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Potato Association of America - Certification Section Annual General Certification Agency Survey

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This list posted at: <http://seedcert.oregonstate.edu/potatoes-potatocert> (4th item)

Date last modified by each state/province shown as Item 21 at end.

Questions Summary

1.	Agency Name: What is the Certification Agency in your state?
2.	Management: What are the name and titles of management personnel?
3.	Board: Does your agency have an elected Board of Directors or other form of grower representation?
4.	Directors: If so, who are the current directors?
5.	Statutory Responsibility: What state agency or entity holds statutory responsibility for seed potato certification?
6.	Funding: How is your certification program funded?
7.	Fees: What fees (and how much) must a seed grower pay for participation in your certification program (acreage fees, winter test fees, promotion, tags, research, etc.)?
8.	SPI: What agency is responsible for shipping point inspection?
9.	Modification Procedures: What is your agency's procedure for changing regulation or fees?
10.	Acreage: What is your state's average acreage of seed potatoes?
11.	Staff: How many field inspectors does your agency employ? What is the average years of experience for your field inspectors, and how are they trained and "certified" for their jobs?
12.	University Affiliation: If your agency is not university sponsored, does your agency have a working relationship to a state university?
13.	Tissue culture Plantlets: (1) Which viruses are tested for?; (2) How often are the plantlets tested?
14.	Sources of material grown in protected environments: Please list the sources of certified minitubers/plantlets &/or diseases tested tissue culture material located within your state or province. (name, contact person, phone & email)
15.	Protected environments: What are the testing requirements for plants grown in protected environments (greenhouse, NFT, etc.)?
16.	Latent Virus Testing: Does your agency test for PVX or PVS in seed lots? If so, which generations are tested?
17A.	BRR: What specific test results do you use to make the determination that a seed lot has the bacterial ring rot disease?
17B.	BRR Reaction: What is your agency's procedure for testing and confirmation of the presence of the BRR pathogen in a seed lot? Please include all details on regulatory powers, trace back activities, sampling details, decertification of lots, domestic/export movement controls, etc. (or note a URL/location where this information is readily available).
18.	PHT-1: Does your agency require a post-harvest test? If so, are all seed lots required to be tested? Explain.
19.	PHT-2: Lot size and testing requirements - please specify size of lots required in PHT and which laboratory tests are required for Foundation level (i.e., for recertification) and certification purposes.

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20	Proprietary Varieties (definition): In regards to certification practices, does your state/province treat 'proprietary varieties' any differently than 'public' / 'open' varieties (i.e. those without restrictions on production). If so, how does your state/province define 'proprietary' in regards to meeting certification requirements?
21	Cross-State Certification: Does your state certify any seed potato lots in neighboring states? If so, what arrangements do you have with those states to allow for the cross border certification of these lots?
22	White Exports tags: Is your state currently using a white "US Export Tag" as discussed at the 2021 NPC Certification Section Meeting? Are they likely to use it, and if not why?
23	Update: Last date modified or affirmed

States not listed (contact information):

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1. What is the Certification Agency in your state?

Alaska	State of Alaska, Department of Natural Resources, Division of Agriculture, Inspection Section
California	California Crop Improvement Association (CCIA)
Canada	Canadian Food Inspection Agency (CFIA)
Colorado	Colorado Potato Certification Service
Idaho	Idaho Crop Improvement Association, Inc.
Maine	Maine Department of Agriculture, Conservation and Forestry-Division of Animal and Plant Health
Michigan	The Michigan Seed Potato Association
Minnesota	Minnesota Department of Agriculture/Plant Protection Division/Fruit, Vegetable, and Grain Unit/Potato Inspection
Montana	Montana Seed Potato Certification Program of Montana State University
Nebraska & WY*3	Potato Certification Association of Nebraska
New York	New York Seed Improvement Project (NYSIP) is commissioned by New York State Dept. of Agriculture & Markets to certify seed grown in New York State. NYSIP operates as an extension project within the Plant Breeding & Genetics section of Cornell University's School of Integrative Plant Science.
North Dakota	North Dakota State Seed Department
Oregon	Oregon Seed Certification Service (Oregon State University)
Washington	Washington State Department of Agriculture- Plant Protection Division
Wisconsin	Wisconsin Seed Potato Certification Program of the University of Wisconsin-Madison

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2. What are the name and titles of management personnel?

Alaska	Mia Kirk, Manager
California	Lauren Port - Executive Director; Alexander Mkandawire - Manager Potato Certification.
Canada	Sr. Director, Plant Protection/Chief Plant Health Officer: Dr. Anthony Anyia; National Manager, Field Crops: Gordon Henry; Current Director: Kevin Nickle, chair of the seed potato subcommittee of the Fruit and Vegetable Growers of Canada.
Colorado	Andrew Houser - Manager; Sarah Noller - Assistant Manager; Teresa Almeida - Lab Supervisor

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Idaho	Kathy Stewart-Williams - Executive Vice President Alan westra - SE Area Manager Colton Thurgood - Assistant Manager, Lisa Tran - SCL Manager
Maine	Megan Patterson: Division Director; Don Flannery-Porter: Farm Program Manager; Eric Hitchcock: Seed Certification Program Manager
Michigan	Damon Kurzer - Executive Director
Minnesota	Mark Abrahamson - Director; Nick Milanowski - Supervisor; Eric Byre - Produce Inspection Supervisor; Jeff Miller- Seed Potato Specialist
Montana	Nina Zidack - Director of Potato Seed Certification Program
Nebraska & WY*3	Jenn Dillinger, Manager
New York	RJ Richtmyer - Manager, New York Seed Improvement Project
North Dakota	Ken Bertsch, Seed Commissioner; Adam Winchester, Director of Potato Programs; Mike Oosterwijk, Inspection Supervisor
Oregon	Andrew Altishin - Manager and Seed Certification Specialist, Tami Brown - Seed Certification Specialist - Potato Certification (Field Production) Terry Burr - Seed Certification Specialist - Potato Certification (Post Harvest Grow-outs and Latent Virus Assays)
Washington	Cindy Cooper - WSDA Plant Services Program Manager
Wisconsin	Dr. Amanda Gevens, Administrative Director, Brooke Babler Seed Potato Associate Program Director, Jolene Spurgeon, Administrative Specialist, Sarah deVeer Research Specialist (Lab Manager)

3. Does your agency have an elected Board of Directors or other form of grower representation?

Alaska	No, but we discuss issues with the Alaska Seed Growers Inc.
California	There is not a specified Board of Directors for Potato seeds growers but for crops that are certified by CCIA
Canada	The CFIA does not have an elected board of directors for the seed potato certification program, instead, consultation on program changes are done through a group of national seed potato stakeholders.
Colorado	Colorado Potato Certification Service (PCS) Advisory Council. The PCS Advisory Council is made up of potato growers (both seed and commercial) and industry representatives and provides input to CPCS on certification rules and regulations, budget, and other issues that may arise.
Idaho	Yes.
Maine	We discuss certification issues with the Maine Potato Board's Seed Executive Council. The Maine Seed Potato Board oversees the operation at the Porter Seed Farm.
Michigan	Yes, we do have an elected Board of Directors.
Minnesota	The Board of the Minnesota Certified Seed Potato Growers Association.
Montana	Seed Potato Certification Advisory Board
Nebraska & Wyoming*3	We have an Executive Council, they are elected by the growers in our association at the annual meeting. We also have a seed certification committee, made up of University of Nebraska department heads, which oversee our association.
New York	No, not currently.
North Dakota	State Seed Commission (Agency), ND Certified Seed Potato Growers Assn. (Potato Program)
Oregon	Yes, the Potato Certification Advisory Committee.
Washington	Yes, the Washington Seed Potato Commission
Wisconsin	Growers are represented through their membership in the Wisconsin Seed Potato Improvement Association (WSPIA) and two of its committees: (a) Advisory Committee [fiscal and seed program management] and (b) Regulatory Committee [rules and regulations].

