



United States Department of Agriculture

A close-up photograph of several blueberries on a branch. The berries are covered in water droplets, and some are still green, indicating they are in the early stages of ripening. The background is a soft, out-of-focus green.

Oregon Blueberries to Korea

**2025 Grower and
Packer Information**

April 4, 2025

Updates for 2025

- New Trade Specialist for Washington, Oregon and Alaska



Monica Little

Monica.M.Little@usda.gov

206-200-2683 (cell)



- *And... a newly revised PowerPoint!*

2024 Season Recap

- Overall, it was a good year!
 - No Notices of Non-Compliance (NNCs)
 - No pest interceptions for two or more years
- Leafroller may be the most likely pest
 - Growers have been very attentive to potential issues

Keep up the great work!

Operational Guidelines

Beginning 2023 Growing Season

- We will do an overview of the document today
 - **You are responsible for thoroughly reading, understanding and implementing the guidelines in this document**
 - Please reach out if you have questions!
 - The **Operational Guidelines** document is shared in the chat for your convenience
 - You can find this at anytime on the Oregon Blueberry Korea Export Program website: <https://oregonblueberry.com/korea/>
 - This can ALSO be found on the PExD Website: <https://pcit.aphis.usda.gov/PExD/faces/ViewPExD.jsf>

Pests of Concern

- Pests Identified by Korea as a concern that are not known to occur in the State of Oregon
 1. *Conotrachelus nenuphar* (Plum Curculio)
 2. *Rhagoletis mendax* (Blueberry Maggot)
 3. *Rhagoletis tabellaria* (White Banded Fruitfly)*
 4. *Acrobasis vaccinii* (Cranberry Fruitworm)
 5. *Epiphyas postvittana* (Light Brown Apple Moth)

*Note: *Rhagoletis tabellaria* (White banded fruitfly) has been found in Oregon, but is not found in areas of, or associated with, commercial blueberry production.

Pests of Concern

- Pests Identified by Korea as a concern with no required mitigation measures
 1. *Ericaphis fimbriata* (Blueberry aphid)
 2. *Ericaphis scammelli* (Blueberry aphid)
 3. *Hemiberlesia rapax* (Greedy scale)
 4. *Leptocoris trivittatus* (Eastern Boxelder bug)



Pests of Concern

- Pests Identified by Korea as a concern that requires mitigation measures
 - Pathogen: *Monilinia vaccinii-corymbosi* (Mummy Berry)



Pests of Concern

- Pests Identified by Korea as a concern that requires mitigation measures
- ***Argyrotaenia citrana* (Orange Tortrix)**



Dick Wilson, 2012, Bugguide.net



Nick Wiser, 2020, Bugguide.net

Pests of Concern

- Pests Identified by Korea as a concern **that requires mitigation measures**
 - ***Choristoneura rosaceana* (Oblique Banded Leafroller)**



Steven Mlodinow, 2016, Bugguide.net



MJ Hatfield, 2016, Bugguide.net

Pests of Concern

- Pests Identified by Korea as a concern that requires mitigation measures
- *Grapholita packardi* (Cherry Fruitworm)



George Smiley, 2020, Bugguide.net



George Smiley, 2020, Bugguide.net

Mitigation Measures: Mummy Berry

- Monitoring and/or trapping surveys must be conducted by commercial pest consultants (PCAs) or ODA in each registered production field.
 - Conduct scouting (visual inspections) for mummy berry.
 - Record data on APHIS form
 - Copies of records must be provided to:
 - Packing facilities prior to packing fruit from that production field
 - APHIS and ODA when requested



If Mummy Berry is Detected

- Increase monitoring of affected fields
 - Identify the infected sites
 - Look for overwintering bodies
 - Monitor spring vegetative and floral growth
- Evaluate fruit as it grows and immediately prior to harvest
 - Follow monitoring directions in **Operational Guidelines**



Fields with No Past Mummy Berry Infections

- Treat with a preventive **spring** fungicide application
 - Follow IPM guidelines
- Monitor the development of fruit
 - Follow monitoring directions in **Operational Guidelines**



← not spring

If Mummy Berry is Identified



Cornell College of Agriculture and Life Sciences

- Estimate the level of infection
- If a low-level infection:
 - Increase inspection of fruit
 - Notify the packing house
 - Removal of infected fruit on the line
- High-level infection rates are not eligible to go to Korea!



