

| CANADIAN FOOD INSPECTION AGENCY 59 Camelot Drive Ottawa, Ontario K1A OY9 (Tel: 225-2342; FAX: 613-773-7204) | D-96-15                       |
|---|-------------------------------|
|   | EFFECTIVE DATE  March 1, 2011 |

**TITLE:** Phytosanitary requirements to prevent the spread of Japanese beetle, *Popillia japonica*, in Canada and the United States.

## **SUBJECT**

This directive contains the phytosanitary requirements intended to prevent the spread of Japanese beetle (*Popillia japonica*) by regulating the movement of plants and other commodities within Canada as well as their import from and export to the continental United States (U.S.) and Hawaii. This directive aims to ensure that Japanese beetle pest risks are mitigated and prevent the introduction of Japanese beetle to non-infested areas of Canada and the U.S. Canada and the U.S. have adopted a harmonized approach to prevent the spread of Japanese beetle.

In this revision, the following changes have been made:

- Section 2.3: The requirements for production during the pest-free window have been clarified.
- Section 4.1, Section 4.2 and Appendix 7: The requirements for treatment of plants by drenching using an approved pesticide have been modified.



(10<sup>th</sup> revision)

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#### Review

This directive will be reviewed every five years. For further information or clarification, please contact the Canadian Food Inspection Agency (CFIA).

# 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 (CFIA regional offices, CFIA Plant Health Risk Assessment Unit, United States Department of Agriculture)
- 2. Provincial government, industry (determined by author)
- 3. National industry organizations (determined by author)
- 4. Internet

#### Introduction

Japanese beetle (JB), *Popillia japonica* Newman, is native to the main islands of Japan and was first discovered in North America in 1916 in a nursery near Riverton, New Jersey, in the U.S. The first beetle found in Canada was in a tourist's car, arriving in Nova Scotia at Yarmouth by ferry from Maine, in 1939. During that same year three additional adults were captured at Yarmouth and three more at Lacolle in Southern Quebec. In Canada, populations are currently established in Ontario, Quebec, Prince Edward Island, New Brunswick and Nova Scotia.

This species of beetle affects more than 300 plant species, including some economically important commodity plants, such as fruit trees, ornamental shrubs, trees, field crops and turf grasses. The larva feeds on roots and is a major turfgrass pest of golf courses, recreational and industrial parks, school grounds and home lawns. The adult feeds aboveground on foliage, flowers and fruits. Without proper mitigation, this beetle could potentially cause a loss of export markets and cause damage both to nursery stock and to the environment.

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This directive is designed to be consistent with the U.S. Domestic Japanese Beetle Harmonization Plan, a plan developed by the U.S. National Plant Board and the U.S. Department of Agriculture (USDA) to ensure that JB pest risks are acceptably managed and to facilitate the marketing of nursery stock within the U.S.

#### Scope

This directive is for the use of: importers; the nursery, greenhouse, sod and turfgrass industries; CFIA inspectors; the Canada Border Services Agency; exporters; and National Plant Protection Organizations (NPPOs). The directive establishes the requirements for trade in host material of JB, including domestic movement, export trade to the U.S. and import from the U.S. (where U.S. includes the continental U.S. and Hawaii). The JB requirements are described, including those related to CFIA monitoring. Attachments to the directive describe regulated areas, certification programs, treatments and techniques for detection of JB.

#### References

D-01-06: Canadian Phytosanitary Policy for Notification of Non-Compliance and Emergency Action. CFIA, Ottawa.

D-95-26: Phytosanitary requirements for soil and related matter, alone or in association with plants. CFIA, Ottawa.

D-96-20: Canadian Growing Media Program, Prior Approval Process and Import Requirements for Plants Rooted in Approved Media. CFIA, Ottawa

The following document supersedes *D-96-15* (9<sup>th</sup> revision and all preceding versions) and *D-84-19: Inspection of Balled and Burlapped Nursery Stock for Japanese Beetle Infested Areas of the USA*.

#### **Definitions, abbreviations and acronyms**

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

#### 1.0 General requirements

#### 1.1 Legislative authority

Plant Protection Act, S.C. 1990, c.22 Plant Protection Regulations, SOR/95-212 Canadian Food Inspection Agency Fees Notice, Canada Gazette, Part I (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 Import Service Centre (ISC) at <a href="http://www.inspection.gc.ca/english/imp/importe.shtml">http://www.inspection.gc.ca/english/imp/importe.shtml</a>. 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/feesfrais/feesfraise.shtml.

# 1.3 Regulated pests

Japanese beetle, Popillia japonica Newman

#### 1.4 Regulated commodities

Rooted plants and plant root systems (e.g. bulbs, tubers) with soil and/or growing media.

## 1.5 Exempt commodities

**Note:** The following commodities are exempt only from the JB requirements described in this directive. Other requirements (e.g. phytosanitary certification) may apply if specified under other directives. Contact your local CFIA office for more information or visit the CFIA website at http://www.inspection.gc.ca/english/toce.shtml.

Plants and plant root systems (all underground propagative material, e.g. roots, rhizomes, tubers, corms, bulbs), whether dormant or growing, that are substantially free from soil and/or growing media. For the purposes of this directive, plants and plant root systems are considered substantially free from soil and growing media as long as the maximum size of any individual clump present on the material is less than 12.7 mm (0.5 inches) in diameter.

Unrooted plant material.

Plants produced entirely outside of the JB flight period (see section 2.3 for details).

Houseplants (non-commercial) which have been grown indoors in a home and not set outdoors as patio plants.

Material intended for consumption.

Plants produced under the Canadian Growing Media Program (see *D-96-20:* Canadian Growing Media Program, Prior Approval Process and Import Requirements for Plants Rooted in Approved Media) must be free of all life stages of JB, but the requirements described below (e.g., additional declarations, production in certified facilities) do not apply.

#### 1.6 Regulated areas

The areas regulated under this directive are Canada, the continental U.S. and Hawaii. "U.S." used in this directive indicates the continental U.S. states and the state of Hawaii.

