

D-94-26: Phytosanitary import requirements for root crops (other than potato), mushrooms, and vegetables with attached roots for consumption or processing

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Subject

This directive outlines the phytosanitary requirements for root crops (other than potatoes), mushrooms, and vegetables with attached roots that are imported for consumption or processing. These requirements are intended to mitigate the risk of introducing and disseminating soil-borne plant pests of quarantine concern to Canada.

Requirements for plants and plant parts intended for planting, as well as for potato tubers (*Solanum tuberosum*), are not included in this directive. Please refer to directives [D-08-04](#) for plants and plant parts for planting and [D-96-05](#) for potatoes.

The following change has been made in this revision:

- **A Permit to Import is no longer required for root crops imported from areas other than the continental United States.**

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Review

This directive will be updated as required. For further information or clarification, please contact the Canadian Food Inspection Agency (CFIA).

Endorsement

Approved by:

Chief Plant Health Officer

Introduction

Note:

- In this directive, "root crops" should be interpreted to mean root vegetables (e.g. carrots, parsnips, turnips), vegetables with attached roots (e.g. green onions, leeks, certain herbs) and mushrooms.
- In this directive, "soil" should be interpreted to mean soil, soil-related matter and growing media.

The Canadian Food Inspection Agency (CFIA) considers soil to be a high-risk pathway for the entry of plant pests of quarantine significance to Canada. As a result, soil is prohibited entry from all areas of the world other than the continental U.S. as well as from certain regulated areas within the U.S. The importation of commodities that could potentially be contaminated with soil and soil-related matter is regulated by the CFIA to minimize the risk posed by soil-borne pests.

Root crops are particularly likely to be contaminated with soil. In addition, some of these vegetables may be viable and could potentially be diverted to propagation rather than to consumption. Propagation of material with underground plant parts is a high-risk pathway for the introduction of regulated soil-borne pests into the agricultural and natural environment. The requirements in this directive aim to mitigate the risk of introducing regulated quarantine soil-borne plant pests into Canada with these vegetables.

Scope

This directive is intended for those wishing to import root crops into Canada. It is also intended for use by CFIA inspection staff, the Canada Border Services Agency and National Plant Protection Organizations (NPPOs).

References

This directive supersedes all previous versions of D-94-26 and all previous documents on this subject, including Permit Letter 7, entitled "Notice to the Importer - Plant Health Requirements: Importation of Edible Roots" (12/11/87).

[D-01-06: Canadian phytosanitary policy for notification of non-compliance and emergency action.](#) CFIA, Ottawa.

[D-08-04: Plant protection import requirements for plants and plant parts for planting.](#) CFIA, Ottawa.

[D-94-25: Plant protection import requirements for ginseng \(*Panax spp.*\).](#) CFIA, Ottawa.

[D-95-26: Phytosanitary requirements for soil and related matter and for items contaminated with soil and related matter.](#) CFIA, Ottawa.

[D-96-05: Phytosanitary requirements for the importation and domestic movement of non-propagative potatoes \(*Solanum tuberosum*\) and related potato articles, including associated soil.](#) CFIA, Ottawa.

Definitions, abbreviations and acronyms

Definitions for terms used in the present document can be found in the [Plant Health Glossary of Terms](#).

1.0 General requirements

1.1 Legislative authority

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

Golden Nematode Infested Places Order. Agriculture and Agri-Food Canada, 2006

Golden Nematode Order (SOR/80-260)

Plant Protection Act (1990, c.22)

Plant Protection Regulations (SOR/95-212)

1.2 Fees

The CFIA charges fees in accordance with the *Canadian Food Inspection Agency Fees Notice*. For information regarding fees associated with imported products, please contact the [National Import Service Centre](#). Anyone requiring other information regarding fees may contact any local CFIA office or visit our [Fees Notice website](#).

1.3 Regulated pests

There are a number of regulated pests and potential quarantine pests that can be associated with soil. The requirements in this directive have been specifically developed to help prevent the entry of the following soil-borne pests, as they are regulated quarantine pests for Canada and could potentially be associated with soil accompanying root crops:

- Columbia root knot nematode (*Meloidogyne chitwoodi* Golden, O'Bannon, Santo and Finley)
- Golden nematode (*Globodera rostochiensis* [Wollenweber] Behrens)
- Pale cyst nematode (*Globodera pallida* [Stone] Behrens)
- Potato wart (*Synchytrium endobioticum* [Schilb.] Perc.)

In addition, all the pests included on the CFIA's List of [Pests Regulated by Canada](#) are prohibited entry to Canada. Shipments will be considered non-compliant if any regulated pests are found in association with the imported material (see Section 3.0 for details).

1.4 Commodities regulated under this directive

Fresh, unprocessed root crops intended for consumption or processing.