APH

Grower Name

Spring
Growth

Estimated
infection level
must be noted!

Pre-
Harvest

OREGON BLUEBERRIES TO KOREA SCOUTING RECORD FOR MUMMYBERRY

GROWER NAME:			DATE:		
GROWER CODE:			FIELD LOCATION:		
DOES FIELD HAS HISTORY OF MUMMYBERRY INFECTION:					

MONITORING OF SPRING GROWTH FOR MUMMYBERRY

Inspect the spring growth at each of the specific site location(s) for evidence of primary infections on vegetative and floral growth • Within the designated area visit three sites. • At each of the three sites, inspect 10 bushes. These bushes should be spaced 3-5 plants apart and on both sides of the row, in order to cover a larger area at each site. • Inspect bushes for symptoms of shoot blight and browning along the major veins. Look for wilted, brown foliage and bent twig

FRUIT MONITORING FOR MUMMYBERRY AFTER FRUIT HAS SIZED AND PRE-HARVEST

SCOUTING AFTER FRUIT HAS SIZED:	YES	NO	SCOUTING AT PRE- HARVEST:	YES	NO	EST. DATE OF HARVEST	
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Monitor fruit as it sizes and immediately prior to harvest to determine whether there are mummyberry infections in the production field • Within the designated area visit three sites. • At each of the three sites, inspect 10 bushes. These bushes should be spaced 3-5 plants apart and on both sides of the row, in order to cover a larger area at each site. • Inspect at least 10 fruit clusters for discolored, shriveled fruit or for any evidence of mummyberry infection (such as early coloring of fruit) • Search the ground underneath the bushes and gently shake the bushes to look for any evidence of mummyberry infected fruit. Infected fruit shrivels and appears mummified as it develops; those "mummyberries" will drop to the soil. Record the number of fruit clusters with infected fruit (IFC) and/or bushes with dropped fruit (DF).

Number of bush	Site 1-IFC	Site 1-DF	Site 2-IFC	Site 2-DF	Site 3-IFC	Site 3-DF	Other Notes
Bush 1							
Bush 2							
Bush 3							
Bush 4							
Bush 5							
Bush 6							
Bush 7							
Bush 8							
Bush 9							
Bush 10							

Estimated level of field infection (if any) (None) (Very Low) (Low) (Medium) (Medium High) (High) :

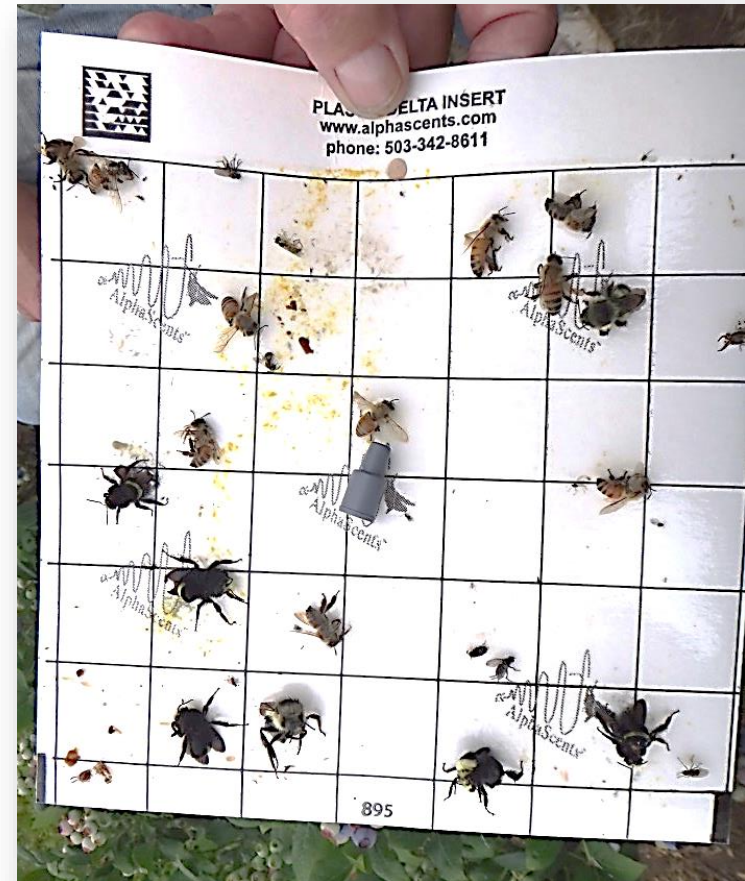
Mitigation Measures: Insect Pests



- *Again*, monitoring and/or trapping surveys must be conducted.
- Trap surveys and scouting for:
 - Orange Tortrix
 - Oblique Banded Leafroller
 - Cherry Fruitworm
- Trap monitoring will be conducted by commercial pest consultants (PCAs)
- ODA may also conduct trap monitoring for a fee

