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<b>Title Production, Maintenance, Multiplication and Certification of Nuclear Stock Class Seed Potatoes</b>	

File

## SUBJECT:

This directive describes the requirements for the production, maintenance, multiplication and certification of Nuclear Stock class seed potatoes under Canada's national seed potato certification program.

It sets out the technical standards for the initiation, maintenance and multiplication of *in-vitro* plantlets, micro-tubers and mini-tubers, including standards for pathogen testing, varietal purity, physical facilities and documentation.

*This revision was made to clarify a number of procedural changes related to new activities and developments in the seed potato certification program. Those activities and developments include:*

- *amendments identified in the findings of a national audit of Nuclear Stock production facilities completed in September 2000.*
- *addition of a Summary Table, Appendix 1*
- *addition of Potato Mop-Top Virus testing requirements*
- *clarification on isolation from host crops for Ralstonia solanacearum, race3 biovar 2.*
- *clarification of provisions when specific pest and disease conditions are encountered.*

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## Review

This directive will be reviewed every three years unless otherwise needed. The next review date for this directive is November 23, 2007. The contact for this directive is Joanne Rousson. For further information or clarification, please contact the Potato Section.

## Endorsement

### Approved by:

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Director, Plant Health Division

## Amendment Record

Amendments to this directive will be dated and distributed as outlined in the distribution list below.

## Distribution

1. Directive mail list (Regions, PHRA, USDA)
2. Provincial Government, Industry (via Regions)
3. National Industry Organisations (Canadian Horticulture Council)
4. Internet - CFIA website

## Introduction

Canada's seed potato certification program is based on the continuous input of Nuclear Stock class seed potatoes, i.e., potatoes that have been produced from pathogen-tested tissue culture plantlets under protected environment conditions. Nuclear Stock class seed potatoes, when planted in the field for the first time, will produce Pre-Elite class seed, provided the crop remains visibly free of disease symptoms and varietal purity and meets the requirements of the *Seeds Regulations Part II*, as determined by the appropriate number of field inspections and laboratory analysis.

In subsequent years of multiplication, the certification class of the progeny seed is lowered to Elite I, Elite 2, Elite 3, Elite 4, Foundation and Certified class, with each class having to meet standards specified by the *Seeds Regulations Part II* for varietal purity and disease tolerances. All seed classes, except Certified, may be used for further seed production. Certified class seed can only be used to produce ware potatoes. The regulated and mandatory application of these principles for seed potato production provides for a "limited generation" or "flush-through" certification system.

All seed potatoes produced in Canada are inspected in accordance with national inspection standards and, when required, representative samples of lots are analysed in Canadian Food Inspection Agency (CFIA)-accredited laboratories, in order to determine compliance with requirements and tolerances pursuant to the *Seeds Regulations Part II*.

**Scope** This directive is intended for use by Canadian Food Inspection Agency staff and Canadian producers of Nuclear Stock class seed potatoes.

**References** Department of the Secretary of State of Canada. *The Canadian Style: A Guide to Writing and Editing*. Toronto, 1993.

**This directive supercedes D-97-08 (Original), dated August 11, 1997**

### **Definitions, Abbreviations and Acronyms**

**Aseptic Environment** An environment which excludes microorganisms that are capable of causing contamination or infection

**Aseptic Facility** A facility capable of producing potatoes in an aseptic environment.

**Breeder's Selection seed potatoes** Seed potatoes that are direct progeny of true seed, or of selected tubers, and that are grown for the purpose of evaluation as a potential variety for commercial use.

**CFIA** Canadian Food Inspection Agency, established by section 3 of the *Canadian Food Inspection Agency Act*

**Clone** A genetically identical group of plants derived and maintained from one individual by vegetative propagation

**Crop** Breeder's Selection seed potatoes, or a variety and class of seed potatoes, growing in an aseptic environment, a protected environment or in one or more fields of a farm unit

**Farm Unit** (a) A single tract of land operated for the production and marketing of seed potatoes under the control of a grower, or  
(b) A number of separate tracts of land operated as a single unit, with the use of common equipment, facilities or storage, for the production and marketing of seed potatoes under the control of the same grower

<b>Lot</b>	The quantity of harvested seed potatoes of a variety and class that is identifiable by one certificate number or the quantity of Breeder's Selection seed potatoes that is identifiable by one certificate number
<b>Plantlet</b>	A small potato cutting or rooted potato cutting produced under aseptic conditions using in-vitro propagative techniques
<b>Protected Environment</b>	A facility for which there are appropriate procedures and physical barriers to prevent the entry of plant pathogens and insects
<b>Micro-tuber</b>	A small potato tuber produced under aseptic conditions using in-vitro propagative techniques
<b>Mini-tuber</b>	A small potato tuber produced in a soil-free medium within a protected environment

## 1.0 General Requirements

### 1.1 Legislative Authority

*Seeds Act ( R.S. 1985, c. S-8 )*

*Seeds Regulations (C.R.C., c. 1400), Sections 45-62*

*Canadian Food Inspection Agency Fees Notice, Canada Gazette, Part 1 (05/13/2000)*

### 1.2 Fees

The CFIA is charging fees in accordance with the *Canadian Food Inspection Agency Fees Notice* where applicable. Further information regarding fees can be obtained from a local CFIA office or from the CFIA website at <http://www.inspection.gc.ca>

## 2.0 Policy

Three phases are recognised in the production of Nuclear Stock class seed potatoes:

Initiation: where pathogen-tested potato propagules are established in an aseptic facility through in-vitro micropropagation (i.e., tissue culture)

Maintenance: where pathogen-tested potato propagules are maintained in an aseptic facility

Multiplication: where pathogen-tested potato propagules are multiplied in an aseptic facility and/or in a protected environment (e.g., greenhouse, screenhouse, growth chamber, etc.)

### 2.1 Initiation

Any potato material (i.e., any potato plant part, including stems and tubers) is acceptable

for the initiation of and certification as Nuclear Stock class seed potatoes, providing the following requirements have been met.

- 2.1.1 An application for seed potato crop inspection (CFIA 1317) must be submitted to the local CFIA office, pursuant to the *Seeds Regulations Part II*. If the farm unit also produces Nuclear Stock class seed potatoes in a protected environment, and/or field grown seed potatoes of other classes, it is recommended that the lots being initiated or otherwise produced in the aseptic facility be listed on a separate page of the submitted application, clearly marked to identify the method of production being utilised.

Note: A grower submitting separate applications for field-grown crops and crops produced in a protected and/or aseptic environment with the intention of operating them as separate farm units (i.e., with different grower numbers) is expected to pay the applicable fees for each application.

- 2.1.2 The initiation facility must be inspected by a CFIA inspector at least once during active production. All areas involved in the propagation (initiation) of the Nuclear Stock class seed potatoes must be inspected, including: laminar flow cabinets, growth rooms, media preparation areas, etc. This inspection should be recorded using the Nuclear Stock aseptic facility inspection report (CFIA 5292; Appendix 2). If the facility does not meet program requirements, a notification of Nuclear Stock production non-compliance and requirement for corrective action (CFIA 5294; Appendix 4) should be completed and a copy provided to the grower as soon as possible.
- 2.1.3 The material being initiated must be of a known varietal/clonal identity and must be duly documented with respect to its origin (name and address), date received, plant breeders' rights, plant variety protection, patent or other known aspects of clonal protection.