#### 2.0 Background

#### 2.1 Regulatory status of areas for Japanese beetle

JB is established to varying degrees in certain areas of the U.S. and Canada as determined through scientific information, surveillance and official survey results. Based on this information, JB is considered to be present and established in an area under any **one** of the following conditions:

- More than two adult JBs are detected by an official survey within the same site in a single year; **or**
- One or more adult JBs are detected by an official survey at the same trap location for two successive years; **or**
- An alternate life stage (e.g., larva) is found associated with the detection of an adult(s) within a same site or trap location.

Detection survey trapping within non-infested areas shall be conducted at a rate of one trap / 5 km<sup>2</sup> in areas suitable for JB establishment. At nursery facilities within the detection survey area, the rate should be increased to a rate of two traps per ha with a minimum of three traps per site.

States, provinces and territories are further assigned to one of four regulatory categories as follows. Phytosanitary requirements are established based on the category number of the state/province/territory of origin of the plant material and the category number of the state/province/territory of destination. These categories are harmonized between Canada and the U.S.

#### **Category 1: Pest-Free Area**

All the following conditions are met:

- JB is absent in the area based on official surveys; and
- There is risk of entry via artificial means; and
- Natural spread from an infested area is not imminent or likely; and
- Impact can only be mitigated to an acceptable level by applying certification programs or protocols for the management of JB; and
- The NPPOs of Canada and/or the U.S. have officially adopted and maintain phytosanitary measures to prevent the entry of JB.

#### **Category 2: Area of Low Pest Prevalence**

All the following conditions are met:

- JB is absent in the area based on official surveys or is only established in limited sections of the area; **and**
- JB is likely to spread into or throughout the area by artificial means; and
- Natural spread of JB from infested areas over time is not preventable; and
- JB could survive in the area; and
- Impact can only be mitigated to an acceptable level by applying certification programs or protocols for the management of JB.

#### Category 3: Partially or Generally Infested Area

All the following conditions are met:

- Infestations are sufficiently widespread that further natural spread cannot be effectively slowed; **and**
- Regulation of host commodities is not likely to be effective; and
- Commodity movement is consistent with nursery certification programs designed to minimize only the artificial movement of plant pests.

#### Category 4: Area Not Known To Be Infested

All the following conditions are met:

- Natural spread of JB is not likely to occur or JB is not likely to survive or become a pest; **and**
- No official control, survey or other regulatory action is planned in the area if/when JB is detected; **and**
- Entry of JB host commodities is consistent with nursery certification programs designed to minimize only the artificial movement of plant pests.

A list of the Japanese Beetle Regulatory Categories of areas in Canada and the U.S. and their JB infested status at the time of publication of this directive is provided in Appendix 1. For the most recent and up-to-date information, contact your local CFIA office or visit the CFIA website at: http://www.inspection.gc.ca/english/toce.shtml.

#### 2.2 Certification options

#### 2.2.1 General certification programs

This directive recognizes plant material certified for JB freedom under the Canadian Nursery Certification Program (CNCP), the Canadian Greenhouse Certification Program (CGCP), the United States Greenhouse Certification Program (USCGP) and the United States Nursery Certification Program (USNCP). Facilities operating under the CGCP or the CNCP may include a module allowing them to self-administer under the various JB programs. The JB-specific module must be integrated into the facility's CGCP Pest Management Plan or CNCP Manual and must contain the appropriate JB Management Plans

which incorporate the necessary JB program criteria. The facilities must verify implementation of the JB program criteria via internal verifications (CGCP) and internal audits (CNCP) which are documented within the CGCP and CNCP programs. The CFIA will audit JB program compliance according to the audit frequency specified under the CGCP and CNCP.

For information on the CNCP and the CGCP, please contact the CFIA's Horticulture Section. For information on the USNCP and USGCP, please contact the United States Department of Agriculture (USDA).

CGCP labels, CNCP Phytosanitary Certificates, USGCP labels and USNCP Phytosanitary Certificates are recognized in lieu of a traditional Phytosanitary Certificate.

#### 2.2.2 Certification programs specific to Japanese beetle

In addition to the general certification programs listed above, regulated material can be certified free of JB under a number of programs specific to this pest, both in the U.S. and in Canada.

The certification programs specific to Japanese beetle in Canada are:

- The Japanese Beetle Free Greenhouse/Screenhouse Program (see Appendix 2 for details);
- The Japanese Beetle Greenhouse Plant Program (Appendix 3);
- The Japanese Beetle Nursery Management Program (Appendix 4);
- The Japanese Beetle Containerized Nursery Stock Program (Appendix 5); and
- The Japanese Beetle Sod and Turfgrass Program (Appendix 6).

The current list of facilities approved under these programs can be found on the CFIA website at

http://www.inspection.gc.ca/english/plaveg/protect/dir/japbeetdire.shtml.

Certification for freedom from JB in the U.S. takes place according to the U.S. Domestic Japanese Beetle Harmonization Plan. JB programs in the U.S. include:

- The Japanese Beetle Free Greenhouse/Screenhouse Program;
- The U.S. Japanese Beetle Nursery Accreditation Program;
- The Japanese Beetle Management Strategy;
- The U.S. Japanese Beetle Containerized Nursery Stock Accreditation Program; and
- The U.S. Japanese Beetle Nursery Trapping Program.

#### 2.3 Pest-free window

As an alternative to production under a certification program, plants may be produced during the pest-free window (the period of time during which JB adults are not in flight). To qualify, the entire plant production cycle (planting, growth, harvest and shipment) must be completed outside the JB adult beetle flight period (June 15 to September 30 in Canada and June 1 to September 30 in the U.S.). The plants must be grown in JB-free commercial growing medium or field soil which has been sterilized (by steam heat to a temperature of 49°C for at least 15 minutes). The starter plants must be substantially free of soil and media or must have been produced at a certified JB-free facility.

Plants produced in a greenhouse during the pest-free window must be separated by a physical barrier from any material not certified free from JB.

