

1510.2330 REQUIREMENTS FOR PRODUCTION OF DIFFERENT CLASSES OF CERTIFIED SEED POTATOES.

Subpart 1. Prenuclear class certified seed potatoes (PN).

A. A lot grown as and intended to be Prenuclear must be grown from plants tested and shown to be free from the following pathogens:

- (1) *Clavibacter michiganensis ssp. sepedonicus* (ring rot);
- (2) *Pectobacterium atrosepticum ssp. Atrosepticum, carotovora* (blackleg);
- (3) potato virus X;
- (4) potato virus S;
- (5) potato virus A;
- (6) potato virus M;
- (7) potato virus Y;
- (8) potato spindle tuber viroid; and
- (9) potato leaf roll virus.

Each initial explant or tuber must also have been tested for any other organisms for which testing is required by the phytosanitary requirements in another state or Canadian province. Material in maintenance must have been tested during the year of the production of prenuclear class.

B. Prenuclear class seed potatoes must be produced in a greenhouse or screenhouse under sanitary conditions, free from insects and weeds that can harbor or transmit potato diseases or other conditions of possible disease contamination. All facilities must be sufficiently insulated from insects by screens and double doors. The facilities and the equipment are subject to inspection to verify freedom from possible disease contamination.

C. One percent of each lot or ten plants or tubers from each lot, whichever is greater, must be tested during the growing season to verify that the crop is free from potato virus X, potato virus Y, potato leaf roll virus, *C. michiganensis*, and *P. atrosepticum*.

D. Prenuclear tubers may originate from greenhouse tubers for one year only if the greenhouse tubers have remained at the same growing operation and have remained isolated from field-grown tubers.

E. A lot must be rejected if it contains any diseased plants at any inspection, or varietal mixture at final inspection.

F. The allowable tolerances for disease and varietal mixture for seed potatoes classified as prenuclear are in Table 1 in subpart 11 under column PN.

Subp. 2. **Generation 1 class certified seed potatoes (G1).** Generation 1 class seed potatoes must meet the following requirements:

- A. The seed source must be either Prenuclear tubers or plantlets.
- B. Tubers or plantlets must be planted in identifiable family units.
- C. Each field must be tested during the growing season for potato virus X. For a lot to be tagged "virus tested (VT)," no more than one percent of the plants tested may be infected with potato virus X.
- D. Each lot must be stored in an individual identifiable unit.
- E. The allowable tolerances for disease and varietal mixture for seed potatoes classified as Generation 1 are in Table 1 in subpart 11 under column G1.

Subp. 3. **Generation 2 class certified seed potatoes (G2).** Generation 2 class seed potatoes must originate from Generation 1 class seed potatoes. Each field may be tested during the growing season for potato virus X at grower's request. For a lot to be tagged "virus tested (VT)," no more than three percent of the plants tested may be infected with potato virus X. The allowable tolerances for disease and varietal mixture are in Table 1 in subpart 11 under column G2.

Subp. 4. **Generation 3 class certified seed potatoes (G3).** Generation 3 class seed potatoes must originate from Generation 2 class seed potatoes. The allowable tolerances for disease and varietal mixture are in Table 1 in subpart 11 under column G3.

Subp. 5. **Generation 4 class certified seed potatoes (G4).** Generation 4 class seed potatoes must originate from Generation 3 class seed potatoes. The allowable tolerances for disease and varietal mixture are in Table 1 in subpart 11 under column G4.

Subp. 6. **Generation 5 class certified seed potatoes (G5).** Generation 5 class seed potatoes must originate from Generation 4 class seed potatoes. The allowable tolerances for disease and varietal mixture are in Table 1 in subpart 11 under column G5.

Subp. 7. **Generation 6 class certified seed potatoes (G6).** Generation 6 class seed potatoes must originate from Generation 5 class seed potatoes. The allowable tolerances for disease and varietal mixture are in Table 1 in subpart 11 under column G6.

Subp. 8. **Primary Foundation classes (PF).**

A. A lot grown as and intended to be Primary Foundation certified seed potatoes must originate from clonal selection, with all clones laboratory tested and be proven free from the following pathogens:

- (1) *Clavibacter michiganensis ssp. sepedonicus* (ring rot);
- (2) potato virus A;

- (3) potato virus M;
- (4) potato virus Y;
- (5) potato spindle tuber viroid; and
- (6) potato leaf roll virus.

B. A lot must be kept under direct control of the grower and must not be stored in any warehouse in which other potatoes are stored.

C. The two classes of Primary Foundation seed potatoes are PF1 and PF2.

(1) PF1 class certified seed potatoes must originate from clonal multiplication where all clones have been laboratory-tested. PF1 class seed potatoes are tuber united. Crops must be free of bacterial ring rot for a minimum of two years to be eligible to be PF1 class seed potatoes. The allowable tolerances for disease and variety mixture are in Table 2 in subpart 12 under column PF1.