Note: provision of documentation in support of the identity of a particular variety or clone is the responsibility of the initiating facility, not the CFIA.

- 2.1.4 A sample of at least two plantlets per variety/clone being initiated must be tested in a laboratory accredited by the CFIA and found not to be infected with any of the following organisms:
- Viruses: PVA, PVS, PVM, PVY, PVX, PLRV, Potato Latent Virus (PotLV) also known as Red LaSoda Virus (RLSV), and Potato Mop-Top virus (PMTV)<sup>1</sup>.
  - Viroid: PSTVd
  - Bacteria: *Clavibacter michiganensis* subsp. *sepedonicus* (*C. m. sepedonicus*), the

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<sup>1</sup> Since the requirement for PMTV testing is new for nuclear stock multiplication in an aseptic facility, a grace period of a year has been granted. Therefore starting November 1st, 2005 PMTV testing results will be required to support certification.

causal pathogen of bacterial ring rot (BRR).

Note: A positive test will result in the disposal of that clone and all its progeny.

- 2.1.5 The initiating facility must use recognised aseptic initiation and propagation procedures (i.e., follows procedures and uses equipment which will maintain sterile conditions). Each facility must have a propagation procedure manual for this purpose, for reference by staff as necessary.
- 2.1.6 If the Centre of Expertise for Potato Diseases confirms the presence of *C. m. sepedonicus*, in aseptic culture production, all aseptic culture progeny production of the affected variety/clone must be removed and destroyed from the facility. All other aseptic clonal production for the affected facility will be subject to re-testing to verify freedom from *C. m. sepedonicus*. The level of testing will be a minimum of 2 plantlets per variety/clone.
- 2.1.7 If the Centre of Expertise for Potato Diseases confirms the presence of PSTVd, or if it is otherwise determined by a CFIA inspector that any of the variety/clone are infected with PSTVd, the infected variety/clone will not be eligible for certification. Any variety/clone that tests positive for PSTVd must be removed from the facility immediately and be destroyed.
- 2.1.8 If the Centre of Expertise for Potato Diseases confirms the presence of *C. m. sepedonicus*, in other field grown crops under the same farm unit, all field grown crops will have certification revoked. However, an inspector for CFIA may determine, based on verification of aseptic techniques and the absence of contact with field grown crops, that this disease did not affect the Nuclear Stock production and it retains its certification status.
- 2.1.9 Any variety/clone that tests positive for any other regulated pathogen (other than the one listed in section 2.1.4), any propagative material showing symptoms or signs of any non-regulated endophytic, epiphytic or saprophytic bacterial or fungal infection or other presence of such organisms, and any containers used in the propagative process showing signs of bacterial or fungal contamination, must be removed from the facility immediately and be sterilized or destroyed.
- 2.1.10 The initiating facility must maintain an information system which accurately documents the following information for each variety/clone in the facility:
  - variety/clone identification  
Note: each facility may establish its own facility coding techniques for the establishment, maintenance and multiplication of variety/clone; however, this must be as prescribed in its facility manual
  - date of initiation and most recent maintenance production date of variety/clone
  - origin of propagative material
  - variety/clone protection status

- testing results from a laboratory accredited by the CFIA
- removal of any varieties/clones as specified by sections 2.1.4, 2.1.6, 2.1.7 and 2.1.9
- CFIA-issued certification number (where applicable)

The information system, propagation facility procedure manual, and any associated documentation must be made available, if requested by a CFIA inspector, for review and audit by the CFIA.

## 2.2 Maintenance

The following requirements must be met for the maintenance of Nuclear Stock propagative material in an aseptic facility.

- 2.2.1 The facility must use recognised aseptic propagation procedures; (i.e., must follow procedures and use equipment which will maintain sterile conditions).
- 2.2.2 Varietal or clonal integrity must be maintained by following procedures which will prevent varietal mixture during all transfer, storage and handling activities.
- 2.2.3 There are no requirements for specific disease testing during the maintenance phase other than those requirements described in section 2.2.5.
- 2.2.4 Maintenance within the initiating facility requires physical and clearly identifiable separation to be present between the material certified as Nuclear Stock class seed potatoes and all other material.
- 2.2.5 Where maintenance takes place in a facility other than the initiating facility, the material must be certified as Nuclear Stock class seed potatoes prior to maintenance (i.e., must comply with all components of section 2.1 or 2.3 and possess disease testing results as described in section 2.1.4 or 2.3.4).
- 2.2.6 If the Centre of Expertise for Potato Diseases confirms the presence of *C. m. sepedonicus*, in aseptic culture production, all aseptic culture progeny production of the affected variety/clone must be removed and destroyed from the facility. All other aseptic clonal production for the affected facility will be subject to re-testing to verify freedom from *C. m. sepedonicus*. The level of testing will be a minimum of 2 plantlets per variety/clone.
- 2.2.7 If the Centre of Expertise for Potato Diseases confirms the presence of *C. m. sepedonicus*, in other field grown crops under the same farm unit, all field grown crops will have certification revoked. However, an inspector for CFIA may determine, based on verification of aseptic techniques and the absence of contact with field grown crops, that this disease did not affect the Nuclear Stock production and it retains its certification



status.

- 2.2.8 If the Centre of Expertise for Potato Diseases confirms the presence of PSTVd, or if it is otherwise determined by a CFIA inspector that any of the variety/clone are infected with PSTVd, the infected variety/clone will not be eligible for subsequent certification as Nuclear Stock class seed potatoes. Any variety/clone that tests positive for PSTVd must be removed from the facility immediately and be destroyed.
- 2.2.9 Any variety/clone that tests positive for any other regulated pathogen (other than the one listed in section 2.1.4), any propagative material showing symptoms or signs of any non-regulated endophytic, epiphytic or saprophytic bacterial or fungal infection or other presence of such organisms, and any containers used in the propagative process showing signs of bacterial or fungal contamination, must be removed from the facility immediately and be sterilized or destroyed.
- 2.2.10 The facility must maintain an information system which accurately documents the following information for each variety/clone being maintained:
- variety/clone identification  
Note: each facility may establish its own facility coding techniques for the establishment, maintenance and multiplication of variety/clone
  - date of acquisition and most recent date of maintenance of each variety/clone
  - origin of propagative material, including nuclear stock certificate, if applicable
  - variety/clone protection status
  - testing results from a laboratory accredited by the CFIA
  - removal of any varieties/clones as specified by sections 2.2.6, 2.2.8 and 2.2.9
  - CFIA-issued certification number (where applicable)

The information system, and its associated documentation, must be made available, if requested by a CFIA inspector, for review and audit by the CFIA.

### 2.3 Multiplication in an Aseptic Facility

The following requirements must be met for the multiplication of Nuclear Stock class seed potatoes in an aseptic facility to be approved and certified by the CFIA.