4. If so, who are the current directors?

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Alaska	N/A
California	Kurt Rubin, Chuck Schonauer, Glenn Hawes, Tom Hearne, Frank Saviez, Dan Howe, Ed King, Brice Lauppe, Grant Baglietto, John Ellis, Rich Matteis, Brenda Lanini, Gail Taylor
Canada	Robert Watson is currently chair of the seed potato subcommittee of the Canadian Horticultural Council
Colorado	PCS Advisory Council: Brendon Rockey, Grant Mattive, Bruce Heersink, Cory Myers, Mark Peterson, Erin Nissen, Chad Cochran, Cheryl Smith, Amy Charkowski, and David Holm.
Idaho	Seven Growers, 1 Ex-Officio, and the Chair of the U of I Foundation Seed Committee. Please refer to the ICIA website, www.idahocrop.com , for current members.
Maine	The Executive Seed Council of the Maine Potato Board is made up of 5 seed growers Dominic Lajoie(President), Dan Blackstone, Jennifer Gogan, Garrett Hemphill and Scott Keirstead.
Michigan	Board of Directors =Greg Iott(chair),Gary Walther(sec./treasurer), Matt Wilks, Gerald Krueger,Matt Skogman, Dr. Jaime Willbur, (Michigan State University),Mike Wenkel (Michigan Potato Industry) Robin Rossenbaun (Michigan Dept. of Ag.)Jeff Axford (Michigan Seed Potato Assc.)
Minnesota	Chairman - Randy Schmidt, Secretary/Treasurer - Justin Dagen, Director - Lonnie Spokely, Director - Chad Gunnerson, Director - Kent Mason
Montana	Dan Dyk, Jake Lake, Sid Scutter, John Venhuizen, Steve Cottom (chair), Roger Starkel, Steve Strich
Nebraska & WY*3	Chase Engel – President, Troy Sorensen - Vice President, Lisa Hickman – Treasurer, Josh McBride - Member, Jon Gilley - Member
New York	N/A
North Dakota	Seed Commission: Doug Goehring (Commissioner of Agriculture) Chairman; Ken Bertsch, Seed Commissioner; Kim Alberty, Luke Anderson, David Fedje, Lance Fugleberg, Dr. Greg Lardy, Dan Mostad, Brad Nilson, John Thiele.
Oregon	Voting members include: seed growers from previous growing season, 2 commercial growers, 3 OSU Specialist (Plant Pathologist, Extension Agent, and Variety Development). Non-voting members include Chair Crop and Soil Science, Director of OSU Seed Services, Manager of OSCS, PCAC Secretary (OSCS), and Oregon Dept. of Ag rep. Please refer to the current Seed Directory for current members (http://seedcert.oregonstate.edu/potatoes)
Washington	Jeff Bedlington (President), Scott Bedlington, Greg Ebe, Blake TeVelde Cindy Cooper (WSDA)
Wisconsin	Matt Mattek (President), Charlie Husnick, Andy Schroeder, Jeff Suchon (vice-president), Clover Spacek (secretary/treasurer)

5. What state agency or entity holds statutory responsibility for seed potato certification?

Alaska	State of Alaska, Department of Natural Resources, Division of Agriculture
California	California Department of Food and Agriculture (CDFA)
Canada	The statutory responsibility for the seed potato certification program rest with the CFIA.
Colorado	Our program is administered by Colorado State University Potato Certification Service (Department of Horticulture and Landscape Architecture) as authorized by the Colorado State Board of Agriculture.
Idaho	The Idaho "Seed and Plant Certification Act of 1959" designates the Regents of the University of Idaho as the seed certification agency for the State of Idaho. Under the authority of this Act, the University of Idaho has designated the Idaho Crop Improvement Association, Inc. as its duly authorized agent to administer and conduct seed certification in Idaho.
Maine	Maine Department of Agriculture, Conservation and Forestry
Michigan	Michigan Department of Agriculture, Conservation and Forestry
Minnesota	Minnesota Commissioner of Agriculture
Montana	Montana State University
Nebraska & WY*3	The University of Nebraska delegated to the Potato Certification Association.

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New York	Per New York State Seed law, the New York Commissioner of Agriculture has delegated this responsibility to the College of Agriculture and Life Sciences, Cornell University
North Dakota	North Dakota State Seed Department
Oregon	Oregon State University. The Dean of the College of Agriculture Science administers the Seed Certification program through the Extension Service.
Washington	Washington State Department of Agriculture
Wisconsin	Wisconsin Department of Agriculture, Trade & Consumer Protection has delegated to UW-Madison

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6. How is your certification program funded?

Alaska	Funded by grower inspection fees and General Fund Appropriation
California	The program is funded by grower fees
Canada	Combination fees for inspection service and by the CFIA.
Colorado	Grower Funded
Idaho	Grower Funded
Maine	Grower funded, but also receives a small General Fund Appropriation.
Michigan	Inspection fees fund our certification program.
Minnesota	We are funded by growers fees.
Montana	We are funded by the Montana's Seed Potato Growers.
Nebraska & WY*3	Growers fees fund our certification program. We also offer other services like GAP audits.
New York	Primarily grower fees.
North Dakota	Program funded completely by service fees, no state funding utilized in certification program services provided by State Seed Department
Oregon	Strictly from grower fees, no state funds are available. Fees are based on acreage entered.
Washington	This program is funded by grower fees
Wisconsin	Grower fees except salary of faculty lead who is a UW-Madison faculty member. Salary is paid by UW-Madison.

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7. What fees (and how much) must a seed grower pay for participation in your certification program (acreage fees, winter test fees, promotion, tags, research, etc.)?

Alaska	Inspection fee: \$35 first acre, \$25 each additional acre, \$6 per seed lot. Tag fee: \$.10 per certification tag.
California	Field inspection is \$56.00 per acre, minimum of \$56.00 per application. All post-season grow-out tests are \$50.00 per sample.
Canada	Growers pay \$50.00 to apply for participation in the program and \$20.00 for each hectare entered for certification. The winter test, Bacterial ring rot tests, virus and viroid test are done on a private basis and growers pay the total cost. Costs for those services may be available by contacting the service providers. There is a charge of \$1.20 per tonne for phytosanitary inspection of potatoes.
Colorado	Acreage: \$34.00 per acre for G1& G2. \$25 per acre G3-G5. \$20.00 for G6. Bulk Certificate: \$0.12 per cwt.; Tags: \$0.12 per tag. Disease testing variable. Post Harvest Test at cost, ~\$520/400 tuber sample. Shipping point inspection is paid by growers to Federal/State Inspection Service.
Idaho	Please refer to the ICIA website, www.idahocrop.com , for current fees.
Maine	Acreage: \$50.00 per acre, Post- Harvest test: \$180 -\$200/Sample, depending on acreage. Shipping point Inspection: \$0.12 per cwt.; Tags: \$0.05 per tag
Michigan	Fees -Field inspection fee = \$42.00/acre, Winter test fees are based on actual cost approx. \$181.00 /sample, Shipping Point inspection are based on actual cost, approx. \$0.20/cwt.
Minnesota	Field inspection: \$28.00 per acre; Winter test: \$11.00 per acre, with a minimum charge of \$50.00; Shipping point: \$0.11+\$0.07 admin fee per cwt.; Certificate of origin; \$50.00; Tags: \$0.035 per tag.

