



CANADIAN FOOD INSPECTION AGENCY 59 Camelot Drive Ottawa, Ontario K1A 0Y9 (Tel: 225-2342; FAX: 613-773-7204)	D-98-02
	(EFFECTIVE DATE) May 18, 2011 (2nd Revision)
TITLE: Importation into Canada and Movement within Canada, of plants and plant parts of <i>Pinus</i> spp. to prevent the entry and spread of Scleroderris Canker, <i>Gremmeniella abietina</i> (Lagerb.) Morelet, variety <i>abietina</i> (European Race)	

SUBJECT:

This directive contains the requirements governing the importation and domestic movement of plants and plant parts of *Pinus* spp.

Note: Import and domestic requirements for *Abies* spp., *Larix* spp., *Picea* spp., *Pseudotsuga* spp., as they relate to the entry and spread of scleroderris canker have been removed. The importation of *Abies* spp. from Japan is prohibited due to the Asian race of scleroderris canker.

In addition to meeting the requirements outlined in this directive, regulated commodities must also meet all other existing Canadian phytosanitary import requirements for any other pests regulated by Canada.

This directive has been revised to update the review date, as well as minor administrative changes. Domestic Movement and Import Requirements have been divided in section 2.0. Information on Inspection requirements and non-compliances have been updated and can now be found in section 3.0 and 4.0 respectively.

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Review

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

Endorsement

Approved by:

Chief Plant Health Officer

Amendment Record

Amendments of 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

Various subspecies and races of scleroderris canker, (*Gremmeniella abietina* (Lagerb.) Morelet), incite seedling blight, branch dieback and stem canker on conifers throughout much of the north temperate zone. In North America two races of *Gremmeniella abietina* var. *abietina* affect pine. The North American race of scleroderris canker was first identified as a serious disease of pines in the mid-1950s. This race affects only pines less than 2 metres high and appears to be more severe in areas where snow cover and below freezing temperatures occur for relatively long periods.

In the mid 1970's, a new race of *G. abietina* var. *abietina* (now referred to as the European race) was discovered killing mature red pines and Scots pines in the Adirondack Mountain region of New York State. This race has since been found in Ontario, Quebec, New Brunswick, and Newfoundland. Unlike the North American strain, the disease caused by the European race of *G. abietina* var. *abietina* causes economic damage on mature pines and is thought to pose a significant risk to pine forests throughout North America.

To prevent the spread of the European race, import restrictions were applied in 1977 on the importation of plants and plant parts, excluding seed, of all species of *Larix*, *Picea*, *Pinus* and *Pseudotsuga* from all countries into Canada. Since then, research has indicated that the European race spread has been through the movement of infected pine nursery stock. Due to this evidence, it was decided to deregulate scleroderris canker, *Gremmeniella abietina* (Lagerb.) Morelet, variety *abietina* (European race) except for one genus, *Pinus* spp. More specifically, regulations are being maintained on pine nursery stock to prevent further movement of this pest. However, Christmas trees, seeds, logs, lumber and processed wood products of all coniferous species are not considered to be a pathway for the introduction or spread of the European race and are not regulated for this pest.

Scope: This directive is intended for use by importers, nursery stock producers, the Canada Border Services Agency, the Canadian Food Inspection Agency (CFIA), other government departments and the public

This directive supercedes D-98-02 (1st revision).

Reference

CFIA Directive D-08-04, Plant Protection Import Requirements for Plants and Plant Parts for Planting: Preventing the Entry and Spread of Regulated Plant Pests Associated with the Plants for Planting Pathway.

CFIA Directive D-01-06, Canadian phytosanitary policy for the notification of non-compliance and emergency action.

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

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 <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/feesfraiss/feesfraise.shtml>.

1.3 Regulated Pests

Scleroderris canker, *Gremmeniella abietina* (Lagerb.) Morelet, var. *abietina*, European race

1.4 Regulated Commodities

Living plants of *Pinus* sp. including nursery stock and forest tree seedlings.

Pines originating from other countries are regulated under the directive D-08-04.

1.5 Commodities Exempt

The following commodities are exempt from the Continental U.S. and Movement within Canada:

Wood/bark chips, cones, seeds, logs, lumber, cut Christmas trees (including branches and other non-propagative parts) of all species including *Pinus*.

1.6 Regulated Areas

All areas within Canada and the continental United States (U.S.) where the European race of scleroderris canker is known to occur. See Appendix 1.