Mitigation Measures: Insect Pests

- Trap surveys must be recorded on an official APHIS trap survey record.
 - Forms must be provided to the packing facility and ODA and APHIS
- Traps checks must take place either 6, 7 or 8 days after the last servicing check.
 - *Unless* the application of pesticides prevents entry to the field





MONTH:		OREGON BLUEBERRIES TO KOREA - APHIS TRAP SERVICING RECORD																												YEAR			
GROWER NAME :						GROWER CODE:						FIELD LOCATION:										GROWER FIELD ID #:											
INITIAL LURE PLACEMENT DATE:						BLUEBERRY VARIETY(S):										ACRES:						# OF TRAP SETS:											
TRAP LABELLING CODES: OT = ORANGE TORTRIX (<i>Argyrotaenia citrana</i>) OBLR = OBLIQUE BANDED LEAFROLLER (<i>Choristoneura rosaceana</i>) CFW = CHERRY FRUIT WORM (<i>Grapholita packardii</i>) Note: One trap with OT lure may be used for both OT and OBLR but each moth type must be recorded separately																																	
TRAP NO.	DAYS OF THE MONTH																																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
OT-1	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	
OBLR-1	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	
CFW-1	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	
OT-2	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	
OBLR-2	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	
CFW-2	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	
OT-3	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	
OBLR-3	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	
CFW-3	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	
OT-4	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	
OBLR-4	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	
CFW-4	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	B	P	
Initials																																	

INSTRUCTIONS:

Put the number of moths found in the trap under the appropriate day of the month.

If you change the trap bottom, put a "X" in the "B" box on the date you made the change.

If you change the pheromone, put an "X" in the "P" box on the date you made the change.

When you have completed harvest of your orchard, draw a vertical line through the next column.

If fewer than four sets of traps are placed, draw a line through any unused trap numbers or delete unused trap numbers.

TRAP DENSITY: Minimum of two traps of each type for less than 10 acres; for 10 acres or more, add one trap for every additional 10 acres or fraction thereof

NOTE: TRAP RECORDS ARE TO BE SUBMITTED TO APHIS AND APHIS COOPERATORS UPON REQUEST. COMPLETED RECORDS MUST BE PROVIDED TO THE PACKING FACILITY PRIOR TO PACKING.

Threshold for Trap Catches

Trap catch thresholds:

- OBLR = 20 moths caught in any trap during any single week of the trapping survey
- OT = 20 moths caught in any trap during any single week of the trapping survey
- CFW = 2 moths caught in any trap during any single week of the trapping survey

Response to Above Threshold Catches

- Use of non-aerial treatments
 - Controls applied for OT, OBLR or CFW must be specifically identified on pesticide usage records
- Intensified Visual Inspections
 - Requirements vary per pest
 - Please see **Operational Guidelines** Document for details



Record Keeping and Distribution

- The grower is responsible for submitting completed records to the packing facility
- The packing facility must submit the applicable records to ODA before, or at, the time of delivery of the lot to the packing facility
- The Records Coordinator at the packing facility will complete the Record Verification Checklist
- All records pertaining to the program shall be retained for a minimum of one year or until the end of the APQA onsite survey, whichever is later



Packing Facilities

- USDA or ODA will verify:
 - Packing facility is kept clean, with screens, air curtains, rubber or plastic curtains, and automatic closing doors



- Designated fruit testing area must be well lit with appropriate equipment
- Visual aids of pest damage to blueberries will be posted

Packing Facilities: Testing

- A representative sample of berries from each load will be subject to salt of brown sugar flotation test for larvae
 - The specifications for this test are listed in the **Operational Guidelines**
- Any larvae found should be sent to APHIS Approved Official for ID
 - OT, OBLR and CFW positive fruit means that lot is not eligible to be packed for Korea