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Montana	All growers pay acreage, winter test, promotion, tags, and research fees. Nuclear G-1 is \$50 per acre. G-2, G-3, G-4 is \$41 per acre. Summer PVY & PVX tests: \$0.46/test. Hawaii test:\$190/sample.
Nebraska & Wyoming*3	Field inspection \$20.00 per acre, and \$50.00 per acre when < 5 acres, Winter test is based on cost, growers are billed on a per sample basis. Shipping point \$0.13 per cwt. Bin inspection fee subsumed into field inspection fee.
New York	New York Field Inspection: <= 100 acres - \$37.50/acre; >100 acres - \$36.50/acre; \$330.00 minimum. Winter Test: currently being reviewed/updated.
North Dakota	Field inspection, \$34.00 per acre, minimum \$100 fee; Grade inspection, \$0.13 per cwt.; Winter test, \$200 per 600 tuber sample; Promotion, determined annually by growers assn., average \$1-2.00 per acre.
Oregon	Field inspection: \$35.00 per acre, Minimum \$60.00 per application. Winter test: \$150 per 400 tuber sample (sliding scale based on acreage up to 3 samples per lot, see question #19), Latent Virus Testing Fee: \$32 sampling fee per lot + lab cost (+ mailing cost if required). No promotion or tag fees. A \$0.05 CWT fee is paid to the Oregon Potato Commission for promotion and research.
Washington	An assessment of \$29 per acre for all field inspections. Other requested inspections are \$62.50 per hour + mileage. There are separate fees for laboratory tests and post harvest testing.
Wisconsin	Fees: Field inspection fees \$44.00/acre. Winter test fees \$350.00 per sample. Shipping point inspection funded through approx. \$0.15 per cwt. charge paid directly to WDATCP.

8. What agency is responsible for shipping point inspection?

Alaska	Federal/State Inspection Service is responsible for shipping point inspection.
California	Federal/State Inspection Service is responsible for shipping point inspection.
Canada	The CFIA is responsible for the shipping point inspections.
Colorado	Federal/State Inspection Service are responsible for shipping point inspections.
Idaho	Idaho State Department of Agriculture and Federal/State Inspection Service
Maine	Maine Department of Agriculture, Division of Animal and Plant Health oversees the shipping point inspections
Michigan	The Michigan Seed Potato Assc. or the Michigan Dept. of Ag.
Minnesota	Minnesota Department of Agriculture/Potato Inspection are responsible for shipping point inspection.
Montana	Montana State Department of Agriculture
Nebraska & Wyoming*3	Potato Certification is in cooperation with Nebraska Department of Agriculture and Federal and State Inspection program.
New York	New York Federal/State Inspection Service (NYSDAM, Food Safety and Inspection) is responsible for shipping point inspection.
North Dakota	North Dakota State Seed Department is responsible for Federal/State shipping point inspections.
Oregon	Oregon State Department of Agriculture
Washington	Washington State Department of Agriculture.
Wisconsin	Federal/State Inspection Service is responsible for shipping point inspection.

9. What is your agency's procedure for changing regulation or fees?

Alaska	Regulation changes must follow the process prescribed by the State of Alaska which includes proposing the regulation change, drafting the regulations, preparing public notice, holding a public hearing, accepting and addressing public comments and adoption of regulations. Fees may be changed without going through a regulation change.
California	All changes to Certification standards or fees are ratified by California Crop Improvement Board of Directors
Canada	Consultation takes place with the seed potato stakeholders and regulatory changes with respect to the standards. Fees must be approved by Parliament to become effective.

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Colorado	Recommendations are made by the the PCS Advisory Council or the PCS manager. Once the coucil has weighed in, the PCS manager and Department Head of Horticulture and Landscape Architecture will either approve or disapprove the proposed change.
Idaho	Changes to certification standards are reviewed by the ICIA Seed Potato Advisory Committee, ICIA Board of Directors and the University of Idaho Foundation Seed Stocks Committee. If approved by these Committees, changes to the standards may be promulgated by Director of Idaho Agricultural Experiment Station after a public comment period of 30 days.
Maine	Regulation and fees changes must follow the process prescribed by the State of Maine to promulgate a rule change. This includes proposing the rule (or fee) change, holding a public hearing, accepting written comments, and addressing all comments in the adoption of the rule.
Michigan	Fees may be changed by the board of directors of M.S.P.A. Regulation changes are a function of the State of Michigan.
Minnesota	Regulation changes pass through the State's Reviser's Office.
Montana	The Seed Potato Advisory Board make recommendations to the President of the Montana State University for final decision.
Nebraska & WY*3	Voted on at annual meeting by membership. Final approval by Certification committee of University of Nebraska, Lincoln
New York	(1) Fees: Evaluated annually; based on operating costs (2) Regulations: Must go through NYS Department of Agriculture & Markets; this requires legal review, open posting and hearing, economic impact appraisal, and statement of support (usually 2-3 years process).
North Dakota	Fee changes are made with the approval of the Seed Commission and the Grower's Association. The Seed Department has the authority, as directed by state law, to make rule changes. Input is sought from constituencies and public.
Oregon	Regulations: An Advisory Committee with final approval by the Certification Board and Dean; Fees: Open hearing process (by law), OSCS must be self-supporting, thus fees are adjusted to maintain the project.
Washington	Regulations and fees are changed by following the state rule making process which requires public hearings and accepting testimony from growers. The process is initiated by the program manager and takes from 3-4 months.
Wisconsin	Certification regulations are contained in State of Wisconsin Administrative Code Chapter 156. Changes require state-wide open hearings and generally take several years to implement.

10. What is your state's average acreage of seed potatoes?

Alaska	40 acres average
California	680 acres in 2021
Canada	2022 hectares (accepted): NL 11, PEI 5,580, NS 161, NB 2,437, QC 3,025, ON 669, MB 3,831, SK 1,425, AB 5,846, BC 226 - Total 23,210 Hectares.
Colorado	around 8,000 acres
Idaho	Approximate 32,000 acres
Maine	10,000 acres
Michigan	2,500 acres
Minnesota	5,500 to 6,500
Montana	10,000 acres
Nebraska & WY*3	5,000 to 7,000 acres
New York	2000-05 average is 950 acres.
North Dakota	14,000 - 15,000 acres
Oregon	2,800 - 3,200 acres passing inspection.
Washington	3,000 - 3,600 acres
Wisconsin	9,500 - 10,000 acres