#### 2.4 Treatments

Recognized JB treatments are described in Appendix 7

#### 3.0 Transit

JB-certified shipments destined for Category 1 and 2 areas may transit through Category 2, 3 and 4 areas provided that the regulated commodities are safeguarded against infestation by the use of secure tarping over the entire load or enclosed conveyances. When plant material that is ultimately destined to non-infested areas moves between two or more approved facilities in infested areas, each shipment must be accompanied by the documents needed to meet JB requirements as stated in Sections 4.1 or 4.2.

#### 4.0 Requirements

#### 4.1 Importation into Canada from the U.S.

A Permit to Import is not required under this directive. However, a Permit to Import may be required under the *Plant Protection Regulations* for commodities with additional phytosanitary requirements (if specified in other directives). More detailed information can be obtained from local CFIA offices.

There are no JB-specific requirements for material moving from a Category 1, 2, 3 or 4 state to a Category 3 or 4 province/territory.

|                    | DES   | STINATION  |
|--------------------|---|--|
| ORIGIN             | Category 1 – Pest Free Area   | Category 2 – Area of Low Pest Prevalence   |
| Category 1         | Requirements: Phytosanitary Certificate indicating the state of origin, USGCP label or USNCP certificate.   | Requirements: Phytosanitary Certificate indicating the state of origin, USGCP label or USNCP certificate.  |
| Categories 2, 3, 4 | <ul> <li>Prohibitions:</li> <li>Sod is not permitted.</li> <li>Balled and burlapped, potted and/or containerized plants which have been treated by dipping or drenching using an approved pesticide for the eradication of JB will not be allowed if the rootballs are over 30 cm (12 inches) in diameter.</li> <li>Plant material from the U.S. Japanese Beetle Containerized Nursery Stock Accreditation Program, the U.S. Japanese Beetle Nursery Accreditation Program or the Japanese Beetle Management</li> </ul> | Prohibitions:  • Balled and burlapped, potted and/or containerized plants which have been treated by dipping or drenching using an approved pesticide for the eradication of JB will not be allowed if the rootballs are over 81 cm (32 inches) in diameter.  Requirements:  • Plants must be:  • Produced in an approved JB-free greenhouse/screenhouse; or  • Certified in accordance with the U.S. Japanese Beetle Nursery Accreditation  |
|                    | Requirements:  Plants must be: Produced in an approved JB-free greenhouse/screenhouse; or Treated for JB in accordance with the U.S. Domestic Japanese Beetle Harmonization Plan; or Produced outside the JB flight season; or Produced in a JB-free area. The shipment must be authorized by the CFIA and may be inspected by a CFIA inspector before being released. The plants must be accompanied by: A USGCP label; or   | Program soil sampling (or Japanese Beetle Management Strategy) protocol; or  Certified in accordance with the U.S. Japanese Beetle Containerized Nursery Stock Accreditation Program; or  Treated for JB in accordance with the U.S. Domestic Japanese Beetle Harmonization Plan; or  Produced outside the JB flight season; or  Produced in a JB-free area.  The shipment must be authorized by the CFIA and may be inspected by a CFIA inspector before being released.  The plants must be accompanied by:  A USGCP label; or  A USNCP certificate; or  A Phytosanitary Certificate listing the following additional declaration: |

| <ul> <li>A USNCP certificate; or</li> <li>A Phytosanitary Certificate listing<br/>the following additional<br/>declaration:</li> </ul> | The plant material meets the Japanese beetle requirements of Canada for Category 2 areas as described in directive D-96-15. |
|--|---|
| The plant material meets the Japanese beetle requirements of Canada for Category 1 areas as described in directive D-96-15.            |   |

# 4.2 Export to the U.S. and domestic movement within Canada

Shipments of regulated commodities require phytosanitary certification for export and must comply with the importing country's phytosanitary import requirements, including the U.S. Domestic Japanese Beetle Harmonization Plan.

There are no JB-specific requirements for material moving from a Category 1, 2, 3 or 4 province/territory to a Category 3 or 4 state/province/territory.

|                    | DES   | STINATION   |
|--------------------|---|---|
| ORIGIN             | Category 1- Pest Free Area  | Category 2- Area of Low Pest Prevalence   |
| Category 1         | Requirements:   | Requirements:   |
|                    | Domestic movement:  | Domestic movement:  |
|                    | No JB requirements.   | No JB requirements.   |
|                    | Export to U.S.:   | Export to U.S.:   |
|                    | Phytosanitary Certificate indicating the province/territory of origin, CGCP label or CNCP certificate.  | Phytosanitary Certificate indicating the province/territory of origin, CGCP label or CNCP certificate.  |
| Categories 2, 3, 4 | Prohibitions:   | Prohibitions:   |
|                    | <ul> <li>Sod is not permitted.</li> <li>Balled and burlapped, potted and/or containerized plants which have been treated by dipping or drenching using an approved pesticide for the eradication of JB will not be allowed if the rootballs are over 30 cm (12</li> </ul> | • Balled and burlapped, potted and/or containerized plants which have been treated by dipping or drenching using an approved pesticide for the eradication of JB will not be allowed if the rootballs are over 81 cm (32 inches) in diameter. |
|                    | inches) in diameter.  | Requirements:   |
|                    | • Plant material from the JB<br>Containerized Nursery Stock and the<br>JB Nursery Management programs<br>is not permitted.  | <ul> <li>Plants must be:         <ul> <li>Treated as per the recognized treatments described in Appendix 7; or</li> </ul> </li> </ul>   |

#### **Requirements:**

- Plants must be:
  - Treated as per the recognized treatments described in Appendix
    7: or
  - Produced outside the JB flight season; or
  - o Produced in a JB-free area; or
  - o Produced in compliance with:
    - The JB Free Greenhouse/Screenhouse Program; or
    - The JB Greenhouse Plant Program.
- The shipment must be inspected at origin by persons authorized by the CFIA.

#### Domestic movement:

A Movement Certificate listing the following movement condition is required:

The plant material meets the Japanese beetle requirements of Canada for Category 1 areas as described in directive D-96-15.

