

Requirements for the Production of Plants for Planting within a PCN regulated area

1.0 Purpose:

To provide guidelines for the production of non-PCN host plants for planting within a PCN regulated area and the movement within and outside of a PCN regulated area.

2.0 Introduction

Two species of Potato Cyst Nematode (PCN) that are considered quarantine pests have been found in Canada. *Globodera pallida*, commonly known as Pale Cyst Nematode, has been found in limited areas of Newfoundland. A closely related nematode, Golden Nematode (*Globodera rostochiensis*), has been detected in Newfoundland, Vancouver Island and in a small area of Quebec. As a result, strict movement restrictions have been placed on host plants (potatoes, tomatoes, eggplants and other solanaceous plants) as well as soil, plants and plant products in association with soil, farm machinery, vehicles and any other products that may be contaminated with soil from the identified high-risk areas.

This document outlines the requirements for the production of non-PCN host plants for planting within a PCN regulated area and the subsequent movement and exportation of plants for planting outside of the PCN regulated area.

3.0 Definitions

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| Exposed land | Land associated, by reason of its agricultural history or its location, with land where PCN has been found including: <ul style="list-style-type: none">• Fields operated by a grower who has farmed infested fields;• Fields farmed with equipment used in a field with a history of infestation;• Fields bordering a field with a history of infestation;• Fields that receive direct drainage from a field with a history of infestation;• Fields exposed as a result of regulatory violations (including unauthorized deposit of potato waste/debris). |
| Infested land | Land where PCN has been detected, based on official soil samples and laboratory procedures. |
| Non-exposed land | Land within the regulated area that is not exposed land. |

Urban landscape	Parks, gardens, green spaces, boulevards, and landscaping around residential properties. Land may not be used for agricultural purposes or for the sale or resale of plant material.
Regulated area	Any area declared to be regulated by the Minister or that is under a notice issued by the CFIA

4.0 References:

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

Ministerial Order, Potato Cyst Nematode - Regulated Areas

Golden Nematode Order

Canada-United States Guideline for Phytosanitary Actions Following the Detection of Potato Cyst Nematodes (*Globodera rostochiensis* and/or *G. pallida*).

5.0 **Determination of the minimum PCN risk mitigating requirements allowing the movement of plants from a greenhouse or nursery:**

IF the nursery or greenhouse does not have land located within a regulated area it is exempt from these requirements.

IF the nursery or greenhouse is located in, or has land located within a regulated area it must develop and implement procedures to mitigate the risk of entry and spread of PCN in order to move plant material outside of the regulated area. In situations where a nursery or greenhouse has distinct, separate facilities or parcels of land (i.e. under an autonomous management structure and utilizes a separate set of agricultural equipment), each will be considered separately at the discretion of the CFIA. A **movement certificate** is required for domestic movement of plant material within the regulated area and to any location outside of the regulated area. A **phytosanitary certificate** is required for the export of plant material to the U.S. with the following additional declaration:

"The plants in this shipment were grown in a manner to prevent infestation of Potato Cyst Nematodes: *Globodera pallida* and *Globodera rostochiensis*."

Note: The following requirements also apply to plants for planting that originate from outside of the regulated area with the exception that the original soil or growing media may remain in the original container. The identity of the material must be maintained, and proof of origin must be documented.

I) Infested Land

Field grown or containerized plants for planting originating from infested land may be moved within the regulated area to other infested land under a movement certificate without additional restrictions. The plants may not be moved to exposed land, non-exposed land, outside of the regulated area within Canada or exported to the US.

II) Exposed Land

Field grown plants for planting that originate from exposed land may be moved:

- a) Within the regulated area to infested land or to other exposed land without additional restrictions;
- b) Directly to an urban landscape site within the province of origin where the material will be planted and will not be moved or resold;
- c) To non-exposed land, to land outside of the regulated area, or exported to the US if they originate from a field found free of PCN based on surveys conducted within the last 12 months AND are bare-rooted and washed completely free of soil and growing media.

Containerized plants for planting that originate from exposed land may be moved:

- a) Within the regulated area to infested land or exposed land without additional restrictions;
- b) Directly to an urban landscape site within the province of origin where the material will be planted and will not be moved or resold;
- c) To non-exposed land, to land outside of the regulated area, or exported to the US if:
They originate from a field found free of PCN based on surveys conducted within the last 12 months AND are bare-rooted and washed completely free of soil and growing media;
OR
They are grown in a soil free growing media at a pest free place of production as described in Annex I.