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11.	How many field inspectors does your agency employ? What is the average years of experience for your field inspectors, and how are they trained and "certified" for their jobs?
Alaska	Manager with 10 years of experience. Any newly trained inspectors would require field school (such as CFIA, WA seed trials) and would train onsite for a minimum of two years.
California	CCIA has one full time certification inspector with 5 years experience in potatoes.
Canada	The CFIA has between 70-80 inspectors doing seed potato field inspection. Average years of experience is not something that is tracked, but the majority of CFIA field inspectors have more than 10 years of experience. They are trained through attendance to the national training course, regional workshops and working with experienced inspectors for at least one season. They are evaluated during the training process to determine if progress is being made and when each individual is ready to perform inspections independently.
Colorado	Three seasonal inspectors, one with 30 yrs experience and two with an average of 15 years experience each. Manager with 15 years experience. Assistant Manager and full time field inspector with 3-5 yrs experience. New inspectors train on site for 2 years plus attend the Canadian rouging school when available.
Idaho	Minimum 12 inspectors, the majority with more that 10 years experience. There is mandatory annual training (classroom and field plot). Management attends the CFIA training course. Less experienced inspectors spend the majority of their first season working with more experienced inspectors.
Maine	Six full time field inspectors, one newly hired from private industry in September 2023. Average work experience is 15 years. Historically most inspectors move to seed inspection from the federal/state inspection service, while others were hired by the seed program from the private industry. When new staff is hired, we pair them with a senior inspector for on the job training. We try and send inspectors to out of state training opportunities when possible.
Michigan	Two fulltime inpectors. The average experience is over 20 years. Attend Canadian inspection school and work under direct supervision of an experianced inspector for at least one year.
Minnesota	1 Field Supervisor- Over 15 years experience. 2 full time with over 5 years of experience with the program. 2 full time inspectors with less than 5 years experience with the program. We require a minimal 3 years field inspection training with an experienced inspector. Aln line with the MOU, we try to send out inspectors to WA seed notato trials and field day in Othello, WA prior to field walking.
Montana	We have 8 inspectors with an average of 9 years of experience. All inspectors participate in the WA seed potato trials ratings and field day in Othello, WA prior to the field season. 1 season under supervision of seasoned inspectors required.
Nebraska & Wyoming*3	We have 3 inspectors: one with 50 years experience, one with 18 years experience, and one who is in training. Training is conducted on-site and in with other certification agencies.
New York	(1) NYSIP Manager; others contracted through NYSDAM (2) 10+ years (3) (a) Orientation with Manager, (b) Literature provided to establish baseline of information, (c) Work with "experienced" inspector until "approved" by the inspector for summer winter inspections, and (d) once "approved", sent to Canadian Inspector School. We also use attendance at industry and professional meetings as a training tool.
North Dakota	1 Field Supervisor, 40 years experience; 4 field inspectors with a range of 5-35 years experience. All field inspection staff receive on the job training for 2-3 year period prior to assuming FT positions.
Oregon	Inspectors: 5 full time field inspectors with, average of 6 years of experience, ranging from 2-19 years. All have a BS or higher university degree in agriculture. We also utilize 4-5 part-time field inspectors who primarily assist with harvest inspections. Training: Attending seminars on disease control in potatoes and related crops; evaluation of seed source plots; and inspections workshops.

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Washington	We have two inspectors working in seed potatoes (5-40%) with an average of 10 years experience, under a supervisor with 10 years experience.. All inspectors participate in the seed potato trials in Othello prior to beginning field inspections. We also send new inspectors to Ridgetown, Ontario for training.
Wisconsin	Three full-time inspectors (2 with 30+ years experience; one with 4+ years) with a recent new inspector hire. All have been to Canadian Inspector's school except new hire. Literature and ongoing interaction with UW-Madison pest and disease experts are invaluable.
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12.	If your agency is not university sponsored, does your agency have a working relationship to a state university?
Alaska	Not at this time.
California	Yes.
Canada	We do collaborate with the research branch of the federal Department of Agriculture and Agri-Food Canada, and use some University facilities for training purposes. Working relationships with provincial departments of agriculture as well as agricultural colleges and universities are common.
Colorado	NA - It is university sponsored.
Idaho	Yes.
Maine	Yes, we cooperate with the University of Maine in disease issues, the breeding program and new varieties, etc. Maine Potato Board staff conducts disease testing on behalf of the certification program in the state's seed potato certification lab.
Michigan	Yes, there is a cooperative agreement between the M.S.P.A., Michigan State University and Michigan Department of Agriculture.
Minnesota	Not at this time
Montana	University Sponsored
Nebraska & Wyoming*3	Yes, the University Certification Committee comprised of Department Heads in Entomology, Plant Pathology, Horticulture and Agronomy oversee the Association and provide input and ideas for the program.
New York	University sponsored.
North Dakota	The State Seed Department has many cooperative projects jointly with NDSU. The State Seed Department is an agency of government of the state of North Dakota, but is situated on the campus of North Dakota State University in Fargo.
Oregon	All fulltime inspectors are employed in the Oregon State University Dept. of Crop and Soil Science.
Washington	Yes, Washington State University
Wisconsin	University sponsored
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13	Tissue culture plantlets: (1) Which viruses are tested for?; (2) How often are the plantlets tested?
Alaska	Tissue Culture plants are tested annually for PLRV, PVA, PVM, PVS, PVX, PVY and for bacteria (growth in NBY broth), tissue culture is tested for bacterial ring rot (by qPCR) if any growth is found in the NBY. Mother plants are tested for PSTVd. PMTV and TRV upon entry to our system.
California	PVA, PVM, PLRV, PVS, PVX, PVY, PSTV, Bacteria: Cms and Erw. (each TC batch)
Canada	Tested annually: A sample of at least two plantlets per variety or clone being initiated must be tested in a laboratory approved 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); Viroid: PSTVd (Potato spindle tuber viroid); Bacteria: <i>Clavibacter michiganensis</i> subsp. <i>sepedonicus</i> (<i>C. m. sepedonicus</i>), the causal pathogen of bacterial ring rot (BRR). Directive D-97-08: Production, Maintenance, Multiplication and Certification of Nuclear Stock Class Seed Potatoes provides all the required details.
Colorado	X,S,Y,A,M,LR,PotLV,PMTV when initiated from new stocks. PVX, S, Y, M, Cms & Erw. Once per year.

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Idaho	Introductory testing requires negative test for PVA, PVS, PVM, PVY, PVX, PLRV, PotLV, PMTV, TRV, PSTVd, <i>C. sepedonicus</i> , and <i>Pectobacterium</i> spp. Recurrent testing requires negative test for PVA, PVS, PVM, PVY, PVX, PLRV, PSTVd, <i>C. m. subsp. sepedonicus</i> , and <i>Pectobacterium</i> spp.
Maine	Pva, Plrv, Pvm, Pvs, Pvx, Pvy, Pmtv, Ralstonia, Cms, Pstvd, Dickeya and Pectobacterium, Annually, and when new cultures are made or received
Michigan	All mother plants tested for plrv,pmtv,pva,pvm,pvs,px,py,pstv,trv,potlv each crop
Minnesota	PVX, PVS, PVA, PVM, PVY, PSTV, PLRV, <i>C. michiganensis sepedonicus</i> (BRR), <i>Pectobacterium atrosepticum</i> ssp. <i>atrosepticum</i> , <i>carotovora</i> (Patro). Tested Yearly. 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.
Montana	Tissue culture plantlets are tested every year prior to mass increase for: PVX, PVY, PVY-n, AMV, PLRV, PVA, PVM, PVS, TRV, PSTVd, PMTV, Cms, Patro.
Nebraska & WY*3	Diseases by ELISA during summer: PVX, PVS, PVY, PVA, PVM, PLRV, Cms, Patro. Only one test during the summer. Testing likely to change in summer 2021 to include PMTV, TRV, and some AMV, but less testing for PVM, PVA and Cms during summer.
New York	Before introduction onto Uihlein Farm, all tissue culture plantlets tested In Ithaca for: Viruses by ELISA: PVX, PVS, PVY, PVA, PVM, PLRV, PMTV, TRV, PotLV; Bacteria by ELISA: Cms, Eca; Broth & Richardson's for other bacteria and fungi; PSTV nucleic acid hybridization assay. New Introduction testing at Uihlein Farm & at reinitiating; historically reinitiation was annual, then every 3rd year; in the future, reinitiation (and testing) of plantlets will be done on an as needed basis. Viruses by ELISA: PVX, PVS, PVY, PVA, PVM, PLRV; Bacteria by ELISA: Cms, Eca; Broth & Richardson's for other bacteria and fungi; PSTV nucleic acid hybridization assay (RNA extraction done at farm, tested in Ithaca. All lots of tissue culture plantlets shipped from the Uihlein Farm are tested for the following: Viruses by ELISA: PVX, PVS, PVY,
North Dakota	Viruses by ELISA: PVX, PVS, PVY, PVA, PVM, PLRV, PMTV, TRV, PotLV; Bacteria by ELISA: Cms, Pectobacterium; Broth & Richardson's for other bacteria and fungi; PSTV nucleic acid hybridization assay
Oregon	PVX, PVS, PVA, PVM, PVY, PLRV, PMTV, C.michiganensis, Pectobacterium (E carotovora). Tested yearly. PSTV tested initially only. All mother plants screened for bacterial and fungi on Richards medium &/or nutritional broth (yearly).
Washington	PVA, PVM, PVS, PVX, PVY, PLRV, PSTVd, PMTV, Ecc, Eca, Cms
Wisconsin	1) PLRV, PVS, PVX, PVY, PVA, PVM, Potato Latent Virus, TRV, Tomato Spotted Wilt Virus, Alfalfa Mosaic Virus, PMTV, PSTV, general bacteria and fungi; black leg pathogens. 2) At introduction to TC bank and at least every 7 years thereafter when TC bank is reinitiated.