- 2.3.1 An application for seed potato crop inspection (CFIA 1317) must be submitted to the local CFIA office, pursuant to the *Seeds Regulations Part II*. If the farm unit also produces Nuclear Stock class seed potatoes in a protected environment, and/or field grown seed potatoes of other classes, it is recommended that all lots being produced in the aseptic facility be listed on a separate page of the submitted application, clearly marked to identify the method of production being utilised.
- Note: A grower submitting separate applications for field-grown crops and crops produced in a protected and/or aseptic environment with the intention of operating them as separate

farm units (i.e., with different grower numbers) is expected to pay the applicable fees for each application.

- 2.3.2 The multiplication facility must be inspected by a CFIA inspector at least once during the multiplication phase. All areas involved in the propagation of the Nuclear Stock class seed potatoes must be inspected, including: laminar flow cabinets, growth rooms, media preparation areas, etc. This inspection should be recorded using the Nuclear Stock aseptic facility inspection report (CFIA 5292; Appendix 2). If the facility does not meet program requirements, a notification of Nuclear Stock production non-compliance and requirement for corrective action (CFIA 5294; Appendix 4) should be completed and a copy provided to the grower as soon as possible.
- 2.3.3 The multiplication facility must use recognised aseptic propagation procedures; (i.e., must follow procedures and use equipment which will maintain sterile conditions). Each facility must have a propagation procedure manual for this purpose, for reference by staff as necessary.
- 2.3.4 Except for micro-tuber production (where valid disease testing results are required prior to the initiation of the micro-tuber production cycle), each crop under production must have valid disease testing results at all times during the multiplication process. Tests must be carried out on a minimum of two plantlets for each variety/clone. They must be carried out by a laboratory accredited by the CFIA and are valid for a period of twelve months. For clarification in determining this period, the recognised twelve month period will commence on the date that the sample was submitted for testing to the accredited laboratory. This date should be included on the official laboratory testing report. Each crop must have been found not to be infected with any of the following organisms:
- Viruses: PVA, PVS, PVM, PVY, PVX, and PLRV.
  - Viroid: PSTVd
  - Bacteria: *C. m. sepedonicus*, the causal pathogen for bacterial ring rot (BRR).

Note: Testing for PotLV and PMTV is performed once at the initiation phase (see section 2.1.4). PMTV results will be required to support certification starting November 1st 2005.

- 2.3.5 If the Centre of Expertise for Potato Diseases confirms the presence of *C. m. sepedonicus*, in aseptic culture production, all aseptic culture progeny production of the affected variety/clone must be removed and destroyed from the facility. All other aseptic clonal production for the affected facility will be subject to re-testing to verify freedom from *C. m. sepedonicus*. The level of testing will be 1% or a minimum of 5 plantlets to a maximum of 50 plantlets per clone.
- 2.3.6 If the Centre of Expertise for Potato Diseases confirms the presence of *C. m. sepedonicus*, in other field grown seed crops under the same farm unit, all field grown crops will have

certification revoked. However, an inspector for CFIA may determine, based on verification of aseptic techniques and the absence of contact with field grown crops, that this disease did not affect the Nuclear production and it retains its certification status.

- 2.3.7 If the Centre of Expertise for Potato Diseases confirms the presence of PSTVd, or if it is otherwise determined by a CFIA inspector that any of the variety/clone are infected with PSTVd, the infected variety/clone will not be eligible for certification. Any variety/clone that tests positive for PSTVd must be removed from the facility immediately and be destroyed.
- 2.3.8 Any variety/clone that tests positive for any other regulated pathogen (other than the one listed in section 2.3.4), any propagative material showing symptoms or signs of any non-regulated endophytic, epiphytic or saprophytic bacterial or fungal infection or other presence of such organisms, and any containers used in the propagative process showing signs of bacterial or fungal contamination, must be removed from the facility immediately and be destroyed or sterilized.
- 2.3.9 The multiplication facility must maintain an information system which accurately documents the following information for each variety/clone being multiplied:
- variety/clone identification  
Note: each facility may establish its own facility coding techniques for the establishment, maintenance and multiplication of variety/clone; however, this must be as prescribed in its facility manual
  - date of acquisition of material and most recent date of multiplication of each variety/clone
  - origin of propagative material, including a nuclear stock certificate, if applicable
  - quantity obtained for each variety/clone
  - the most recent date that samples of each lot were submitted for pathogen tests to a laboratory accredited by the CFIA
  - testing results from a laboratory accredited by the CFIA
  - removal of any varieties/clones as specified by sections 2.3.5, 2.3.7 and 2.3.8
  - propagation schedules
  - Nuclear Stock production and distribution data (including harvest dates, and quantities)
  - CFIA-issued certification number(s)

The information system, propagation facility procedure manual, and any associated documentation must be made available, if requested by a CFIA inspector, for review and audit by the CFIA.

## 2.4 Multiplication in a Protected Environment

The following requirements must be met for the multiplication of Nuclear Stock class seed potatoes in a protected environment to be approved and certified by the CFIA.

- 2.4.1 An application for seed potato crop inspection (CFIA 1317) must be submitted to the local CFIA office, pursuant to the *Seeds Regulations Part II*. If the farm unit also initiates or produces Nuclear Stock material in an aseptic facility, and/or produces field grown seed potatoes of other classes, it is recommended that all lots being produced in the protected environment be listed on a separate page of the submitted application, clearly marked to identify the method of production being utilised.

Note: A grower submitting separate applications for field-grown crops and crops produced in a protected and/or aseptic environment with the intention of operating them as separate farm units (i.e., with different grower numbers) is expected to pay the applicable fees for each application.

- 2.4.2 The grower must notify an inspector of the CFIA prior to the proposed date of planting in order to allow sufficient time for a pre-planting inspection to be scheduled, if deemed necessary (approximately two weeks advance notice may be sufficient, depending on the demands on the local CFIA office). The protected environment may be required to be inspected and approved by a CFIA inspector (this is at the inspector's discretion) before planting can proceed. This pre-planting inspection, and approval to plant, should be recorded using a Nuclear Stock protected environment inspection report (CFIA; 5293; Appendix 3). If the protected environment does not meet program requirements, a notification of Nuclear Stock production non-compliance and requirement for corrective action (CFIA 5294) should be completed and a copy provided to the grower as soon as possible.
- 2.4.3 The facility must be inspected by a CFIA inspector at least once during the growing cycle (this requirement is in addition to the optional pre-planting inspection described in section 2.4.2). The inspection must take place at or about budding/flowering time (40 - 70 days after planting). Depending on the condition or appearance of the crop, the inspector may take leaf samples for laboratory testing to be carried out by the Centre of Expertise for Potato Diseases to determine if the crop is free of regulated pathogens (section 2.4.12) or to confirm varietal purity. This inspection should be recorded using a Nuclear Stock protected environment inspection report (CFIA; 5293; Appendix 3). If the protected environment or growing crop does not meet program requirements, a notification of Nuclear Stock production non-compliance and requirement for corrective action (CFIA 5294) should be completed and a copy provided to the grower as soon as possible.
- 2.4.4 The protected environment must be "aphid-proof" and be equipped as follows:
- a double-door entrance in which the doors form an aphid-proof closure