#### Export to U.S.:

- The plants must be accompanied by:
  - o A CGCP label; or
  - A CNCP certificate; or
  - A Phytosanitary Certificate listing the following additional declaration:

The plant material meets the Japanese beetle Category 1 area requirements of the United States.

- o Produced outside the JB flight season; or
- o Produced in a JB-free area; or
- o Produced in compliance with:
  - The JB Free Greenhouse/Screenhouse Program; or
  - The JB Greenhouse Plant Program; or
  - The JB Nursery Management Program;
     or
  - The JB Containerized Nursery Stock Program; or
  - The JB Sod and Turfgrass Program.
- The shipment must be inspected at origin by persons authorized by the CFIA.

#### Domestic movement:

A Movement Certificate listing the following movement condition is required:

The plant material meets the Japanese beetle requirements of Canada for Category 2 areas as described in directive D-96-15.

## Export to U.S.:

- The plants must be accompanied by:
  - ∘ A CGCP label; or
  - A CNCP certificate; or
  - A Phytosanitary Certificate listing the following additional declaration:

The plant material meets the Japanese beetle Category 2 area requirements of the United States.

# 5.0 Inspection procedures for CFIA staff

See Appendix 9.

#### 6.0 Non-compliance

Imported shipments which do not meet requirements may be refused entry, returned to origin, or disposed of at the importer's expense. Canada will provide notification to the NPPO of the exporting country when a shipment of regulated articles has not complied with Canadian import requirements as per policy directive *D-01-06*: Canadian Phytosanitary Policy for Notification of Non-Compliance and Emergency Action.

Domestic shipments not in compliance with these requirements may be subject to regulatory actions at the owner's expense, such as detention, movement to a specified place, return to origin, treatment or disposal.

Facilities participating in the Japanese Beetle Free Greenhouse/Screenhouse Program, Japanese Beetle Greenhouse Plant Program, Japanese Beetle Nursery Management Program, Japanese Beetle Sod and Turfgrass Program or the Japanese Beetle Containerized Nursery Stock Program shall be audit-inspected for compliance with JB program criteria and notified in writing by a CFIA Program Officer concerning any non-compliances.

# 7.0 Appendices

Appendix 1: The regulatory status of areas in Canada and the United States

Appendix 2: Japanese Beetle Free Greenhouse/Screenhouse Program

Appendix 3: Japanese Beetle Greenhouse Plant Program

Appendix 4: Japanese Beetle Nursery Management Program

Appendix 5: Japanese Beetle Containerized Nursery Stock Program

Appendix 6: Japanese Beetle Sod and Turfgrass Program

Appendix 7: Recognized Japanese beetle treatments

Appendix 8: Application for approval under Japanese Beetle programs

Appendix 9: CFIA inspection procedures

Appendix 10: Facilities Approved for the Japanese Beetle Program

# THE REGULATORY STATUS OF AREAS IN CANADA AND THE UNITED STATES

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

#### JAPANESE BEETLE FREE GREENHOUSE/SCREENHOUSE PROGRAM

#### **Purpose:**

To provide for the production of Japanese beetle (JB) free, screened greenhouse/ screenhouse grown nursery stock within an area infested with JB, including grasses and sedges which are excluded from the Japanese Beetle Containerized Nursery Stock Production Program.

**Note:** Grasses include all genera and species in the family *Poaceae* (*Gramineae*). Sedges include all genera and species in the family *Cyperaceae*.

#### Criteria:

- 1. The facility develops and implements a Japanese Beetle Management Plan (JBMP) which ensures that the criteria listed below are incorporated into their operation and will be achieved. The management plan must include a map illustrating the layout of the facility. The facility must keep their JBMP and documentation up to date and must inform the local CFIA office of any changes to their operations with respect to the program. All JBMP criteria activities must be documented.
- 2. Soil, humus, compost, manure or other growing media introduced into the screened greenhouse/screenhouse must have been sterilized (by steam heat to a temperature of 49°C for at least 15 minutes) prior to entry. Commercially processed or prepared soil free growing materials are exempted from sterilization.
- 3. The cuttings, crowns or rooted plants must be substantially free of soil or growing media before planting. Plant material from JB free areas, or approved under the Japanese Beetle Free Greenhouse/Screenhouse Program or the Japanese Beetle Greenhouse Plant Program, is permitted with soil or growing media.
- 4. The plants must be maintained within the screened greenhouse/screenhouse at all times during the adult flight period.
- 5. The screened greenhouse/screenhouse must be tightly constructed so that adult JBs cannot gain entry. Ventilation and other openings shall be screened or otherwise covered to prevent entry. A double door entry system shall be installed. Excelsior pads and other materials used in the cooling ducts must be maintained in good condition. These requirements will be applied during the JB adult flight period (June 15 to September 30).
- 6. No material potentially infested with JB shall be allowed into the approved screened greenhouse/screenhouse at any time.
- 7. The plants and their growing medium must be stored, packed and shipped in a manner that prevents possible infestation while at the facility.

- 8. Certified screened greenhouse/screenhouse nursery stock may not be transported into or through any JB infested areas unless identity is preserved and adequate safeguards are applied to prevent possible infestation.
- 9. The screened greenhouse/screenhouse, stock and records will be audit-inspected at least once during the JB adult flight period by a CFIA inspector or persons authorized by the CFIA and must be specifically approved as JB secure and compliant facilities. Pots with rooted plants may be examined.
- 10. The facility must regularly monitor the plants and interior of the screened greenhouse/screenhouse for the presence of JB and immediately notify the CFIA of any detections.

#### **Administrative Procedures:**

Each screened greenhouse/screenhouse operation must submit annually by April 01 a completed application form (see Appendix 8) to the CFIA. The facility must be inspected, staff interviewed and documentation reviewed by persons authorized by the CFIA prior to June 15. The facility application must be approved by a Program Officer of the CFIA as having met and maintained the requirements described in the criteria above. This approval shall be valid until the annual expiry date of June 15 of the following year. Records associated with this program must be kept for five years and made available to the CFIA upon request.

