

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 7, 2012

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[Freezing Fruit for All Seasons](#) (7/9/09, You Tube)

A video from a couple of years ago about Willamette Valley Fruit Company

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

[Click here to go directly to the weekly SWD Report](#)

Main SWD messages:

- The heat spike this last weekend (over 100F (38C) on Saturday and around 95F (35C) on Sunday) suppressed adult trap numbers.
- Late season crops are at heightened risk. Tighten up control programs.
- Fresh market blueberries have a zero tolerance for larvae.
- Late ripening raspberries and blackberries are preferred by SWD and once an infestation starts it will be very difficult to get it under control.
- Prevention of any infestation is the goal...and even more so the later in the season we are.
- Primocane fruiting raspberries appear the most difficult berry crop in which to maintain economic control.

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 (Monday, 8/6)

- **Blueberries:** The hot weather the last three days at 32C (89-90F) has really brought on Bluecrop and has caused some soft fruit issues in the leader berries. Lots of Dukes off last week in the machines. Some fields produced exceptionally. But there are fields that didn't live up to expectations. But overall I think we are up on the early crop. SWD numbers are really starting to increase in regional trap counts. This month

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](#)

will be very important for consistent control measures and tight spray intervals. Wild blackberries are starting to ripen so there lots of new infestation potential.

- **Raspberries:** Raspberries are essentially done this past weekend with a few left to drum the remnants early this week. Checking for mites now and prepping for post harvest fungicide applications.

Willamette Valley, Oregon and SW Washington

- **Blackberries, processed:** (Tuesday, 8/7) Marions should be around 90% finished by this Friday. The guys with the SWD are already done (or cut off) while the growers with a good management program still have some fruit coming in. The overall crop size is good—better than I thought it'd be and quality is also pretty good. IQF and puree prices could end up within 5 cents of each other. Evergreens should start harvest in about 10 days.



Evergreen Blackberries, Willamette Valley, OR. August 7, 2012. Photos by Bill Dinger

- **Blueberries** (Tuesday, 8/7) A lot of processed, machine harvested fruit coming in: Bluecrop, Bluejays, Berkeleys, Jerseys, Rubels. Not many machines or processing lines not in action right now with blackberries and blueberries coming in. On the fresh side, the weekend heat wave cut into the quality but we're back down into the high 70's today. Maybe a little more heat coming this next week. Pretty much what we can expect this time of year. We're well into Liberty and Legacy. A few Elliotts are coming in. Probably some Aurora also starting to be picked or they will be very soon.

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Event Calendar

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

- **August 17 — Sutherlin Blackberry Festival, Sutherlin, OR.** [Click here](#) for the website.
- **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** ~ in Mt Vernon starting at 1pm. 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 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.

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 Management Related Information

- [Starlings beware, falcons patrol Oregon blueberry fields](#) (8/1, ODA News)

Spotted Wing Drosophila Update for 8-7-12

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](#)

Spotted Wing Drosophila comments

From Tom Peerbolt—This applies to the southern growing areas I'm directly familiar with. They could be true for other areas as well but I can't speak to that directly.

- We continue to see increases in SWD larval infestations although the recent short heat wave has suppressed trap numbers this week.
- This last week has made pretty obvious the differences between those growers on a maintenance spray program and those not.
- We're beginning to sample ripe Himalayan blackberries along field borders to see how well that would work for predicting the risk to the adjacent field.
- We're also identifying field specific border areas that are potential initial infestation points to be monitored by adult traps and fruit sampling in future years.
- Many processors are now sampling fruit and rejecting some crop loads based on detection of larvae.
- Many blueberry fields with ripe fruit have seen a big increase in adult trap counts.
- Last pick Duke blueberry fields had an increased infestation rate over the last year's.
- Insecticide spray intervals need to be shortened in order to maintain the same equivalent level of control as achieved earlier in the season.
- Be prepared. Be conservative and pro-active. If you or your neighbors had SWD pressure last year, expect higher pressure this year. Take all reasonable precautions to minimize the risk this insect poses to your crop.

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SWD in the News

- [Invasive plants, insects take center stage](#) (8/2, The Norwalk Citizen)

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.

Fruit sampling for Larvae Totals

The table below, while indicating a very real dramatic increase in larvae recovered, has a number of variables that influence it. A big one is that many of the post harvest fields that are no longer receiving any insecticide applications and are now showing the biggest increases.

