Agency (CFIA) office for details).

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Review

This directive will be reviewed every five years. For further information or clarification, please contact the CFIA.

Endorsement

Approved by:

Chief Plant Health Officer

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 (determined by Author)
3. National Industry Organizations (determined by Author)
4. Internet

Introduction

The Oriental fruit moth does not occur in British Columbia. Surveys using sticky traps with Oriental fruit moth pheromone are carried out annually to verify pest freedom. The Oriental fruit moth is an economic pest of peach, plum, apricots and nectarines, feeding internally on the fruit and attacking the new shoots of fruit trees. The introduction of Oriental fruit moth into the fruit production areas of British Columbia could result in increased production costs, loss of fruit quality, and a loss of export markets.

To prevent the introduction of Oriental fruit moth into British Columbia, hosts and carriers of Oriental fruit moth from infested areas of Canada, the United States and other countries presently require fumigation before they may be shipped into British Columbia. This requirement is outlined in other directives (D-87-29 for import requirements and Quarantine Directive: D-7 for domestic requirements); please contact your local CFIA office for further information.

A systems approach has been shown to be an effective alternative means of mitigating the risk of Oriental fruit moth being introduced into Canada on stone fruit. The National Plant Protection Organization developed a systems approach program involving field controls and packing house inspections (Oriental Fruit Moth Certification Program). Growers in the United-States states listed in Appendix 1 are eligible to participate in the Oriental Fruit Moth Certification Program. Growers in other United-States. states who wish to utilize the systems approach must demonstrate the effectiveness of the program using a pilot project. United-States. stone fruit certified under this program will not require fumigation with methyl bromide to enter British Columbia. As there is no similar program developed at this time for fruit produced in Canada, regulated fruit shipped from other parts of Canada into BC require fumigation.

Scope This directive is intended for the use of the CFIA inspection staff, Canada Border Services Agency, importers, shippers and brokers in order to outline the necessary requirements and inspection procedures for the movement of non-fumigated fresh fruit of peaches, nectarines, apricots (and apricot crosses) and plums from the United-States states listed in Appendix 1 or into British Columbia.

This directive supersedes D-99-04 (3rd Revision).

This directive does not supersede the existing directives which relate to hosts and carriers of Oriental fruit moth. The import and domestic requirements for the movement of Oriental fruit moth hosts remain the same (see D-87-29 for import requirements and Quarantine Directive: D-7 (1988-01-31) for the domestic requirements).

Definitions, Abbreviations and Acronyms

Definitions for terms used in the present document can be found in the Plant Health Glossary of Terms at www.inspection.gc.ca/english/plaveg/protect/dir/glosterme.shtml.

1.0 General Requirements

1.1 Legislative Authority

The Plant Protection Act, S.C. 1990, c. 22

The Plant Protection Regulations, SOR/95-212

The Canadian Food Inspection Fees Notice, Canada Gazette, Part 1 (as amended from time to time)

1.2 Fees

The CFIA is charging fees in accordance with the *Canadian Food Inspection Agency Fees Notice*. For information regarding fees associated with imported product, please contact the National Import Service Centre (NISC) at <http://www.inspection.gc.ca/english/imp/importe.shtml>. Anyone requiring other information regarding fees may contact any local CFIA office or visit our Fees Notice Web Site: <http://www.inspection.gc.ca/english/reg/cfiaacia/feesfraais/feesfraise.shtml>.

1.3 Regulated pests

Oriental fruit moth, *Grapholita molesta* (Busck)

1.4 Regulated Commodities

Fresh fruit of peach, nectarine, plum and apricot (as well as genetic crosses of apricot with other species) such as pluot and plumcot (*Prunus* sp.), are eligible for shipment to British Columbia under a systems approach.

1.5 Regulated Areas

Growers from the United-States states listed in Appendix 1 are eligible for participation in the Systems Approach based Oriental Fruit Moth Certification Program.

2.0 Specific Requirements

2.1 Import Requirements

To import fresh fruit of peach, nectarine, plum or apricot (and apricot crosses) from the United-States listed in Appendix 1 into British Columbia, the following is required:

2.1.1. Pre-shipment conditions:

2.1.1.1 Approval of Growers

The fruit must originate from a grower approved by the National Plant Protection Organization to participate in Oriental Fruit Moth Certification Program.

2.1.1.2 Pest Monitoring and Controls

All fruit intended for shipment to British Columbia under the Oriental Fruit Moth Certification Program must be grown in an orchard which meets the requirements for pest monitoring and controls as outlined by the National Plant Protection Organization.

