

2022 Potato Certification Advisory Committee
Tuesday, Jan 25, 2022 at 10:00 AM
Three Rivers Convention Center, Kennewick, WA 99336

AGENDA

I. WELCOME & INTRODUCTIONS – Rob Lane (acting chair)

Membership: See https://seedcert.oregonstate.edu/sites/seedcert.oregonstate.edu/files/potato_members.pdf

II. PRESENTING THE 2021 MINUTES

(see:https://seedcert.oregonstate.edu/sites/seedcert.oregonstate.edu/files/potato_pac2021minutes.pdf)

III. PROGRAM UPDATES

- A. Oregon Department of Agriculture (Elizabeth A. Savory)
 - B. OSU - Crop & Soil Science & Seed Services Reports (Tom Chastain / Dan Curry)
 - C. Oregon Seed Certification Service (Andy Altishin)
 - D. Winter Grow-Out Report (Terry Burr)
 - E. Review of National Potato Certification Meetings (Jeff McMorran)
- See Appendix A1 (Page 6)

IV. OSCS ISSUES & UPDATES FOR GENERAL DISCUSSION

Item 1: Modification of Policy Sheet #2 on accepting 'no WGO lots'	2
Item 2: Change to Bylaws related to PCAC membership.	3
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VI. Other Business

VI. Election of new Vice Chair & Board Representative

VII. Adjourn

EXPANDED BACKGROUND INFORMATION

IV. OSCS ISSUES & UPDATES FOR GENERAL DISCUSSION

Item 1: Modification of Policy Sheet #2 on accepting 'no WGO lots'

See Appendix A1 - Policy Statement #2 (Page 8)

Background: OSCS Policy on accepting lots without a Winter Grow-Out was discussed and accepted by the PCAC in 2019. This policy allows for acceptance of seed potato lots from outside Oregon for which the Post-Harvest Test (PHT) consisted of only a virus test in the lab (no grow-out). As noted in the policy statement, this involved the situation where the lot was known to either: (1) lack a WGO before shipment, or (2) lack a WGO test that was discovered after shipment (but did have a virus test). No provision was made for lots that did not have *any* PHT. The Potato Standards were subsequently amended to allow for acceptance of potato seed lots from outside Oregon in which the PHT consisted only of virus testing if this was the only option open to the grower in those states provided they met the provision of Policy #2 (see page 13, Section IX, of the 2021 Potato Standards)

Situation: In reviewing Policy #2 this year, it was realized that several provisions were not routinely being met, and an update was needed to be aligned it with current practice (or conversely current practice needed to be modified to strictly adhere to the stated policy).

Specific areas of conflict between policy and practice:

- 1. PVA testing:** PVA testing was originally included in the require testing because, like PVY, it can cause visual mosaic symptoms in potato plants. However, I am not aware of any state that routinely tests for PVA as part of the PHT, and we rarely find any PVA in WGO lots. Thus it is recommended this requirement be removed.
- 2. 2x WGO requirement:** If one assumes the current WGO tuber requirements are adequate to assess the acceptability of a lot for re-certification, there does not seem to be any valid basis for this requirement other than punitive. This provision was also difficult to keep track of in the WGO trial, and as often as not would be missed by the grower or OSCS in determining the amount of tuber to turn over for the WGO. OSCS would recommend this provision be dropped.
- 3. Accepting lots without any PHT:** The current policy has no stated provision of lack of accepting lots with no PHT, in fact explicitly says at the end that they will not be accepted “under any circumstances” (Part C), however they have been accepted several time in past years as “special cases” in which the required virus testing was conducted on the emerging plants. Such lots were considered eligible as long as: (1) the tested plant meant virus tolerances *in Oregon* for re-certification, and (2) the state/province of origin had no objections to Oregon considering the lots eligible for re-certification. Making the statement on the Policy sheet that “*Lots that lack any Post Harvest Testing will not be eligible for recertification in Oregon under any circumstances*” while allowing them as ‘special cases’ sends a mixed message to growers and is misleading. OSCS recommends modifying Section C to state the policy by which such lots have been accepted in the past.

