Seed Potato Certification Grower Requirements

December 2025: Version 1

1. DEFINITIONS & ACRONYMS

Approved	Authorised by the New Zealand Seed Potato Certification Authority (NZSPCA) to perform specified activities under the scheme.
Approved Organisation	An organisation approved by the NZSPCA to undertake seed potato certification activities under the scheme.
Authority	The New Zealand Seed Potato Certification Authority (NZSPCA), operating as an unincorporated committee of Potatoes New Zealand Incorporated.
Certified seed	Seed potatoes for which seed certification labels have been issued.
Crop inspection	Official visual examination of potato crop entered for certification to determine compliance with requirements of the scheme.
Crop Reference No	ID for a particular seed line from planting until it is replanted in the following season.
Faults	Factors affecting seed potato quality, including pests and diseases and their symptoms, rogues, external damage, misshapen tubers, and sizing, for which tolerances are established within the scheme.
Field Certified	A programme within the scheme for seed potatoes intended for process potato, where no tuber inspection is undertaken.
Foreigners	Plant/s of a different variety to the one registered for the seed line certification.
Generation	One growing cycle of a potato crop.
Group	A programme where growers maintain seed lines on their farms and make selections from these for multiplication.
Haulm destruction	Any method of termination of crop growth. Chemical (desiccation) or physical (flailing, haulm pulling, haulm burning etc).
IVA	Independent verification agency (SGS-AsureQuality) authorized by MPI to deliver regulatory services including the PCN/Wart survey.
Lot	A seed line, or portion of a seed line presented for tuber inspection.
Merchant	Commercial entity managing the multiplication of seed potatoes for seed potato certification.
Mini-tuber	Seed potato grown in a control environment facility e.g., glass house.
MPI	Ministry for Primary Industries.
Off type	Genetic variants (different genotype) to the one registered for the seed line certification.
PCN	Potato Cyst Nematode.
Plot map	A map/site plan denoting the layout of seed lines within an individual paddock.
Production site	A defined area which can be GPS mapped in which a seed potato crop will be / is being grown.
Pyramid	A programme where seed potato multiplication starts with tissue culture plantlets or mini-tubers and tuber numbers are increased through successive field generations.
Rogues	Off types (genetic variants), volunteers, and foreign cultivars.
ROP	Region of Production.
Scheme	The New Zealand Seed Potato Certification scheme as published and amended from time to time by the Authority.
Seed certification labels	Labels approved by the Authority used to provide assurances to seed potato buyers that seed meets the requirements of the scheme.

Seed line	Seed potatoes, including tissue culture plantlets, of a single variety that when grown are confined within one field and for which a unique reference number has been issued by the Authority.
Seed Potato Certification	All those activities leading to, and including, the official issuance of a seed certification label.
Seed Sown Reference No	ID for the seed line used to plant a current season crop. Therefore, it is the Crop Reference No. from the previous season seed crop.
Tissue culture	Growth of potato plantlet on an artificial medium under sterile conditions.
Tuber inspection	Visual examination of seed tubers submitted for certification to determine compliance with requirements of the scheme.

2. REQUIREMENTS FOR GROWERS

2.1 REGISTRATION OF NEW GROWERS

All new growers must complete the 'New Grower – Merchant Registration Form'. Registration forms are available from the Administrator or from the Potatoes New Zealand website. Submit completed application forms to the Administrator.

2.2 MPI OFFICIAL ASSURANCE PROGRAMME - POTATO CYST NEMATODE AND POTATO WART

1. All seed potato crop production sites registered into PNZ's Seed Potato Certification Scheme must also be registered by the grower into the **Ministry for Primary Industry Official Assurance Programme – Potato Cyst Nematode and Potato Wart**.

   NB: Seed lines from registered production sites will only be certified once the site/s have been designated "Compliant" on the MPI website and have met all other Certification Scheme standards. Registered production sites can be found from the "Registers and Lists" page on the MPI website.
2. Complete and submit the **MPI OAP PCN and Potato Wart forms** to the grower-nominated IVA and Potatoes New Zealand no later than 21 days after planting.
3. The IVA will manage and process the completed grower-provided PCN forms onto the MPI website and complete the production site soil sampling survey (if soil sampling is required).