- provision for footwear disinfection prior to entering the protected environment (the disinfectant utilized must be registered for agricultural disinfection purposes as registered with the Pest Management Regulatory Agency and be changed at intervals as recommended on the manufacturer's label)
  - aphid-proof ventilation screening on all intakes and exhaust openings (including louvered fan exhausts). All aphid screening used must have a minimum of 12 meshes per centimetre (30-32 meshes per inch)
  - there must be no holes in the structure that would allow aphids to enter the protected environment
- 2.4.5 The facility must be cleaned and disinfected, and must be free from all potato and solanaceous plant debris prior to planting.
- 2.4.6 No field-produced seed potatoes (including pathogen tested clonal selections), non-seed potatoes, nor any other solanaceous, pelargonium species or other host plants of *Ralstonia solanacearum* Race 3, Biovar 2 can be grown in the same protected environment facility. In addition, any quarantine pathogen for seed potatoes identified in the air, water, soil or environment associated with a Nuclear Stock production facility will result in decertification of all seed potato crops grown in that production facility.
- 2.4.7 The producer must adopt a management program that includes effective sanitation practices and effective insect and disease monitoring and prevention procedures (e.g., use of yellow sticky traps for aphid monitoring, adoption of integrated pest management practices, records of any pests or diseases observed and corrective actions taken, etc.).
- 2.4.8 Nuclear Stock class propagative material must be planted in commercially available soil-free medium which has not been recycled.
- 2.4.9 If ground beds are used, the underlying soil must be separated by a new or clean, disinfected physical barrier from the growing medium (e.g., separated by landscape cloth). If containers are used, they must be new, or cleaned and disinfected.
- 2.4.10 The crop must be grown from certified Nuclear Stock class seed potatoes which were produced in an aseptic facility, or from first generation Nuclear Stock class mini-tubers produced in the grower's own protected environment facility, or from stem cuttings produced in the grower's own protected environment facility.
- 2.4.11 Varieties/clones must be separated by physical barriers which will maintain varietal purity.
- 2.4.12 Each crop under production must have valid disease testing results at the time of planting in a protected environment, unless planting first generation mini-tubers (section 2.4.13). Tests for the following pathogens must have been carried out by a laboratory accredited

by the CFIA and are valid for a period of twelve months. For clarification in determining this period, the recognised twelve month period will commence on the date that the sample was submitted for testing to the accredited laboratory. This date should be included on the official laboratory testing report. Samples must have been collected within 30 days prior to the date of testing. Each crop must have been found not to be infected with any of the following organisms:

- Viruses: PVA, PVS, PVM, PVY, PVX, PLRV
- Viroid: PSTVd
- Bacteria: *C. m. sepedonicus* the causal pathogen for bacterial ring rot (BRR).

Note: Testing for PotLV and PMTV is performed once at the initiation phase (see section 2.1.4). PMTV results will be required to support certification starting November 1st 2005.

2.4.13 If first generation mini-tubers are used to produce a second generation, the first generation must have been tested by a laboratory accredited by the CFIA and found to be free from the pathogens listed in section 2.4.12. If testing on the first generation was not carried out, tests for the pathogens listed in section 2.4.12 must be performed by a laboratory accredited by the CFIA on the second generation crop.

2.4.14 When additional pathogen testing is required on a crop producing mini-tubers, samples should be collected at budding/flowering time (approximately 40 -70 days after planting) on a representative sample consisting of 1% of the plants/tubers with a minimum of 5 and a maximum of 50 plants/tubers sampled per lot. All samples taken for required pathogen testing must be collected under the supervision of a CFIA inspector.

2.4.15 The facility must maintain an information system which accurately documents the following information for the crop(s) within each structure:

- origin of planted stock, certification number of source material
- nuclear tag or nuclear stock certificate, unless grower's own material
- the most recent date that samples of each lot were submitted for pathogen tests to a laboratory accredited by the CFIA
- testing results from a laboratory accredited by the CFIA
- actions carried out and observations made under the management program (section 2.4.7) for sanitation, insect and disease monitoring, and prevention
- distribution data (including harvest dates, and quantities)
- CFIA-issued certification number(s)

The information system, and its associated documentation, must be made available, if requested by a CFIA inspector, for review and audit by the CFIA.

2.4.16 If the Centre of Expertise for Potato Diseases confirms the presence of *C. m. sepedonicus*, in a protected environment facility, all production of the affected facility must be

destroyed. However, a CFIA inspector may determine, based on the definition of ‘farm unit’ and verification of sanitation techniques utilised in the protected environment and separation with field grown production, that this disease was not in contact with field-grown production and it may retain its certification status.

- 2.4.17 If the Centre of Expertise for Potato Diseases confirms the presence of *C. m sepedonicus*, in other field grown potatoes identified under the same application and definition of ‘farm unit’, all field grown seed potato crops will have certification revoked. However, a CFIA inspector may maintain the certification status of the crops grown in the protected environment, based on the definition of ‘farm unit’, verification of sanitation techniques and the absence of contact between the field grown crops and the ones grown in the protected environment.
- 2.4.18 If the Centre of Expertise for Potato Diseases confirms the presence of PSTVd, or if it is otherwise determined by a CFIA inspector that any of the variety/clone are infected with PSTVd, the infected variety/clone will not be eligible for certification. Any variety/clone that tests positive for PSTVd must be removed from the facility immediately and be destroyed.
- 2.4.19 In the event that insect disease vectors (i.e., aphids) are detected by a CFIA inspector on or in the growing crop, including evidence of wingless aphids, nymphs, molting skins, dead and/or parasitized aphids, the grower must provide post-harvest test results to the CFIA. One or two extraneous winged aphid(s) or vector(s) found on sticky traps, or in areas not directly in contact with the crop, does not automatically indicate additional testing requirements, but will alert the inspector to be vigilant during his inspection of the crop, to ensure aphid or vector activity is not occurring in the growing crop.

After confirming the evidence of virus vectors in the crop, a representative sample collected under the supervision of an inspector (consisting of 1% of the harvested tubers with a minimum of 5 and a maximum of 50 tubers sampled per lot), for each variety/clone produced in the protected environment, must be post-harvest virus tested and, provided the results are negative for PVS, PVM, PVA, PVY and PLRV, the crop will be assigned Nuclear Stock class. Failure to provide post-harvest test results, if required to do so, will result in assigning Pre-Elite class to all varieties/clones in the protected environment (assuming all other standards of the class have been met).

- 2.4.20 If testing performed by a laboratory accredited by the CFIA reveals the presence of PVA, PVS, PVM, PVY, PVX, or PLRV, the crop will be assigned the Pre-Elite class (providing it meets the appropriate standards), not Nuclear Stock class, and allowed to be grown for the next generation by the owner only.

## 2.5 Certification

2.5.1 An application for seed potato crop inspection (CFIA 1317) must be filed for each variety/clone produced, as follows:

2.5.1.1 For Nuclear Stock produced in an aseptic facility, the application for certification must be filed before the material is transferred to a new owner or transferred into a protected environment or planted in a field.