Date	# of fruit samples taken	# of larvae recovered
7/30-8/3	49	865
7/23 – 7/27	46	174
7/16 – 7/20	47	53
7/9 – 7/13	47	14
7/2 – 7/6	45	5

Eastern Washington

- [Click here](#) for the WSU Eastern Washington SWD reporting site.
- **Latest report from the site--Friday, July 20: "SWD in the Yakima/Tieton region: A positive catch was reported from the region today."**

Columbia Gorge

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

- **The latest report: August 4: "Spotted wing Drosophila (SWD) -Total SWD trap catch this week was substantially up from the previous week, with 240 males and 289 females versus 68 and 182, respectively, the week before. Trap catch continued to be widely distributed and included traps in the lower and upper Hood River Valley and the White Salmon Valley. Several traps in commercial orchards had SWD. The highest numbers were from traps near unmanaged cherries, wild blackberries, or both."**

Report from Lyn Long, OSU Wasco County Extension

- **The latest report: August 6: "Spotted wing Drosophila trap counts continue to climb especially in local gardens but we are also seeing an increase in area cherry orchards. This is not unusual for this time of year and is probably not a concern unless there are unharvested blocks of fruit next to infested blocks."**

British Columbia

From the August 4 Blueberry IPM Newsletter done weekly by Carolyn Teasdale ([ES Cropconsult](#)) for the [BC Blueberry Council](#)):

- "SWD pressure is very high this year.
- It is imperative that all growers manage this pest at this time. Larvae are starting to be detected in the berries. SWD traps have more than doubled in most regions over the past week. Significantly more flies are being caught in unsprayed fields than in fields that have been sprayed with an insecticide within the past 10 days.
- All fields with ripe or ripening fruit are susceptible to SWD damage...Fruit may be rejected or downgraded if it contains SWD larvae."
- [Click here](#) for the full newsletter with trap counts and insecticide options.

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[Click here](#) for the August 4th Monitoring report for South Western British Columbia (Coast).

From that report:

- "SWD numbers have increased significantly again this week in berry fields:

- 20 SWD caught in raspberry field traps (8 last week).
- 69 SWD in blueberry fields (17 last week).
- Consider that:
 - 352 SWD flies (84 last week) caught in another project, including hedgerow and field edge traps (108 traps in total).
 - SWD flies are emerging for wild salmonberry, red elderberry, Indian plum, and strawberries collected through June and July. “

Guidelines for checking the fruit for SWD larvae

New Information: 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

- [Managing spotted wing drosophila update](#) (7/2/12, Michigan State Extension)
- [Spotted Wing Drosophila \(SWD\) Management in B.C. Berry Crops](#)
- [The latest APHIS Map of where SWD is in the United States.](#)
- 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](#) (8/4) Weekly by Carolyn Teasdale, [ES Cropconsult](#). Sponsored by the BC Blueberry Council.

- [New Jersey Blueberry Bulletin](#) (7/30) Weekly by Gary Pavlis, Rutgers blueberry agent.
- [Michigan State Extension news for Blueberries](#) (8/6)
- [The Source](#) (8/6) 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: 7/30—Tip dieback in Arapaho blackberry variety** Reports on recent insect and disease research and observations in California.
- [Team Rubus](#) by Gina Fernandez, North Carolina State Small Fruit Specialist. **Recent entry: 8/1—Meet 'Von' a new thornless blackberry** 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: 7/23—Spotted wing drosophila detected in Arkansas.**

Breeding

- [Blueberry cultivars could benefit Southern growers](#) (8/3, *The Packer*) *These are early season—April and May.*
- [Meet 'Von' a new thornless blackberry](#) (8/1, Team Rubus blog-NC State)
 - [Click here](#) for a fact sheet for 'Von' (NC 430) *It's compared with the Arkansas program's blackberry cultivars.*

Labor

- [Washington Farm Labor Association Newsletter](#) for 8/3/12.
- [California agriculture labor shrinking](#) (8/3, San Jose News)
- [States cool on immigration measures](#) (8/7, Politico)

