This document supercedes all previous Alaska seed certification handbooks or documents relating to potatoes. Seed lots originating from material produced in accordance with the limited generation system (Appendix 2) immediately will be subject to the rules and regulations contained in this document. Lots certified prior to implementation of these regulations will be permitted recertification under existing disease tolerance levels through the 1986 growing season. After the 1986 growing season, all seed lots entered for certification (including those originating outside of Alaska), must meet all standards as set forth in this document.

These standards are subject to review, and changes may be made as necessary to protect the integrity of certified seed and the certification process. Any changes will be based on professional scientific advice to the Board of Directors of ASG who will have the authority to review and approve any changes before incorporation into the standards.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. AUTHORITY FOR CERTIFICATION OF POTATO SEED</td>
<td>1</td>
</tr>
<tr>
<td>B. PURPOSE FOR CERTIFICATION OF POTATO SEED</td>
<td>3</td>
</tr>
<tr>
<td>C. AGENCY RESPONSIBILITIES</td>
<td>4</td>
</tr>
<tr>
<td>1. Alaska Seed Growers, Inc</td>
<td>4</td>
</tr>
<tr>
<td>2. Division of Agriculture</td>
<td>4</td>
</tr>
<tr>
<td>D. CERTIFICATION RULES &amp; REGULATIONS</td>
<td>5</td>
</tr>
<tr>
<td>1. Applications</td>
<td>5</td>
</tr>
<tr>
<td>2. Certification Fees</td>
<td>5</td>
</tr>
<tr>
<td>3. Seed Stock Eligibility</td>
<td>6</td>
</tr>
<tr>
<td>4. Varietal Eligibility</td>
<td>6</td>
</tr>
<tr>
<td>5. Field Management</td>
<td>6</td>
</tr>
<tr>
<td>6. Sanitation</td>
<td>7</td>
</tr>
<tr>
<td>7. Equipment Management</td>
<td>7</td>
</tr>
<tr>
<td>8. Storage</td>
<td>8</td>
</tr>
<tr>
<td>9. Inspection</td>
<td>8</td>
</tr>
<tr>
<td>a. Inspection Procedure</td>
<td>8</td>
</tr>
<tr>
<td>b. Field Inspection</td>
<td></td>
</tr>
<tr>
<td>c. Storage Inspection</td>
<td></td>
</tr>
<tr>
<td>d. Grading Inspection</td>
<td></td>
</tr>
<tr>
<td>e. Appeal Procedure</td>
<td></td>
</tr>
<tr>
<td>10. Labeling</td>
<td>10</td>
</tr>
<tr>
<td>11. Disease Tolerance</td>
<td>10</td>
</tr>
<tr>
<td>12. Certified Potato Seed Crop Directory</td>
<td>11</td>
</tr>
<tr>
<td>13. Emergency Clause</td>
<td>11</td>
</tr>
<tr>
<td>14. Disclaimer of Warranty</td>
<td>11</td>
</tr>
<tr>
<td>E. APPENDICES</td>
<td>12</td>
</tr>
<tr>
<td>1. Certified Variety List</td>
<td>12</td>
</tr>
<tr>
<td>2. Limited Generation System</td>
<td>13</td>
</tr>
<tr>
<td>3. Definitions</td>
<td>14</td>
</tr>
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</table>
A. AUTHORITY FOR CERTIFICATION OF POTATO SEED

Inasmuch as the Department of Natural Resources for the State of Alaska has the legislative authority to control the movement of seeds and other plant propagative parts into and within the State of Alaska (AS 03.05.010 and 03.05.030); and

Inasmuch as the objective of the Division of Agriculture of the Department of Natural Resources is to promote the orderly development of agriculture in this state through various means including the promotion of top quality seed; and

Inasmuch as the promotion of the use of top quality seed is an objective of the Alaska Seed Growers, Inc., a nonprofit organization incorporated under the laws of the State of Alaska; then

The following constitutes an agreement between the Department of Natural Resources and the Alaska Seed Growers, Inc., as to methods by which seed shall be certified in Alaska and the responsibilities of the parties to this agreement.