2.5.1.2 For Nuclear Stock produced in a protected environment, the application must be filed within thirty days after planting the crop(s) in the protected environment. (**NOTE:** the requirement to notify the local CFIA office in advance of planting stated in section 2.4.2 to allow for a pre-planting facility inspection, if deemed necessary, still applies). Amendments to the application can be made no later than the appropriate inspection time for the crop growing in the protected environment facility. A subsequent inspection may be required for those crops not at 40-70 days maturity. A new application must be filed for crops not planted at the time of inspection (40-70 days).

For facilities under continuous propagation and production, an arrangement with the local inspection office must be determined and formal notification with that office listing new crops growing in the appropriate window for inspection, must be filed, inspected and recorded on the application for seed potato crop inspection (CFIA 1317) and entered into the CFIA Multi Commodity Activity program database (MCAP). Under these provisions one annual application will suffice.

2.5.2 The application for certification must be made using the application for seed potato crop inspection (CFIA 1317). It is recommended that a separate page of the submitted application be used to differentiate between each of the three following types of production: Nuclear Stock initiation/production in an aseptic facility; Nuclear Stock production in a protected environment; and any field potato production. The completed application package must contain the following information and supporting documentation.

- the applicant's name and address
- the variety(ies)/clone(s) to be propagated/planted
- the type of facility and method of propagation must be clearly indicated (i.e., aseptic or protected environment)
- the location of each facility must be described
- the origin of each variety/clone (i.e., either self produced (plantlets or mini-tubers) or received from other sources). When received from other sources, an official Nuclear Stock Certificate or equivalent is required
- the most recent date that samples were submitted for pathogen tests to a laboratory accredited by the CFIA (the applicant must be ready to provide copies of the test results if requested by the CFIA)
- the certification number of the material being multiplied or, in the case of initiated



- material, the origin of the material
  - a floor plan for the crop(s) in each protected environment must be submitted with the application. The floor plan must clearly indicate the location of each variety/clone under production
  - if the application is for mini-tubers, the application must indicate clearly whether the mini-tubers are first or second generation
- 2.5.3 Certification of each variety/clone will be granted by the CFIA, following official inspections, if all the requirements under section 2.1, 2.3 or 2.4 have been met, and the crop meets all the standards of the *Seeds Regulations Part II*.
- 2.5.4 Growing Crop Certificates (CFIA 1318) must be issued for all certified potatoes, including Nuclear Stock class seed potatoes, pursuant to the *Seeds Regulations Part II*.
- 2.6 Transfer**
- 2.6.1 Nuclear Stock class seed potatoes being transferred to a new owner must be accompanied by one of the following certificates supplied by the CFIA prior to the transfer of the stock:
- an official Nuclear Stock Tag (CFIA 5298). Tags for Nuclear Stock were recently implemented and used for mini-tubers produced in a protected environment. This Nuclear Stock tag is white with a diagonal purple bar and must be attached to the container of mini-tubers they represent
  - a Nuclear Stock Certificate (CFIA 4351). Used for all material produced in an aseptic facility and mini-tubers produced in a protected environment
  - a Certificate of Authorisation (CFIA 4378). Used for all unregistered varieties shipped domestically.
- Nuclear Stock Tags or Nuclear Stock Certificates will be issued for mini-tubers produced in protected environments, while Nuclear Stock Certificates only will continue to be issued for all material produced in an aseptic facility.
- 2.6.2 An application for issuance of either Nuclear Stock Tags or certificates should be made by the producer using an Application for issuance of Nuclear Stock tags and certificates (CFIA 5295; Appendix 5).
- 2.6.3 The following information must be provided on the Nuclear Stock Tag (CFIA 5298):
- the name of the variety / clone
  - the certification number
  - the quantity of mini-tubers in kilogrammes
  - the date on which the Nuclear Stock Tag was issued
- 2.6.4 The following information must be provided on the Nuclear Stock Certificate (CFIA

4351) or Certificate of Authorisation (CFIA 4378):

- the name(s) of the variety(ies) / clone(s) being transferred
- the crop certification number(s)
- the type of propagules transferred: (i.e., micro-tubers or plantlets)
- the number of propagules transferred
- the grower's name and address
- the consignee's name and address
- the date on which the Certificate was issued
- the most recent date that samples of the lot were submitted for pathogen tests to a laboratory accredited by the CFIA
- the certificate must be signed and dated by the issuing CFIA inspector or officer

2.6.5 Nuclear Stock Tags and Nuclear Stock Certificates can only be used for varieties registered and sold in Canada pursuant to the *Seeds Act* and *Seeds Regulations Part III*. Unregistered varieties must not be listed on a Nuclear Stock Tag or Nuclear Stock Certificate, unless they are being exported directly to another country. Transfer of unregistered varieties should be made using a Certificate of Authorisation (CFIA 4378). If unregistered Nuclear Stock varieties are transferred using a Certificate of Authorisation, the information requirements described in section 2.6.4 must also be present.

2.6.6 Nuclear Stock class seed potatoes produced in a protected environment and transferred to a new owner cannot be used to further produce Nuclear Stock class seed potatoes.

### 3.0 Appendices

- Appendix 1: Summary Table
- Appendix 2: Nuclear Stock aseptic facility inspection report, CFIA 5292
- Appendix 3: Nuclear Stock protected environment inspection report, CFIA 5293
- Appendix 4: Notification of Nuclear Stock production non-compliance and requirement for corrective action, CFIA 5294
- Appendix 5: Application for issuance of Nuclear Stock tags and certificates, CFIA 5295

## Summary Table

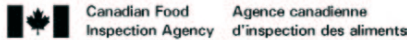
## Appendix 1

<u>CRITERIA</u>	<u>INITIATION</u> (aseptic)	<u>MAINTENANCE</u> (aseptic)	<u>MULTIPLICATION</u> (in an aseptic facility)	<u>MULTIPLICATION</u> (in a protected environment)	<u>COMMENTS</u>
<b>AN APPLICATION FOR CERTIFICATION MUST BE COMPLETED</b>	Must be filed before the material is transferred to a new owner or transferred into a protected environment or planted in a field.	N/A	Must be filed before the material is transferred to a new owner or transferred into a protected environment or planted in a field.	Must be filed within 30 days after the crop(s) have been planted.  See details in section 2.5.1.2	Use the application for seed potato crop inspection (CFIA 1317). It is recommended that a separate page be used to differentiate between each type of production. Section 2.5.2 details all the info that the application
<b>INSPECTION NEED</b>	-At least once during active production. -Recorded on CFIA 5292	N/A	-At least once during the multiplication phase. -Recorded on CFIA 5292	-At least once, at or about budding / flowering time (40-70 days after planting) Plus, an optional pre-planting inspection (see 2.4.2)	If the facility does not meet program requirement, use form <b>CFIA 5294 for corrective action</b> .
<b>VARIETAL/CLONAL IDENTITY documented</b>	✓	✓	✓	✓	Origin must be duly documented
<b>RECOGNISED ASEPTIC INITIATION AND/OR PROPAGATION PROCEDURES</b>	Each facility must have a propagation procedure manual (2.1.5).	The facility must use recognised aseptic propagation procedures.	Each facility must have a propagation procedure manual (2.3.3).	The producer must adopt a management program that includes effective sanitation practices (2.4.7). The protected environment must be "Aphid proof" (2.4.4).	
<b>LAB TESTING REQUIREMENTS: FREE OF VIRUS / VIROID / BACTERIA</b>	Minimum of 2 plantlets per variety.  <b>Viruses:</b> PVA,PVS,PVM, PVY, PVX, PLRV, (PotLV, PMTV.starting November 1st, 2005) <b>Viroid:</b> PSTVd <b>Bacteria:</b> CMS A positive test will result in the disposal of that clone and all its progeny	No requirements. <b>Except:</b> Where maintenance takes place in a facility other than the Initiating facility, the material must be certified as Nuclear Stock class seed potatoes prior to maintenance. (2.2.5) <b>Note:</b> Maintenance within initiating facility requires separation between Nuclear stock and other material	Minimum of 2 plantlets per variety (valid for one year, must have <u>valid* testing results at all time during multiplication process</u> ) <b>Viruses:</b> PVA,PVS,PVM, PVY, PVX, PLRV <b>Viroid:</b> PSTVd <b>Bacteria:</b> CMS <b>Except</b> for micro-tuber production where testing results are required prior to initiation of the production cycle.	Must have <u>valid* testing results at the time of planting</u> for the following: <b>Viruses:</b> PVA,PVS,PVM, PVY, PVX, PLRV <b>Viroid:</b> PSTVd <b>Bacteria:</b> CMS <b>Except</b> for planting first generation mini-tubers (details in section 2.4.13 and 2.4.14)	* For clarification on determining the validity period, the recognised twelve month period will commence on the date that the samples was submitted for testing to the lab (must be in a CFIA accredited laboratory). PMTV and PLRV testing are usually done at the Initiation phase and will be required starting <b>November 1st,2005</b> .