(2) PF2 class certified seed potatoes must originate from PF1 class seed potatoes and originate from the same farm operation. They must be grown from potatoes produced on a tuber unit seed plot. Crops must be free of bacterial ring rot for a minimum of two years to be eligible to be PF2 class seed potatoes. The allowable tolerances for disease and varietal mixture are in Table 2 in subpart 12 under column PF2.

Subp. 9. **Foundation classes (F).** The two classes of Foundation class seed potatoes are F1 and F2.

A. F1 class certified seed potatoes must originate from Primary Foundation class seed potatoes. The allowable tolerances for disease and varietal mixture are in Table 2 in subpart 12 under column F1.

B. F2 class certified seed potatoes must originate from F1 class seed potatoes. The allowable tolerances for disease and varietal mixture are in Table 2 in subpart 12 under column F2.

Subp. 10. **Certified class certified seed potatoes.** Certified class seed potatoes must originate from Foundation or Generation classes of seed potatoes. The allowable tolerances for disease and varietal mixture are in subpart 11, Table 2, under column C.

Subp. 11. **Table 1.**

TABLE 1
TOLERANCES FOR DISEASES AND VARIETAL
MIXTURE FOR GENERATION CLASSES

CLASSES

	PN	G1	G2	G3	G4	G5	G6	C
Tolerances:								
Severe Mosaic	0	0.5	0.5	0.5	0.5	0.5	0.5	1
Leaf Roll	0	0.5	0.5	0.5	0.5	0.5	0.5	1
Total	0	0.5	0.5	0.5	0.5	0.5	0.5	1
Other viruses (S and X excluded)	0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Mycoplasmas	0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Total	0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Mild Mosaic (S)	0							
Mild Mosaic (X)	0	VT:1	VT:3	VT:3	VT:3	VT:3	VT:3	VT:3
Blackleg	0	0	0.2	0.5	1	exc.	exc.	exc.
Varietal mixture	0	0	0	0	0.1	0.1	0.2	0.2
Ring Rot and Spindle Tuber	0	0	0	0	0	0	0	0
Winter Test:								
Virus, Ch. Dam.		0.5	0.5	0.5	0.5	0.5	0.5	0.5
BRR, PSTV		0	0	0	0	0	0	0
Summer Test:								
PVX, VT* virus	0	1	3	3	3	3	3	
BRR, PSTV	0	0	0	0	0	0	0	0

Numbers represent percentages

VT means Virus Tested

Mycoplasmas: Haywire, Witches Broom, Yellow Dwarf

Severe Mosaic: PVY, PVA, PVM

BRR means Bacterial Ring Rot

PSTV means Potato Spindle Tuber Viroid

Ch. Dam. means Expressing symptoms of chemical damage

* For the classes G2 and lower, the summer test for PVX is done on request of the grower only. The lot may be labeled "Virus Tested," if the tolerance of one percent for G1 and three percent for the lower classes is met.

Subp. 12. **Table 2.**

TABLE 2
TOLERANCES FOR DISEASES AND VARIETAL MIXTURE FOR
CLASSES ORIGINATING FROM CLONAL MULTIPLICATION

	CLASSES					
	CLONE	PF1	PF2	F1	F2	C
Severe Mosaic	0	0.5	0.5	0.5	0.5	1.00
Leaf roll	0	0.5	0.5	0.5	0.5	1.00
Total	0	0.5	0.5	0.5	0.5	1.00
Total other viruses (S and X excluded)	0	0.5	0.5	0.5	0.5	0.5
Mycoplasmas	0	0.5	0.5	0.5	0.5	0.5
Total	0	0.5	0.5	0.5	0.5	0.5
Mild Mosaic (S)						
Mild Mosaic (X)						
Blackleg		0.1	0.2	exc.	exc.	exc.
Varietal Mixture				0.1	0.2	0.2
Ring Rot and Spindle Tuber	0	0	0	0	0	0
Winter Test:						
Virus, Ch. Dam.		0.5	0.5	0.5	0.5	0.5
BRR, PSTV		0	0	0	0	0
Summer Lab Test:						
Virus	0					
BRR	0					
PSTV	0					

Numbers represent percentages

VT means Virus Tested

Mycoplasmas: Haywire, Witches Broom, Yellow Dwarf

Severe Mosaic: PVY, PVA, PVM

BRR means Bacterial Ring Rot

PSTV means Potato Spindle Tuber Viroid

Ch. Dam. means Expressing symptoms of chemical damage.

Statutory Authority: *MS s 14.05; 18.79; 21.113; 21.118*

History: *21 SR 482; 24 SR 546; 25 SR 1142; 35 SR 1325*

Published Electronically: *March 1, 2011*