Farm Bill

- [House GOP to extend aid to drought-stricken farmers, drop farm bill extension](#) (7/31, Washington Post)
- [Riding Herd on G.O.P. effort to produce a farm bill in the House](#) (8/1, New York Times)
- [House passes drought, disaster aid \(put off farm bill action\)](#) (8/2, Politico)

Farm/Food Politics

- [Food fight in Congress: Fresh vs. frozen produce in schools](#) (8/7, Washington Post)

The West

- (Cal) [Strawberries steam ahead into September](#) (8/2, *The Packer*)

National

- [U.S. farm expenditures increased 10.2 percent in 2011](#) (8/3, Capital Press)

International

- [On the brink of another global food crisis](#) (8/2, *The Guardian*)
- [Food in China: a chemical age](#) (8/6, China Dialogue)
- (Russia) [Radioactive blueberries found in Moscow region](#) (7/20, *The Moscow Times*) *At least this is one problem we don't have. Although—who knows?*
- (Eastern Canada) [Nova Scotia blueberry growers enjoy bumper crop](#) (8/1, AgAnnex)

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Pest Management Activities

- **Scout for and treat as needed:** [Yellow rust](#) raspberries
- **Scout for and treat as needed:** [Blackberry rust](#), Evergreen blackberries
- **Scout for and treat as needed:** [Aphids](#) northern raspberries
- **Scout for and evaluate if management action is needed:** [Twospotted mites](#) raspberries
- **Scout for and treat as needed:** [Aphids/Scorch Virus](#) B.C. Blueberries –vector (aphid) management

- From the B.C. Pest Alert: “Blueberry Scorch Virus is transmitted by aphids. An effective aphid control program should be used by all growers.” You can email the B.C. Blueberry Council’s research coordinator, [Karina Sakalauskas](#), for further information on testing and/or disease management.
- **Scout for and determine if management actions are needed:** Root Weevil adults, all crops [Black Vine](#), [Rough Strawberry](#), [Strawberry Root Weevils](#).
- **Time for preventative fungicide applications:** [Alternaria Fruit Rot](#) blueberries
 - Alternaria can infect the fruit beginning at the end of bloom and throughout the fruit development stage, up until harvest. ([Click here for expanded view of this disease.](#))
- **Time for preventative fungicide applications:** [Anthracnose Ripe Rot](#) blueberries
 - After harvest, spore masses form rapidly on infected fruit when in cellophane-covered baskets or in plastic clamshell packs. ([Click here for expanded view of this disease.](#))
- **Scout for:** [Mummyberry](#) blueberries [Mummyberry primer from MSU](#)
 - Infected fruit is now easy to distinguish from healthy fruit in some Oregon fields.
 - The infected fruit colors earlier, shrivels, whitens and drops from the bushes easily when disturbed.
 - The inside of an infected berry will be filled with white fungal mycelium.
 - Sort out and remove from field as much of the infected fruit as possible.
 - During harvest evaluate the level of Mummyberry infections and the areas of the field that are infected.
 - Use this yearly Mummyberry information to assess and plan next year’s Mummyberry prevention program.

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Crop Work

All crops

- Pay attention to new plantings of all berries for weeds, water, insects, diseases, and nutrient deficiencies.
- Maintain SWD monitoring and management plan.
- Weed management.
- Post-harvest—soil and leaf test for evaluation of nutrients.
- Post harvest—can treat for SWD management if field is adjacent to vulnerable fruit crop.

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 aphid management where Scorch virus transmission is an issue.
- Scout for virus symptoms and send in samples for testing as needed.
- 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 and Anthracnose prevention if needed.

Raspberries

Harvest finished in south, ongoing in north

- Scout for weevils and treat as needed.
- (North) Scout for raspberry beetle feeding symptoms.
- Scout for virus symptoms and send in samples for testing as needed.
- Scout for fruit mold and treat as needed.
- Scout for yellow rust and assess treatment options.
- Scout for spider mites and treat as needed.
- Scout for aphids and treat as needed.
- Scout for leafroller larvae.

Blackberries

Harvest ongoing

- Scout for leafroller larvae and treat as needed to prevent fruit contaminant problems.
- Scout for virus symptoms and send in samples for testing as needed.
- 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 two spotted 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 and put out pheromone monitoring traps.
- 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 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.

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Archived Small Fruit Updates

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

[08-01-12](#) [07-25-12](#) [07-17-12](#)

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