

Small Fruit Update



Providing Northwest berry growers with the information they need when they need it.

The Small Fruit Update is sent out weekly during the growing season by [Peerbolt Crop Management](#) and is funded entirely by the Northwest berry growers and industry through their commissions and councils.

July 15, 2015

Week 29

Table of Contents

[Regional Reports](#)

[Berry Events](#)

[Blueberry Bud Development](#)

[Industry News](#)

[Grower Resources](#)

[Pest Alerts](#)

[Crop Work](#)

- [Breeding, Energy, Shelf Life will Drive Future of Post Harvest Fruit Storage](#) (7/2, FGN)
- [Kerr Concentrates, Salem Fruit and Vegetable Specialty Company, Sold for \\$100 Million](#) (7/8, Portland Business Journal)

[The Weather Cafe](#) by Rufus La Lone [Small Fruit Cold Storage report](#)

Spotted Wing Drosophila Alert

High risk of fruit infestations in Northwest Berry Crops

- Now that we're by the heat wave, we've got another critical threat to our berry crops--SWD.
 - The cooler weather conditions favor the insect.
 - The premature ripening of the wild blackberries favors a rapid increase in populations.
 - There's also a lot of older/riper berries in the fields
- We can expect increasing SWD pressure as long as the weather remains mild.***
- We're picking larvae up in commercial blueberry fields and many caneberry fields.
 - If you're harvesting—**protect your crop.**
 - Stay on a regular insecticide application regime as needed & monitor the fruit to be sure you're maintaining control.
 - Fields with infestations detected need to quickly move to a much shorter interval between applications.

Disseminating information for:

Washington

[Washington Red Raspberry Commission](#)
[Washington Blueberry Commission](#)
[Washington Strawberry Commission](#)

Oregon

[Oregon Raspberry and Blackberry Commission](#)
[Oregon Blueberry Commission](#)
[Oregon Strawberry Commission](#)

British Columbia

[B.C. Strawberry Growers Association](#)
[Raspberry Industry Development Council](#)
[B.C. Blueberry Council](#)

National

[North American Blueberry Council](#)

There will also be an **SWD Workshop** in Eugene on August 4th. Details are posted right below in the Events.
Tom Peerbolt, SFU editor

For the SWD resources and other crop management information go to the [Grower Resources](#) section.

[Back to Contents](#)

SFU 7/15/2015 ~ Page 1

Regional Berry Events

- **New Posting: August 4 — Spotted Wing Drosophila Workshop: Team Approach from Around the World** ~ 9 am to 1 pm, Eugene, OR. [Go here](#) for the details. Sponsored by OSU, WSU, USDA and NCAP.
- **August 18 — Oregon Strawberry Commission Fresh Strawberry Plasticulture Workshop and Demonstration 9:30-5:00** [Go here for the agenda](#).



Vintage raspberries picked July 10, 2015 ~ photo by T. Peerbolt

Regional reports

British Columbia, Fraser Valley

[Go here](#) for the B.C. Blueberry Council's Blueberry IPM Report for 7/10.

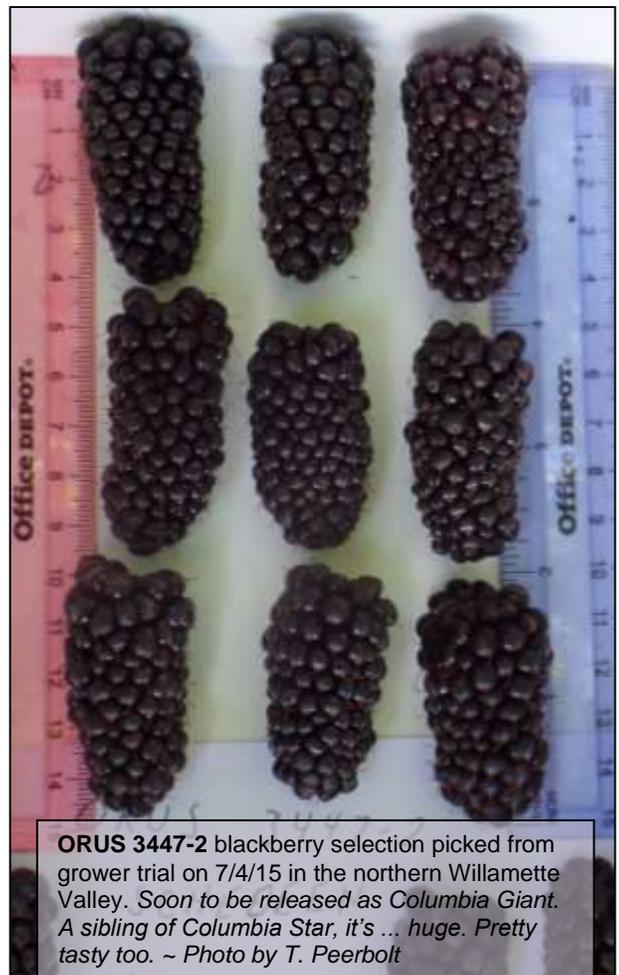
British Columbia, Fraser Valley (Tuesday 7/14)

