

FORM OF ORDER AND TRANSMITTAL BY AGENCY HAVING SINGLE HEAD

State of Washington

Department of Agriculture
(agency name)

Administrative Order No. 1933

(1) I, C. Alan Pettibone, director of Washington State Department of Agriculture

do promulgate and adopt at Olympia, WA (place)

the annexed rules relating to: Certified Seed Potato Limited Generation program in Chapter 16-324.

(2) ALTERNATIVE A. Use only for Adoption of Permanent Rules.

This action is taken pursuant to Notice No. filed with the code reviser on These rules shall take effect: [ ] thirty days after they are filed with the code reviser pursuant to RCW 34.04.040(2). [ ] at a later date, such date being

(2) ALTERNATIVE B. Use only for Adoption of Emergency Rules.

I, C. Alan Pettibone, find that an emergency exists and that this order is necessary for the preservation of the public health, safety, or general welfare and that observance of the requirements of notice and opportunity to present views on the proposed action would be contrary to public interest. A statement of the facts constituting the emergency is: The limited generation certified seed potato program is one that has been developed over the past few years and adopted by other states. Because of Washington growers becoming involved in this program, it is necessary to immediately adopt standards until a hearing can be scheduled.

These rules are therefore adopted as emergency rules to take effect upon filing with the code reviser.

(3) Pursuant to the requirements of RCW 34.04.026 that "every agency shall incorporate the most specific, but in no case omit all, of the following language alternatives when adopting or amending rules" fill in statement (a), (b), or (c) as appropriate:

[X] (a) This rule is promulgated pursuant to RCW 15.14 RCW and is intended to administratively implement that statute. [ ] (b) This rule is promulgated pursuant to RCW which directs that the

(agency) has authority to implement the provisions of (name of act or RCW citation)

[ ] (c) This rule is promulgated under the general rule-making authority of the (agency) as authorized in RCW

(4) The undersigned hereby declares that the agency has complied with the provisions of the Open Public Meetings Act (chapter 42.30 RCW), the Administrative Procedure Act (chapter 34.04 RCW) and the State Register Act (chapter 34.08 RCW) in the adoption of these rules.

(5) This order, after being first recorded in the order register of this agency, is herewith transmitted to the Code Reviser for filing pursuant to chapter 34.04 RCW and chapter 1-12 WAC.

APPROVED AND ADOPTED June 9 1987

STATE OF WASHINGTON FILED

By [Signature] Deputy Director Title

JUN 9 1987

[Form CR-7: Rev. 7/23/82]

CODE REVISER'S OFFICE WSR 87-13-017

AMENDATORY SECTION (Amending Order 1199, filed 5/5/71, effective 6/7/71)

WAC 16-324-360 DEFINITIONS. The definitions set forth in this section shall apply throughout this chapter, unless the context otherwise requires:

(1) "Department" means the department of agriculture of the state of Washington.

(2) "Director" means the director of the department of agriculture or his duly appointed representative. (Inspector)

(3) "Potatoes" mean Irish potatoes that have been produced outside of or within the state of Washington and are being handled for seed purposes, propagation, or reproduction within the state of Washington.

(4) "Disease treated" means tested for potato viruses, PVA, PVM, PVS, PVX, PVY, leafroll, spindle tuber viroid, Erwinia carotovora carotovora, Erwinia carotovora atroseptica and Corynebacterium sependonicum.

(5) "Root knot nematode" means a disease (infestation) of plant parasitic nematodes of potatoes including but not limited to Ditylenchus, Pratylenchus, and Meloidogyne genera.

(6) "Micropropagated" means potato stock propagated using aseptic laboratory techniques and culture media to promote plant tissue growth.

(7) "In vitro" means in an artificial environment outside the living organism.

(8) "Prenuclear" means micropropagated plants in vitro or tubers in vitro. Also included are micropropagated plants or microtubers produced in a greenhouse.

(9) "Nuclear stock" means plantlets, microtubers, minitubers, or seed potatoes produced from pre-nuclear stock.