14 Sources of material grown in protected environments: Please list the sources of certified minitubers/plantlets &/or diseases tested tissue culture material located within your state or province. (name, contact person, phone & email)

Alaska	Alaska Plant Materials Center, Christine Macknicki, 907-745-8104, Christine.Macknicki@alaska.gov
California	
Canada	There are a number of facilities in Canada that are registered as seed potato growers of Nuclear Stock material.
Colorado	See the current Crop Directory, page 10 and 11 at https://potatoes.colostate.edu/wp-content/uploads/2021/10/2021-Crop-Directory.pdf
Idaho	Please refer to the current Seed Directory for a complete listing.
Maine	1) Maine Seed Potato Board, Don Flannery, 207-769-5061, flannery@mainepotatoes.com; 2) Seed Pro, Inc., Daniel Corey, 207-532-0096, dcorey@pwless.net
Michigan	Sklarzyk Seed Farm 989-858-0142

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Minnesota	1) Valley Tissue Culture Inc. Sandi Aarestad 218-456-2161 sandi@potatoseed.com; 2) E Green Americas, LLC (EGA), James Kwonjil, 917-796-6957, kisuh@eggtuber.com
Montana	Private & MSU Nuclear class production exist but cannot be sent out of state
Nebraska & WY	Clear Horizon Seed Lab. Chase Engel. 3087603380. chase_engel@hotmail.com
New York	
North Dakota	North Dakota State Seed Dept., Preley Mosher 701-231-5400, pmosher@ndseed.ndsu.edu
Oregon	Any lab or GH certified as eligible for the production of certified minitubers/plantlets in the state/province of origin. There are currently no private lab sources in Oregon.
Washington	1) Pure Potato (360) 354-2196; 2) Ebe Farms (360) 366-5699 3) Cascade Farms (360) 815-1594 4) Bedlington Farms (360) 354-5264 5) Diamond Seed Co. (360) 815-2365 6) NuGen Seed Co. (360) 366-5699
Wisconsin	1) UW Elite Foundation Seed Potato Farm (brooke.babler@wisc.edu), 2) Fritio Lay Research Farm (Heather Pond)

15 Protected environments: What are the testing requirements for plants grown in protected environments (greenhouse, NFT, etc.)?

Alaska	10 leaves per variety or 1% (whichever is greater) for PLRV, PVX and PVY in the greenhouse.
California	<i>Foliage. PVA, PVM, PLRV, PVS, PVX, PVY, PSTV, Bacteria: Cms and Erw. (1st minituber lot). Currently, we do not have greenhouse production/certification in the state</i>
Canada	Same requirements as tissue cultured plantlets.
Colorado	Foliage: PVX, S & Y; 10 min. per lot or 1% of population. 5 lvs/well. Mini-tubers: Erwinia -10 min. per lot or 0.5% of population. Cms - 10 min. per lot to 1%, 100 cores/test max. Will perform additional testing as requested by owner or for export requirements.
Idaho	1% of crop tested for Potato Virus A, X, Y, PLRV, <i>C. m. subsp. sepedonicus</i> , and <i>Pectobacterium</i> spp.
Maine	1% of the plants tested for PV-Y, PLRV
Michigan	Two visual & lab tested for plrv,pmtv,pva,pvm,pvs,pvx,pvy,pstv,trv,potlv,ralstonia,brr,dickeya
Minnesota	1% of each lot or 10 plants or tubers from each lot must be tested during the growing season to verify that the crop is free from; PVX,PVY PLRV, <i>C.michiganensis</i> , and <i>E. carotovora</i> .
Montana	Propagation sources must be disease free material. All invitro mother plant materials must be tested for all listed above in No. 17 and by the electron microscope. Plantlet populations or mini-tubers produced in a greenhouse shall be randomly tested for all diseases of concern. Minimum of 1.5% of plants shall be sent to MSU prior to planting.
Nebraska & WY*3	PVY, PVX, PVA, PLRV, PVM, PVS, Patro, Cms.
New York	
North Dakota	1% of each lot or 10 plants or tubers from each lot must be tested during the growing season to verify that the crop is free from; PVX,PVY PLRV, <i>C.michiganensis</i> , and <i>Pectobacterium</i> .
Oregon	1% of plants (minimum 20/lot) tested for PVX, PVY, PLRV, PVS* (leaf material), and <i>C.michiganensis</i> , <i>Pectobacterium</i> (<i>E carotovora</i> , stem bases or harvested tubers). *PVS testing required for monitoring purposes only (does not down-grade lot).
Washington	1% of plants (20 min.) must be tested and found free of PVX, PVY, PVS, PLRV, Ecc, Eca, Cms
Wisconsin	Visual inspections of all protected environment crops is required during the production cycle. Lab testing for PVY is done on leaf tissue in greenhouse crops grown from tissue culture plantlets to comply with the Necrotic Virus Mgt Plan. Beyond this, lab testing is conducted in principle to evaluate any certified product before it is moved to another operation. Minitubers are not tested at the UW Leleh Starks Elite Foundation Seed Farm, unless they are being shipped to growers, because our production system is vertically integrated and all E-1 lots produced from greenhouse crops are postharvest tested. If minitubers or transplants are being sold off of an operation, those propagules are tested for PVY, PVX, PVS, PLRV and Cms at a level representing 1% of the plants that produced them in the greenhouse.

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16 **PVX & PVS Testing:** Does your agency test for PVX or PVS in seed lots? If so, which generations are tested?

Alaska	Yes, PVX and PVS in tissue culture, only PVX in the greenhouse.
California	Yes, PVX testing is mandatory for Pre-Nuclear, Nuclear, and G1. (Optional for G2, G3, G4, G5). We do not test but require seed lots entering the state to be tested
Canada	Yes, it is mandatory for all seed lots of the Nuclear Stock class to be tested and not found to be infected with PVX and PVS.
Colorado	In-vitro mother plantlets, Nuclear plantlets, greenhouse foliage, and G1 (first year) field foliage are tested for both PVX and PVS.
Idaho	Pre-Nuclear and Nuclear only. Not required for field-grown materials.
Maine	In-vitro and Pre-Nuclear (lab and greenhouse) material is required to be tested.
Michigan	At Pre-Nuclear level (lab and greenhouse) is required to be tested.
Minnesota	All Pre-Nuclear is tested for PVX and PVS. First field generation (G1) is tested for PVX.
Montana	We test for PVX in generation 2, and all generations in the Post Harvest Test. We don't test for PVS in the field.
Nebraska & WY*3	PVX and PVS tests are required in field year 1. After that it is at the growers request.
New York	
North Dakota	Yes. All Pre-Nuclear stock is tested for PVX and PVS at all stages prior to field planting. Field samples are submitted on a voluntary basis and tested for PVX and PVS.
Oregon	PVX testing only required for <i>in-vitro</i> and Greenhouse minitubers. PVS is tested in <i>in-vitro</i> and monitored in Pre-Nuclear Greenhouse production (minitubers/transplants), but is not required to be tested at PN class or beyond. Varieties latent for PVY must be tested through G1 unless for 'own use only'.
Washington	PVX testing is required for in-vitro and Pre-Nuclear plants. PVS is tested for in in-vitro and PreNuclear plants. Wisconsin In-vitro and Pre-Nuclear (lab and greenhouse) material is tested.
Wisconsin	In-vitro and Pre-Nuclear (lab and greenhouse) material is tested.