#### JAPANESE BEETLE GREENHOUSE PLANT PROGRAM

#### **Purpose:**

To provide for the production of Japanese beetle (JB) free greenhouse plants within an area infested with JB. Greenhouse plants and environments are viewed as low risk for JB infestation. Greenhouse plants are species commonly known and recognized as indoor foliage, flowering plants and plants categorized as bedding plants for planting either indoors or outdoors. The following groupings comprise the majority of greenhouse grown plants: bedding plants, cacti, flowering house plants, foliage house plants, orchids, potted bulb plants and succulents.

**Note:** Grasses (*Gramineae* or *Poaceae*) and sedges (*Cyperaceae*), preferred hosts of JB, are not admissible for certification under this program and may not be present within the certified greenhouse. These plants may instead be grown under the JB Free Greenhouse/Screenhouse Program (see Appendix 2). *Exemption:* Grasses and sedges may be present within facilities exclusively for use as banker plants (open rearing systems for biological control agents).

#### Criteria:

- 1. The facility develops and implements a Japanese Beetle Management Plan (JBMP) which ensures that the criteria listed below are incorporated into their operation and will be achieved. The management plan must include a map illustrating the layout of the facility. The facility must keep their JBMP and documentation up to date and must inform the local CFIA office of any changes to their operations with respect to the program. All JBMP criteria activities must be documented.
- 2. Soil, humus, compost, manure or other growing media introduced into the greenhouse/screenhouse must have been sterilized (by steam heat to a temperature of 49°C for at least 15 minutes) prior to entry. Commercially processed or prepared soil free growing materials are exempted from sterilization.
- 3. The cuttings, crowns or rooted plants must be substantially free of soil or growing media before planting. Plant material from JB free areas, or approved under the Japanese Beetle Free Greenhouse/Screenhouse Program or the Japanese Beetle Greenhouse Plant Program, is permitted with soil or growing media.
- 4. The plants must be maintained within the greenhouse at all times.
- 5. When banker plants are used, they shall be employed as per Best Management Practices as described in provincial production guides.
- 6. No material potentially infested with JB shall be allowed into the approved greenhouse at any time.
- 7. The greenhouse shall be maintained within a minimum 3.0 metre vegetation free border around the structure which serves as a ground barrier against JB. If the greenhouse has screened sidewall vents to prevent JB entry or no side wall vents, a

- 1.0 metre vegetation free border is allowed along those walls. These borders shall be maintained from May 15 until October 31.
- 8. The plants and their growing medium must be stored, packed and shipped in a manner that prevents possible infestation while at the facility.
- 9. Certified greenhouse plants may not be transported into or through any JB infested areas unless identity is preserved and adequate safeguards are applied to prevent possible infestation.
- 10. The greenhouse, stock and records will be audit-inspected at least once during the JB adult flight period by a CFIA inspector or persons authorized by the CFIA and must be specifically approved as in compliance. Root systems of potted plants may be examined.
- 11. The facility must regularly monitor the plants and interior of the greenhouse for the presence of JB and immediately notify the CFIA of any detections.

#### **Administrative Procedures:**

Each greenhouse operation must submit annually by April 01, a completed application form (see Appendix 8) to the CFIA. The facility must be inspected, staff interviewed and documentation reviewed by persons authorized by the CFIA prior to June 15. The facility application must be approved by a Program Officer of the CFIA as having met and maintained the requirements described in the criteria above. This approval shall be valid until the annual expiry date of June 15 of the following year. Records associated with this program must be kept for five years and made available to the CFIA upon request.

#### JAPANESE BEETLE NURSERY MANAGEMENT PROGRAM

#### **Purpose:**

To provide for the production of Japanese beetle (JB) free nursery stock grown at nursery sites or individual nursery fields located within a JB infested area.

**Note:** Grasses (*Gramineae* or *Poaceae*) and sedges (*Cyperaceae*), preferred hosts of JB, are not admissible for certification under this program and may not be present within the certified area. These plants may instead be grown under the JB Free Greenhouse/Screenhouse Program (see Appendix 2).

#### Criteria:

- 1. The facility develops and implements a Japanese Beetle Management Plan (JBMP) which ensures that the criteria listed below are incorporated into their operation and will be achieved. The management plan must include a map illustrating the layout of the facility. The facility must keep their JBMP and documentation up to date and must inform the local CFIA office of any changes to their operations with respect to the program. All JBMP criteria activities must be documented.
- 2. A Critical Zone free of vegetation must be established before weeds begin to grow and maintained throughout the adult flight period within the plant rows to a width of at least 30 cm wider on all sides than the largest anticipated soil ball to be taken when harvesting plants.
- 3. Treatment practices may be incorporated in the JBMP to ensure that the risk of introducing JB into nursery fields is minimized. These could include but are not limited to:
  - Bio-control methods (i.e., microbial products and parasitic nematodes);
  - Adult treatments (in combination with adult trapping);
  - Larval treatments:
  - · Weed control; and
  - Pest monitoring.
- 4. The facility, stock and records will be audit-inspected at least once during the JB adult flight period by a CFIA inspector or persons authorized by the CFIA and must be specifically approved as in compliance.

If and only if Criteria 1, 2, 3 and 4 are complied with, proceed to 5, 6 and 7.

5. Freedom from JB larvae must be based on soil surveys conducted at the appropriate rate for individual fields (see table below). A field will be removed from the program if one JB larva is present in the samples collected. Sampling takes place separately from the audit-inspection visit and is conducted between September and May. Sampling is to be conducted under the supervision of persons authorized by the CFIA.

- 6. The plants and their growing medium must be stored, packed and shipped in a manner that prevents possible infestation while at the facility. This includes balled and burlapped stock, wire baskets and field potted plant material placed in holding yards (see criteria for holding yards below). The maximum time for which the plants can remain in a holding yard is 14 days. If plants are held in a yard for longer than 14 days, the yard must be certified under the JB Containerized Nursery Stock Program (see Appendix 5).
- 7. Certified nursery stock may not be transported into or through any JB infested areas unless identity is preserved and adequate safeguards are applied to prevent possible infestation.