(10) "Microtubers" means tubers produced in vitro by a micropropagated plant or plantlet.

(11) "Minitubers" means tubers produced under controlled greenhouse conditions.

(12) "Tuber unit" means a method of planting whereby cut seed pieces from one tuber are dropped consecutively in a row.

(13) "Hill unit" means a method of planting whereby all tubers from one plant are dropped consecutively in a row.

(14) "Family unit" means a method of planting whereby pre-nuclear stock made up of various family lines are mass planted in recognizably separate plots limited to the size and number of plants per plot.

NEW SECTION

WAC 16-324-600 LIMITED GENERATION (L.G.) CERTIFIED SEED POTATO PRODUCTION. The limited generation (L.G.) program is offered as an alternative to the current program for certification of seed potatoes. This L.G. program is not intended to supersede or replace existing rules and standards for certified seed potato production. Limited generation certified seed potato production shall comply with current standards, where applicable, in addition to the following rules. The purpose of the program is to provide certification for additional kinds of propagative stock now being produced by tissue culture and/or stem cutting techniques.

NEW SECTION

WAC 16-324-610 LIMITED GENERATION CERTIFIED SEED POTATO--LAND REQUIREMENTS. Land requirements in the L.G. certified seed potato program are as follows:

- (1) Well water shall be the source of irrigation.
- (2) Class Produced      Years out of Potatoes  
  (Unless prior crop was a  
  higher class-same variety)
- Prenuclear                 Approved laboratory (greenhouse)
- Nuclear                    Six years (new ground preferred,  
  fumigation required)
- Generation I             Four years
- Generation II            Three years
- Foundation               Two years
- Certified                 Two years.

NEW SECTION

WAC 16-324-620 LIMITED GENERATION CERTIFIED SEED POTATO--ISOLATION REQUIREMENTS. Isolation required for limited generation seed potato are as follows:

- (1) Prenuclear - approved laboratory (greenhouse).
- (2) Nuclear - Generation I: Location of field approved by the department.
- (3) Generation II - three hundred feet from potatoes not classified as virus tested.
- (4) Foundation and certified - six feet minimum space between lots of a different class and variety.
- (5) Each lot shall remain distinctly separated in the field and in storage.
- (6) Fields shall be staked or marked so that varieties, lots, unit plantings, single drop plantings, and different seed sources can be identified.
- (7) Access to fields shall be severely restricted. Entrance shall only be allowed in the presence of the grower.
- (8) Nuclear and Generation I stocks are to be planted by a unit method. Cut seed and single drop seed shall be sorted and planted separately within the unit plot, with single drop seed identified.
- (9) Nuclear units shall be planted with a one row skip between every two rows. If a ground rig is used for spraying, a wide enough spray row shall be allowed so tires will not touch plants during the growing season.

NEW SECTION

WAC 16-324-630 LIMITED GENERATION CERTIFIED SEED POTATO--FIELD INSPECTION TOLERANCES.

## FIELD INSPECTION TOLERANCES: PERCENT DISEASES

Factor	NUCLEAR		GEN. I		GEN. II		FOUND.		CERT.	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Varietal mixture	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.01	0.08	0.05
Pvy mosaic	0.00	0.00	0.00	0.00	0.01	TR	0.50	0.25	0.50	0.25
Leafroll	0.00	0.00	0.00	0.00	0.01	TR	0.03	.010	.080	0.05
Blackleg	0.00	0.00	0.10	0.10	0.50	0.50	1.00	1.00	2.00	2.00
Ring rot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nematode	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PVX	0.00		0.50		1.00		3.00		4.00	
% PVX tested	25%		10%		1%		.5%			

NEW SECTION

WAC 16-324-640 LIMITED GENERATION CERTIFIED SEED POTATO--WINTER GREENHOUSE TEST TOLERANCE.