We have had some cooler weather (mid 20's C/~77F) and a couple showers but things are expected to begin heating up again over the weekend. Heat taking toll (plants drying up) on some fields with no / poor irrigation.

- **Blueberries:** First pick Blue crop by hand has been under way for last week or so. Machines just heading into Blue crop today. Finishing up Duke harvest by machine. Third pick Reka happening this week by machine. Not sure if there will be a fourth. Elliot ripening and has excellent size and flavor at this point. Earliest fields may begin harvest in 10-14 days. Aurora starting to ripen.

Western Oregon, Willamette Valley

- **Blueberries:** (Saturday, 7/11) A lot of machine harvesting is now in progress with Berkeley, last of the Dukes, Bluejay, Bluecrop, etc picking. Fresh market Drapers, Legacy, Liberty are hand picking. Some sizing issues after all that heat and ripening is very accelerated. Some Elliotts are looking like they're ready to be picked! Aurora also showing significant color. Nice weather...finally. Yes—there are SWD issues but fields on a strict insecticide regime are staying clean.
- **Blackberries:** (Tuesday 7/14) Starting to pick up SWD here and there in the blacks as guys nearing the end are backing off their treatment schedules. Black Diamond is hanging in there surprisingly well. Other than those, very little IQF quality left. Yields will be off in the Marions. Most will do the same as last year or worse, the heat was just too much this year. The cold winter too much last year. By the end of the week almost done, some hanging on to the middle of next week. Evergreens are about two weeks away, hoping we can keep the SWD away.
- **Strawberries:** (Tuesday 7/14) *From Bernadine Strik, OSU Berry Horticulturist:* "With June bearing strawberries done early some growers are renovating very early. This will lead to much more fall fruiting than typical. I would highly recommend a renovation date of the third week of July to August 1 here in the



ORUS 3447-2 blackberry selection picked from grower trial on 7/4/15 in the northern Willamette Valley. Soon to be released as *Columbia Giant*. A sibling of *Columbia Star*, it's ... huge. Pretty tasty too. ~ Photo by T. Peerbolt

Willamette Valley this year. Waiting too much later may weaken plants if cutting off new growth. Going earlier will promote fall fruiting which may decrease next year's yield or increase botrytis inoculum."

Blueberry Development Comparisons for the Western Willamette Valley

Protocols for these photos: 1) Each Friday I take 5-7 cuttings from the same fields in the NW Willamette Valley. 2) Later in the day I look over the cuttings and choose what seems the most 'representative' (not the most advanced or the least advanced). I'm aiming for the development stage that best represents the fruit that would be the first harvested. **We continue ahead in development over the last two years.**