17A **BRR Testing:** What specific test results do you use to make the determination that a seed lot has bacterial ring rot disease?

Alaska	PCR and ELISA; tuber coring and qPCR (Cela) to screen, additional qPCR (with different targets) and/or ELISA to confirm.
California	1) Visual assessment of plant or tuber. 2) Gram stain test. 3) Serological test (ELISA). Samples sent to an accredited lab for confirmation
Canada	The test used to detect the presence of the pathogen causing bacterial ring rot in CFIA approved laboratories are ELISA and IMF. Each find must be confirmed by the CFIA Charlottetown Laboratory. Details are available in Directive D-97-12: Seed potato certification program – bacterial ring rot testing program for field grown seed potatoes.
Colorado	Three independent lines of evidence: Plant or tuber symptoms present. Gram stain needs to show positive. Antiserum test (+) ELISA or IFAS. If test performed on symptomless tuber, a qPCR test (cela) is required. If Cela is pos, then will confirm on cms50 & 72A.
Idaho	All seed lots, FY2 and higher, screened by qPCR (Cela). Confirmation of positives is by LAMP and qPCR with another primer.

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Maine	<p>The following laboratory tests are acceptable for use when testing samples for the bacterial ring rot pathogen: Enzyme Linked Immunosorbant Assay, Latex Agglutination, Gram Stain, Immunofluorescent Antibody Staining, Polymerase Chain Reaction.</p> <p>Plants and/or tubers which exhibit visual symptoms of the bacterial ring rot pathogen will be declared positive upon confirmation of two laboratory tests, at least one of which is serological (examples: Enzyme Linked Immunosorbant Assay, Latex Agglutination, Immunofluorescent Antibody Staining).</p>
Michigan	<p>Bacterial ring rot is present in a seed lot in the operation. All seed stocks of that lot are to be removed from the operation. All equipment and facilities that may have come in contact with this seed shall be cleaned and disinfected. The first lot of seed cut or planted, or cut and planted, bacterial ring rot is present in a seed lot in the operation. All seed stocks of that lot are to be removed from the operation. All equipment and facilities that may have come in contact with this seed shall be cleaned and disinfected. The first lot of seed cut or planted, or cut and planted, after the infected lot is not certifiable and is not eligible for sale as certified seed for 1 growing season. These lots may be retained in the operation in the certified inspection system and may be reentered as seed that is eligible for certification the following year if bacterial ring rot is not noted. The classification level for these lots shall be retained under the normal generation system as if they were eligible for certification. All other seed lots in the operation may be certified, but shall not be sold for future seed propagation for 1 growing season. All shipping and inspection documents for these lots that are sold during the first year after disease identification shall indicate that the seed is not to be used for seed propagation. If bacterial ring rot is detected in an operation in more than 1 seed lot in the same year or in 1 seed lot 2 of 3 consecutive years, then all seed stocks shall be removed from the operation and all equipment and facilities shall be cleaned and disinfected before further certification will be issued. If bacterial ring rot is detected in an operation in more than 1 seed lot in the same year or in 1 seed lot 2 of 3 consecutive years or noncertified production occurred in the previous year of operation, then seed potatoes will not be approved for sale or transfer from the operation to other seed propagation operations for 2 growing seasons. Cutting and planting equipment is to be thoroughly cleaned and disinfected between lots and the disinfection shall be documented for future reference by the official seed-certifying agency. This documentation shall be part of the application for certification. Materials that are used to disinfect cutting and planting equipment shall be of a type labeled for bacterial disease control.</p>
Minnesota	Visual examination, ELISA, IFAS, and PCR by an independent lab.
Montana	Visual examination, gram stain, ELISA, PCR, confirmation by independent laboratory.
Nebraska & Wyoming*3	Visual examination, ELISA, PCR
New York	1) visual assessment of samples 2) gram stain test 3) Serological Test (latex agglutination or ELISA) 1-3 must agree for positive determination.
North Dakota	Visual examination, Gram stain, ELISA and IFS and/or PCR
Oregon	ELISA and/or PCR - Protocol on file for determination of + results.
Washington	See Idaho: Latex Agglutination, Gram Stain, Double Diffusion, IFAS done for follow up if necessary
Wisconsin	1) Visual assessment of samples 2) PCR assays (Cel A, Cms 50, 72) are done concurrently.
17B	BRR Reaction: What is your agency's procedure for testing and confirmation of the presence of the BRR pathogen in a seed lot? Please include all details on regulatory powers, trace back activities, sampling details, decertification of lots, domestic/export movement controls, etc. (or note a URL/location where this information is readily available).
Alaska	A visual diagnosis in the field must be confirmed by our lab. When confirmed, all seed lots on that farm are rejected. We would perform a trace back of the sister lots and conduct additional inspections at those certified seed farms.
California	

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Canada	<ul style="list-style-type: none">- All seed potato lots are inspected a minimum of two times during the crop growing season and at various occasions during shipping point inspections for the presence of symptoms associated to the bacterial ring rot pathogen, <i>Clavibacter michiganensis</i> subsp. <i>sepedonicus</i> . At any given time, suspect plants or tubers are forwarded to a CFIA lab for confirmation.- A minimum of two seed lots per farm unit and all seed lots sold as Elite II, Elite III, Elite IV and Foundation class must be sampled and tested, for <i>C. m. sepedonicus</i> as described in CFIA Policy Directive D-97-12 [http://www.inspection.gc.ca/plants/plant-protection/directives/eng/1304570539802/1304570628492].- This mandatory testing can be done either on stems sampled before harvest (in the field), or on tubers collected from the lot prior to, during or after harvest.- Following confirmation by the CFIA that a crop or a lot produced on a seed farm unit is infected with <i>C. m. sepedonicus</i> , the certification as seed is revoked for all lots produced on the farm unit and others that came in contact with contaminated material or equipment.- Mandatory follow up actions to a positive detection are required to comply with section 50 (3) (b), 50 (4) (d), 52 (3) and 52 (6) of the Canadian Seeds Regulations.- Investigation procedures following the detection of <i>C. m. sepedonicus</i> on a farm unit requires extensive tuber sampling and testing of lots produced from the same seed source (sister lots), testing of all other lots on the affected farm unit and it may extend to other farm units.- Details are described in CFIA Policy Directive D-95-18 [http://www.inspection.gc.ca/plants/plant-protection/directives/eng/1304570539802/1304570628492].- Domestic movement of infected lots for processing or table stock end use may be permitted in accordance with provincial, municipal or other related requirements.- All exports of potatoes are certified in accordance with the plant quarantine import requirements of the country of destination.
Colorado	<p>A late season BRR field inspection is performed, based on symptoms expressing in a local BRR plot. Symptoms normally express by 90 DAP. Inspectors observe a minimum of 4,600 plants per lot, or 100 plants per acre, whichever is greater. 100% of plants are observed for lots less than 4,600 plants. If confirmed positive, all sister seed lots are rejected. All seed lots cut or planted after infected lot are rejected. Other lots are in the farming operation that pass intensified inspections are eligible for re-certification or sale as certified seed. An * is placed on every seed lot in the Seed Directory from the growers operation indicating these lots listed passed all field inspection requirements and are approved as certified seed; however, this grower had a lot(s) of seed potatoes in his farming operation rejected due to BRR. Any lot with an * in its designation shall not be eligible for recertification the following year except by the original grower or the farming operation where BRR was identified.</p> <p>If a seed field is vine killed prior to vines expressing adequate maturity, a tuber sample is required and will be tested for Cms using ELISA + PCR (celA). If the ELISA and PCR testing come back positive for Cms, the above protocol will apply to the farming operation in question.</p>
Idaho	<p>Governed by ICIA and ISDA rules:</p> <ol style="list-style-type: none">1. Confirmed BRR is rejected.2. Immediate traceback to identify and test sister and contact lots.3. Contact lots eligible for certification only.4. Sister lots eligible for recertification if negative.5. Five year probation with official sampling.6. Mandatory reporting to ISDA.
Maine	<p>Maine has a zero tolerance for bacterial ring rot, Maine's BRR regulations can be found here https://www.maine.gov/sos/cec/rules/01/001/001c252.docx</p>
Michigan	<p>See 17A</p>
Minnesota	<p>Minnesota has a zero tolerance for bacterial ring rot. A discovery of a single plant in the field or a tuber in storage shall cause the rejection of the field or lot. All other fields and lots on that farm are not eligible for re-certification.</p>