# SOIL SAMPLING RATES FOR THE JAPANESE BEETLE NURSERY MANAGEMENT PROGRAM

| Deter                                   | mining Numbers of Soil Samples                           | to Collect   |
|---|--|--|
| Block/Field Size in<br>Hectares (Acres) | Cup Cutter Method  | Spade Method   |
| 0.0404 - 0.404 (0.1 - 1.0)              | 50   | 20   |
| 0.444 - 2.02 (1.1 - 5.0)                | 70   | 30   |
| 2.06 - 4.04 (5.1 - 10.0)                | 80   | 35   |
| 4.08 - 10.1 (10.1 - 25.0)               | 90   | 40   |
| 10.14 - 20.2 (25.1 - 50.0)              | 125  | 50   |
| > 20.2 (50.0)                           | 125 plus 2 samples for each additional 4.04 ha(10 acres) | 50 plus 1 sample for each additional 4.04 ha(10 acres) |

#### **Criteria for holding yards:**

- a. Plant material shall be maintained year round within a minimum 3.0 metre vegetation free border around the container growing area and on material which serves as a ground barrier against JB (e.g., gravel, plastic, hard-packed clay, landscape cloth, etc.).
- b. Certified lots shall be identified and segregated in a manner satisfactory to a person authorized by the CFIA.
- c. All plant material shall be maintained free of weeds year round.

#### **Administrative Procedures:**

Each nursery operation must submit annually by April 01 a completed application form (see Appendix 8) to the CFIA. The facility must be inspected, staff interviewed and documentation reviewed by persons authorized by the CFIA prior to June 15. The facility application must be approved by a Program Officer of the CFIA as having met and maintained the requirements described in the criteria. This approval shall be valid until the annual expiry date of June 15 of the following year. Documents, sampling records and maps shall be maintained and made available to the CFIA upon request. Records associated with this program must be kept for five years.

#### JAPANESE BEETLE CONTAINERIZED NURSERY STOCK PROGRAM

#### **Purpose:**

To provide for the production of Japanese beetle (JB) free containerized nursery stock grown in JB infested areas. Containerized plant areas can be outdoor yards, pot-in-pot installations, opened hoop-houses and polyhouses.

**Note:** Grasses (*Gramineae* or *Poaceae*) and sedges (*Cyperaceae*), preferred hosts of JB, are not admissible for certification under this program and may not be present within the certified area. These plants may instead be grown under the JB Free Greenhouse/Screenhouse Program (see Appendix 2).

#### Criteria:

- 1. The facility develops and implements a Japanese Beetle Management Plan (JBMP) which ensures that the criteria listed below are incorporated into their operation and will be achieved. The management plan must include a map illustrating the layout of the facility. The facility must keep their JBMP and documentation up to date and must inform the local CFIA office of any changes to their operations with respect to the program. All JBMP criteria activities must documented.
- 2. Unapproved soil or growing media shall not be introduced into the facility. Plant material brought into the facility must be transplanted to remove all unapproved soil and media. Soil or media from JB free areas, or certified under the Japanese Beetle Free Greenhouse/Screenhouse Program, the Japanese Beetle Greenhouse Plant Program, the Japanese Beetle Containerized Nursery Stock Program, or the Japanese Beetle Nursery Management Program, is approved. Plant material produced under these programs or originating from JB free areas is exempt from the requirement to transplant. For transplanting, commercially processed or prepared soil free growing materials are approved. Field soil and other growing media are approved if sterilized by steam heat to a temperature of 49°C for at least 15 minutes.
- 3. Potted plants shall be maintained year round within a minimum 3.0 metre vegetation free border around the container growing area and on material which serves as a ground barrier against JB (e.g., gravel, plastic, hard-packed clay, landscape cloth, etc.).
- 4. Certified lots shall be identified and segregated in a manner satisfactory to a person authorized by the CFIA.
- 5. All containers shall be maintained free of weeds year round.
- 6. The plants and their growing medium must be stored, packed and shipped in a manner that prevents possible infestation while at the facility.
- 7. Certified nursery stock may not be transported into or through any JB infested areas unless identity is preserved and adequate safeguards are applied to prevent possible infestation.

8. The facility, stock and records will be audit-inspected at least twice during the JB adult flight period by a CFIA inspector or persons authorized by the CFIA and must be specifically approved as in compliance. Examination of rootballs is not required.

#### **Administrative Procedures:**

Each nursery operation must submit annually by April 01 a completed application form (see Appendix 8) to the CFIA. The facility must be inspected, staff interviewed and documentation reviewed by persons authorized by the CFIA prior to June 15. The facility application must be approved by a Program Officer of the CFIA as having met and maintained the requirements described in the criteria. This approval shall be valid until the annual expiry date of June 15 of the following year. Records associated with this program must be kept for five years and made available to the CFIA upon request.

#### JAPANESE BEETLE SOD AND TURFGRASS PROGRAM

#### **Purpose:**

To certify commercial turfgrass and sod farms located within a Japanese beetle (JB) infested area as being free from JB. Sod produced under this program may be shipped to uninfested Category 2 areas.

#### Criteria:

1. The facility must comply with **one** of the following two options. A facility may be composed of several production sites. Sites will be considered as separate if at least 250 metres apart.

Option 1: Production within an established Japanese Beetle Free Production Site

The facility develops and implements a Japanese Beetle Monitoring Plan which ensures that the criteria listed below are incorporated into their operation and will be achieved. The monitoring plan must include a map illustrating the layout of the facility. The facility must keep their plan and documentation up to date and must inform the local CFIA office of any changes to their operations with respect to the program. All plan criteria activities must be documented.