This agreement terminates the agreement between the Division of Agriculture and the Alaska Crop Improvement Association, as dated December 16, 1964.

This agreement shall become effective when signed by the Commissioner of Natural Resources, Director of the Division of Agriculture, and by three members of the Board of Directors of the Alaska Seed Growers, Inc. and this agreement shall remain in effect until cancelled by either party at the end of any calendar year with the provision that if the agreement is cancelled, seed lots meeting certification standards during that year will be considered as meeting certification standards for planting as certified seed in the succeeding year. Notice to cancel shall be given the other party at least 90 days prior to the end of the calendar year.

Revisions in this agreement may be made at any time by mutual consent of both parties.

1. The seed certification standards of the Alaska Seed Growers, Inc., shall be those for certification of seeds in Alaska.

2. The Alaska Seed Growers, Inc. shall provide the various application and inspection forms to growers desiring to certify seed, shall process applications to determine eligibility of seeds planted, and shall notify the Division of Agriculture of those seed lots requiring inspection for certification purposes.
3. The Alaska Division of Agriculture personnel shall inspect eligible lots of potatoes at least twice during the growing season and once each during storage and grading or shipment to see if the lots conform to certification standards. They shall inspect cereal and grass seed lots once during the growing season and shall take official samples for laboratory analysis of the seed. Division of Agriculture personnel shall also be responsible for tagging certified seed.

4. The Alaska Division of Agriculture shall transmit to the Alaska Seed Growers, Inc. the pertinent information derived from these inspections.

5. The Alaska Seed Growers, Inc. shall issue tags for certified seed on the basis of inspection information supplied by the Alaska Division of Agriculture.

6. The Alaska Seed Growers, Inc. shall collect and retain certification fees. The fees shall be subject to review by the Alaska Department of Natural Resources and the Alaska Division of Agriculture.

For the ALASKA DEPARTMENT OF NATURAL RESOURCES

/S/ Esther Wunnicke

__________________________Esther Wunnicke, Commissioner

For the ALASKA DIVISION OF AGRICULTURE

/S/ Bill Heim

__________________________Bill Heim, Director

For the ALASKA SEED GROWERS, INC.

/S/ Mark Weaver

__________________________Mark Weaver, Director

/S/ Ben VanderWeele

__________________________Ben VanderWeele, Director

/S/ Byron J. Hollembaek

__________________________Byron Hollembaek, Director
B. PURPOSE FOR CERTIFICATION OF POTATO SEED

The purpose of the potato seed certification program shall be to provide for the acquisition, maintenance, and increase of top quality, disease-tested propagating material of varieties requested by growers in Alaska. Participating state agencies are expected to facilitate this process by utilizing the best techniques and procedures available for testing, increasing and distributing parent material. To this same end, participating growers voluntarily agree to observe certification rules and regulations. Adherence to the rules and regulations of certification will contribute to the stability and health of the potato industry.

NORTH AMERICAN EXPORT SEED REGULATIONS

Export seed potato standards were developed by the Certification Section of the Potato Association of America to function as a uniform set of certified seed potato regulations recognized by all state seed certification agencies. These regulations will help facilitate trade across state and national borders by defining terminology and seed production criteria. Alaska Seed Growers, Inc. has agreed to incorporate these regulations into the Alaska program as a parallel system for certifying seed potatoes. Seed growers who choose to produce seed under these regulations will need to modify their operations in order to comply.