2.3 ANNUAL SEED LINE REGISTRATION

Each seed line must be registered into the Certification Scheme, annually. Complete the current 'Application for seed potato certification' form - available from the Administrator or the Potatoes New Zealand website, or from an Approved Organization. Submit completed applications to the Administrator or Approved Organization. The closing date for entries is 21 days after planting. Potatoes New Zealand may exercise discretion in accepting late entries where this does not impinge on the management of the Scheme or on crop inspections.

To be eligible for registration:

1. Each seed line must be grown within a registered production site.
2. A minimum of 5 harvest seasons is required since the last potato crop was grown in the production site.
3. Region of production (ROP) including the production site letter/s is a unique identifier for a production site and are required on the certification application form. If an ROP has not previously been allocated, then Potatoes New Zealand will allocate a unique production site identifier.
4. A plot map must be supplied showing where all the seed lines are to be or have been planted in the production site: clearly showing cultivar/s, planted and harvest generation/s, and seed sown reference number/s.

NB: Once seed applications have been verified by PNZ, a unique **Crop Reference Number** is allocated to each seed line (e.g. P20210001). This unique number will be the identifier for the individual seed line for the growing season and, if the seed line is to be entered for certification in the following season, it will need to be entered as the **Seed Sown Reference Number** on the application form.

2.4 ANNUAL CROP REGISTRATION FEES

The Authority reviews its fees annually and publishes the fees in the Authority newsletter. The fee comprises an administration fee and an inspection fee. The administration fee covers management of the seed potato database, management of the Scheme by the Authority, printing of labels, communications, and other administrative matters. The inspection fee covers the cost of crop inspections, tuber inspection, providing labels, and reporting to the Authority.

Where growers are producing seed for an Approved Organisation the Authority will recover the grower's administration fee from the Approved Organisation. The Approved Organisation will carry out crop and tuber inspections and report the results to the Administrator.

All other seed growers will be invoiced by the Authority for the combined administration and inspection fees in February. Growers have the option to pay half of the total invoice in February and the balance in May.

2.5 CROP MANAGEMENT

2.5.1 Identification of seed lines

At planting and during growth:

a. Individual cultivars in the production site must be kept separate by at least the equivalent of one clear row between cultivars.
b. Individual generations are marked by a minimum of 5 meters of the first row left unplanted and by a flag, visible post, or other marker at each end of the row.
c. Use nursery pegs or equivalent markers as identifiers in the production site and include the cultivar, and planted and harvest generation.
d. Where a grower opts to plant a potato crop not for certification in the same production site as a certified seed crop, there must be a gap of two unplanted rows separating that crop from the certified seed crop and it must be sown with certified seed (field certified seed is acceptable).

2.5.2 Crop protection

It is recommended that growers implement a robust pest and disease management programme to minimise the risk of infection and spread of infection.

Growers will keep a crop diary to be retained for 12 months, showing a minimum of the following information:

a. Crop reference number
b. Planting date
c. Spray application dates
d. Chemical name and type
e. Chemical application rates
f. Date of crop desiccation
g. Date of harvest

2.5.3 Rogueing

1. Growers will complete a schedule of rogueing to remove potato plants showing disease symptoms, foreign cultivars, and off-types.
2. Complete the first schedule of rogueing of the certified seed potato crop before the first crop inspection.
3. All plant tops and tubers of rogued plants must be removed from the production site.

2.5.4 Withdrawal of crops from the Scheme

Growers may voluntarily withdraw a seed line from the scheme at any time. Once withdrawn the seed line will not be eligible for re-entry into the scheme. Where a seed line is withdrawn ***prior*** to the first inspection the grower (or Approved Organisation) is required to pay to the Authority only the administration charge per hectare set for that growing season and notify the Administrator. Where crops are withdrawn ***after*** the first crop inspection the grower or Approved Organisation will be charged the full registration.

2.5.5 Tolerances for defects in seed crops

Following crop inspections the inspector will determine whether the level of faults in the seed line are within the set tolerances for pests, diseases, and varietal purity within the group programme, or the appropriate generation of the pyramid programme. The relevant tolerances are as follows:

CHEMICAL DAMAGE & WEEDS

Any crop showing the effects of chemical damage (e.g., hormonal damage) may be rejected if the number of affected plants is very obvious and extensive and the affected area cannot be isolated for re-inspection. Crops that are excessively weedy may be rejected if the inspector is unable to see the crop and move freely through it. Inspectors will consider the impact of weeds on their ability to inspect the crop and whether chemical damage may impact on daughter tubers, or mask disease symptoms.