Infested sites are to be determined on the basis of national, provincial or state surveys. A buffer zone of 1 km will be applied around all positive findings. An infested site will be defined as any area where a positive identification of *Gremmeniella abietina* var. *abietina*. This application of a buffer zone takes into account the latent period of the fungus, and the potential for discovery of previously undetected symptoms.

2.0 Phytosanitary Requirements

2.1 Domestic Movement requirements

2.1.1 Propagative Material from Regulated Areas of Canada

For movement of all regulated material originating within areas listed in Appendix 1 where the European race of *Gremmeniella abietina* var. *abietina* occurs to all other areas of Canada, a Movement Certificate is required based on the conditions listed in Appendix 2. Otherwise, movement of *Pinus* spp. from regulated areas is prohibited.

2.1.2 Propagative Material from Non-regulated Areas of Canada

There are no restrictions for scleroderris canker for movement of *Pinus* spp. originating from non-regulated areas.

2.2 Import Requirements

2.2.1 Propagative Material originating from Regulated Areas of the U.S.

For importation of all regulated material originating within areas of U.S. (listed in Appendix 1) where the European strain of *Gremmeniella abietina* var. *abietina* occurs, a CFIA Permit to Import is required. In addition, a Phytosanitary Certificate issued by the national plant protection organization of the U.S. based on the conditions listed in Appendix 3 is required. Otherwise importation of *Pinus* spp. from regulated areas in the U.S. is prohibited.

2.2.2 Propagative Material originating from Non-regulated Areas in U.S.

A CFIA Permit to Import is required for the importation of propagative material for all *Pinus* spp. The shipment must be accompanied by a Phytosanitary Certificate issued by the national plant protection organization of the U.S. with an additional declaration that **“the material certified was produced outside of the scleroderris canker regulated area”**.

2.2.3 Propagative Material from All Other Countries

For the importation of *Pinus* spp. from all countries and areas other than the continental U.S., please consult the D-08-04.

3.0 Inspection Requirements

All shipments of regulated materials imported into Canada are subject to inspection and/or sampling for regulated pests. For information on detecting scleroderris canker presence or signs of damage, see Appendix 4.

Inspections are to be carried out according to the sampling intensity as prescribed under Appendix 4.

4.0 Non-Compliance

Shipments not meeting the import or domestic movement requirements of this directive will be refused entry, returned to origin or destroyed at the importer's expense. The importer or person in care and control of the shipment is responsible for any and all costs relating to treatment, disposal, removal or re-routing, including costs incurred by CFIA to monitor the action taken. Notification of non-compliance to the exporting country may be required as per D-01-06, Canadian phytosanitary policy for the notification of non-compliance and emergency action.

5.0 Appendices

Appendix 1 - Areas Regulated for the European race of *Gremmeniella abietina* var. *abietina*.

Appendix 2 - Conditions for the issuance of Movement Certificates

Appendix 3 - Conditions for the issuance of Phytosanitary Certificates

Appendix 4 - Detection of *Gremmeniella abietina* var. *abietina* and Sampling Plan

**AREAS REGULATED FOR THE EUROPEAN RACE OF
GREMMENIELLA ABIETINA VAR. ABIETINA**

1. Canada

Ontario

Haliburton County - the geographic township of Minden.

Hastings County - the geographic township of Mayo.

District Municipality of Muskoka - the geographic townships of Chaffey, Macauley, Monck, Ryde, Stephenson, Stisted, Watt.

Parry Sound District - the geographic townships of Armour, Joly, McMurrich, Perry, Ryserson, Strong.

Peterborough County - the geographic township of Galway.

Victoria County - the geographic township of Somerville.

Quebec

Considered generally infested for regulatory purposes. The European race has now been found in many plantations in the south of the province.

New Brunswick

The European race of scleroderris canker exists at one site* near Bourgoin, Madawaska County.

** For more detail on this location please contact the CFIA.*

Newfoundland

The Avalon peninsula - all areas east of route 202.

2. United States

Maine

New Hampshire

County of Coos

New York

Counties: Clinton, Essex, Franklin, Fulton, Hamilton, Herkimer, Jefferson, Lewis, Oneida, Oswego, St. Lawrence and Warren

Vermont

Counties of Caledonia, Franklin, Lamoille, Orleans, Washington, Addison (townships of Starksboro, Ripton), Essex (township of Maidstone), Chittenden (townships of Underhill and Milton) and Orange (townships of Orange and Washington)

CONDITIONS FOR THE ISSUANCE OF MOVEMENT CERTIFICATES

Areas regulated for the European race of *Gremmeniella abietina* var. *abietina* are described in Appendix 1. For movement of living plants of *Pinus* spp, including nursery stock and forest tree seedlings, originating from within the regulated area and moving outside of the regulated area, the following conditions must be met:

1. Based on surveys under the direction of CFIA, the *Pinus* spp. contained in the shipment did not originate within 1 km. of a location in which *Gremmeniella abietina* var. *abietina* was found.