Additional requirements for the production of certified seed under NAESR include:

1) Latent testing of Generation 1 and 2 for PVX
2) Additional one-year no potatoes for field history
3) Generation 5 last year eligible
4) Reduced tolerance for Blackleg
5) Zero tolerance for Witches Broom

A copy of the North American Export Seed Regulations can be obtained from the Alaska Seed Growers, Inc. or the Alaska Plant Materials Center.
C. AGENCY RESPONSIBILITIES

1. Alaska Seed Growers, Inc. (ASG)
   a. Prepare and distribute application forms.
   b. Determine acceptability of applications received and eligibility of seed for which certification is requested.
   c. Collect certification fees.
   d. Print and issue official certification tags.
   e. Maintain appropriate records.
   f. Assign lot numbers annually.
   g. Establish procedure for distribution of G-1 seed in cooperation with other interested agencies.
   h. Publish results of field inspections.

2. Division of Agriculture
   a. Plant Materials Center (PMC)
      1) Acquire or produce disease-tested parent material of appropriate potato varieties as needed.
      2) Conduct rapid seed increase of parent material via nodal cutting or similar procedures.
      3) Annually produce, harvest and store G-1 tuber crop.
      4) Establish procedures for distribution of G-1 seed, in cooperation with ASG, and assist ASG in distribution of G-1 seed.
      5) Maintain appropriate records.
      6) Conduct field inspections and furnish results of inspections to ASG.
      7) Conduct bin inspections and furnish results to ASG as soon thereafter as practicable.
   b. Plant Industries
      1) Conduct grading and shipping inspections when requested.
      2) Maintain appropriate records
D. CERTIFICATION RULES AND REGULATIONS

I. APPLICATIONS:

a. Certified seed producers are encouraged to become members of ASG.
b. By applying for certification, potato seed growers are granting access by state inspectors or their designates to certifiable fields and seed storage facilities. The farmer assumes no liability by granting such access.
c. Application forms are available from the ASG, and may be available from the Alaska Division of Agriculture, Plant Materials Center and Cooperative Extension Service offices. Information and assistance relating to completion of application forms will be provided by the ASG.
d. Completed applications must be returned to the Alaska Seed Growers, Box 895, Palmer, AK 99645 on or before July 4. Applicants not meeting the July 4 deadline, will be assessed a nonrefundable penalty of $50.00. Fees (see Section D-2) are due at the time of application. Make checks payable to Alaska Seed Growers, Inc.
e. The ASG reserves the right to accept or reject certification applications. Applications may be rejected for the following reasons:

1) Unacceptable lots (see Section D-3).
2) Nonpayment of fees. Fees are due at the time of application (see Schedule D-2).
3) Incomplete or imprecise farm maps. Farm maps showing the location and dimensions of seed lot must accompany applications.
4) Incomplete or improperly completed applications. Assistance in this regard is available from ASG.

2. CERTIFICATION FEES:

a. Fees are due at the time of application. Make checks payable to Alaska Seed Growers, Inc.
b. Fees are computed as follows: $30 for the first acre or part thereof; plus $5 per lot; plus $20 per acre on total remaining acres. A maximum of $400 will be charged to any one farm.
c. With respect to fees, "EXPERIMENTAL" varieties will be assessed at the same rate.
d. Fifteen dollars worth of tags (calculated at $.10 per tag) will be supplied without additional charge, for each certified acre. Additional tags will be paid for by the grower at the rate of $.10 per tag.
e. Fees will be refunded in full for any lot withdrawn prior to the first inspection.
f. Ten dollars per acre will be refunded for lots withdrawn after the first inspection but prior to the second inspection.
g. No refunds after the second inspection.
3. **SEED STOCK ELIGIBILITY:**
   
   a. All seed stocks entered for certification must meet the ASG eligibility standards contained in these regulations.
   
   b. Alaska grown seed stocks are eligible for entry into the certification system if they meet the limited generation system requirements (Section E-2) and have passed the previous years field, bin and grading inspections.
   
   c. Out-of-state grown certified seed stocks are eligible for entry into the Alaska certification system if they meet the limited generation requirements (Section E-2) and have passed field and bin inspections with tolerance limits for disease and defects equal to or better than those found in this publication (Section 11). **Please remember** Alaska is currently believed to be free from several diseases and pests common in other potato growing areas. The importation of seed potatoes carries the potential of introducing serious problems and is discouraged.

