

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.

August 21, 2012

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[Whatcom Ag Monthly](#) (8/16, WSU Whatcom County Extension)

Articles include: Day Neutral Strawberry research, WSU Berry Breeding Program, Drip Irrigation Management, SWD Update.

[Agrobot: A robotic prototype for harvesting strawberries](#)

(8/20, YouTube)

[Robotic Strawberry Harvester on the Move](#) (8/17, Strawberries and Caneberries Blog, Mark Bolda, UC Davis Extension) More photos and information.

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

U.S. Department of Labor (part two)

In following up on last week's information on the actions being taken by the DOL ([Department of Labor](#)), the [Washington Farm Labor Association](#) (WFLA) has an Update in their August 20 newsletter, "[Employer Essentials](#)". According to the WFLA article the Oregon legislative delegation has sent a letter to DOL regarding this issue.

WFLA also adds some insight on the DOL's tactics. Here's an excerpt: "The agency has created a theory of a 'ghost employee,' and here is how it would work if applied to the apple harvest: The agency determines the highest quantity of apples a person can harvest in one day is 8 bins. If a worker is paid for more than 8 bins in a day, there must be another person helping them. Therefore, the agency proposes fining the grower for not paying the proper wages for the ghost employee – the person who is helping the overly productive employee."

[Here's a link](#) to the Department of Labor's complaint hotline. If you've got other links or information to help Northwest berry growers and processors deal with this situation please send them along and I'll share them.

Tom Peerbolt, SFU Editor

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

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

National

[North American Blueberry Council](#)

Spotted Wing Drosophila

- The risk of fruit damage and economic losses to this new fruit pest for any berry crop still harvesting in the Northwest. It is highly recommended to take all appropriate measures to mitigate this risk.
- The heat wave in the southern growing areas last week had a dramatic affect on SWD trap counts and larval infestations. See the regional reports below for more observations.
- [Click here to go to the weekly SWD update for 8/21/12 below](#)

Regional Reports

These reports are from individuals within the region and are their particular observations. They are included to give an impression of the present 'state of the industry' and regional activities.

British Columbia, Fraser Valley (Tuesday, 8/21)

A nice change in temperature to start this week vs. last week's blazing temps. Plants and people look relieved.

- **Blueberries:** The first pick Liberty is just finishing with generally good quality and only a little softness showing up at the height of the heat. A small Draper second pick will go this week. Bluecrop still picking and possibly some juvenile Elliot will pick late in the week. Mature plants need more time. Getting some tissue testing done and some late season weed control underway.

Northern Washington, Whatcom County (Tuesday, 8/21)

- **Blueberries:** Blueberry harvest is about ½ done, tonnage and quality fairly decent. SWD sprays should continue. Dukes are done. Rekas, Bluecrop, and 1613's are in progress, Draper also. Weather is about to cool down up here. We're herbicide edging in the blueberries after harvest, including Matrix with or without Aim and Gramoxone. Matrix looked real good in trials up here this year.
- **Raspberries:** Raspberry harvest all but done, Wakefield's have 1-2 more picks to go. Watch for mites, they just won't quit this year.

Willamette Valley, Oregon and SW Washington

- **Blackberries/blueberries:** (Tuesday, 8/21): We started Evergreen blackberries on August 19, twelve days earlier than last year. Size is good, no mold, no SWD, overall excellent. I agree with Jeff's assessment of the SWD situation (*below in the blueberry report-TP*). I have been looking for them in Himalayas and finished blackberry fields and no sign, not sure where they went but not backing off spray schedules. Should finish up on blueberries this week, have one field of Elliot that will be picked for the first time today. The rest of what is coming in are clean up picks.
- **Blueberries:** (Monday, 8/20). At Salem, we are into the second pick of Aurora. A nice, third, hand pick of Liberty and Legacy remain. This winter we had installed additional cooling infrastructure and I believe the system probably paid for itself during this last heat event.....hardly any Aurora fruit was lost. SWD has been the real mystery this season. At July's end we were unsure if we would be able to spray often enough to keep it contained. Growers bringing fruit to us in August were shocked when we showed them the density of larvae in their fruit from the salt dunk (and some had multiple, short interval sprays with mixed MOAs). And now.....where did SWD go? Late fruit left unprotected last year was riddled with stings. Now, overripe scraps of duke sit in the field unsprayed for nearly 3 weeks w/o any infestation. Even Himalayan blackberry shrubs nearby have no infestation. My hope is that a strong virus/fungus moved through SWD.....or was it the heat? Anyway, the SWD pressure appears off here although we continue to protect the fruit on a fairly tight schedule. Following the heat, most varieties have found a final push of new growth and we appear to have plenty of new wood for a good crop next season. It's time for some leaf and soil sampling

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Event Calendar

For more comprehensive event calendar, [click here](#).