The monitoring program used by participating growers must be specific for Oriental fruit moth and effective as a tool for estimating the optimum time for applying chemical controls.

Chemical controls and/or biological controls must be applied, if necessary, to ensure that all fruit shipped to British Columbia is free from all stages of Oriental fruit moth.

All aspects of the pest monitoring and control program must be audited throughout the growing season by the National Plant Protection Organization.

Upon request, detailed information relating to pest monitoring and controls and information specific to each state utilizing the systems approach must be provided to the Plant Health and Biosecurity Directorate of the CFIA.

2.1.1.3 Fruit Sampling and Examination

Fruit on the packing line must be inspected for internal feeders, specifically for Oriental fruit moth, by packing house employees trained by officials authorized by the National Plant Protection Organization. Fruit examination techniques must incorporate the inspection conditions and procedures described in Appendix 1. The fruit examination must include cutting of each individual piece of fruit. The number of fruit to be inspected must be based on detecting a pest infestation of 1.0% or greater with a 95% probability of finding at least one infested fruit in a lot. In practical terms, a minimum of 300 fruit are required to be selected and examined from each days harvest for each grower lot packed. A grower lot is defined as the fruit produced from a same geographic location under the same phytosanitary management system. The fruit examined must be representative of the entire grower lot. If Oriental fruit moth is detected, shipments from the infested lot will be disqualified for entry into Canada for the remainder of the shipping season.

2.1.1.4 National Plant Protection Organization Audit Inspections

1% of the boxes in a lot to be examined by inspectors authorized by the National Plant Protection Organization. At least two fruit per inspected box must be cut and examined for internal feeders. If Oriental fruit moth is detected, shipments from the infested lot will be disqualified for entry into Canada for the remainder of the shipping season.

2.1.1.5 Labelling

All boxes must be identified with a grower lot number and the name of the packer in order to facilitate inspection, to allow for trace-back in cases of non-compliance, and to minimize losses to the importer/exporter, should pests be found.

2.1.1.6 Packing House Approval

The packing house must be approved for handling fruit for export to British Columbia. The facility must be clean and maintained free of quarantine pests and infested fruit. The packing line used for fruit destined to BC must be cleaned prior to packing. At the time of packing, packing house staff must ensure that there is no mixing of non-eligible fruit (i.e. fruit which has not been produced under the Systems Approach based Oriental Fruit Moth Certification Program) with the fruit destined to British Columbia.

2.1.1.7 Safeguarding

The fruit must be safeguarded from contamination from quarantine pests during packing, loading, and transportation.

2.1.1.8 Records

Growers and packing houses must keep records as requested by the National Plant Protection Organization to demonstrate full compliance to program requirements.

2.1.2. Permit to Import:

A Canadian Permit to Import issued under the *Plant Protection Regulations* is not required.

2.1.3. Phytosanitary Certificate:

A federal Phytosanitary Certificate is required. This document must be issued under the authority of the National Plant Protection Organization and must accompany each shipment imported into British Columbia. The following additional declaration must appear on the certificate:

"The fruit in this shipment was produced under the Systems Approach based Oriental Fruit Moth Certification Program."

2.2 Transit Requirements

Regulated commodities entering British Columbia in transit to out of province destinations must transit under Canada Customs Bond or meet British Columbia entry requirements.

2.3 Inspection Requirements

Shipments may be subject to inspection and sampling by CFIA on arrival to determine if pests are present. 5% of the boxes must be randomly selected and examined. Any fruit showing signs of pest damage shall be cut and examined. All pests found will be identified to determine if quarantine pests are present. The shipment may be placed under Notice of Quarantine pending the results of a laboratory identification.

The Import Service Centre shall:

1. verify that the Phytosanitary Certificate, including the additional declaration, conforms to the requirements specified under Section 2.1. Import Requirements of this directive.

CFIA inspectors shall:

1. examine shipments at the rate specified for freedom from pests;
2. inspect according to the general instructions in the Plant Health Import Inspection Manual for fresh fruit, Section 3.4.4;
3. if any pests are found, take specimens, place the shipment under Notice of Quarantine, and submit specimens for identification, according to the instructions in the *Guidelines for Laboratory Submission of Imported Plants, Plant Pests and Related Matter*.