4. **VARIETAL ELIGIBILITY:**
   
   a. A list of potato varieties that have been certified by ASG appears in Section E-1 of this publication. This list is for information purposes only and is not intended to restrict eligibility for certification.
   
   b. A variety is eligible for certification if the following information is available:
      1) Evidence of performance, including yield data, disease resistance or other factors supporting the identity of the variety. Performance tests, whether by private enterprises or public agencies shall include appropriate check varieties.
      2) A statement of origin.
      3) A description of morphological characteristics.
      4) Written permission for use, if exclusive rights to the variety are possessed by some firm or individual other than the applicant.
   
   c. Experimental varieties:
      1) Seed lots of varieties or lines not eligible for certification by the criteria listed above may be accorded inspection under the standards and criteria enumerated in this publication, and similar fees paid. If the seed meets these standards, compliance may be indicated by tagging the seed with official tags, but bearing the designation "EXPERIMENTAL VARIETY".
      2) Special consideration will be given to seed with no or limited description. The visual inspection of such seed carries risk. The symptom expression of potentially diseased plants is unknown. A description of the varieties will be developed as information is collected.

5. **FIELD MANAGEMENT:**
   
   a. Failure to comply with field management criteria will result in downgrading or disqualification, whichever is appropriate.
b. Isolation:
1) In the field, there shall be a physical separation of at least 50 feet between plots of certified seed grown for sale and potatoes not entered for certification.
2) There should be a physical separation of at least 10 feet between lots of certified seed grown for sale.
3) There should be a physical separation of at least 10 feet between plots of certified seed potatoes grown for home use and plots of potatoes not entered for certification.

c. Field history requirements:

```
<table>
<thead>
<tr>
<th>Last Year Spuds</th>
<th>To grow for 20</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999</td>
<td>5 years out</td>
</tr>
<tr>
<td>2000</td>
<td>4 years out</td>
</tr>
<tr>
<td>2001</td>
<td>3 years out</td>
</tr>
<tr>
<td>2002</td>
<td>2 years out</td>
</tr>
<tr>
<td>2003</td>
<td>1 year out</td>
</tr>
<tr>
<td>2004</td>
<td>0 years out</td>
</tr>
</tbody>
</table>
```

d. Roguing:
It is recommended that roguing begin as early, and be done as often, as circumstances dictate. Rogued plants are to be removed from the field in total (vines, seed pieces and newly formed tubers) and be buried or destroyed. Any lot that has been rogued in excess of 5% will be disqualified from certification, except that roguing in excess of 5% for varietal mix may be allowed with prior approval from the inspector.

6. SANITATION:

Seed growers are advised and encouraged to carefully clean and disinfect storage areas, storage containers, all machinery, equipment, and tools used in their seed-growing operation. Solutions of sodium hypochlorite (household bleach) diluted to 1% is generally recommended for this purpose, although other suitable disinfectants exist.

7. EQUIPMENT MANAGEMENT:

a. Equipment used for production (planting, harvesting, grading, etc.) of certified seed grown for sale may not be used for the production of potatoes not submitted for certification. Used equipment purchased for the purpose of seed production must be thoroughly cleaned and disinfected, under the supervision of potato field inspectors, prior to its first use for seed production.

b. Equipment used for planting, harvesting, grading, or handling of certified seed lots
grown for home use (home use indicates certified seed is to be utilized on the same farm upon which it was produced) may be used for non-certified potatoes, providing the equipment is thoroughly cleaned and disinfected prior to use on certified seed lots. Cleaning and disinfection in this case will be the responsibility of the grower. Seed lots designated as "home use" cannot be returned to "seed for sale".

c. Planting, harvesting, grading and handling equipment used for more than one lot of seed shall be thoroughly cleaned and disinfected between lots.
d. Exchange or sharing of equipment among growers is discouraged.