III) Non-exposed Land

Field grown or containerized plants for planting that originate from non-exposed land may be moved:

- a) Within the regulated area without additional restrictions;
- b) Directly to an urban landscape site within the province of origin where the material will be planted and will not be moved or resold;
- c) To land outside of the regulated area, or exported to the US if:
They originate from a field found free of PCN based on surveys conducted within the last 12 months AND are bare-rooted and washed completely free of soil and growing media;
OR
They are grown at a pest free place of production as described in Annex II.

ANNEX I- Requirements to establish and maintain a pest free place of production on Exposed Land for containerized plants.

As a minimum, the facility must have measures in place to prevent the entry of PCN which include:

- No field grown plants
- No history of host crop production on the land;
- Negative PCN soil survey conducted within the previous 12 months (4 x 8 pace grid at 25% perimeter minimum) if soil is present in the facility of the establishment of the place of production;
- Maintaining a five metre PCN host free buffer around the site. No host plant should be present in the area, including solanaceous weeds;
- In facilities where nursery or greenhouse plants were propagated outside of the regulated area and then transferred as pre-potted plants to a facility located on exposed land, the original soil or growing media may remain in the original pot. The identity of the material must be maintained, and proof of origin must be documented.
- In facilities where plants are propagated or are re-potted within the regulated area, the plants must be grown in above ground pots in approved sterile soil-free growing media. Approved growing media must:
 - Consist of synthetic or other approved substances (other than soil and related matter) used singly or in combination. Examples of approved growing media include expanded or baked clay pellets, expanded polystyrene beads, floral foam, ground coconut husk, ground cocoa pods, ground coffee hulls, ground risk husk, peat, perlite, pumice, recycled paper, rock wool, sawdust, synthetic sponge, vermiculite, and volcanic ash or cinder;
 - Contain only substances that were not previously used for growing plants or for other agricultural purposes.
- The facility must:
 - Be of a construction to prevent the penetration of plant roots into the soil, with floors constructed of cement, asphalt, or a 5-10 cm thick layer of gravel covered with landscape fabric and/or plastic. If fabric or plastic is used, it must be maintained and replaced if punctured or if there is any evidence of weeds growing through. Alternatively, plants may be placed on raised benches that are high enough above the floor to avoid soil contamination from water splashing;
 - Shipping/receiving, parking and other areas must also be constructed and maintained in a manner that prevents movement of soil into the facility.
- The plant production practices must involve:
 - The use of clean water during production (e.g. sourced from non-exposed land or land outside of the regulated area, treated, disinfected, filtered, or sourced from a capped well). Municipal tap water is acceptable provided it has been appropriately treated;
 - Measures to prevent the entry of soil into the facility. Equipment must be rendered free from soil prior to entry into the facility and movement outside of the regulated area;
 - Maintenance of the facility in a clean state by routine cleaning and disinfection of

- floors, benches, handling equipment and tools;
- The storage of unused containers and growing media in a manner to prevent contamination by soil and run off water.
- All procedures implemented by the facility must be described and documented in a PCN manual. A checklist outlining the required elements of the PCN manual can be found in Annex III.

ANNEX II- Requirements to establish and maintain a pest free place of production on non-exposed land.

As a minimum, the facility must have measures in place to prevent the entry of PCN which include:

- No history of host crop production on the land;
- Negative PCN soil survey results (4 x 8 pace grid at 25% perimeter minimum)
 - Ongoing surveillance is required every year to maintain status;
- Maintaining a five metre PCN host free buffer around the site. No host plant should be present in the area, including solanaceous weeds;
- The use of clean water during production (e.g. sourced from non-exposed land or land outside of the regulated area, or treated, disinfected, filtered, sourced from a capped well etc.).
- All procedures must be documented in the PCN manual. A checklist outlining the required elements of the PCN manual can be found in Annex III.

ANNEX III- PCN Manual Checklist

- A general description of the facility's business including:
 - Company history;
 - Acreage under production including container, field, greenhouse production;
 - Maps of the facility and fields indicating location of plant material;
 - Proportion of business that is propagation/production/brokering;
 - Target markets (local, inter-provincial, US, other);
- List of facility management names and titles;
- Name, title, duties, and responsibilities of staff involved;
- Description of how the specific requirements for a establishing and maintaining a pest free place of production have been implemented including:
 - Description of the production, shipping and receiving locations;
 - Sources for new plant material;
 - Sources and composition of growing media;
 - Water source or treatment method;
 - Description of sanitation practices;
 - Description of procedures for maintaining product identity from receiving to shipping;
 - Description of procedures for maintaining the necessary records.