- **August 21—OSU/USDA Caneberry Open House: Late Season Ripening Cultivars and Advanced Selections** ~ 3 -5. [OSU North Willamette R and E Station](#). An informal event walking through the breeding plots, discussing cultivars and advanced selections. Bernadine Strik and Chad Finn. For information contact Bernadine at 541-737-5434.

- **August 23—USDA-ARS Blueberry Field Day** ~ 1-4 PM Lewis-Brown Horticultural Research Farm, 33447 DE Peoria Road, Corvallis, OR [Click here](#) for details. For more information, call David Bryla 541-738-4094 or email Dave at david.bryla@ars.usda.gov
- **September 12—Washington Red Raspberry Commission** ~ 1 to 5 PM **New meeting location:** [Bellewood Acres](#), 6140 Guide Meridian Drive, Lynden. It's an apple farm between Bellingham and Lynden. They recently completed a new distillery and deli that has a nice meeting room associated with it. For more details, call (360) 354-8767 or [email](#) Henry Bierlink.
- **September 18—Oregon Raspberry and Blackberry Commission** ~ 5:30 pm at Langdon Farms. Call (541) 758-4043 or [email](#) Philip Gutt for more information.
- **September 25—Oregon Blueberry Commission** ~ Noon at [Chemeteka Community College](#), Chemeteka Events at Winema, Building 48, Rooms 202 A and B. Call 503- 364-2944 for more information.
- **September 27—Oregon Strawberry Commission** ~ 5:30 pm at Langdon Farms. Call (541) 758-4043 or [email](#) Philip Gutt for more information.
- **October 2-5—North American Blueberry Council/US Highbush Blueberry Council Meetings** ~ St Louis, Mo. [Click here](#) for relevant information and agendas.

Spotted Wing Drosophila Update for 8-21-12

This Update is a collective effort. It is composed by Peerbolt Crop Management with contributions from OSU, USDA-ARS, WSU, B.C. Ministry of Agriculture and various Northwest berry industry people.

SWD Information Websites

[Peerbolt Crop Management](#)

[Oregon State Univ.](#)

[B.C. Ministry of Ag.](#)

[WSU Westside](#)

[WSU Eastside](#)

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Willamette Valley, Oregon and SW Washington

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SWD in the News

- [New fruit pest confirmed in Minnesota](#) (8/17, Post Bulletin)

Regional Monitoring (South to North)

Oregon and SW Washington Public Scouting Program

This scouting program and reporting system are being funded by a USDA SCRI grant, and a Northwest Center for Small Fruits Research grant.

Adult Apple Cider Vinegar trapping results

I've been reporting these in detail until now and am going to discontinue doing so. The adult trap numbers, while valuable in giving an overall impression of population dynamics, don't correlate well with the actual larval infestations now being found. The links below are the best context in which to view the adult trap count dynamics—in a chart form by county quadrants and crops along a timeline rather than single week counts.

- [Click here](#) for the Home page for the Western Oregon and SW Washington Spotted Wing Drosophila Survey.

- [Click here](#) to go directly to the county quadrant crop SWD charts.

Eastern Washington

- [Click here](#) for the WSU Eastern Washington SWD reporting site.
- **Latest report from the site--Wednesday, August 8: "SWD in Stemilt Hill region: A trap from Stemilt Hill was found to contain SWD today."**

Columbia Gorge

Report from [Steve Castagnoli](#), OSU Hood River Extension

- **The latest report: August 18: "Spotted wing Drosophila (SWD) –Over the last four weeks, total SWD trap catch (males plus females) has nearly doubled on a weekly basis with 1458, 890, 529, and 250 flies per week. Trap catch continues to be widely distributed including traps throughout the Hood River Valley and the White Salmon Valley."**

British Columbia

From the August 17 Blueberry IPM Newsletter done weekly by Carolyn Teasdale ([ES Cropconsult](#)) for the [BC Blueberry Council](#)):

[Click here](#) for the full newsletter with trap counts and insecticide options.

- "SWD pressure remains very high. It is imperative that all growers with ripe fruit in their fields continue to manage this pest.
- SWD larvae continue to be found in ripe berries. Regional SWD trap catches are the highest they have been all season. Trap catches are particularly high in fields that have not been sprayed regularly.
- All fields with ripe or ripening fruit are susceptible to SWD infestation. Late season varieties are now at risk of infestation. Fruit may be rejected or downgraded if it contains SWD larvae."
- [Click here](#) for the August 11 SWD report from the BC Ministry of Agriculture.