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Montana	
Nebraska & Wyoming*3	Nebraska has a zero tolerance for BRR. We conduct field inspections for BRR 70 days post planting. We require ELISA tests on foliage for FY0. We are the only state conducting bin inspections (30-60 days after harvest), primarily focused on BRR. There is no tolerance for BRR during shipping point inspections for all tag grades. Though not currently a requirement, 70-80% of lots undergo PCR testing after harvest. All growers are required to submit cutter/equipment schedules. All lots cut using equipment that was used previously to cut a rejected lot with BRR are also rejected. A grower is required to purchase all new seed if BRR was identified in the previous year on that farm.
New York	
North Dakota	North Dakota has a zero tolerance for bacterial ring rot. The seed lot with confirmed BRR is rejected. Sister seed lots are scrutinized. All seed produced by a farming operation in which BRR has been found will be ineligible for recertification the following year. All equipment and storages must be cleaned and disinfected. A farming operation found to be infected on three consecutive years shall be required to purchase all new seed, clean and disinfect the operation under the supervision of the seed department before entering any seed for certification.
Oregon	Oregon's BRR testing and confirmation protocol is posted at: http://seedcert.oregonstate.edu/potatoes (last item). All testing for BRR is currently done at the labs of ICIA in Idaho Falls. No BRR is allowed in seed potato field (or lot), in our out of count. Any +BRR results in removal the lot from certification. All lots on that Seed Farm planted with the same seed lot as the rejected field will also be refused certification (See Standards Part XII C). A third or additional inspection will be required on remaining seed lots and a winter test will be required at double the normal size. All other seed lots associated with, or planted after, the rejected lot will not be eligible for recertification, but will be eligible for commercial planting if all other certification requirements are met. Any seed stored in a cellar with potatoes having bacterial ring rot will not be eligible for recertification. Seed could be sold for commercial planting (see Standards Part XV). Lots withdrawn by the grower prior to the second inspection must be inspected for BRR as uncertified seed unless lot planted with growers own seed source.
Washington	The department will reject any seed lot in which ring rot is detected and will conduct additional inspections on all of the grower's remaining seed lots. The department will not recertify any seed lot associated with or planted after the rejected lot. The department will submit samples of ring rot to an approved laboratory for confirmation. Detection of ring rot in a field will make that field ineligible for production of certified seed potatoes for three years. Presence of volunteer potato plants in a field with ring rot history will disqualify the current field crop for certification.
Wisconsin	Wisconsin has a zero tolerance for bacterial ring rot. A discovery of a single plant in the field or a tuber in storage shall cause the rejection of the field or lot. All other fields and lots on that farm are not eligible for re-certification. http://docs.legis.wisconsin.gov/document/administrativecode/ATCP 156.03(6)
18	Does your agency require a post-harvest test? If so, are all seed lots required to be tested? Explain.
Alaska	No, historically and in recent years, seed potatoes grown in Alaska has shown none to a rare occurrence of virus in production areas and most seed lots are small so not practical to require a post harvest test.
California	Post - harvest test is not required for commercial sales, but is required for recertification.
Canada	Post harvest virus testing is not mandatory for certification. Mandatory testing for bacterial ring rot at a minimum of two seed lots per farm unit, and all seed lots shipped as Elite II, Elite III, Elite IV, and Foundation have to be tested prior to shipment. Note: Some provinces may have a mandatory post harvest test for PVY and PLRV as part of a provincial program.
Colorado	Yes, Post - harvest test is required on all seed lots (including G1). All lots destined for re-certification and commercial production are required.
Idaho	All lots require a post-harvest test for PVY and PLRV. FY2 and higher require a post-harvest test for BRR.

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Maine	Yes, but seed lots comprising of less than 1 acre do not have to be tested, provided the lot is not to be sold the year the test requirement is waived. Also, first year material does not have to be tested again provided that the lot is not to be sold that year. A rule Change effective for the 2021 crop will exempt testing for out of state export of seed for commercial purposes based on a passing field reading. ELISA is used in all post harvest testing.
Michigan	All seed lots are required to be winter tested.
Minnesota	All seed lots are required to be winter tested
Montana	All seed lots from generation 1-4 are required to be tested in Post Harvest trials in Oahu, HI.
Nebraska & Wyoming*3	A post-harvest test is required for recertification
New York	All lots are required to be winter tested.
North Dakota	All seed lots planted for recertification have a post-harvest test requirement. Seed lots are visually inspected in Florida, and many are virus-tested in the laboratory as a part of the post-harvest test process.
Oregon	Post-harvest test required for final certification. Internal Necrotic Arc inspection required of all out-of-state shipments (as per the Necrotic Virus Management Plan).
Washington	Post harvest testing is required for: All Generation 1 lots except lots that are less than 0.25 acre and planted back on the same seed potato farm; All seed lots sold for recertification; A seed lot that has more than a trace amount of virus disease noted during any field inspection is not eligible for recertification, unless it has been post-harvest tested; Seed potato lots exposed to any chemical that causes tuber-borne
Wisconsin	All seed lots, both for certification and for re-certification, are required to be winter tested. In-state lots for recertification are all ELISA tested, latent varieties entering the State must be ELISA tested.
=====	
19	Post Harvest Test lot size and testing requirements: Please specify size of lots required in PHT and which laboratory tests are required for Foundation level (i.e., for recertification) and certification purposes.
Alaska	NA
California	
Canada	When required provincially or not, usually 200 or 400 tubers tested. Lab test usually for PVY and PLRV.
Colorado	G1: 25 tuber minimum to 200 tubers. G2-G6: 0.1-0.2 acres = 100 tubers; >0.2-1.0 acres = 200 tubers; >1.0 - 1.5 acres = 300 tubers; >1.5 acres - 40 acres = 400 tubers; >40-80 acres = 800 tubers; >80 acres = 1,200 tubers. The Colorado Seed Act requires PVY-N and PVY-NTN testing of any lot showing 1 - 5% PVY at PHT to prove they meet a 1% PVY-N and PVY-NTN tolerance. All imported seed lots must have a PHT and meet Colorado Seed Act tolerances. Colorado State Dept of Ag does have a Late Blight quarantine in effect for all seed lots entering the San Luis Valley growing area of Colorado. Other areas in Colorado are exempt. This does require a 400 tuber sample incubation and observation on the originating state/province prior to shipping. Plan ahead. This is a 21 day incubation and the seed should not be shipped until the incubation/observation is complete.
Idaho	All seed lots must be ELISA tested for mosaic (PVY). PLRV = visual or ELISA. Fields less that 0.1 acre = 10% of tuber to max. 100; 0.1 - 0.4 acres = 100 tubers; 0.5 - 0.9 = 200 tubers; greater than 1 acre = 400 tubers. BRR testing required for FY2 and higher, lots 0.1 acre or higher require 400 tubers. Smaller lots require 10% to a maximum of 200 tubers.
Maine	Maine requires PVY and PLRV tests for seed lots not otherwise exempted. ELISA Sampling rates include 200 tubers for 0-4.9 acres, 250 tubers for 5-40 acres, 250 tubers plus 10 additional tubers for each acre over 40 acres.
Michigan	All lots entered for certification are tested at 400 tubers per 40 acres less than 1 acre=200 tubers. Latent varieties are ELISA tested.
Minnesota	200 tubers<1 acre: 400 tuber sample is required for all lots between 1 and 45 acres. Each additional 45 acres adds another 400 tubers. Latent varieties tested for PVY by Elisa.