<u>CRITERIA</u>	<u>INITIATION</u> (aseptic)	<u>MAINTENANCE</u> (aseptic)	<u>MULTIPLICATION</u> (in an aseptic facility)	<u>MULTIPLICATION</u> (in a protected environment)	<u>COMMENTS</u>
<b>IF BRR IS DETECTED</b>	·Destroy all progeny of that clonal line -Retest all other aseptic clonal production in the affected facility. <b>Level of testing:</b> a minimum of 2 plantlets per clone/variety.	·Destroy all progeny of that clonal line -Retest all other aseptic clonal production in the affected facility. <b>Level of testing:</b> a minimum of 2 plantlets per clone/variety.	·Destroy all progeny of that clonal line -Retest all other aseptic clonal production in the affected facility. <b>Level of testing:</b> 1% or a minimum of 5 plantlets to maximum of 50 plantlets per clone/variety.	Destroy all production in the protected environment and conduct an investigation to determine risk of spread to farm unit.	If BRR is detected in field crops, a CFIA inspector may be able to verify aseptic techniques within nuclear production and the absence of contact with field grown crops, to prevent de-certification.
<b>IF PSTVd IS DETECTED</b>	·Destroy material from the positive clone/variety	·Destroy material from the positive clone/variety	·Destroy material from the positive clone/variety	·Destroy material from the positive clone/variety	
<b>IF positive FOR ANY REGULATED AND NON REGULATED PATHOGEN</b>	·Destroy all positive material	·Destroy all positive material	·Destroy all positive material	-Determine class eligibility for disease tolerance as in Regulations. (2.4.20) -If evidence of <b>insect disease vector</b> (see section 2.4.19)	
<b>THE FACILITY MUST MAINTAIN AN INFORMATION SYSTEM</b>	(see 2.1.10 for details)	(see 2.2.10 for details)	(see 2.3.9 for details)	(see 2.4.15 for details)	
<b>CFIA ISSUED GROWING CROP CERTIFICATE</b>	√	NA	√	√	Under application and prior to distribution of Nuclear class seed
<b>DOCUMENT USED FOR TRANSFER OF MATERIAL</b>	<b>Nuclear Stock Certificates</b> or <b>Certificate of Authorisation</b> (for unregistered varieties)	NA	<b>Nuclear Stock Certificates</b> or <b>Certificate of Authorisation</b> (for unregistered varieties)	<b>Nuclear Stock Certificates</b> or <b>Nuclear Stock Tags</b> or <b>Certificate of Authorisation</b> (for unregistered varieties)	See section 2.6.3 and 2.6.4 for information to be provided on document issued. And section 2.6.5 for details about transfer of unregistered varieties. *Nuclear stock class seed potatoes produced in a protected environment and transferred to a new owner cannot be used to further produce Nuclear stock class seed potatoes.

Appendix 2

Nuclear Stock Aseptic Facility Inspection Report - CFIA 5292



**NUCLEAR STOCK ASEPTIC FACILITY  
INSPECTION REPORT**

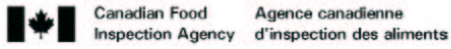
**RAPPORT D'INSPECTION D'UN ÉTABLISSEMENT  
ASEPTIQUE PRODUISANT DU MATÉRIEL NUCLÉAIRE**

Grower's title & name / Titre et nom du producteur		Telephone Number / Numéro de téléphone		
Grower's address / Adresse du producteur		Fax Number / Numéro de télécopieur		
		Inspector / Inspecteur		
Grower number / Numéro du producteur		Date of application / Date de la demande		
<b>Criteria Critères</b>	<b>Yes Oui</b>	<b>No Non</b>	<b>Comments Commentaires</b>	
Application lists all varieties being multiplied, and documentary proof of origin provided / La demande énumère toutes les variétés multipliées, et des preuves documentaires de leur origine sont fournies.				
Producer maintains adequate information system and records for: varietal identification, initiation/propagation dates, origin, sample submission dates, test results, and certification numbers (where applicable) Le producteur maintient un système d'information adéquat et des registres concernant l'identification des variétés, les dates de production/de multiplication, l'origine, les dates de soumission des échantillons, les résultats d'analyse et les numéros de certificat (le cas échéant).	Variety ID Id. des variétés			
	Initiation date Date de prod.			
	Origin Origine			
	Testing dates Dates d'analyse			
	Cert. number N° de certif.			
All material produced from tissue culture sources tested and found to be free from: CRV, PVA, PVM, PVS, PVX, PVY, PLRV and PSTVd within last 12 months. PotLV and PMTV testing done at least once since initiation of the material. / Tout le matériel produit à partir de cultures de tissus analysées dans les 12 derniers mois et trouvées exemptes de flétrissement bactérien, des virus A, M, S, X et Y de la pomme de terre, du virus de l'enroulement et du viroïde de la filosté des tubercules. Les analyses pour le virus latent de la pomme de terre (PotLV) et le virus du Mop-Top (PMTV) ont été faites au moins une fois depuis l'initiation du matériel.				
Procedures manual exists, is implemented, and recognized aseptic procedures used / Le producteur possède un manuel des procédures et le met en œuvre, et il applique des mesures aseptiques reconnues.				
Aseptic environment maintained in required areas Un milieu aseptique est maintenu dans les zones nécessaires.				
Laminar flow hood functioning (insert date of last test certificate) La hotte à flux laminaire fonctionne bien (indiquer la date du dernier certificat de vérification).				
Material and containers visibly free from bacteria, viruses, saprophytic contamination or other diseases Le matériel et les contenants sont visiblement exempts de bactéries, de virus, de contamination saprophyte et d'autres maladies.				
All containers capped Tous les contenants sont fermés.				
All containers labelled with variety and traceable identification number Tous les contenants portent une étiquette indiquant la variété et un numéro d'identification permettant sa traçabilité.				
Physical separation exists between material being initiated, banked, and/or multiplied / On retrouve une séparation physique entre le matériel en cours d'initiation, en banque et/ou en multiplication.				
Banked stock clearly labelled as such Le matériel nucléaire entreposé porte une étiquette qui l'identifie comme tel.				
Facility meets requirements? L'établissement satisfait-il aux exigences?				
Grower's Signature du producteur		Inspector's Signature de l'inspecteur		Date of signature / Date de la signature