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Guidelines for checking the fruit for SWD larvae

Rutgers instructions for checking for SWD larvae in blueberries

- A recent edition of the Rutgers Blueberry Bulletin lays out their step by step instructions for checking blueberry fruit for SWD.
- It uses the same type of salt water method we've listed below but includes a lot of more specific details that might be helpful in standardizing this process especially for fruit receiving stations/processors.
- [Click here](#) for the 7/23/12 newsletter. The method is on pages 4 and 5.

Suggested methods

These suggestions are based on techniques that various public researchers and industry personnel have been developing over the past couple of years. If any of you have ideas for improvements to these protocols, please pass them along.

For scouts/field checking ([We have created a video of this larvae-checking method.](#)):

1. Collect a sample of fruit to be tested (Strawberries: 25-30 per sample, Caneberries/blueberries: 75 per sample)
2. Put fruit in a gallon size sealable plastic bag.
3. Pour in enough of the salt water solution to allow the fruit to float (solution is: 1 cup of salt per gallon of water).
4. Mark bag with field code/date.
5. For a quick check in the field after a designated period of time (at least 15 minutes) holding the baggie up to light. This helps to see the larvae in the solution
6. 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.

For processors or fruit handling stations:

1. Collect a two pound sample of fruit to be tested.
2. Put the sample into a shallow tray and cover with the salt water solution (1 cup of salt per gallon of water).
3. After a designated period of time (at least 15 minutes) use a piece of wire mesh screen to hold the fruit down to make it easier to separate the larvae from the fruit.

SWD Management Resources

- [WSU Spotted Wing Drosophila in Western Washington](#)
- [Spotted Wing Drosophila \(SWD\) Management in B.C. Berry Crops](#)
- SWD pesticide options for Oregon and Washington berry crops.
 - Blueberries: [click here](#). Strawberries: [click here](#). Caneberries: [click here](#).
- [NC Spotted Wing Drosophila—General Information and resources](#)

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Industry News/Resources

Newsletters/ Berry Reports

- [BC Blueberry IPM Newsletter](#) (8/17) Weekly by Carolyn Teasdale, [ES Cropconsult](#). Sponsored by the BC Blueberry Council.
- [Michigan State Extension news for Blueberries](#) (8/21)
- [Imperial Frozen Foods Newsletter](#) (8/16) / [Quick Frozen Foods International News](#)
- [The Source](#) (8/20) Market reports from *The Produce News*
- [National Berry Report](#) A daily-updated fresh market statistics report on all berry types hosted and maintained by the California Strawberry Commission

Magazine compilations

- The Packer's Market scope: [blueberries](#) [blackberries](#) [raspberries](#) [strawberries](#)
Recent stories and fresh market pricing for the various berries from *The Packer*.
- Growing Produce: [recent berry articles](#)

Berry Research Blogs

- [Strawberries and Caneberries blog](#) by Mark Bolda, UC Davis Berry Extension Agent. **Recent entry: 8/17—Robotic strawberry harvester on the move** Reports on recent insect and disease research and observations in California.
- [Team Rubus](#) by Gina Fernandez, North Carolina State Small Fruit Specialist. **Recent entry: 8/17—Black Raspberry Project!** Reports on issues in blackberries and raspberries from the Southeast.
- [NC Small Fruit and Specialty Crop IPM](#) by Hannah Burrack, NCSU extension entomologist. Recent entry: 7/31—Another reason to appreciate bees and wasps in grapes.

Marketing

- [Reviving Frozen sales](#) (8/16, Retailwire)
- [Farm level environmentalism could provide unique selling proposition, says study](#) (8/13, Food Navigator)

Labor

- [Labor shortage still a concern as picking continues](#) (8/17, Capital Press)

Technology

- [New accessory turns iPhone, iPod, or iPad into portable pH meter](#) (8/14, Growing Produce)

Farm/Food Politics

- [Opponents of campaign to require GMO labels raised \\$12 million](#) (8/14, L.A. Times)
- [Food safety regulation cuts across political lines](#) (8/7, The Packer)

West

- [Record yields for Washington blueberries](#) (

National

- [Florida strawberry growers look forward to better season](#) (8/15, The Packer)

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Leaf/tissue analysis and Soil testing

Post harvest is the best time to do most soil and leaf testing for nutrient management planning. Nutrient levels are at their lowest and you can get the best information on what nutrients the recent crop might have had too much or too little of.

