

Small Fruit Update



News and opinions from [Peerbolt Crop Management](#) and [BerriesNW](#) sent out weekly during the growing season, and sporadically when we have something to share in the off season.

September 7, 2010

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Alert

[Spotted Wing Drosophila](#), all berries: Through the end of this season, the risk of fruit damage and economic losses to this new fruit pest continue will continue to increase. For any berry crop still harvesting in the Northwest, it is highly recommended to take all appropriate measures to mitigate this risk.

See the more extensive [SWD weekly update](#) below for in-depth SWD information.

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

- **Blueberries:** (9/7) The cool, wet weather of the last few days is hampering the last picks of Elliotts. Not really sure what kind of quality we're going to get without a bit of a warm up this week. There is considerable fruit left, but we need the weather to cooperate just a little more -- say to the 20th or so. For the most part, plants look pretty good going into the post harvest fall. I have seen some fields that look pretty beat up, though. A combination of crop load, machining, and irrigation issues. It was incredibly dry through July and August, and I suspect some growers should be looking critically at their irrigation management systems and root health factors while the evidence is clearly at hand.
- **Raspberries** (9/7) Good growth on the raspberry primocanes and baby fields. Pruning the old canes now. This has been a weird raspberry season.

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](#)

Whatcom County, Northern Washington

Blueberries/Raspberries: (9/7) Rain is delaying the final pick of Bluecrop. Pruning raspberries is beginning. We also have NemaCur and Ridomil applications going on some fields.

Willamette Valley, Oregon and SW Washington

- **Blueberries: (9/6) (Organic production)** We are hoping to wrap up harvest this week. We had frost this morning. It got down to 30.5 degrees. Does that make them IQF? I am ready to be done, not that having more fruit is bad as it seems as though everyone is short on fruit to meet the sales demand. The plants have excellent growth despite having a bumper crop this year. We're losing some young Duke plants to some kind of lack of root system problem. I think we have made it through the SWD for the season without any problems. We sprayed the GF-120 bait early season, watched the trap numbers, and when they got to around mid teen's we started spraying Entrust. We sprayed ten days apart at first then went to spray when I could fit it in which was about two weeks apart. The problem with the Entrust is the three-day pre-harvest wait and the limit of 9 ounces total for the season. We are going to need some other product to alternate with for next year. This has me most concerned, as of right now I see no other products that have close to this kind of SWD control for Organic growers.

Meeting Information

For more comprehensive meeting schedule, [click here](#).

- **September 8 — Washington Red Raspberry Commission meeting** ~ 1-5 pm, [WSU Mt. Vernon Research Center](#), [Email](#) Henry Bierlink for more information or call him at 360-354-8767.
- **September 13 — Raspberry Fumigation Information Field Day** ~ 9:30 am. Hosted by WSU & USDA-ARS. 2 pesticide credits. Raspberry field on south side of Birch Bay-Lynden Rd between Woodland & Enterprise Rds, Lynden. RSVP/further information--Dan Coyne: dcoyne@wsu.edu • (360) 676-6736.
- **September 14 — Oregon Raspberry & Blackberry Commission meeting** ~ 6 pm. Langdon Farms Golf Course, Aurora, OR. Contact [Philip Gutt](#) for more information.
- **September 22 — Oregon Strawberry Commission meeting** ~ 6 pm. Roth's in Salem, OR. Contact [Philip Gutt](#) for more information.

Industry News/Resources

Newsletters

- [Michigan State IPM Fruit Newsletter for 8/31](#)

Research

- [Fruit and Soil Quality of Organic and Conventional Strawberry Agroecosystems](#) (PlusOne, August, 2010)
Conclusions/Significance: *“Our findings show that organic strawberry farms produced higher quality fruit and that their higher quality soils may have greater microbial functional capability and resilience to stress. These findings justify additional investigation aimed at detecting and quantifying such effects and their interactions.”*
- [More proof that organic matters](#) (9/2, Washington Post) A news article based on the above research article.
- [Organic strawberries are better – in some ways – researchers say](#) (9/2, Los Angeles Times) This story is getting a lot of media coverage.