Proposal: Modifying the Policy #2 to be as noted in Appendix A2 (Page 10).

NOTE: Generation terminology updated to the FY system.

Item 2: Change to Bylaws related to PCAC membership.

Background: Seed Grower membership on the PCAC is defined in the Bylaws as follows:

Klamath Potato Growers Association (KPGA)	3
Central Oregon Potato Growers Association (COPGA)	2
Blue Mountain Potato Growers Association (BMPGA)	2
Oregon Seed Potato Growers Association ('at large' position)	1
Oregon Potato Commission (commercial potato growers)	2

There are also voting and non-voting representatives from ODA and OSU (see Bylaws).

A few facts to consider:

- (a) There are currently 2 vacancies among the grower groups (C. Oregon, Klamath). No grower has offered, or been put forward, to fill the Klamath position, and there is now only 1 Central Oregon grower. It is a bit unclear exactly how representatives from the regional areas are selected.
- (b) There are much fewer seed potato growers in Oregon than in past years when the PCAC Bylaws were written. Currently there are only 11 farms (with 2 entities being the managed by the same people).
- (c) The PCAC meetings are open and generally well attended by the growers because they are held in conjunction with the WA-OR Potato Meetings in Kennewick each year.

Proposal: To amend the PCAC Bylaws to specify that each active seed potato entity (i.e. farm) who attends the meeting (either in person, or virtually when offered) has one vote. It would be up to each grower entity to select an official representative if several persons from that farm attend the meeting, and the voting members would need to identify themselves at the commencement of each meeting. Official representatives may select a proxy. The selection and representation of other members of the PCAC, including the OPC 'at large' positions, ODA, and OSU positions will not change. **See the Proposed wording for the Bylaws on page 12).**

Item 3: Update of the Crop History section of the Standards

Background: Upon review, several sections of the Crop History section of the current Potato Standards (Section X., page 14) were found to be either a bit confusing or in need of updating.

A. Volunteers: This section (B.) notes that "volunteers" in excess of those shown in Table 5 "Field/Harvest Tolerance" will not be permitted unless previous crop was the same variety or an earlier generation. Confusion arises in that Table 5 does not mention "Volunteers". It is not clear if any between row plants should be considered potentially "Variety mixture / off type" and thus meet the tolerances shown on Table 5 under OT or treated separately.

To clarify this situation OSCS is proposing the following wording for part B:

B. Volunteers: Potato plants found between the planted rows are not permitted if they exceed the tolerance shown for “ Variety mixture / off type” on Table 5, (pg. 16), except where the previous crop of the same variety was of an earlier generation than that being produced.

B. Modification of Crop History (MLH)

Background: This section (C.) allows for a grower to reduce the number of non-potato years required between seed potato crops (see Table 3 in the Standards). It is rarely used and the requirements stated are a bit vague. In particular the reference to “culture practice proven to be successful” does not say by what criteria such practices have been “proven” successful, and with so little use MLH it leaves OSCS staff uncertain just what should and should not be considered acceptable. OSCS staff also believe it may not prudent to shorten the years out requirement for the earliest generations.

Considerations: Unlike other true seeded crops certified by OSCC where the main objective of a successful MLH relates to the reduction of volunteer plants from the previous planting, with potatoes there is a much greater emphasis on diseases, weather soil-borne or via spread from volunteer plants. Practices that may reduce volunteers to an acceptable level may not reduce various disease causal factors nearly as well as longer periods out of potatoes.

Proposal: Remove the MLH section from the Standards. Any future request to modify the number of years out of potatoes for a specific seed generation would then be handled as a ‘special case’ requiring an appeals panel for approval of the methods proposed.