The facility shall annually survey all sod production sites at a rate of 1 trap per 5 hectares (13 acres). There shall be a minimum of 3 traps per site regardless of the size of the site. The traps shall be placed around the perimeter of each site. CFIA approved traps shall be baited with a lure consisting of an attractant and a pheromone. Traps shall be purchased, placed, monitored weekly and renewed by the facility at regular intervals. This trapping must be conducted annually during the adult flight period.

If no beetles are captured at that site, the site meets the criterion for shipping sod to pest free Category 2 areas. If one or two beetles are captured in total for that site, the sod farm may maintain its JB free status provided that in the judgement of the CFIA the detection does not represent an established population of JB. If more than two beetles are captured in total from all traps, the sod production site is considered to be infested with JB. This infested site can be certified under Option 2 (see below).

Detailed maps and trapping records must be maintained and made available to the CFIA upon request. All captured beetles must be presented to the CFIA. An infested site will retain its infested status until two consecutive years of negative trap surveys are completed.

## OR

#### Option 2: Production at an infested site

The facility develops and implements a Japanese Beetle Management Plan (JBMP) which ensures that the practices listed below are incorporated into their operation and will be achieved. The management plan must include a map illustrating the layout of the facility. The facility must keep their JBMP and documentation up to date and must inform the local CFIA office of any changes to their operations with respect to the program. All JBMP activities must be documented.

Practices which must be incorporated in a JBMP include:

- a) Larval treatments: Sod must be treated with a Pest Management Regulatory Agency (PMRA) registered pest control product which is recognized as an effective treatment against JB grubs. Preventative treatments must be applied during the early instars of the larvae, usually in July and August. Curative treatments may be applied against later instars. Consult PMRA for the appropriate window of efficacy of the registered product selected.
- b) Adult treatments: Application of a JB adulticide program with a PMRA registered pest control product which is recognized as an effective treatment against JB adults. This treatment program must also be maintained on the sod farm periphery where adults are observed to be feeding. Large trees may be exempt as these may be difficult to spray.
- c) The facility should remove plant species upon which JB adults feed from the immediate growing area (where practical; adjacent properties are exempt).

Additional practices which could be incorporated include but are not limited to:

- i) Bio-control methods (i.e., microbial products and parasitic nematodes)
- ii) Pest monitoring
- 2. The facility, fields and records shall be audit-inspected at least once in the later half of the JB adult flight period for compliance by a CFIA inspector or persons authorized by the CFIA and must be specifically approved as in compliance.

If and only if criteria 1 and 2 are complied with, proceed to 3, 4 and 5.

- 3. Freedom from JB larvae is confirmed by inspection at the time of harvest (sod cutting). Inspection must be conducted by persons authorized by the CFIA.
- 4. The sod and turfgrass must be stored, packed and shipped in a manner that prevents possible infestation while at the facility.
- 5. Certified sod and turfgrass may not be transported into or through any JB infested areas unless identity is preserved and adequate safeguards are applied to prevent possible infestation.

# Instructions to CFIA staff regarding inspection to certify freedom from JB larvae at time of harvest (sod cutting)

CFIA inspectors or persons authorized by the CFIA may choose one of the two following inspection options:

a) Product Inspection of each harvested shipment after it has been cut and stacked on pallets. The inspection shall include some destructive examination of 30 cm section samples of the cut sod.

#### OR

b) Field Inspection of the crop. In each section to be harvested, the inspector will follow the sod cutter as it completes a pattern within the section of the field and inspect for JB larva. The inspector may require additional cuts in areas exhibiting symptoms of JB infestation or areas of preferred JB habitat.

If a JB larva is detected during inspection options a or b, then that field is excluded from the Japanese Beetle Sod and Turfgrass Program.

#### **Administrative Procedures:**

Each facility must submit annually by April 01 a completed application form (see Appendix 8) to the CFIA. The facility must be inspected, staff interviewed and documentation reviewed by persons authorized by the CFIA prior to June 15. The facility application must be approved by a Program Officer of the CFIA as having met and maintained the requirements described in the criteria above. This approval shall be valid until the annual expiry date of June 15 of the following year. Documents, sampling records and maps shall be maintained and made available to the CFIA upon request. Records associated with this program must be kept for five years.

#### RECOGNIZED JAPANESE BEETLE TREATMENTS

The CFIA recognizes Japanese beetle (JB) treatments when applied in the U.S. as described in the U.S. Domestic Japanese Beetle Harmonization Plan. The U.S. Plan can be found on the National Plant Board website at: http://nationalplantboard.org/docs/jbcolumn.pdf.

In Canada, contact your local CFIA office prior to the application of any treatment for JB.

Records associated with JB treatments must be kept for five years and made available to the CFIA upon request.

#### Treatment of plant material for all life stages of JB:

Plant material which has not been certified under one of the JB certification programs may be treated to control this pest. New treatments for plant material may be accepted once phytosanitary officials from Canada or the U.S. is satisfied that the treatment will effectively control JB. In Canada, plant material may only be treated with Pest Management Regulatory Agency (PMRA) registered pest control products which are recognized as effective regulatory treatments against JB.

# Treatment of plant material for larval stages of JB only:

If plants with soil and growing media are treated, they must be treated with a PMRA-registered pest control product which is recognized as an effective treatment against JB larvae.

Balled and burlapped, as well as potted plant materials may be eligible for shipment from JB infested areas if the material is treated as described by the label directions on PMRA-registered products.

Some active ingredients (such as imidacloprid) are preventative and are only effective against the first and second larval stages of JB. Imidacloprid is recognized as providing 16 weeks of control. Imidacloprid may only be applied up to July 31<sup>st</sup> in Canada (cut-off date); after this date, JB enters its third larval stage, against which imidacloprid is not considered effective.

Other active ingredients (such as chlorpyrifos) are approved for eradication and are effective against all larval stages. There is therefore no cut-off date for use of these products.

Upon application of the treatment, the plants are to be drained and must be held for a period of not less than three days. During the adult flight period, the plants must be protected against subsequent re-infestation and may require re-treatment if not shipped within the label coverage period.