- **Blueberries:** Leaf/tissue testing and pH monitoring are most critical. Complete soil tests don't correlate well with plant needs as leaf/tissue tests. [Click here](#) to view OSU's Blueberry Nutrient (and testing) Guidelines.
- **Blackberries and Raspberries:** While annual soil testing has been the industry norm, Oregon State's updated nutritional guide recommends annual leaf/tissue testing, with soil tests done just every few years. [Click here](#) to view OSU's Caneberry Nutrient (and testing) Guidelines.

Crop Work/Pest Management Activities

All crops

- Pay attention to new plantings of all berries for weeds, water, insects, diseases, and nutrient deficiencies.
- Maintain SWD monitoring and management plan. ([blueberries](#), [raspberries](#), [blackberries](#), [strawberries](#))
- Weed management.
- Post-harvest—soil and leaf test for evaluation of nutrients.
 - [OSU's Blueberry Nutrient \(and testing\) Guidelines](#)
 - [OSU's Caneberry Nutrient \(and testing\) Guidelines](#).
- Post harvest—can treat for SWD if field is adjacent to vulnerable fruit crop.
- Scout for Root Weevil adults [Black Vine](#), [Rough Strawberry](#), [Strawberry Root Weevils](#).

Blueberries

Harvest ongoing

- Maintain [bird damage management](#).
- Scout for weevil notching on leaves and for adult weevils.
- Scout for [leafroller larvae](#) feeding.
- Stay on top of [Aphids/Scorch Virus](#) management where Scorch virus transmission is an issue.
- Scout for virus symptoms and send in samples for testing as needed. ([Scorch](#), [Shock](#)).
- Scout for [Blueberry Gall Midge](#) damage.
- After petal fall until harvest starts, can treat for Alternaria and anthracnose prevention if needed.
- Scout for berry symptoms like green fruit botrytis, hail damage, [Mummyberry](#), etc.
- Can apply clean up insecticide just before harvest for crop contaminant management.
- Can treat for [Alternaria Fruit Rot](#) and [Anthracnose Ripe Rot](#) prevention if needed.

Raspberries

Processed harvest finished

Post harvest

- Scout for [Yellow Rust](#) and assess treatment options.
- Scout for [Two-spotted Mites](#) and treat as needed.

For late season, fresh market:

- Scout for weevils and treat as needed ([Black Vine](#), [Rough Strawberry](#), [Strawberry Root Weevils](#)).
- (North) Scout for [Raspberry Fruitworm](#) feeding symptoms.
- Scout for virus symptoms and send in samples for testing as needed ([RBDV](#), [TRsV](#))
- Scout for [fruit mold](#) and treat as needed.
- Scout for [Yellow Rust](#) and assess treatment options.
- Scout for [Two-spotted Mites](#) and treat as needed.
- Scout for [aphids](#) and treat as needed.
- Scout for [leafroller larvae](#).

Blackberries

Harvest ongoing

- Scout for leafroller larvae ([O.T.](#), [OBLR](#)) and treat as needed to prevent fruit contaminant problems.
- Scout for virus symptoms and send in samples for testing as needed. ([RBDV](#))
- Can apply clean up insecticide just before harvest for crop contaminant management.
- Scout for and treat as needed [Blackberry Rust](#) in Evergreen blackberries.
- Scout for [Twospotted Spider Mites](#) and treat as needed in susceptible cultivars.
- Can apply horticultural oil for [Redberry Mite](#) management at green fruit stage in susceptible cultivars.
- Can apply fungicides for [Fruit/Blossom Rot](#) through the end of bloom.
- Scout for [Cane and Leaf Rust](#).

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

Strawberries

Processed harvest (June bearers) 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](#) ..
- Scout for weevil adults and notching.

Processed market-June bearers—finished harvesting

- [Weed Control at strawberry renovation](#) (6/26/12, Michigan State Extension)
- Mow and treat immediately for [SCM/SWD](#) if needed.
- Mow and renovate 2-4 weeks after harvest unless pest pressure require mowing and treating sooner.

Fresh market-still harvesting

- Scout for [Lygus Bugs](#).
- Scout for fruit damage symptoms like cat facing, [slug damage](#), anthracnose, etc.
- Can apply slug bait as needed.
- Scout for [Powdery Mildew](#) and treat as needed.
- Scout for [Twospotted 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 ([Botrytis](#)).

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Archived Small Fruit Updates

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

[08-14-12](#)

[08-07-12](#)

[08-01-12](#)

This document is a guide and not intended as a recommendation or endorsement.
Consult with your supplier, field representative, or pest consultant.