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Montana	In Montana, all seedlots are ELISA tested in the winter grow-out for PVA, PVX and PVY. A 400 tuber sample is required for all lots between 1 and 40 acres, each additional 40 acres adds another 400 tuber sample. We have a minimum 100 tuber sample size for lots less than an acre.
Nebraska & Wyoming*3	Grow-out is required. 0-1 acre=125 tubers: 1-10 acres = 250 tubers: 10-70 acres = 500 tubers: > 70 acres = 1000tubers. ELISA testing is required on latent varieties. Our seed law says that seed entering the state has to meet our standards: seed produced out of state is not excused from requirements our own growers adhere to. Tests always done are PVY and PLRV. PVA and PVM are sometimes required, depending on origination.
New York	
North Dakota	80 acres and over:1200 tubers, 2 acres to 80 acres:600 tubers for each field, 2 acres and under:300 tubers for each field, Minimum (small plots):100 tubers for each field. PVY testing is done on latent cultivars. Additional testing at grower's request.
Oregon	PHT lot size: <1 acre = 220 tubers, 1-20=400 tubers, 21-40=800, >40=1200; Lab testing used only for confirmational purposes except on a few early generation lots intended for sale. PVY lot testing available upon request of grower.
Washington	400 tubers from lots 1/2 acre or more. Lots less than 1/2 acre are sampled at a rate of 4 tuber/100 cwt. with a minimum of 50 tubers.
Wisconsin	400 tubers per 50 acres (4 samples maximum), small lots (<.25 acres) are allowed to submit 200 tubers.
20	Proprietary Varieties (definition): In regards to certification practices, does your state/province treat 'proprietary varieties' any differently than 'public' / 'open' varieties (i.e. those without restrictions on production). If so, how does your state/province define 'proprietary' in regards to meeting certification requirements?
Alaska	Our growers indicate on the application whether or not they are entering in a protected variety for certification. If so, evidence of needed permissions, must be provided, before lot is certified.
California	We assume that the applicant (grower or seed company) who is submitting an application has the permission to grow and obtain certification for the variety. If it is a new variety (has not been included in our database or certified before), the applicant or variety's owner must submit a variety description. That document should indicate if the variety is public, proprietary and if it has or has not not a PVP title. See note below for more info.
Canada	The Canadian Food Inspection Agency (CFIA) does not differentiate between registered, unregistered and proprietary varieties when subject to seed potato certification standards. The CFIA views all varieties in the same way, therefore, all applications for seed certification are assessed against the same requirements contained in the Seeds Regulations. There are no provisions within Canada's Seeds Act and Seeds Regulations to refuse the certification of a seed potato crop or lot of a "Proprietary Variety" provided all applicable requirements are met. The permissions required to grow protected/private owned varieties is a commercial matter.
Colorado	Grower must be approved by variety owner/agent to have certified; Proprietary = PVP certificate issued or pending. PVP varieties can be removed from the Seed Directory only with written permission from variety owner/agent.
Idaho	Proprietary varieties are those covered by PVP, Patent, or other intellectual property law. ICIA does not enforce intellectual property rights. Unless the variety owner (or their agent) requests otherwise, proprietary varieties are required to be listed in the annual Crop Directory.
Maine	Grower must be approved by variety owner/agent to have certified; Proprietary = PVP certificate issued or pending.
Michigan	All varieties are treated the same.

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Minnesota The applicant must submit a written statement with the certification application from the breeder, originator, or originator's designee that the applicant has full and unrestricted rights to introduce the protected variety into the commercial market.

Montana

Nebraska & WY*3 Not in rules but we give growers a verbal reminder of the obligation.

New York

North Dakota Seed growers growing any variety protected by patent or the Plant Variety Protection Act must have authorzatiion from the owner to be eligible for certification.

Oregon Grower must be approved by variety owner/agent to have seed lot certified; Proprietary = PVP certificate issued or pending.

Washington We treat all varieties the same

Wisconsin We openly communicate with licensee's about the varieties and acreages grown of protected germplasm.

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21 Cross-State Certification: Does your state certify any seed potato lots in neighboring states? If so, what arrangements do you have with those states to allow for the cross border certification of these lots?

Alaska No certificaion activities in other states or in Canada.

California

Canada

Colorado

Idaho ICIA has a MOU with Utah Crop Improvement Association to certify seed potatoes produced in Box Elder and Cache Counties, Utah. This MOU is part of the Idaho SNHP manual.

Maine

Michigan

Minnesota

Montana

Nebraska & WY*3

New York

North Dakota No certification activies outside the state of North Dakota.

Oregon YES. Oregon has certified lots in northern California for several years now. This was at the request of the growers who were predominately Oregon based but had some fields in California. In these cases we must get the permission from the California CIA to allow us to certify these lots. We have co-certified lots in Nevada with the Nev. Dept of Ag but not currently.

Washington

Wisconsin

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22 White Exports tags: Is your state currently using a white "US Export Tag" as discussed at the 2021 NPC Certifaion Section Meeting ? Are they likey to use it, and if not why? NOTE: Example from Idaho at bottom of file.

Alaska N/A

California

Canada

Colorado

10/1/2023

**Potato Association of America - Certification Section
Annual General Certification Agency Survey**

Idaho	YES.
Maine	
Michigan	
Minnesota	
Montana	
Nebraska & WY*3	
New York	
North Dakota	No. Canada is the only country North Dakota exports to. The use of our bulk certificates, inspection certificates and phytosanitary certificates has been sufficient for this market.
Oregon	No. Oregon does not have an export tag. White is used in Oregon Certification for Experimental Class.
Washington	
Wisconsin	

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Potato Association of America - Certification Section
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23	*1 - Last date modified or affirmed
Alaska	Oct-23
California	Oct-21
Canada	Nov-15
Colorado	Oct-21
Idaho	Oct-23
Maine	Nov-23
Michigan	Nov-18
Minnesota	Nov-18
Montana	Dec-11
Nebraska & WY*3	Sep-20
New York	Nov-23
North Dakota	Oct-22
Oregon	Oct-23
Washington	Oct-19
Wisconsin	Oct-23