PYRAMID PROGRAMME TOLERANCES

Within the pyramid programme the following tolerances apply to the harvested class of each seed line (Table 1) based on visual examination for symptoms. A seed line that is assessed to be below or at the tolerance indicated will be passed, seed lines that exceed the tolerances will fail inspection. Dependent on the fault type and percentage of incidence the inspector may give the grower the option to take corrective action, to be followed by a reinspection.

Table 1. Tolerances for faults by visual examination within the pyramid programme of the Seed Potato Certification Scheme.

	G1	G2	G3	G4	G5	G6
Maximum Virus Potato virus A, M, X, Y, & leafroll virus	0	0.05 (1 in 2000)	0.05 (1 in 2000)	0.05 (1 in 2000)	0.1 (1 in 1000)	0.2 (1 in 500)
Candidatus Liberibacter solanacearum symptoms	0	0.2 (1 in 500)	0.2 (1 in 500)	0.2 (1 in 500)	0.2 (1 in 500)	0.2 (1 in 500)
Maximum Rogues (off types, volunteers, foreign varieties)	0	0	0.01 (1 in 10,000)	0.01 (1 in 10,000)	0.01 (1 in 10,000)	0.025 (1 in 4000)
Maximum Blackleg *(E. carotovora)*	0	0.1 (1 in 1000)	0.1 (1 in 1000)	0.1 (1 in 1000)	0.1 (1 in 1000)	0.3 (1 in 333)
Maximum wilt *Verticillium, Fusarium*, Pink Rot	0	0.1 (1 in 1000)	0.1 (1 in 1000)	0.1 (1 in 1000)	0.1 (1 in 1000)	0.5 (1 in 200)

LIBERIBACTER

Tolerances for symptoms of Liberibacter have been established. Where the tolerance is exceeded the grower or merchant may, at their expense, request that the inspector take samples and that these are tested for the presence of Liberibacter. If the tests do not confirm the presence of Liberibacter the seed line may be passed.

GROUP PROGRAMME TOLERANCES

Seed lines to be certified within the Group programme must meet the tolerances specified for G6 within the pyramid programme.

2.5.6 G2 Virus Testing

Merchants or growers must collect leaf samples from all G2 registered crops (i.e., G2 harvested) and submit these for virus testing by a laboratory approved by the Authority. Samples must be taken according to the following procedure:

a. Aim for representative coverage of the crop with the sampling pattern.
b. Sample in a W or zig-zag (e.g., WWW) pattern depending on the size and shape of the crop.
c. Determine the number of paces required for the given sample size in order to cover as much of the crop as possible using the W or zig-zag pattern.
d. Take the required number of steps, stop, reach down to the plant nearest the right or left foot (be consistent).
e. Collect the terminal leaflet from the forth petiole from the top.
f. Group in lots of 10 in plastic bags (where appropriate).
g. Clearly label with the crop reference number and other information required on the Virus Sample Submission Form.
h. Store in a cooler bag/chilly bin until dispatch (do not freeze).
i. Complete the Potato virus sample submission form and dispatch to the laboratory.

The following 2 sampling options are available depending on the size of the G2 plot:

A) Collect 1 leaf from 100 plants and test 10x10 (10 tests). 10 bags of 10 leaves, 100 leaves total.

B) Collect 1 leaf from 10 separate plants and test 1x10 (10 tests). 1 bag of 10 leaves, 10 leaves total.

If the plot has more than a 100 plants: Option A

If the plot has less than a 100 plants: Option B

Test results must be forwarded to the sample submitter and a copy to the Scheme Administrator.

If more than one sample tests positive then the line must be removed from the scheme.

If one sample tests positive then the G2 label must be endorsed “failed G2 virus test” and the seedline will be subject to a compulsory virus test at G3. The G3 line is subject to the same criteria as G2 lines. Repeated failure will require virus test on the following generations. The seedline will not be eligible to be tagged as certified seed until the virus test returns negative.