V. OTHER BUSINESS

If not previously discussed:

- (1) Use of white Export tags,
- (2) Inclusion of a check box on the PVY testing options form to include testing data on the NAHC
- (3) Minor updates to the Potato Standards

VI. Election of new Vice Chair & Board Representative

VII. Adjourn

APPENDIX

A1 - Review of National Potato Certification Meetings	Page 6
A2. WGO Report (graph)	Page 7
A3. Policy Statement (#2. - OSCS Policy Regarding Accepting Out-Of-State Lots Which Have <u>Not</u> Had A Winter Grow Out.	Page 8
A4. Revised Bylaws (proposed)	Page 12
A5. US Exports Tags (white & Blue)	Page 14

Additional Handouts

1. OSU/Seed Services/Seed Certification Updates

Appendix A1 - Review of National Potato Certification Meetings

NPC Disease Management and Seed Certification Sub-Committee &
 Potato Association of America, Certification Section
 NPC Headquarters - Washington, DC.

TOPICS COVERED (one or both meetings):

1. Certification Agency Updates
2. USDA-APHIS/NPC Update Lisa Peraino, USDA and Mike Wenkel, NPC
 State-National Harmonization Program/ Necrotic Virus Management Plan
3. PCN update US & Canada Survey Lynn Evans-Goldner; Gordon Henry
4. Potato Wart Survey Update Gordon Henry
5. UNECE & NAPPO Update Nina Zidack, Gordon Henry
6. True Potato Seed Certification Joshua Parsons/Charles Miller
7. Dormant Tuber Testing Update Nina Zidack, Steve Hystad
8. G3_NY_0315_Automation scalability for direct testing of potato tubers to
 safeguard US seed potato health Don Sklarczyk
9. Use of White Export Tags * Peter Joyce/Alan Westra
10. PAA List and Surveys: (1) Agency Contact List, (2) General Agency Survey, (3) Regulations
 Summary, (4) North American Certified Seed Potato Health Certificate, (5) Post-Harvest survey, (6)
 Latent virus list, (7) Limited Generation Table.
 See: <https://seedcert.oregonstate.edu/potato-certification-national-level>
11. PAA certification section web page (<https://potatoassociation.org/>) Mia Kirk
12. Report on Annual PAA Meeting Gordon Henry/Niza Zidack

Minutes of both NPC and PAA Certification meetings available upon request.

* more extensive discussion at PCAC planned.

Appendix A2. WGO Report (graph)

{ Terry to supply }

Appendix A3. Revisions to Policy Statement #2**OSCS POTATO PROGRAM – Policy Statement (#2)****3-13-2019**

REVISED 2019 - Lots from states/provinces that only have lab-based tuber testing of the WGO samples will be accepted into the OSCS program without penalty.

**OSCS POLICY REGARDING ACCEPTING OUT-OF-STATE LOTS WHICH HAVE
NOT HAD A WINTER GROW OUT.**

NOTE: *OSCS requires that all lots for recertification have a post-harvest grow out (“winter test”) as referenced on page 17-18 of the 2018 Standards. Exceptions to this requirement include (a. Lots received from states/provinces where the official policy is to only conduct lab-based tuber testing on the WGO sample; (b) Lots considered as “special cases” due to late purchase, or lack of other practical alternatives, where an acceptable lot that has had a grow-out of the Post-Harvest sample is not possible. Such “special cases” should be approved in advanced by OSCS. Lots that lack any Post Harvest Testing will not be eligible for recertification in Oregon under any circumstances.*

Explanation: The requirement for a winter grow out for any seed to be recertified in Oregon is based on the fact that a grow out allows Certification officials to evaluate a lot for the presence of variety mixtures, chemical damage, and other diseases not detected with a standard ELISA.