Northwestern Willamette Valley Top – 7/10/15 Middle – 7/11/14 Bottom – 7/12/13

Patriot

Bluejay

Liberty

Aurora

Elliott

*Patriot
Machine
harvest
began 7-
1-15
(Week 27)*

*Blue Jay
Machine
harvest
began 7-
7-15
(Week 27)*

*Liberty
Hand
Harvest
began
Week 28*



Week 28, 2015



*Patriot
Machine
harvest
began 7-
12-14
(Week 29)*

Week 28, 2014



*Patriot
Machine
harvest
began
Week 28*

Week 28, 2013

Patriot

Bluejay

Liberty

Aurora

Elliott

Industry news/resources

Newsletters/ berry reports

- [Whatcom Ag Monthly](#) Produced by WSU Whatcom County Extension. Includes excellent berry crop information.
- [National Berry Report](#) Daily fresh market berry reports. Hosted by the California Strawberry Commission, this report is generated from data from the USDA Agricultural Marketing Service and is updated daily.
- [Market Report from General Produce for Week 28](#) (7/13)
- [The Source](#) from Pro*Act (7/9)
- [USDA Market News \(Fruits & Vegetables\)](#)

Magazine/website compilations

- The Packer: [blueberries](#), [blackberries](#), [raspberries](#), [strawberries](#).
- **Growing Produce:** [recent berry articles](#).
- **Fruitnet-Eurofruit:** [recent berry articles](#).
- **Fresh Fruit Portal:** [blueberries](#), [blackberries](#), [raspberries](#), [strawberries](#).

Berry research blogs

- [Strawberries and Caneberries](#) by Mark Bolda, UC Davis Berry Extension Agent. Reports on recent insect and disease research and observations in California.
- [Team Rubus](#) by Gina Fernandez, North Carolina State Small Fruit Specialist. Reports on issues in blackberries and raspberries from the Southeast.

Climate/water

- [Industry experts sound off on climate change](#) (6/24, Growing Produce)
- [Severe drought conditions spreading rapidly in Washington](#) (7/9, Capital Press)
- [Skagit County farmers get some water, but still far short](#) (7/8, Capital Press)
- [Drought worsens water woes in lower Yakima Valley](#) (7/9, Capital Press)

Labor

- [Dwindling options force more growers to use H-2A program](#) (6/2, FGN)

Technology

- [New temperature logger finalist for Best New Food Safety Product](#) (6/4, Fresh Plaza)

MRLs

- [MRLs could pose trade barrier for U.S. fruit exports](#) (7/2, FGN)
- Germany: [Foreign strawberries contaminated with chlorate](#) (7/14, Fresh Plaza)

Business/Marketing

- [Driscoll's sets sites on increased organic strawberry volume](#) (7/7, The Produce News)

Pollinators

- [Study links bee declines to climate change](#) (7/9, The Hill)
- Research (four minute video): [How to link pollination with crop yield](#) (6/8, You Tube—MSU Research)

North America

- [New Jersey farms expecting a good blueberry harvest](#) (7/8, Philly.com)
- [Wild blueberries set for late July start](#) (7/14, The Packer)

West

- California: [Blackberry supplies from Central Valley tight](#) (7/10, Fresh Plaza)

International

- [Chile breaks ground on \\$4.4 million USDA inspection site for southern fruit growers](#) (7/2, Fresh Fruit Portal)



- [Peruvian blueberry exports to Spain up 400%](#) (7/10, Fresh Plaza)
- Peru: [“Investment recovered with the second blueberry harvest”](#) (7/13, Fresh Plaza)
- Mexico: [US most important market for Mexican berry crops](#) (7/10, Fresh Plaza)
- Mexico: [No market for Michoacán blackberries](#) (7/2, Fresh Plaza)



Draper blueberries; July 3, 2015, Northern Willamette Valley ~ photo by T. Peerbolt

Grower Resources ---- Week 29

- [Social-media use among farmers](#) (Ag News Online)
- Michigan: [Increase of spotted wing Drosophila in berry crops](#) (7/14, MSU Extension)
- [New research shows spotted wing drosophila repellent naturally produced in fruits](#) (7/7, Growing Produce)

Pest Alerts

Monitor & apply preventative insecticides as needed:

Spotted wing drosophila

SWD Resources

- [SWD I.D. Card](#) (UC Extension)
- [Spottedwing.org](#) *Information from the 5 year SCRI regional project that just concluded. Cooperating organizations: OSU, WSU, Agri-Foods Canada, UC Davis, UC Berkeley, Peerbolt Crop Management & the USDA.*
- [Spottedwing.org/SWD external links resources](#)