8. STORAGE:

a. Certified seed potatoes grown for sale may be neither kept nor graded in a storage containing potatoes not entered for certification. If two or more storages are combined in one structure, they must have separate entries and must be separated by a permanent solid wall with no connecting passage ways (ventilation, heating, cooling, etc.).
b. Certified seed potatoes grown for home use may be kept in a storage with non-certified potatoes, provided a tight wall (a barrier that will prevent the passage of potato tubers, tuber parts, and adherent debris) separates certified from non-certified potatoes.
c. Different lots may be stored in the same storage; however, they must be separated from one another by tight walls.
d. All stored lots shall be clearly labelled by variety and lot number.
e. Any evidence of contamination or co-mingling of lots is cause for rejection.

9. INSPECTIONS:

a. Inspection Procedures
   1) Whenever possible, inspector shall inform seed grower at least one day prior to field inspections.
   2) Field inspectors will utilize either disposable footwear, or footwear that will be disinfected before and after each inspection.
   3) Inspector shall contact growers and arrange for the pre-harvest and pre-grading storage inspection. Inspectors will sterilize footwear, and any tools or utensils used, before and after storage inspection.
   4) Seed growers shall contact inspectors and arrange for grading inspections. Inspectors will sterilize footwear, and any tools or utensils used, before and after the grading inspection.

b. Field Inspection
   1) At least two field inspections shall be made each growing season. Additional inspections may be made if necessary. Whenever possible, inspectors will inform growers at least one day prior to field inspections.
   2) Inspections shall be performed by walking through the fields in a predetermined, prescribed manner, and visually examining the plants.
   3) Disease percentages shall be derived from actual plant counts in the field, as follows:
      a) First and second inspections - at least 100 plants per lot and 100 plants per acre shall be counted.
      b) Additional inspections may consist of a visual survey if plant counts
are not deemed necessary.

4) All disease diagnosis shall consist of a visual examination and/or lab test as deemed necessary. In the case of Bacterial Ring Rot caused by *Clavibactor sepedonicum*, a visual diagnosis must be confirmed by a gram stain, serology or other appropriate test.

5) Inspecting officials may refuse to inspect a field for any of the following reasons:
   a) Recent application of hazardous chemicals that may present a health hazard to the inspector.
   b) Extensive chemical damage which seriously injures or impairs growth of the plants and causes unsatisfactory conditions for inspection.
   c) Excessive amounts of weeds.
   d) Any other condition which precludes or unreasonably limits inspection.

6) Confirmed identification of Bacterial Ring Rot on any seed farm is grounds for rejection of all certified seed lots grown on that farm. The diagnosis of Bacterial Ring Rot shall disqualify the farm upon which it is found from certified seed production until proof that adequate steps have been taken to assure that:
   a) all potatoes on that farm have been disposed of through sale or discard.
   b) all equipment and other surfaces that come in contact with potatoes have been thoroughly disinfected; and
   c) seed potatoes eligible for certification have been obtained by the grower.

c. Storage Inspection
   1) Inspectors shall contact growers to schedule storage inspections.
   2) Two storage inspections will be conducted annually.
   3) Pre-harvest inspection is to insure sanitation of storage.
   4) Post-harvest, pre-grading inspection is to insure proper storage practices are being followed (Section D-8). Improper or inadequate binning shall be grounds for rejection of certification.

d. Grading Inspection
   1) All certified seed is subject to inspection at the time of grading.
   2) All certified seed potatoes, except contract grade, grown and certified in Alaska shall meet the requirements of U.S. No. 1 Seed Potatoes (37 FR 8667 Sec. 51.000) (Appendix 5) at point of origin. Contract Grade shall consist of potatoes that meet all the requirements of grade and condition established by a buyer-seller agreement.
   3) Seed potatoes shall not be washed.
   4) Bulk containers shall be thoroughly cleansed and sterilized prior to use. Other containers (sacks, boxes, etc.) shall be new.
   5) Confirmed identification of Bacterial Ring Rot during grading inspections, is grounds for rejection of all lots grown on that farm.

e. Appeal Procedure
   1) Growers disagreeing with an inspection decision at any point, may appeal that decision.
   2) A letter of appeal, signed by the grower, must be sent to the Alaska Seed
Growers, Inc. within 7 days of the grower's receiving notice of the questioned decision.