If the G2 virus test is missed completely, the seedline will be subject to a compulsory virus test at the next generation and the G2 label will be endorsed with “Virus test not completed”. If the virus test is missed again at G3 the seedline will be removed from the scheme.

2.6 CROP INSPECTIONS

2.6.1 Number of crop inspections required

All seed lines will have two inspections, except for Red King Edward, Jersey Benne, Russet Burbank, and Russet Ranger or crops with a growing period longer than 110 days from planting which require three inspections. The grower is responsible for arranging the date of inspection with Potatoes New Zealand or the Approved Organization. Ideally, the first inspection should be carried out before row closure and the second inspection should be between flowering and haulm destruction in order to spot any rogue/mixed varieties, and the third inspection should be carried out as close as practical to haulm destruction. Growers must contact the inspection agency no less than 3 days prior to the proposed haulm destruction date to arrange for the inspection.

2.6.2 Corrective action following crop inspection

Where an inspector finds faults in a seed line that exceed the scheme tolerances, and the inspector believes that corrective actions could be taken by the grower to correct the fault, the inspector may suspend the inspection and allow the grower to take corrective action. The inspector must complete the inspection report and record the options given to the grower.

Inspectors may not allow corrective actions to be taken for the same fault in the same crop twice. If the fault is not corrected the crop concerned will be downgraded or rejected. Upon re-inspection the crop must meet all of the requirements and tolerances of the scheme.

2.6.3 Downgrading following crop inspection

Compulsory Downgrading

Where a seed line within the pyramid programme exceeds the tolerance for its registered generation it may be downgraded to a lower generation (i.e., a higher G number) as long as it does not exceed the tolerance for that generation, otherwise it will be rejected completely. This is the responsibility of the seed inspector.

Voluntary Downgrading

The grower or merchant can request a voluntary downgrading at any time for a particular seed line to a lower generation (i.e., a higher G number).

2.6.4 Rejection following final crop inspection

Where a seed line within the group programme exceeds the tolerance for the group programme, it shall be rejected from certification. Where a seed line within the pyramid programme exceeds the tolerance for its registered generation and is unable to be downgraded (as described in 2.6.3) it shall be rejected from certification. Seed lines may be rejected from certification if they fail to meet other requirements of the scheme including, but not limited to:

a. Seed lines are not adequately identified or separated (Section 2.5.1).
b. Plant tops and tubers of rogued plants have not been removed from the production site (Section 2.5.3).
c. Seed lines are not compliant with the requirements of the MPI OAP PCN compliance programme (Section 2.2).
d. Haulm destruction has taken place before all necessary crop inspections have been completed.

Where a seed line is rejected following the final crop inspection, the inspector will notify the grower and discuss the reasons for rejection with the grower.

2.6.5 Rejection of part of a seed line

At the inspector's discretion a seed line may be separated and part of that seed line rejected or downgraded with the remaining portion passed. There must be a clearly defined area affected by a fault that exceeds the tolerance for the harvest generation.

Prior to inspection, the grower may also propose to the inspector that the area entered for certification is modified (for example where the grower is aware of a problem in a portion of the crop).

The original seed line entry area must be redefined, and the separate areas must be clearly defined and identifiable (e.g., pegged off by markers that can be seen clearly at both ends of the rows). If the area with the fault is to be downgraded rather than rejected, the grower is required to provide the Administrator with the downgraded crop area. The Administrator will enter the downgraded part of the crop as an additional entry and will issue a Crop Reference Number for this entry.

2.7 APPEALS

Where a grower wishes to appeal the decision of an inspector to reject a seed line from certification, an appeal must be lodged with the Administrator within 24 hours of being notified in writing of the inspector's decision.

The grower must not improve the crop in any way before an appointed independent evaluator visits.

Appeals must be made in writing (email is acceptable) specifying:

a. Crop registration details (ROP, cultivar, generation, area sown);
b. Name of the inspection body;
c. The reason for the appeal.

An appeal fee of $1000 plus GST per production site under appeal is payable at the time of lodging an appeal. The fee is reimbursed if the appeal is successful. The Independent Evaluator will hear the appeal and will collect all relevant information and discuss the appeal with the grower and the inspector. The grower will have the opportunity to make the case supporting the appeal. The Independent Evaluator will normally visit the crop under appeal without the presence of either the grower or inspector.