This includes roots, bulbs, tubers, corms, rhizomes and other below-ground plant parts. Vegetables with attached roots and mushrooms are also included. Examples include but are not limited to: edible flower bulbs (e.g., lily bulbs), fresh herbs with attached roots (e.g., cilantro), arrowroot, beets, burdock root, carrots, cassava, celeriac, chicory root, daikon, dong quai, galangal, garlic, ginger, ginseng, green onions, horseradish, Jerusalem artichokes, jicama, leeks, leren, lotus root, mushrooms, onions, parsnips, peanuts (in shell), radishes, rutabagas, salsify, shallots, suran, sweet potatoes, taro, turmeric, turnips, wasabi, water chestnuts, yacon and yams. Appendix 1 lists the common and scientific names of these crops.

1.5 Commodities not regulated under this directive

The following related commodities are not regulated under this directive but may be subject to other CFIA requirements:

- Processed root crops (prepared or altered from their original state such that they are free from soil and cannot be propagated [e.g. sliced, peeled, cooked, pickled, canned, frozen or dried]).
- Plant parts intended for propagation and/or planting.
- Potato (*Solanum tuberosum*) tubers.

Please refer to the appropriate commodity-specific directives for the requirements for these commodities. For more information, consult the CFIA's website or contact your [local CFIA office](#).

1.6 Regulated areas

Importation of regulated commodities from all countries, destined to any area of Canada, is regulated under this directive.

2.0 Specific requirements

Note: It is prohibited to plant and/or propagate root crops imported for the stated purpose of consumption or processing. Roots intended for planting are subject to particular requirements, such as those described in directive [D-08-04](#).

Specific requirements are based on the country or U.S. state of origin of the regulated commodity (i.e. where the root crops were grown) regardless of whether the shipment transits through or is packaged in other countries or states before its arrival in Canada.

Refer to [D-94-25](#) for specific import requirements related to ginseng (*Panax* spp.).

2.1 From any area/country other than the continental U.S.

The following table provides the import requirements for root crops from areas other than the continental U.S.

With/without soil	Permit to Import	Phytosanitary Certificate	Additional requirements
with soil	As per directive D-95-26 , importation of any commodity (including root crops) in association with soil from areas other than the continental U.S. is prohibited .		
without soil	not required	not required	Root crops must be free from soil. No loose soil may be present inside or adhering to the outside of shipping containers, bins or packaging. A fine film of dust (as from dirty wash water) is permitted.

2.2 From the continental U.S.

2.2.1 Vegetables and herbs with roots grown in soil-free media

Note: The following exemption does **not** apply to products grown in areas regulated for golden nematode and/or pale cyst nematode. Products grown in these regulated areas must meet the requirements described in Section 2.2.2.

Vegetables and herbs with roots from the continental U.S. that are grown in soil-free media (e.g., hydroponically) may be packaged and transported with a small amount of this soil-free growing media. Given the low risk posed by the growing media, the requirement for a Phytosanitary Certificate showing additional declarations for soil-borne plant pests is waived. Neither a Phytosanitary Certificate nor a Permit to Import is required.

2.2.2 All other products

2.2.2.1 From the state of New York

Root crops produced in areas regulated for golden nematode (*Globodera rostochiensis*) must be produced and packaged according to the standards agreed to between the USDA and the CFIA.

For information regarding areas regulated for golden nematode (*Globodera rostochiensis*), please contact the USDA.

The following table provides the import requirements for root crops from the State of New York.

Origin	With/without soil	Permit to Import	Phytosanitary Certificate	Additional requirements
Areas regulated for golden nematode	with soil	Prohibited.		
	without soil	required	not required	Root crops must be free from soil. No loose soil may be present inside or adhering to the outside of shipping containers, bins or packaging. A fine film of dust (as from dirty wash water) is permitted.
Areas that are not regulated for golden nematode	with soil	not required	required	The Phytosanitary Certificate must indicate the state of origin. No additional declarations are required.
	without soil	not required	not required	Root crops must be free from soil. No loose soil may be present inside or adhering to the outside of shipping containers, bins or packaging. A fine film of dust (as from dirty wash water) is permitted.

2.2.2.2 From the state of Idaho

Root crops produced in areas regulated for pale cyst nematode (*Globodera pallida*) must be produced and packaged according to the standards agreed to between the USDA and the CFIA.

For information regarding areas regulated for pale cyst nematode (*Globodera pallida*), please contact the USDA.

The following table provides the import requirements for root crops from the State of Idaho.

Origin	With/without soil	Permit to Import	Phytosanitary Certificate	Additional requirements
Areas regulated for pale cyst nematode	with soil	Prohibited.		
	without soil	required	not required	Root crops must be free from soil. No loose soil may be present inside or adhering to the outside of shipping

The following table provides the import requirements for root crops from the State of Idaho.

Origin	With/without soil	Permit to Import	Phytosanitary Certificate	Additional requirements
				containers, bins or packaging. A fine film of dust (such as from dirty wash water) is allowed.
Areas that are not regulated for pale cyst nematode	with soil	not required	required	The Phytosanitary Certificate must indicate the state of origin. The Phytosanitary Certificate must list the following additional declaration: "Material was grown in an area free of the Columbia root knot nematode (<i>Meloidogyne chitwoodi</i>). This declaration is made on the basis of official soil surveys."
	without soil	not required	not required	Root crops must be free from soil. No loose soil may be present inside or adhering to the outside of shipping containers, bins or packaging. A fine film of dust (such as from dirty wash water) is allowed.