A. PRE-SEASON INQUIRIES:1. Requirement for accepting out-of-state lots that have not had a “winter test”:

- a. Written request with explanation of the need for waiver: A grower wishing to use seed not subject to a winter grow out must make this request in writing and cite the reason(s) why this lot should be considered for recertification even though it does not fully meet the requirement for certification in Oregon.
- b. Virus testing: A minimum 400-tuber sample must be tested for the presence of PVY, PVA, PLRV by ELISA (or test of equivalent sensitivity) by a laboratory acceptable to the State/Province from which the seed was sent (“originating state”); PVX testing is required on all material classified as Nuclear and Generation 1. A smaller sample will be accepted only if the originating state has a smaller sample requirement for the equivalent class of material in their post-harvest testing requirements.
- c. Shipping point inspection (required). Grower must provide proof of shipping point inspection at time of application.
- d. First field inspection: The first field inspection will use exam at least double the minimum count requirement.

B. POST PLANTING SITUATIONS:

When an out-of-state lot was found after planting (un-be-knowns to the purchaser) to have only an ELISA test as described in Part A, and not to have had a winter grow out, the following actions must be taken to allow for certification:

1. The lot is initially **REJECTED** as being ineligible for recertification in Oregon because of lack of a winter grow out.
2. The grower may then **appeal** (in writing) this decision citing the reason why this lot should be considered for recertification even though it does not fully meet the requirement for certification in Oregon.
3. If satisfactory explanation is given the lot could be approved for recertification **ONLY** if the following **provisions** are met:
 - a. The lot may be certified at the current otherwise eligible class if a **winter grow out at 2x** the normal sample size is submitted and the lot passes in regards to tolerances at this class. The grower will be required to pay double the regular fee for this test.

OR

 - b. The lot may be certified at the next higher class (i.e. downgraded a class) if a winter grow out at 1x the normal sample size is submitted and the lot passes in regards to tolerances at this class. Normal winter grow out fee to apply.

C. LOT WITH NO POST HARVEST TESTING:

Lots that lack any Post Harvest Testing will not be eligible for recertification in Oregon under any circumstances.

Originally approved by OSCS Potato Advisory Board Committee and Certification Board in 2004. Revised as recommended by the Potato Certification Advisory Committee in 2007 & 2019. Revised 10-8-08 (extra fee provision removed..

(3-13-2019 – JMc)

OSCS POTATO PROGRAM – Policy Statement (#2) **REVISED**

Proposed 1-24-2021

OSCS POLICY REGARDING ACCEPTING OUT-OF-STATE LOTS WHICH HAVE
NOT HAD A WINTER GROW OUT.

NOTE: *OSCS requires that all lots for recertification have a post-harvest grow out (“winter test”) as referenced on page 17-18 of the 2018 Standards. Exceptions to this requirement include (a) Lots received from states/provinces where the official policy is to only conduct lab-based tuber testing on the WGO sample; (b) Lots considered as “special cases” due to late purchase, or lack of other practical alternatives, where an acceptable lot that has had a grow-out of the Post-Harvest sample is not possible. Such “special cases” should be approved in advanced by OSCS. Lots that lack any Post Harvest Testing will not be eligible for recertification in Oregon under any circumstances.*

Explanation: The requirement for a winter grow out for any seed to be recertified in Oregon is based on the fact that a grow out allows Certification officials to evaluate a lot for the presence of variety mixtures, chemical damage, and other diseases not detected with a standard ELISA.

I. PRE-SEASON INQUIRIES:1. Requirement for accepting out-of-state lots that have not had a “winter test”:

- a. Written request with explanation of the need for waiver: A grower wishing to use seed not subject to a winter grow out must make this request in writing and cite the reason(s) why this lot should be considered for recertification even though it does not fully meet the requirement for certification in Oregon.
- b. Virus testing: A minimum 400-tuber sample must be tested for the presence of PVY, PVA, PLRV by ELISA (or test of equivalent sensitivity) by a laboratory acceptable to the State/Province from which the seed was sent (“originating state”); PVX testing is required on all material classified as Nuclear- FY1 and Generation 1 FY2. A smaller sample will be accepted only if the originating state has a smaller sample requirement for the equivalent class of material in their post-harvest testing requirements.
- c. Shipping point inspection (required). Grower must provide proof of shipping point inspection at time of application.
- d. First field inspection: The first field inspection will use examine at least double the minimum count requirement. Not to exceed counts of 12,000 plants (2,000 clicks).