TJ Mullinax, Good Fruit Grower

Packing Facilities: Lines for Korea

- Poor quality berries will be removed manually
- Leaves, branches, soil or other contaminants will also be removed



Dan Charles, NPR

- Berries for Korea must be kept separate from other ineligible fruit
- Lines must be generally cleaned of fruit and debris before running blueberries for Korea

Packing Facilities: Labeling for Export

- The clamshell should identify the production field
- Each carton or pallet should have the packing facility name
- The cartons and pallets will be marked with “For Korea” with the label facing out when stacked



Packing Facilities: Pallet Label

- If pallet identification labels **[FOR KOREA]** are used *in lieu of* clamshell labels:
 - **Every pallet in the shipment must have a label**
- Korea will **REFUSE ENTRY** on any pallet without the required label!

**FOR
KOREA**



Phytosanitary Inspections

- Inspections will be completed by a certifying official (likely ODA)
 - Must be free of all pests of concern to Korea



- Certifying Official will also verify the submitted lots comply with Korea's requirements.
- The Authorized Certifying Official will issue the phyto with the following Additional Declaration listed:

“Fruits in this consignment are not infested with *Monilinia vaccinii-corymbosi*, *Argyrotaenia citrana*, *Choristoneura rosaceana*, *Grapholita packardi*, and *Epiphyas postvittana*.”

Sealing the Freight

- Ocean Freight will be sealed by the Freight Forwarder and the seal number will be included with the documents
- Air Cargo shipments will be covered to prevent pest infestation
- The wrapping material will be sealed with USDA – APHIS tape

Example:

U.S. EXPORT TO KOREA

Tampering With Shipment Is Prohibited While in Transit

- Text will be in green letters on two inch wide clear tape
- The words “U.S. EXPORT TO KOREA” will be in one-inch high letters. “Tampering With Shipment Is Prohibited While In Transit” will be in as large a type size as possible not to exceed one-half inch tall letters and will be centered below the words “U.S. EXPORT TO KOREA”.
- The blocks of text will repeat continuously at a spacing of one-half inch.



Tape Vendors

(examples of, but not limited to)

Michelsen Packaging Company

Lisa Poulson

509-853-2885 direct

lisa@mpcyak.com

Natureworx - Environmentally Intelligent Packaging

Tia Ross

503-709-1153

tia@natureworxpkg.com

H.R. Spinner Corporation

509-453-9111

Washington Packing

206-286-1000

sales@washingtonpacking.com

Freight Forwarders – Air Freight

- Air freight blueberry shipments subjected to TSA screening must be handled by a freight forwarder that is under compliance with USDA-APHIS.
- **Packing facilities must provide APHIS with the name of any freight forwarders they will use by May 15**
- Any new facilities will need to be signed under compliance





United States Department of Agriculture

APHIS Approved TSA Certified Cargo Screening Facilities

In California:

Commodity Forwarders Inc.
240 Lawrence Blvd., 240-B
South San Francisco, CA 94080
(650) 952-9845

Commodity Forwarders Inc.
11101 S La Cienega Blvd.
Los Angeles, CA 90650
(310)-348-8855

Able Freight Services Inc.
332 East Grand Ave.
San Francisco, CA 94080
(650) 877-0854

Vizion Logistics / LAX Warehouse
5343 West Imperial Highway
Suite 300
Los Angeles, CA 90045
(310) 322-1888

**Currently awaiting a response from
Able Freight in Los Angeles.*



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APHIS Approved TSA Certified Cargo Screening Facilities

In Washington State:

Commodity Forwarders, Inc.
19034 13th Place South
Building 3
Seattle, WA 98148
(206) 439-6765

Jetstream Freight Forwarding
21024 24th Avenue South
Suite 114
SeaTac, WA 98198
(206) 824-0495

2025 is an Audit Year!

- Korea visit ***tentatively*** scheduled for the week of July 14th, 2025
- Please keep your records up to date in the binders provided!
 - Korean Officials will want to go through them





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Questions?

Monica Little
USDA-APHIS-PPQ
Trade Specialist
Seatac, WA
206-200-2683

Monica.M.Little@usda.gov

Katy Gustafson
USDA-APHIS-PPQ
Export Certification Specialist
Portland, OR
971-352-0823

Kathryn.Gustafson@usda.gov