2.4 Non-Compliance

Shipments found infested with suspect regulated pests will be held under Notice of Quarantine pending laboratory identification. Shipments may be refused entry, ordered removed from Canada or disposed of if they do not meet requirements or if they are found to be infested with Oriental fruit moth or any other regulated pests. If determined feasible by the inspector, such shipments may be rerouted to other destinations, or diverted to approved processing facilities, or fumigated provided such a course of action does not cause unwarranted pest risk.

If Oriental fruit moth is discovered during inspection in Canada, future shipments of the lot found to be infested will be disqualified for entry into Canada for the remainder of the shipping season. A suspension of importation will also apply to shipments of all other lots from the grower and from the packing house implicated in the pest interception. This suspension will be in effect until an investigation into the systems approach failure is conducted and corrections to the program have been made to prevent future failures. CFIA will suspend the Systems Approach based Oriental Fruit Moth Certification Program if multiple shipments are rejected, demonstrating that the Program is not consistently eliminating Oriental fruit moth from shipments.

The importer of the shipment is responsible for any and all costs relating to disposal, removal, rerouting or diversion to processing facilities, including costs incurred by the CFIA to monitor the action taken.

3.0 Other Requirements

Other Canadian import requirements, which are in addition to those stated above, include:

- 1) chemical residue standards as established under the *Food and Drug Regulations*,
- 2) licensing and inspection requirements as established under the *Licensing and Arbitration Regulations* under the *Canada Agricultural Products Act*,
- 3) regulatory requirements as established under the *Fresh Fruit and Vegetable Regulations* under the *Canada Agricultural Products Act*, and
- 4) packaging and labelling requirements as established under the *Consumer Packaging and Labelling Act and Regulations*.

It is the importer's responsibility to know and satisfy these requirements.

Questions and requests for information on any requirements should be directed to local offices of CFIA.

4.0 Appendices

Appendix 1 - United-States states that have an approved Systems Approach Based Oriental Fruit Moth Certification Program

Appendix 2 - Evaluation and inspection of fresh fruit of peach, nectarine, plum and apricot, as well as their genetic crosses for the presence of Oriental fruit moth

Appendix 1

U.S. states that have an approved Systems Approach Based Oriental Fruit Moth Certification Program

www.inspection.gc.ca/english/plaveg/protect/dir/ofmcpe.shtml

Appendix 2

Evaluation and Inspection of Fresh fruit of peach, nectarine, plum and apricot (as well as genetic crosses of apricot with other species) for the presence of Oriental Fruit Moth

Equipment

- hand lens with at least 10 x magnification
- sharp knife (preferably with a long thin blade and sharp point)

Lighting

The light intensity at the surface of the fruit shall not be less than 540 lux / 50 foot candles.

Inspection Procedure:

Fruit surface

Under optimal lighting conditions, check the fruit surface using the hand lens and knife to investigate punctures, holes, depressions, blemishes, specks or frass. Oriental Fruit Moth interceptions have been found randomly on the fruit surface (i.e. not just in the stem cavity of the fruit) therefore the entire surface must be examined in detail.

The smallest holes may be less than 1 mm in diameter which is a little larger than the lenticels in the fruit skin. The holes are often highlighted by discolourations in the skin which are caused by halos of dead skin cells. The knife can be used to cut thin slices of tissue below a surface imperfection to detect signs of larval infestation (i.e. tunnels or frass). In some cases larval tunnels are easily seen because of discoloured brown fruit tissue, but sometimes the tunnel is not brown and close inspection with the lens will be necessary to see that a larva has actually bored into the fruit.

Fresh feeding injury should be cause for closer examination of the entire shipment.

If the injury is fresh but there are no larvae present, more intensive examination of the rest of the shipment should be carried out.

Stem cavity

This cavity is a protected area and it is a favourable spot for shelter and feeding used by some insects. Minute amounts of webbing and frass should be examined closely with the hand lens for concealed larvae. The tip of the knife can be used to gently lift or probe webbing under which larvae can hide, but extreme care must be taken not to injure the insects.

Detection of early instars:

Early instars can be very difficult to find because of their small size and their lack of body pigment which allows them to match the internal colour of the fruit and escape detection. However because their head capsule is pigmented, one may detect them by this colour anomaly or by their movement. Frass is also a good indication that larvae are present but due to its small size, very careful examination of the fruit is necessary. Early instar frass is often the same size and texture as flour and thus requires a hand lens for detection.

Note: Lighting is probably the most important aid in helping to detect early instars.