British Columbia

- [BC SWD Management](#) (Updated June 19, 2015) *It has 2015 spray options.*
- [Weekly Monitoring Reports](#) (Updated every Monday)
- [SWD information brochure in English](#) (Published June, 2015)
- [SWD information brochure in Punjabi](#) (Published June, 2015)

Oregon and Washington *(last updated 2/24/14)*

- [USpest.org SWD Extension Documents](#) *Many of Amy Dreves' generated SWD materials on managing and monitoring SWD.*
- Blueberries: [SWD pesticide options and information](#)
- Raspberries and blackberries: [SWD pesticide options and information](#)
- Strawberries: [SWD pesticide options and information](#)

Monitoring berries for SWD larvae in the field

[We have created a video of the larvae-checking method.](#) *It's from 2010 but still pretty good.*

- Put a sample of fruit to be tested in a gallon size sealable plastic bag.
- Pour in enough salt water solution to allow the fruit to float (solution is: 1 cup of salt per gallon of water). Mark bag with field code/date. Gently crush/break open fruit.

- For a quick check in the field after a designated period of time (at least 15 minutes) hold the baggie up to light. This helps to see the larvae in the solution.
- For a more thorough examination, after a designated period of time (at least 15 minutes), pour the fruit and salt solution out into a shallow tray and use a piece of wire mesh screen to hold the fruit down making it easier to separate the larvae from the fruit.

Scout for: [Silver leaf disease](#) symptoms in **blueberries**.

- *This is a recently identified disease that has so far been confirmed only in a few Draper variety fields in western Oregon. It's unknown how economic this disease will be.*



Silver Leaf disease symptoms—Draper blueberry field, Willamette valley 5/22/15. Photos by Tom Peerbolt

Scout for: **Aphids**, blueberries.

- The action threshold for aphids in blueberries is very low in any area where [Scorch virus](#) is a concern.
- Aphids spread Scorch Virus and killing the aphids is the most effective way to prevent new infections.
- In areas where Scorch Virus is not a concern, the potential economic damage from aphids is much less and larger populations can be tolerated before management actions are taken.
- With Scorch Virus, infected bushes **do not** return to productivity and should be removed ASAP to limit the disease spread.

Scout for and treat if needed: [Orange Tortrix leafrollers](#), raspberries & blackberries (SW Washington & Oregon).

- The larval hatch that, before SWD, caused our major crop contaminant problems is ongoing at this time.
- Fields that have been recording high adult pheromone trap counts are at high risk of having larval contaminant problems at harvest.
- Control materials, containing active ingredients specifically targeted at leafroller larvae such as Bacillus thuringiensis and Spinosad, are much more effective on these larvae when they're small and could be used at this time.

Scout for: [mummyberry](#), blueberries. [mummyberry primer from MSU](#).

- Infected fruit is now becoming easy to distinguish from healthy fruit.
- The infected fruit colors earlier, shrivels, whitens and drops from the bushes easily when disturbed.
- Right now this fruit could be mistaken for green berry botrytis infected fruit.
- The inside of an infected berry will be filled with white fungal mycelium.

Scout for and evaluate if management action is needed: [twospotted mites](#), raspberries.

Additional, Ongoing Pest Information

Diseases

- **Scout for:** [Phytophthora root rot](#) raspberries. Look for primocane collapse.
- **Scout for:** [blackberry rust](#), (Phragmidium Rust) Evergreen blackberries.

Insects/Mites

- **Scout for:** [azalea bark scale](#), **blueberries**. This scale's telltale bright white egg sacs on the lower branches of infested plants are now apparent in some southern blueberry fields.
- **Scout for:** **Root Weevils, strawberries & blueberries**. Larvae & adults of [black vine](#), [rough strawberry](#), and [strawberry root weevils](#) are now being recovered from some fields.
- **Scout for:** [blueberry gall midge](#), **blueberries**. tip damage from this midge is showing up in blueberries. Damage is usually deemed to not be economic except in specific situations like new vigorous fields where gall midge can occasionally cause too much stunting of new growth.
- **Scout for:** **Mites in raspberries (northern growing areas):** [twospotted mites](#) [yellow mites](#)
- **Scout for:** [strawberry crown moth](#) **southern strawberries:** Infested plants will have a weakened crown and will often break off with a pull on the top growth.