3) Appeals will be decided by the ASG Board of Directors.

10. **LABELING:**
   a. All sacked lots shall be labelled with the grower's name, address, net weight, state or origin and variety.
   b. All sacks or master containers shall have attached a certification tag issued by the ASG. Master containers shall not exceed 105 lbs. gross weight.
   c. Bulk bins shall have the label and a certification tag attached to shipping certificate for lot or load.
   d. A label and certification tag shall accompany each bulk load and invoice.
   e. Grade certificates may be issued by the Division of Agriculture at point of origin when requested.
   f. Tags will not be issued to "home use" seed growers, as home use seed is not produced for sale. See Section 13 for exception.

11. **DISEASE TOLERANCES (PERCENTAGES) AT FINAL FIELD INSPECTION:**
   Wart, Golden Nematode or Rootknot Nematode are not known to occur in Alaska.

<table>
<thead>
<tr>
<th></th>
<th>G-1</th>
<th>G-2</th>
<th>G-3</th>
<th>G-4</th>
<th>G-5, 6, 7 &amp; 8</th>
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<td>Bacterial Ring Rot (BRR)</td>
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<td>Minimum Plant Sample</td>
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</table>

* At grower request, plants will be sampled and tested for PVX. Only lots testing within tolerance will be designated "PVX Tested".

The detection of any insect, nematode, disease or disorder not common to potatoes in Alaska or which is of phytosanitary concern is cause for rejection or down-grading.
12. **CERTIFIED POTATO SEED CROP DIRECTORY:**

A directory of certified potato seed growers will be published annually, by the ASG within two months after final field inspections are completed. The directory will list growers, varieties and acreages except home use seed, and will include a report of disease levels (blackleg, Rhizoctonia and total viruses) in each grower's fields. Only seed lots meeting minimum certification requirements, up to that point, will be listed. However, final certification status will not be assigned until bin and grade inspections are complete.

13. **EMERGENCY CLAUSE:**

In the event that supplies of *For sale* seed fall short of demand, a certified seed potato emergency may be declared by the Board of Directors of the ASG, in which case, producers of *home use* seed may request permission to sell seed potatoes. In order to qualify as a seller of *home use* seed, a home use seed grower must have passed all field, bin, and grading inspections, and must have conformed to the *home use* production and storage recommendations enumerated in sections D-5, D-7 and D-8 of this document. Qualifying seed will be labelled Generation 6 (G-6).

14. **DISCLAIMER OF WARRANTY:**

Certified seed potatoes have been subjected to field and bin inspections pursuant to the Rules and Regulations prepared by the Alaska Seed Growers, Inc. and the Alaska Division of Agriculture. The seller, the inspector and the Alaska Seed Growers, Inc. make NO WARRANTY OF ANY KIND, EXPRESSED OR IMPLIED, INCLUDING MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, QUALITY, OR ABSENCE OF DISEASE CONCERNING SAID SEED POTATOES. The certification tag pertaining to any certified seed potatoes indicates only that, at the time of inspection, the potatoes met the requirements for certification as set forth in said Rules and Regulations. BY ACCEPTANCE OF THE SEED POTATOES, BUYER EXPRESSLY AGREES THAT ITS EXCLUSIVE REMEDY FOR ANY BREACH OF DUTY OWED IN REGARD TO CERTIFICATION SHALL BE LIMITED SOLELY AND EXCLUSIVELY TO A RETURN OF THE PURCHASE PRICE PAID BY BUYER FOR SAID SEED.