II. POST PLANTING SITUATIONS:

A. Lots with only virus testing (no Winter Grow-outs):

When an out-of-state lot was found after planting (un-be-knowns to the purchaser) to have only an ELISA test as described in Part A, and not to have had a winter grow out, the following actions must be taken to allow for certification. These steps are not required if virus testing was the only option available in the source state/province.

1. The lot is initially **REJECTED** as being ineligible for recertification in Oregon because of lack of a winter grow out.
2. The grower may then **appeal** (in writing, eMail OK) this decision citing the reason why this lot should be considered for recertification even though it does not fully meet the requirements for certification in Oregon.
3. If satisfactory explanation is given the lot could be approved for recertification **ONLY** if the following **provisions** are met:

a. The lot may be certified at the current otherwise eligible class if a **winter grow out at 2x** the normal sample size is submitted and the lot passes in regards to tolerances at this class. The grower will be required to pay double the regular fee for this test.

OR

b. The lot may be certified at the next higher class (i.e. downgraded a class) if a winter grow out at 1x the normal sample size is submitted and the lot passes in regards to tolerances at this class. Normal winter grow out fee to apply.

c. First field inspection: The first field inspection will use examine at least double the minimum count requirement. **Not to exceed counts of 12,000 plants (2,000 clicks).**

B. Lots with no post-harvest testing:

Lots that lack any Post Harvest Testing will not be eligible for recertification in Oregon, and will initially be **REJECTED** as being ineligible for recertification. The grower may then **appeal** (in writing, eMail OK) this decision citing the reason why this lot should be considered for recertification even though it does not fully meet the requirements for certification in Oregon. Though still considered a “special case” the lot may be accepted provided the following conditions are applied:

a. A virus sample of 400 leaves per lot is taken at the first inspection at random across the field and are tested for PVY. The PVY levels must not exceed tolerance levels for mosaic at the specific class. Downgrading is permissible. The grower is charged a ‘sampling fee’ by OSCS and billed by the OSU lab for the virus testing required.

b. A standard Winter Growout sample is submitted. No exceptions are permitted for Own-Use-Only or lot size.

NOTE: “Special Case” exemptions are generally only allowed once per grower for a specific source grower.

Originally approved by OSCS Potato Advisory Board Committee and Certification Board in 2004. Revised as recommended by the Potato Certification Advisory Committee in 2007 & 2019. Proposed revision 1-25-2022. (12-14-21 – JMc)

Appendix 4 - Revised Bylaws (proposed)

Current Wording

Article III. Membership

1. The Advisory Committee consists of thirteen voting members: eight growers of certified seed potatoes; and two commercial potato growers selected by the Oregon Potato Commission; one OSU researcher; one extension specialist; and one county agent. In addition, the Certification Program, and the Commodity Inspection Division, Oregon Department of Agriculture, shall be represented by one ex-officio member each. Other ex-officio members may be appointed as the Dean or the committee deem necessary.
2. Representatives of the committee shall be appointed from the following geographical areas by the organizations listed below:

Klamath Potato Growers Association (KPGA) – three seed potato growers (includes Southern Lake County).

Central Oregon Potato Growers Association (COPGA) – two seed potato growers (includes Crook, Deschutes, Jefferson and Northern Lake County).

Blue Mountain Potato Growers Association (BMPGA) – two seed potato growers.

Oregon Seed Potato Growers Association – one ‘at large’ seed grower

Oregon Potato Commission – two representatives who must be commercial potato growers.

College of Agricultural Sciences (OSU) – one researcher, one extension specialist, one county agent, one Foundation Seed representative (ex-officio), and one Certified Seed representative (ex-officio).