CFIA / ACIA 5292 (2004/11) Information may be accessible or protected as required under the provisions of the Access to Information Act

Les renseignements peuvent être accessibles ou protégés selon ce que prescrit la Loi sur l'accès à l'information





**NUCLEAR STOCK ASEPTIC FACILITY  
INSPECTION REPORT**

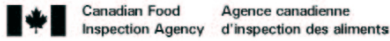
**RAPPORT D'INSPECTION D'UN ÉTABLISSEMENT  
ASEPTIQUE PRODUISANT DU MATÉRIEL NUCLÉAIRE**

Grower's title & name / Titre et nom du producteur	Telephone Number / Numéro de téléphone
Grower's address / Adresse du producteur	Fax Number / Numéro de télécopieur
	Inspector / Inspecteur
Grower number / Numéro du producteur	Date of application / Date de la demande
Overall or additional comments / Commentaires généraux ou autres	

CFIA / ACIA 5292 (2004/11) Information may be accessible or protected as required under the provisions of the Access to Information Act / Les renseignements peuvent être accessibles ou protégés selon ce que prescrit la Loi sur l'accès à l'information



**Nuclear Stock Protected Environment Inspection Report - CFIA 5293**




**NUCLEAR STOCK PROTECTED ENVIRONMENT INSPECTION REPORT**

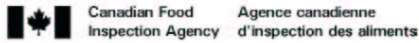
**RAPPORT D'INSPECTION D'UN MILIEU PROTÉGÉ PRODUISANT DU MATÉRIEL NUCLÉAIRE**

Grower's title & name / Nom et titre du producteur	Telephone Number / Numéro de téléphone		
Grower's address / Adresse du producteur	Fax Number / Numéro de télécopieur		
	Inspector / Inspecteur		
Grower number / Numéro du producteur	Date of application / Date de la demande		
Alternative contact / Autre personne-ressource	Crop / Récolte <input type="checkbox"/> 1 <sup>st</sup> / 1 <sup>ère</sup> <input type="checkbox"/> 2 <sup>nd</sup> / 2 <sup>e</sup> <input type="checkbox"/> 3 <sup>rd</sup> / 3 <sup>e</sup>		
Number of protected environment units producing nuclear stock Nombre d'unités de production de matériel nucléaire en milieu protégé	This inspection report relates to production unit number Le présent rapport d'inspection concerne l'unité de production n°		
<b>2 (A) PRE-PLANTING inspection of the protected environment facility / (A) Inspection du milieu protégé AVANT LA PLANTATION</b>			
<b>Criteria Critères</b>	<b>Yes Oui</b>	<b>No Non</b>	<b>Comments Commentaires</b>
Facility is aphid-proof at all possible entry points L'établissement est complètement à l'épreuve des pucerons			
Facility and all material used for production are disinfected and free of solanaceous plants or debris / L'établissement et tout le matériel utilisé pour la production sont désinfectés et exempts de plants de solanacées et de débris			
Entrance foot-bath present Il y a un bain de pieds à l'entrée de l'établissement.			
Adequate double door entrance Entrée à double portes à l'épreuve des pucerons.			
Soil-free medium will be used Un milieu de croissance exempt de terre sera utilisé.			
Separation between medium & soil Il y a une séparation physique entre le sol et le milieu de croissance.			
Insect monitoring program, sanitation practices and information system established Un programme de surveillance des insectes, des pratiques sanitaires et un système d'information sont bien établis.			
Facility meets requirements? L'établissement satisfait-il aux exigences?			

Grower's Signature du producteur \_\_\_\_\_ Inspector's Signature de l'inspecteur \_\_\_\_\_ Date of signature / Date de la signature \_\_\_\_\_

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Grower's title & name / Nom et titre du producteur		Grower number / Numéro du producteur		Crop / Récolte <input type="checkbox"/> 1st / 1ère <input type="checkbox"/> 2nd / 2e <input type="checkbox"/> 3rd / 3e		
<b>2 (B) GROWING CROP inspection of the protected environment facility / Inspection des CULTURES SUR PIED dans un milieu protégé</b>						
<b>Criteria / Critères</b>		<b>Yes / Oui</b>	<b>No / Non</b>	<b>Comments / Commentaires</b>		
Application lists all varieties present, and documentary proof of origin provided / Toutes les variétés présentes sont inscrites sur la demande d'inspection et des preuves documentaires de leur origine sont fournies.						
Floor plan submitted showing location of each variety / Un plan montrant l'emplacement de chaque variété est fourni.						
All lots produced from material tested and found to be free from: BRR, PVA, PVM, PVS, PVX, PVI, PLRV and PSTVd within last 12 months. PotLV and PMTV testing done at least once since initiation of the material. / Tous les lots sont produits à partir de matériel analysé dans les 12 derniers mois et trouvé exempt de flétrissement bactérien, des virus A, M, S, X et Y de la pomme de terre, du virus de l'enroulement et du viroïde de la filotité des tubercules. Les analyses pour le virus latent de la pomme de terre (PotLV) et le virus du Mop-Top (PMTV) ont été faites au moins une fois depuis l'initiation du matériel.						
Information system exists and is well-maintained / L'établissement possède un système d'information et le met à jour constamment.						
Effective sanitation practices plus disease and insect monitoring program utilised / Des pratiques sanitaires efficaces et un programme de surveillance des maladies et des insectes sont appliqués.						
Aphid-proof screening intact / Le système de détection des pucerons est intact.						
Double doors and entire structure aphid proof / Les doubles portes et toute la structure sont à l'épreuve des pucerons.						
Entrance foot-bath present and refreshed in accordance with manufacturer's instructions / Il y a un bain de pieds situé à l'entrée de l'établissement et le produit désinfectant est rafraîchi selon les directives du fabricant.						
Yellow sticky traps or equivalent in use and checked / Des pièges collants jaunes ou l'équivalent sont utilisés et vérifiés.						
All medium used is soil-free / Tous les milieux de croissance utilisés sont exempts de terre.						
Ground bed separation appears intact / La séparation entre le sol et le milieu de culture semble intacte.						
Crop is budding or flowering at time of inspection / La culture a des bourgeons ou des fleurs au moment de l'inspection.						
Varieties/clones separated by physical barriers / Les variétés et semis sont séparés par des barrières physiques.						
Visibly free from varietal mixtures / Visiblement exempt de mélanges de variétés.						
Free from non-nuclear potatoes and other solanaceous plants or weeds / Exempt de pommes de terre qui ne sont pas du matériel nucléaire, de plants de solanacées et de mauvaises herbes.						
Free from observable symptoms of disease / Exempt de symptômes observables de maladie.						
Free from observable presence of, or signs of, aphids / Exempt de pucerons ou de signes observables de leur présence.						
Crop can be certified without leaf samples being taken for lab testing (if not, provide details of symptoms observed/other reason for sampling) / La culture peut être certifiée sans le prélèvement d'échantillon pour analyse en laboratoire. (Sinon, détailler les symptômes de maladies observés ou spécifier toute autre raison exigeant un prélèvement d'échantillon)						
Growing crop meets program requirements / Les cultures sur pied satisfont aux exigences du programme.						