This disclaimer of warranty and limitation of liability and remedy may not be altered or amended except by an instrument in writing and then only as to those specifically and expressly agreeing to the terms of said instrument. By acceptance of the seed potatoes, buyer agrees that the disclaimer and limitations described herein are express conditions of sale, and that they constitute the entire agreement between parties regarding warranty, liability or remedy.
# Appendix 1

## CERTIFIED VARIETY LIST

**A. Varieties that have been certified by Alaska Seed Grower, Inc. (ASGI) include:**

<table>
<thead>
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<th>No.</th>
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<td>13</td>
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<td>25</td>
<td>Superior</td>
</tr>
<tr>
<td>26</td>
<td>Yellow Finn</td>
</tr>
<tr>
<td>27</td>
<td>Yukon Gold</td>
</tr>
</tbody>
</table>

**B. Growers of certified seed and a listing of varieties produced are published by ASGI each year in the Alaska Certified Seed Potato Directory.**
Appendix 2

LIMITED GENERATION (a)
MOTHER PLANTS (b)
GREENHOUSE (G-0)
GENERATION 1 (G-1) (c) First year field grown
GENERATION 2 (G-2)
GENERATION 3 (G-3)
GENERATION 4 (G-4)
GENERATION 5 (G-5)
GENERATION 6 (G-6)
GENERATION 7 (G-7)
GENERATION 8 (G-8)

(a) Generation number indicates the number of field harvests (generations) that have passed after the greenhouse production, although the number may be increased if disease tolerances exceed those listed for a generation. Each generation can be produced only from a lower numbered generation. G-8 is not eligible for recertification.

(b) Plants subjected to purification procedures, and examined for the presence of detectable, pathogenic microorganisms (viruses, bacteria, fungi), if no pathogens are detected, individual plants are qualified as mother plants.

(c) G-0 seed sold to potato producers by Alaska Seed Growers, Inc.

(d) Virus-tested stock produced at the PMC is eligible for sale as G-8 "not eligible for further certification" if disease tolerance levels as outlined in Section 11 of this publication are met.
Appendix 3

DEFINITIONS

1. **Bacterial Ring Rot** - A disease caused by *Clavibactor sepedonicum*.
2. **Blackleg** - A disease caused by a complex of two organisms: *Erwinia carotovora* var. *atroseptica* and/or *Erwinia carotovora* var. *carotovora*.
3. **Disease tolerance** - A specific level of a particular disease permitted to exist in certified seed stocks. This level is sufficiently low as to reasonably preclude a significant effect on seed quality (see "zero tolerance").
4. **Farm** - A potato enterprise that includes all land, equipment, storage facilities and labor that are used in a common effort to produce potatoes.
5. **Home use** - Production of certified seed solely for the purpose of planting a commercial crop on the same farm on which the seed was produced. Tags are not issued for seed produced under "home use" guidelines. Such "home use" seed is not eligible for "for sale" production in later generations.
6. **Lot** - The system of identifying particular sources within the certification program. A seed source is assigned a number (lot number) upon its entry into the certification program. This seed lot will carry the same source lot number throughout its life in the limited-generation system. The lot number system guarantees a recording of the history of the seed sources within the certification program, and permits a tracing of problems back to their sources.
7. **Master container** - A package containing two or more individual packages of the same commodity in the same quantity.
8. **Roguing** - The removal and destruction of diseased or undesirable plants (including seed pieces, foliage, and tubers) from a certified potato seed field.
9. **Storage** - A space or place for storing certified potato seed.
10. **Tight wall** - A barrier that will prevent the passage of potato tubers, tuber parts, or adherent debris.
11. **Tuber unit** - A method of planting whereby each seed piece from one tuber is planted consecutively and separated from seed pieces from other tubers by a distance that is clearly apparent.
12. **Zero tolerance** - In the case of all diseases or conditions warranting a 0.0% tolerance, it indicates that the disease or condition was not observed during the inspection process. The 0.0% tolerance is not intended, nor may it be construed to mean that the lot inspected is free from the designated disease or condition.