#### Note:

# Chlorpyrifos:

Balled and burlapped, as well as potted plant material treated by dipping or drenching with chlorpyrifos is not eligible for entry into Category 1 areas of Canada and the U.S. if the rootball or pot is larger than 30 cm (12 inches) in diameter, or into Category 2 areas if the rootball or pot is larger than 81 cm (32 inches).

# *Imidacloprid:*

Potted plant material treated by drenching with imidacloprid is not eligible for entry into Category 1 and 2 areas of Canada and the U.S. if the pots are over 30 cm (12 inches) in diameter.

#### APPLICATION FOR APPROVAL UNDER JAPANESE BEETLE PROGRAMS

| Name of facility:       |  |        |         |         |
|-------------------------|--|--------|---------|---------|
| Address:                |  |        |         |         |
| Telephone number:       |  |        |         |         |
| Fax number:             | E-   | -mail: |         |         |
|                         | se Beetle Pest Management Progor each) whether this is your init | •      | •       |         |
| Japanese Beetle Pest M  | lanagement Program   |        | Initial | Renewal |
| Japanese Beetle Free G  | Freenhouse/Screenhouse Progr                                     | ram    |         |         |
| Japanese Beetle Green   | house Plant Program  |        |         |         |
| Japanese Beetle Nurse   | ry Management Program  |        |         |         |
| Japanese Beetle Contain | inerized Nursery Stock Progra                                    | am     |         |         |
| Japanese Beetle Sod an  | d Turfgrass Program  |        |         |         |

**Note:** Facilities operating under the Canadian Greenhouse Certification Program or the Canadian Nursery Certification Program must submit initial applications to CFIA, although renewal applications will be completed and retained in the facility records by April 01 of each year.

#### **Criteria for Participation in the Japanese beetle program(s) selected above:**

- 1. This application must be received annually by the Canadian Food Inspection Agency (CFIA) by **April 01**.
- 2. The facility agrees to comply with the program criteria for the selected Japanese Beetle Program(s) as described in directive D-96-15. Any documents, records (including sampling records) and maps associated with the regulated commodities produced under the program(s) must be kept at the approved facility for **five years**. All records must be made available to the CFIA upon request.
- 3. The facility, production areas, stock and records will be audit-inspected by a CFIA inspector or persons authorized by the CFIA and must be specifically approved as compliant. The facility agrees to cooperate and assist with these audit-inspections.
- 4. The facility agrees to immediately suspend shipment of regulated commodities if notified by the CFIA that the approved facility is in non-compliance.

| I, the owner/operator in portion of the facility carrying on business as understood and agree to comply with all the terms, conditions, or requirements stated in directive D-96-15 by which I may product accordance with program criteria until the date of expiry | have read, obligations and ce plant material in /  (name of owner/operator) day of, |
|--|---|
| has executed the program criteria outlined in D-96-15, this 20 in the city/county/municipality of  | _ day of,   |
| has executed the program criteria outlined in D-96-15, this 20 in the city/county/municipality of  | _ day of,   |
| 20 in the city/county/municipality of  | in the province of  |
|  |   |
| CFIA use only  In witness to the inspections referred to in section 4 of this a verify that the criteria of the application have been met.   | pplication, I hereby  |
| Signature  |   |
| Inspector, CFIA Date   | _   |
| I hereby approve the above-mentioned establishment for pa  | rticipation in the  |
| Japanese Beetle Free Greenhouse/Screenhouse Program Japanese Beetle Greenhouse Plant Program Japanese Beetle Nursery Management Program Japanese Beetle Containerized Nursery Stock Program Japanese Beetle Sod and Turfgrass Program                                |   |
| Japanese Beetle Free Greenhouse/Screenhouse Program Japanese Beetle Greenhouse Plant Program Japanese Beetle Nursery Management Program Japanese Beetle Containerized Nursery Stock Program  | _   |

#### **CFIA INSPECTION PROCEDURES**

#### 1. Document Verification

For domestic shipments, a Movement Certificate with the necessary additional conditions of movement must be available to an inspector authorized by the CFIA upon delivery of the shipment at destination.

For imports, a Permit to Import if required and a Phytosanitary Certificate containing any necessary additional declarations must be verified by the CFIA prior to release of the shipment to the importer.

For export shipments, a Phytosanitary Certificate will be issued in accordance with the U.S. plant quarantine import requirements. Appropriate declarations will be included. Shipments certified under the Canadian Nursery Certification Program (CNCP) or the Canadian Greenhouse Certification Program (CGCP) will be documented as described within those programs.

#### 2. Product Examination

All import, export and domestic shipments requiring inspection may be inspected by a CFIA inspector or persons authorized by the CFIA at facilities authorized by the CFIA. Samples may be taken and submitted to a CFIA approved laboratory in order to determine the pest status of the shipment.

#### 3. Certification Programs

Plant material may be certified under the CNCP or the CGCP, if these programs include a module incorporating the necessary Japanese beetle (JB) program elements. Certified facilities are responsible for conducting the required activities and audits at the prescribed times. For information on the CNCP and CGCP, please contact CFIA's Horticulture Section.

#### 4. Audit-Inspections

The Japanese Beetle Free Greenhouse/Screenhouse Program (Appendix 2), the Japanese Beetle Greenhouse Plant Program (Appendix 3), the Japanese Beetle Nursery Management Program (Appendix 4), the Japanese Beetle Containerized Nursery Stock Program (Appendix 5) and the Japanese Beetle Sod and Turfgrass Program (Appendix 6) shall be audit-inspected for compliance by the CFIA or by persons authorized by the CFIA. As described in these JB programs, one approval audit-inspection will occur prior to June 15 and at least one other during the JB

adult flight period, in addition to sampling (for the Nursery Management Program) or harvest inspection (Sod Program). Regular reports of these activities shall be prepared by CFIA auditors or persons authorized by the CFIA. Program officers shall forward any changes in approved status to Ottawa in order to update the list of approved facilities.

# FACILITIES APPROVED FOR THE JAPANESE BEETLE PROGRAM

http://www.inspection.gc.ca/english/plaveg/protect/dir/japbeetdire.shtml