Crop Work

All crops

- **Sample for & treat as needed for SWD fruit infestation.**
- Vole management.
- Weed management.
- Fertilizer program.
- Water management.

Blueberries

- *If ripe/coloring fruit is in field, can begin treating for prevention of SWD infestation.*
- Bird management.
- Scout for [mummyberry](#) infected fruit.
- Stay on top of aphid management where Scorch virus transmission is an issue.
- Scout for [leafroller larvae](#) & treat as needed.
- Scout for virus symptoms & send in samples for testing as needed ([shock virus](#); [scorch virus](#)).
- Scout for scale insects.
- Scout for weevil notching.
- Scout for [azalea bark scale](#) in southern blueberries
- Scout for blueberry [gall midge](#) damage.
- Can put out pheromone traps to monitor for leafrollers. ([orange Tortrix](#) and [oblique Banded](#))
- Scout for berry symptoms like green fruit botrytis, hail damage, mummyberry, etc.

Blackberries

- *Treat for prevention of SWD infestation.*
- Can put out pheromone trap to monitor for leafrollers. ([orange Tortrix](#) and [oblique Banded](#))
- Can apply fungicides for [fruit/blossom rot](#) from 10% bloom through the end of bloom.
- Scout for virus symptoms and send in samples for testing as needed.

Evergreen Blackberries



- Scout for [blackberry rust](#) and treat as needed.

Raspberries

- *Treat for prevention of SWD infestation.*
- Scout for [yellow rust](#) and assess treatment options.
- Scout for yellow mites and [twospotted mites](#).
- Scout for virus symptoms & send in samples for testing as needed.
- Can put out pheromone traps to monitor for leafrollers. ([orange Tortrix](#) and [oblique Banded](#))
- Scout for [cane blight](#) and [cane botrytis](#) symptoms.

Strawberries

- ***Processed harvest finished throughout region. Fresh market harvest ongoing.***

All strawberries

- Evaluate weak growing areas and check plants for weevil larvae, root rot and/or cold damage.
- (South) Can scout for Strawberry Crown Moth larvae and put out pheromone monitoring traps.
- Scout for weevil adults and notching.

Processed market June-bearers—finished harvesting

- *After harvest, can treat for SWD control if field is adjacent to other susceptible, ripening, crops.*
- [Weed control at strawberry renovation](#) (6/26/12, Michigan State Extension)
- Treat post harvest for SWD if needed especially if field is in close proximity to other ripening berry/stone fruit crops.
- Mow and treat immediately for SCM if needed.
- Mow and renovate 2-4 weeks after harvest unless pest pressure requires mowing and treating sooner.

Fresh market-still harvesting

- Scout for Lygus bugs.
- Scout for fruit damage symptoms like cat facing, slug damage, anthracnose, etc.
- Monitor ripe and ripening fruit for SWD larvae.
- Can apply slug bait as needed.
- Scout for Powdery Mildew and treat as needed.
- Scout for Two Spotted Spider Mites and predatory, beneficial mites.
- Scout for aphids, lady beetles, aphid mummies (parasitized aphids), and other beneficial insects that feed on aphids.
- Scout for fruit quality issues such as mold.

Degree Day Updates

- [WSU Extension—Whatcom County](#)
- [Regional sites—Updated by Len Coop, OSU-IPPC](#) *click on the link, go to right hand column & click on the Degree day icon.*

Events

Upcoming Regional Events & Commission Meetings

[Go here for Full Event Calendar](#)

Upcoming National & International Berry Events

- **September 7-9 — 5th Annual International Blueberry Organization Summit** ~ Coffs Harbor, Australia. [Go here](#) for meeting information.
- **September 13-16 — International Symposium on Mechanical Harvesting & Handling of Fruits and Nuts** ~ Richland, Washington. [Go here](#) for meeting information.
- **October 13-15 — 6th Biennial Berry Health Benefits Symposium** ~Madison, Wisconsin. [Go here](#) for all the details.

Archived Small Fruit Updates

(For older Updates [go here.](#))

[28-SFU07-08-15](#)

[26-SFU06-24-15](#)

[25-SFU06-17-15](#)