Article IV. Term of Membership

1. The eight seed producers, and the two commercial growers, shall serve three year. Re-appointment for additional term(s) is permissible.

Proposed Wording

Article III. Membership

1. The Advisory Committee consists of **the following membership: 1 voting member from each Fam of certified seed potatoes the previous season;** and two commercial potato growers selected by the Oregon Potato Commission; one OSU researcher; one extension specialist; and one county agent. In addition, the Certification Program, and the Commodity Inspection Division, Oregon Department of Agriculture, shall be represented by one ex-officio member each. Other ex-officio members may be appointed as the Dean or the committee deem necessary.
2. ~~Representatives of the committee shall be appointed from the following geographical areas by the organizations listed below:~~

~~Klamath Potato Growers Association (KPGA) – three seed potato growers (includes Southern Lake County).~~

~~Central Oregon Potato Growers Association (COPGA) – two seed potato growers (includes Crook, Deschutes, Jefferson and Northern Lake County).~~

~~Blue Mountain Potato Growers Association (BMPGA) – two seed potato growers.~~

2. The committee shall consist of the following representatives:

Oregon certified seed growers- 1 voting member from each Fam producing certified seed potatoes the previous season;

~~Oregon Seed Potato Growers Association~~—one ‘at large’ seed grower

Oregon Potato Commission – two representatives who must be commercial potato growers.

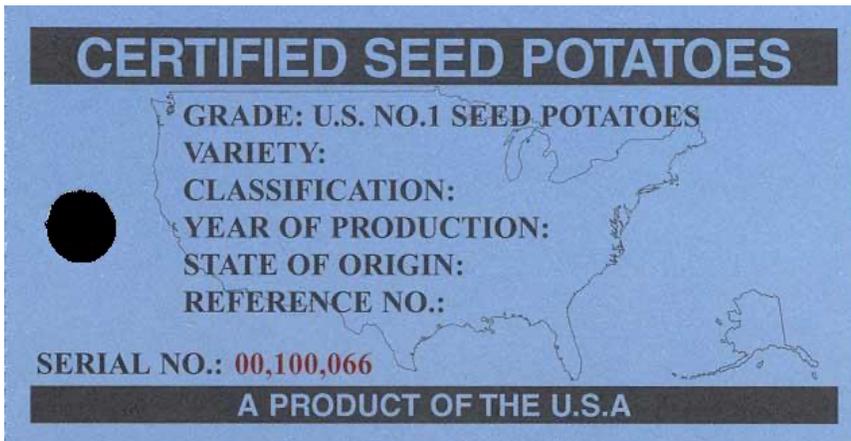
College of Agricultural Sciences (OSU) – one researcher, one extension specialist, one county agent, one Foundation Seed representative (ex-officio), and one Certified Seed representative (ex-officio).

Article IV. Term of Membership

1. ~~The eight~~ Seed producers - no limit on length of service. Voting membership to be determined by each individual farm.
2. The two commercial growers, shall serve three years. Re-appointment for additional term(s) is permissible.

{ the rest of the bylaws the same }

Appendix A5 - US Export Tags



{ This is the end of the 2022 PCAC Agenda Packet }

Discussion - White Export tags

{ to be reviewed and discussed during the Review of National Meetings }

Situation: At the NPC Certification meeting in December the US Potato Board representative, Peter Joyce, discussed the frustration importing countries/growers have with the variety of tagging and classes displayed on potato seed from US states. He asked if US Agencies would consider using a US Export Tag, in particular, a white tag similar to that currently used by Idaho (see Appendix A4, page 12). Years ago, a Blue US Export tag was developed by the PAA Certification Section but never widely adopted.