The outcome of the appeal will be decided by the Independent Evaluator who will report back directly to the grower and Potatoes New Zealand. This decision will be final and not subject to further appeal.

2.8 TRACEABILITY AND TUBER INSPECTION

2.8.1 Traceability

To ensure traceability of seed lines and to avoid contamination, all bins and/or bulk bags must be prior to storing. The minimum information required on the label is the cultivar, generation, and ROP number. Each seed line must be readily identifiable with the same information when in storage after harvest.

2.8.2 Tuber inspections

Seed potatoes for certification must be inspected at any point when ownership of that seed changes hands, except for 'Field Certified' lines. It is the responsibility of the grower to make arrangements for tuber inspections with PNZ or the Approved Organization.

Tuber Inspection Request forms can be obtained from the Administrator or the Approved Organization. Seed lots exceeding specified tolerances will fail tuber inspection. Dependent on the fault type and percentage of incidence the inspector may give the grower the option to take corrective action, to be followed by a reinspection.

2.8.3 Tolerances for faults at tuber inspection

Tolerances for faults at tuber inspection in the Pyramid and Group programmes are described below. These do not apply to Field Certified seed lines. Tolerances for scab, rhizoctonia, sizing and misshapen tubers are described separately, and the tolerances for the remaining faults are presented in Table 2.

SCAB

The maximum tolerance for powdery scab is 1% of tubers evidencing any scab lesions. The maximum tolerance for common scab is 1% of tubers with 5% of the surface area covered with scab lesions. These tolerances apply to any generation of the pyramid programme or the group programme.

If scab is present (regardless of type) on more than 1 tuber in any of the 100 tuber samples drawn, an additional randomly selected sample of 500 tubers is to be drawn. Where more than 5 tubers in the 500 sample show any presence of scab, the grower must have the scab type identified by a laboratory.

The test result must be forwarded to the inspector. Where the level of powdery scab exceeds 1% the line will be rejected. Where the level of common scab exceeds 1% the line will pass, and the seed certification label will be endorsed with common scab and the percentage included on the label. The result will also be recorded on the tuber inspection report and the buyer will be informed.

RHIZOCTONIA

The maximum tolerance for rhizoctonia is 5% of tubers each with 5% of the surface area covered with rhizoctonia, i.e., for each 100 tubers inspected, rejection will occur if more than 5 tubers have more than 5% surface covered with rhizoctonia.

SIZING GUIDELINE

The minimum seed size for certification is 28 mm or 30 grams. Exceptions may be made for trial plots or minituber multiplication plots. For seed tubers with a maximum diameter of 55 mm, the maximum length is 85 mm. For those with a diameter of 60 mm, the maximum length is 90 mm. No more than 5% of tubers may exceed the length limit for their respective size range. Any lot exceeding this tolerance must be noted on both the tuber inspection report and the seed label, and the buyer must be informed.

MISSHAPEN TUBERS

If misshapen tubers are more than 4% in any of the 100 tuber samples drawn, the percentage of misshapen tubers will be printed on the seed certification label.

OTHER FAULTS

The maximum allowable faults and diseases are described in Table 2 and 3. The maximum tolerances described in Table 2 must not be exceeded for any individual fault, or in combination. For example, if a lot has >2% stem end rot the lot will fail even if the total faults do not exceed the combined maximum faults.

Table 2. Maximum allowable faults in a tuber sample within the group programme and all generations of the pyramid programme (refer also separate tolerances for scab, rhizoctonia, size and misshapen tubers).

Fault type	Maximum %
Potato Tuber Moth/insect damage	4
External damage (not infected, as lesions deeper than 2mm into the tuber)	4
Stem end rot	2
Combined maximum faults	**5**

Table 3. Maximum allowable diseases in a tuber sample within the group programme and all generations of the pyramid programme.

Diseases	Maximum %
Wet rot	0.1
Dry rot (Fusarium/Gangrene)	1
Root knot nematode	2

2.9 STORAGE

Storage is outside the scope of the Scheme; however, it is recommended that good seed potato storage practices are followed. Best practice guidelines can be found on the potatoes New Zealand website.