OR

- 2.1. Nurseries located in the regulated area are required to be in good standing in a provincial scleroderris canker control program; and
- 2.2. Recommended fungicide programs for control of scleroderris canker are followed in accordance to provincial guidelines; and
- 2.3. All *Pinus* spp. are inspected and determined to be free of scleroderris canker by personnel trained under the direction of CFIA prior to movement from the nursery location based on the sampling plan outlined in Appendix 4; and
- 2.4. Audit inspections (including site management, compliance with scleroderris canker control program, visual inspection of the seedlings and record keeping) are to be carried out by CFIA or designated provincial inspectors on an annual basis; and
- 2.5. Each shipment originating in a regulated area must be accompanied by a Movement Certificate issued by CFIA inspectors with a declaration that a scleroderris canker control program had been followed; and
- 2.6. Nursery personnel are required to maintain records (for a minimum of 5 years) of all *Pinus* spp. material moving in and out of the nursery. These records must be made available at the request of CFIA.

CONDITIONS FOR THE ISSUANCE OF PHYTOSANITARY CERTIFICATES

Note that a Permit to Import is required for importation of all *Pinus* spp. into Canada.

1. Based on official surveys, the *Pinus* spp. contained in the shipment did not originate within 1 km. of a location in which *Gremmeniella abietina* var. *abietina* was found. The Phytosanitary Certificate must contain an additional declaration which states **“the plants contained in this shipment were produced in an area not infested with *Gremmeniella abietina* var. *abietina* (European race)”**.

Or

- 2.1 Nurseries located in the regulated area are required to be in good standing in a state or national scleroderris canker control program approved by CFIA; and
- 2.2 Recommended fungicide programs for control of scleroderris canker are followed in accordance to state or national guidelines; and
- 2.3 All *Pinus* spp. are inspected and determined to be free of scleroderris canker by personnel trained under the direction of the National Plant Protection Organization prior to movement off the nursery location based on the sampling plan outlined in Appendix 4; and
- 2.4 Audit inspections of nurseries are to be carried out by under the direction of the national plant protection organization on an annual basis; and
- 2.5 Each shipment must be accompanied by Phytosanitary Certificate issued by the national plant protection organization. In addition, the Phytosanitary Certificate must have an additional declaration stating that **“the plants contained in this shipment have been produced according to the conditions prescribed by CFIA”**; and
- 2.6 Nursery personnel are required to maintain records of all *Pinus* spp. material moving in and out of the nursery for a minimum period of 5 years.

Detection of *Gremmeniella abietina* var. *abietina* and Sampling Plan

To detect the presence of scleroderris canker in a lot of forestry or nursery seedlings, it will be necessary to examine the trees for symptoms of the disease. The five major symptoms of the disease are:

- 1) tree and seedling mortality - Needles are often down turned after the snow melts, become red-brown at the needle bases and by mid-summer are uniformly brown.
- 2) progressive die back of branches - branch is often girdled and dies from the infection point to the tip. The fungus grows through the branch at the rate of approximately one internode per year.
- 3) foliar discolouration - the previous year's foliage on infected branches will turn either orange or yellow at the needle bases before shoots elongate in spring and by mid-June these needles will have turned brown or grey-green. These needles are loose and usually drop off leaving a bare branch tip. A pull test is often used as a primary diagnostic test for scleroderris canker, whereby infected needles can be detected by a gentle pull sufficient to detach them from the shoot.
- 4) cankers are elongated openings in the bark, often with the remaining branch stub left where the fungus entered the main stem. Detectable cankers may not develop until the trees are 5 to 10 years of age because younger trees are usually girdled and killed within one or two years.
- 5) characteristic yellow - green to emerald-green pigment is often produced by the fungus in dead tissues found just beneath the bark.

Because of possible confusion with other diseases, it is essential to submit samples for confirmation to the Canadian Food Inspection Agency, Ottawa Laboratory (Fallowfield).

Sampling plan:

Examine the appropriate number of trees in a given lot as indicated on the chart below, whether they are bare-root or container stock for symptoms of the disease. A lot in this case is defined as a group of pine seedlings of the same variety, age, and growing environment.

Total number of plants in a lot	number of plants to be examined carefully for symptoms
less than 5,000	50
5,000 to 50,000	100
50,000 to 250,000	200
more than 250,000	400