Issues inherent with using a White US Export tag:

1. **Other uses of white tags:** White tags are used for other types of seed (Experimental varieties and for Foundation Class in Oregon for example).
2. **Grade terminology:** The tag says “Meets US Export Grade” (not a class). Grade relates to *physical* characteristics of the harvested tubers and is generally determined at a Shipping Point Inspection. Class refers to a lot meeting all the requirements of certification (isolation, field history, source, inspection criteria, PHT, etc.). Class criteria vary widely among states, grade does not. Thus universal use of a white tag that simply says the seed meets US Export Grade requirements might be misconstrued by imported to mean white tags from one state are equivalent to white tag lots from another state in regards to class.
3. **Uniformity among states does not exist:** Though it would be nice to have some uniformity among states in terms of certification terminology or class requirements, this is currently not the case. In particular, a lack of uniformity among class terminology can make universal use of a “White Export Tag” just as confusing as different color/types of state tags. Peter Joyce noted that the main item importing growers look at is “the number” (i.e. G1, G2, G3 or FY1, FY2, FY3). So if, for example, Montana and Oregon both used White tags with Montana having class as G1 and Oregon having the equivalent class as FY2, Oregon exports might be at a disadvantage, where as having different looking tags from each state might clearly relay that non-congruity of the imported seed in regards to class and field years.

Question: Should Oregon consider using a White Export Tag in the future?

Additional Notes/Considerations: (1) Use of a White Export Tag does not preclude the use of the ‘regular’ blue or yellow Oregon certification tag on the same bag. (2) Exports generally require additional inspections by ODA as part of the official Shipping Point Inspection (grade) and any needed inspection for phytosanitary certificates. Thus it might actually make more sense to have the ODA issue any White Exports Tags rather than OCS.

OSCS Updates - Having PVY testing results appear on NAHC by default

{ This will just be mentioned at the end of the OSCS update }

Background: As a voluntary/optional program PVY testing of the WGO lots is not included on the NAHC unless the grower request it's inclusion. There is a box on the NAHC for PVY results, but this is left blank if no request is made. The blank box may infer to growers/states receiving this seed that no PVY testing was done, even if the test were completed. Very few growers make such a request, even if all their tests show 0% PVY. Adding the PVY testing results to the NAHC after they are initially printed without showing it can be done, but involves extra time on the part of OSCS staff.

Question: Should OSCS change this policy to include the PVY testing results unless a grower request it NOT be included?

Item 3: Discussion - Cutting WGO tubers after planting to look for necrotic arcs

{ At OSCS internal discussion 12-4-21 it was decided not to offer or discuss this at the PCAC }

Background: Currently The Necrotic Virus Management Plan (NVMP), of which Oregon is a signatory via the State National Harmonization Plan (SNHP), requires that all seed lots shipped across state lines be inspected for internal symptoms of ‘necrotizing viruses’ (specifically PVYntn, PMTV, TRV). The NVMP stipulates tolerances of no more than 0.5% for seed to be considered eligible for re-certification, or 2% for seed for commercial use (note - this is symptom expression in the tubers, not virus lab test tolerances or foliar symptoms in a WGO). Currently growers are required to submit samples to ODA for this assay. The OSCS Winter Grow-Out Sample has not been used for this inspection, primary because it was considered a phytosanitary requirement and thus the prevue of the ODA. Tuber handling could also be a problem in some cases if there was excessive rot or sprouting in the WGO sample at the time of disposal.

Discussion Point: It is conceivable that the ‘left over’ WGO sample (i.e. bags of tubers after the WGO readings are complete) could be used for this inspection if the tubers were still in decent shape. The WGO test only requires melon ball scoop be taken from the bud end, leaving the rest of the tuber intact. The intact tubers could later be cut before disposal if requested by the grower to meet the requirement of the NVMP.