## WINTER GREENHOUSE TEST TOLERANCE (PERCENT)

Factor	NUCLEAR	GEN. I	GEN. II	FOUND.	CERT.
Leafroll	0	0.25	0.3	0.75	1
Mosaic	0	0.25	0.5	1	2
Spindle Tuber	0	0	0	0	0
Other virus	0	0.25	0.75	2	2
Total virus	0	0.50	0.75	2	2

NEW SECTION

WAC 16-324-650 LIMITED GENERATION CERTIFIED SEED POTATO--PRODUCTION PHASES. (1) Prenuclear seed production phases:

SEE ILLUSTRATION  
(WAC 16-324-650, illus. 1)

(1) Prenuclear seed production phases:

PRENUCLEAR SEED PRODUCTION

- Stocks laboratory tested for viral and bacterial pathogens

LABORATORY PRODUCTION  
-plantlets  
-microtubers

GREENHOUSE PRODUCTION  
-transplants  
-minitubers

FIELD SEASON I

(prenuclear stock is planted in identifiable nuclear units)

NUCLEAR SEED PRODUCTION

- All units are PVX tested (0% tolerance)
- 2 visual inspections
- Tubers post-harvest tested

All tubers in each nuclear unit are harvested and stored together as a bulked nuclear unit =

NUCLEAR CLASS

FIELD SEASON II

(One or more bulked nuclear units are combined and planted as identifiable units)

GENERATION I PRODUCTION

- All units are PVX tested (.5% tolerance)
- 2 visual inspections
- Tubers post-harvest tested

Units are harvested as one bulked lot =

GENERATION I CLASS

(2) Generation II seed production phases:

SEE ILLUSTRATION  
(WAC 16-324-650, Illus. 2)

NEW SECTION

WAC 16-324-660 LIMITED GENERATION CERTIFIED SEED POTATO--SANI-  
TATION. Requirements for sanitation in the limited generation certi-  
fied seed program are as follows:



(2) Generation II seed production phases:

GENERATION II SEED PRODUCTION

- Field is PVX tested (1.0% tolerance)
- 2 visual inspections
- Random sample of tubers evaluated in a winter grow out test

FIELD SEASON III

(Generation I seed is mass planted)

↓  
Field (lot) harvested and stored =  
GENERATION II CLASS

FOUNDATION SEED PRODUCTION

- Field is PVX tested (3.0% tolerance)
- 2 visual inspections
- Random sample of tubers evaluated in a winter grow out test

↓  
FIELD SEASON IV

(Generation II seed is mass planted)

↓  
Field (lot) harvested and stored =  
FOUNDATION CLASS

CERTIFIED SEED PRODUCTION

- Field is PVX tested (4.0% tolerance)
- 2 visual inspections
- Random sample of tubers evaluated in a winter grow out test

↓  
FIELD SEASON V

(Generation III seed is mass planted)

↓  
Field (lot) harvested and stored =  
CERTIFIED CLASS

↓  
END OF GENERATION PROGRAM



(1) Chemicals used in the sanitation of equipment shall be those recommended by the "Pacific Northwest Plant Disease Control Handbook." Vector control shall be maintained throughout the growing season as prescribed by the "Pacific Northwest Plant Disease Control Handbook."

(2) Seed stocks in a limited generation program shall be planted and harvested prior to handling any other seed stock. The highest generation shall be handled prior to lower classes within the program. All equipment used in the cutting, planting, digging, storage, and sorting process shall be sanitized between lots and varieties. When cutting nuclear stock, gloves and knives shall be sanitized between each tuber cut.

(3) Precautions shall be taken when roguing, irrigating, or cultivating to prevent the spread of potato pathogens. Only sanitized footwear shall be allowed in the field.

(4) To produce nuclear, Generation I and Generation II stock, a grower shall have successfully produced certified seed potatoes the previous two years with no bacterial ring rot disease during this period. Exceptions to this subsection are possible on approval by the department.

(5) Only department approved containers shall be used during the digging, storage, and packing process. Approved containers shall be new sacks or bags. Wood containers shall be painted with no bare wood exposed.

(6) Appropriate procedures for sanitizing shall include a pressure washer to eliminate all dirt and dry matter, followed by steam cleaning, followed by application of a recommended chemical to kill bacteria.