2.2.2.3 From continental U.S. states other than New York and Idaho

The following table provides the import requirements for root crops from continental U.S. States other than New York and Idaho.

With/without soil	Permit to Import	Phytosanitary Certificate	Additional requirements
with soil	not required	required	The Phytosanitary Certificate must indicate the state of origin. If the material originates in a state where Columbia root knot nematode (<i>Meloidogyne chitwoodi</i>) is present (see Appendix 5 of directive D-08-04 for list of states), the following additional declaration is required: "Material was grown in an area free of the Columbia root knot nematode (<i>Meloidogyne chitwoodi</i>). This declaration is made on the basis of official soil surveys." For all others states, no additional declarations are necessary.
without soil	not	not required	Root crops must be free from soil. No loose soil may be present inside or adhering to the outside of shipping

The following table provides the import requirements for root crops from continental U.S. States other than New York and Idaho.

With/without soil	Permit to Import	Phytosanitary Certificate	Additional requirements
	required		containers, bins or packaging. A fine film of dust (such as from dirty wash water) is allowed.

3.0 Non-compliance

Imported consignments may be inspected by the CFIA and must meet all requirements when they reach first point of arrival in Canada. Consignments will be refused entry, and removed from Canada or disposed of, if they do not meet requirements or are found to be infested with any pests of quarantine concern. Treatment may be ordered prior to disposal to prevent the spread of pests. The importer is responsible for all costs relating to treatment, disposal or removal. The CFIA will advise the NPPO of the country of origin of any non-compliance with any conditions outlined in this directive as per directive [D-01-06: Canadian phytosanitary policy for notification of non-compliance and emergency action](#).

4.0 Appendices

Appendix 1: Examples of some commonly imported root crops (other than potatoes)

Notes: These may be roots, bulbs, tubers, corms, rhizomes and other below-ground plant parts, vegetables with attached roots, and mushrooms that are cultivated for consumption. Potatoes (*Solanum tuberosum*) are not included in this list, as they are subject to unique phytosanitary requirements described in other directives.

This list provides examples of root crops and is for information purposes only. **The list is not exhaustive.**

The following table provides a list of examples of root crops.

Common name	Scientific name
arrowroot	<i>Maranta arundinacea</i>
beet, sugar beet, mangold	<i>Beta vulgaris</i>
burdock root, gobo	<i>Arctium</i> spp.
carrot	<i>Daucus carota</i> subsp. <i>sativus</i>
cassava, manioc, tapioca	<i>Manihot esculenta</i>
celeriac, celery root	<i>Apium graveolens</i> var. <i>rapaceum</i>
chicory root	<i>Cichorium intybus</i>
cilantro and other herbs with roots attached	<i>Coriandrum sativum</i> , etc.
daikon, lobok	<i>Raphanus sativus</i> subsp. <i>longipinnatus</i>

The following table provides a list of examples of root crops.

Common name	Scientific name
dong quai	<i>Angelica sinensis</i>
galangal	<i>Alpinia</i> spp.
garlic	<i>Allium sativum</i>
ginger	<i>Zingiber officinale</i>
green onion, scallion	<i>Allium cepa</i>
ginseng	<i>Panax</i> spp.
horseradish	<i>Armoracia rusticana</i>
Jerusalem artichoke	<i>Helianthus tuberosus</i>
jicama	<i>Pachyrhizus erosus</i>
leek	<i>Allium porrum</i>
leren, topi-tambo	<i>Calathea allouia</i>
lily bulbs and other edible flower bulbs	<i>Lilium</i> spp., etc.
lotus root	<i>Nelumbo nucifera</i>
mushroom - button, cremini and portabello	<i>Agaricus bisporus</i>
mushroom - enoki	<i>Flammulina velutipes</i>
mushroom - oyster	<i>Pleurotus ostreatus</i>
mushroom - shiitake	<i>Lentinula edodes</i>
onion	<i>Allium cepa</i>
parsnip	<i>Pastinaca sativa</i> subsp. <i>sativa</i>
peanuts (in shell)	<i>Arachis hypogaea</i>
radish	<i>Raphanus sativus</i>
rutabaga, swede	<i>Brassica napus</i> var. <i>napobrassica</i>
salsify	<i>Tragopogon porrifolius</i>
shallot	<i>Allium oschaninii</i>
suran, elephant yam	<i>Amorphophallus</i> spp.
sweet potato, boniato	<i>Ipomoea batatas</i>
taro, arvi, dasheen, eddo, kalo	<i>Colocasia esculenta</i>

The following table provides a list of examples of root crops.

Common name	Scientific name
truffle	<i>Tuber</i> spp.
turmeric, haldi	<i>Curcuma longa</i>
turnip	<i>Brassica rapa</i> subsp. <i>rapa</i>
wasabi	<i>Wasabia japonica</i>
water chestnut	<i>Eleocharis dulcis</i>
yacon	<i>Smallanthus sonchifolius</i>
yam	<i>Dioscorea</i> spp.

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