Issues:

1. **Authorization:** as a phytosanitary inspection, the ODA would have to authorize OSCS to perform this inspection.
2. **Request at delivery:** Not all seed lots are sent out of state, thus the grower would have to request, in advance, that this test be done if possible. The seed grower may not know at the time of delivery that the lot is to be shipped out-of-state. Later requests may not be possible in as much as the seed tubers are discarded shortly after lots are read to optimize space.
3. **Tuber breakdown or sprouting:** Tubers in some lots may not be suitable for cutting if they have begun to breakdown or have sprouted excessively * (making bag separation nearly impossible). Smaller tubers are not likely to fair well for cutting or not have enough intact tuber tissue left for the evaluation.
4. **Billing:** Growers would have to be billed for this inspection. Amount is yet to be determined but would be based on the extra time required.

Question: Is this activity something growers might be interested in?

Table A2 – Special testing requirements by other states.

Testing Requirements for Trade within US and to Canada (in addition to Post Harvest Test) *a				
US Agency	Lab Test PVY *1		Soil sampling	Other requirements to import into these states/provinces
	All Varieties	Latent Varieties *2		
Alaska	-	-		
California	-	-		
Colorado	X	X		Late blight incubation required all seed all areas of Colorado, PVYntn test (if >0.5% PVY)
Idaho	X	X		BRR test on FY2 class and later generations, PVY lab , PLRV visual or ELISA).
Maine	-	X		
Michigan	-	X		
Minnesota	-	-		
Montana	NA	NA		Montana does not allow seed imported into certification
North Dakota	-	-		
Nebraska/WY	-	-		Root Knot Nematode if in area known to be present or unknown
New York	-	-		
Oregon	-	-		
Washington	-	-		
Wisconsin	-	X		Growout (field or screenhouse) required for recertification.
Canada Agency	-	-	PCN	BRR
-New Brunswick	X	-	PCN	BRR,PLRV
-PEI	X	-	PCN	BRR, PLRV
*1 - PVY Lab test requirements: "-" = not required, X=required as indicated, NA= not applicable, does not allow imported seed.				
*2 Latent varieties generally include: Shepody, Norkotah, Silverton, Nicolet, Clearwater, etc.				
*a - Table developed by Alex Crawford of Wisconsin Seed Certification Service				

Table A3 - Certification requirements for in-state and out-of-state shipments.

PHT Certification Requirements In-State vs Out-of-State		
Item	Oregon *5	Out-Of-State shipments *4
Post-harvest Test *1	WGO	WGO or DTT
PVY testing	"latent varieties"(FY1 & FY2)	Generally required or expected
PVY tolerance	2% for re-certification, no 'cap' for certified seed	depends of state, re-cert varies from 0.5% to 2%; certified 2% to 'no cap'
PVY strain test	not required	Required if PVY% > 0.5% and necrotic arcs observed at SPI*3; required for Colorado.
Shipping Point Inspection	not required	Generally required. SPI for internal necrotic arcs required under NVMP
Testing for Dickeya sp	not required	(Maine?)
BRR test	not required	Required for shipments to Canada & Colorado (also often a requirement by companies buying seed)
Variety mix	1.0% for re-cert; no cap on certified	Highly variable, 0% early generations to 2% for cert. class (WA). Many states simply note or apply summer tolerances.
Chemical damage	noted, no 'cap' (re-cert/cert)	varies, 5% ID,
Fusarium	noted only	USDA #1 tolerance at SPI tolerances apply (5%)
Late blight	noted only	Test required CO, Canada
Powdery Scab	noted only	WA - "none allowed"
Maximum generation	FY6	Most states FY6; MA & CA - FY5 ; MN, ND, WA, CA, ID - FY7; AK - FY8;

Abbreviations and notes

*1 PHT = Post-Harvest Testing. May be Winter Grow-Out (WGO) or lab testing.

*2 WGO = Winter Grow-Out of tuber sub-sample. Generally includes virus testing.

DTT = Direct Tuber Testing

*3 NVMP - Under the Necrotic Virus Management Plan

*4 Required by state/Province receiving seed. See PAA "Post Harvest Testing Survey" for more detailed state-by-state requirements.

*5 Requirements to re-certify / certify; same if not noted