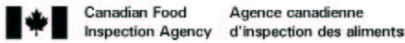
Grower's Signature du producteur \_\_\_\_\_ Inspector's Signature de l'inspecteur \_\_\_\_\_ Date of signature / Date de la signature \_\_\_\_\_

CFIA / ACIA 5293 (2004/11) Information may be accessible or protected as required under the provisions of the Access to Information Act

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**NUCLEAR STOCK PROTECTED ENVIRONMENT  
INSPECTION REPORT**

**RAPPORT D'INSPECTION MILIEU PROTÉGÉ  
MATÉRIEL NUCLÉAIRE**

Grower's title & name / Nom et titre du producteur	Telephone Number / Numéro de téléphone
Grower's address / Adresse du producteur	Fax Number / Numéro de télécopieur
	Inspector / Inspecteur
Grower number / Numéro du producteur	Date of application / Date de la demande
Overall or additional comments / Commentaires généraux ou autres	

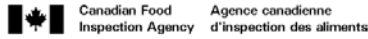
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Grower's Signature du producteur                      Inspector's Signature de l'inspecteur                      Date of signature / Date de la signature

CFIA / ACIA 5293 (2004/11)      Information may be accessible or protected as required under the provisions of the Access to Information Act      Les renseignements peuvent être accessibles ou protégés selon ce que prescrit la Loi sur l'accès à l'information      **Canada**

Appendix 4

**Notification of Non-Compliance of Nuclear Stock Production Facility and Requirement for Corrective Action - CFIA 5294**



**NOTIFICATION OF NON-COMPLIANCE OF NUCLEAR STOCK PRODUCTION FACILITY AND REQUIREMENT FOR CORRECTIVE ACTION**

**AVIS DE NON-CONFORMITÉ AUX ÉTABLISSEMENTS DE PRODUCTION DE POMMES DE TERRE DE SEMENCE « MATÉRIEL NUCLÉAIRE » ET DEMANDE DE MESURES CORRECTIVES**

Grower's title & name / Titre et nom du producteur	Telephone Number / Numéro de téléphone
Grower's address / Adresse du producteur	Fax Number / Numéro de télécopieur
	Inspector / Inspecteur
Grower number / Numéro du producteur	Date of application / Date de la demande
Alternative contact / Autre personne-ressource	<input type="checkbox"/> In-vitro production / Production in vitro <input type="checkbox"/> Protected environment production / Production en milieu protégé
<b>This section for protected environments only / La présente section s'applique seulement à la production en milieu protégé.</b>	
Crop / Récolte <input type="checkbox"/> 1st / 1 <sup>ère</sup> <input type="checkbox"/> 2nd / 2 <sup>e</sup> <input type="checkbox"/> 3rd / 3 <sup>e</sup>	
Number of units producing nuclear stock / Nombre d'unités produisant du matériel nucléaire	This notification relates to unit number / Le présent avis concerne l'unité de production n°
<b>Description of non-compliance / Description des non-conformités</b>	
The following non compliance has been noted at the above facility / Les non-conformités suivantes ont été observées à l'établissement susmentionné  _____  _____  _____	
The above noted defect must be rectified within _____ days for the crop to remain eligible for certification / Les non-conformités susmentionnées doivent être corrigées dans les _____ jours pour que la culture demeure admissible à la certification. A CFIA inspector will return to the above described facility within _____ days to verify that appropriate corrective action has been taken. / Un inspecteur de l'ACIA retournera à l'établissement susmentionné dans les _____ jours pour vérifier que les mesures correctives appropriées ont été prises.	
Grower's Signature / du producteur	Inspector's Signature / de l'inspecteur
Date of signature / Date de la signature	
<b>Verification of compliance / Vérification de la conformité</b>	
The above facility has been re-inspected in light of the above noted non-compliance. The required corrective action has been taken and the facility now complies with the seed potato program / L'établissement susmentionné a été réinspecté concernant les non-conformités notées ci-dessus. Les mesures correctives ont été prises, et l'établissement est maintenant conforme aux exigences du Programme de certification des pommes de terre de semence	
<input type="checkbox"/> Yes / Oui <input type="checkbox"/> No / Non	
Inspector's Signature / de l'inspecteur	
Date of signature / Date de la signature	

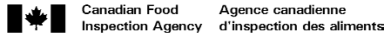
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Appendix 5

Application Form for Issuance of Nuclear Stock Tags and Certificates - CFIA 5295



APPLICATION FORM FOR ISSUANCE OF  
NUCLEAR STOCK TAGS AND  
CERTIFICATES

DEMANDE DE DÉLIVRANCE D'ÉTIQUETTES  
ET DE CERTIFICATS  
« MATÉRIEL NUCLÉAIRE »

Grower or facility name / Nom du producteur ou de l'établissement				Date of issuance request / Date de la demande	
Consignee name and address / Nom et adresse du destinataire					
<p><b>NOTE:</b> tags/certificates must accompany shipment and <b>cannot</b> be back-dated /  <b>NOTE :</b> Les étiquettes et les certificats doivent accompagner l'envoi et <b>ne doivent pas</b> être antidatés.</p>					
Variety Variété	Certification number Numéro de certificat	Material type & generation* Type de matériel et génération*	Quantity to be shipped Quantité à expédier	Destination	Date last submitted for testing Date des derniers tests en laboratoires
<p>* If mini-tubers are being shipped, this application must indicate whether they are first or second generation                  * Si l'envoi comprend des minitubercules, la présente demande doit indiquer si ils sont de première ou de deuxième génération.</p>					
<b>DECLARATION / DÉCLARATION</b>					
The above information is accurate to the best of my knowledge. All material being shipped has been approved and certified by the Canadian Food Inspection Agency			À ma connaissance, les renseignements ci-dessus sont exacts. Tout le matériel expédié a été approuvé et certifié par l'Agence canadienne d'inspection des aliments.		
Applicant's Signature du demandeur			Date of application / Date de la demande		
<b>CFIA OFFICE USE ONLY / À L'USAGE DE L'ACIA SEULEMENT</b>					
Date nuclear production facility last inspected and approved Date de la dernière inspection et approbation de l'établissement de production de matériel nucléaire				Date tags/certificate(s) issued Date de la délivrance des étiquettes et des certificats	

Signature of inspector / officer issuing tags/certificate(s)  
Signature de l'inspecteur ou de l'agent délivrant les étiquettes et les certificats

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