National

- [Strawberry growers make case for Farr, Hamburg](#) (9/4, The Packer) FDA commissioner, Margaret Farr, and CA Representative, Sam Farr toured California strawberry field & hear about the 'Dirty Dozen' List issues.
- [Illegal immigration declines sharply in California, across the country, report says](#) (9/1, Los Angeles Times)

International

- (Uruguay) **Website/blog:** Spanish original: [Latin Berries](#). English translated version: [Latin Berries](#).

Crop Protection Materials Information

- [Endosulfan phase out announced by EPA](#) (9/1, MSU Fruit Crop Advisory Team Alert)

New Pest Management Information

Insects

- **Weevils, strawberries, blueberries:** [Black Vine](#), [Strawberry](#) and [Rough Strawberry](#) root weevils. As the weather cools, adults re-emerge from the soil. [Rough Strawberry root weevils](#) lay eggs in the fall as well as the spring and control measures need to be considered in problem areas.

Diseases, blueberries

- [How to recognize Phytophthora & Pythium root rot in blueberries](#) (8/24, Fruit Crop Advisory Team Alert)

Ongoing Pest Management Information

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Insects/Mites

- [Redberry Mites](#), late ripening blackberries: Evergreens are usually the hardest hit. The berries turn brick red and hard instead of ripening.
- [Yellow Mites](#), northern raspberries
- [Twospotted Spider Mites](#), raspberries, blackberries.

Diseases

- Blueberry fungal diseases: [Anthracnose Ripe Rot](#), [Alternaria Fruit Rot](#), [Botrytis Fruit Mold](#), [Mummyberry](#).
- Blueberry virus diseases: [Scorch virus](#), British Columbia blueberries.
- Raspberry and blackberry fungal diseases: [Botrytis Fruit Mold](#), late ripening blackberries, [Blackberry Rust](#) (Phragmidium Rust) evergreen blackberries, [Yellow Rust](#), raspberries, [Phytophthora Root Rot](#) raspberries.
- Raspberry and blackberry virus diseases: Raspberry Bushy Dwarf virus, [Raspberries](#), [Marionberries](#).

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Spotted Wing Drosophila Update for 9-7-10

This Update is a collaborative effort with contributions from OSU, USDA-ARS, WSU, and Peerbolt Crop Management.

- [Click here](#) for information links from PCM.
- [Click here](#) for the OSU SWD website.
- [Click here](#) for the BC Ministry of Agriculture and Lands SWD website.
- [Click here](#) for the WSU, Mt. Vernon SWD website.
- **New:** [Click here](#) for SWD Resources for Eastern Washington Fruit Growers

Recent Washington State University SWD Grape Information

- [SWD Grape Trial Update](#) (8/28)
- [SWD in Wine Grapes Fact Sheet](#)
- [SWD in Concord Grapes Fact Sheet](#)

SWD News Stories

- (CA) [Advice to Grow By](#) (San Joaquin County Master Gardeners Newsletter)
- (N. Carolina) [SWD trapping update](#) (9/1, N.C. Extension IPM Blog)

General SWD Comments

New comments

- SWD populations continue to increase and will through the end of the season.
- The ongoing insecticide management program has been very effective where implemented consistently.
- The Oregon 5-scout survey that was funded by the Oregon Department of Agriculture from April through August has ended. The primary objective of this survey was to minimize the economic impact of this new pest on Oregon fruit growers. The great majority of the harvest is finished.
- Some vineyard and late season caneberry and blueberry SWD trapping will continue through the end of September in Oregon/SW Washington with 2 scouts funded through a Northwest Center for Small Fruits Research (USDA) grant.
- These weekly SWD report will continue.
- So far, few adults have been caught within vineyards however there are reports of some larval infestations in Concord and Red Flame grapes.

Ongoing comments

- Some growers report finding larvae infested fruit even though they had little or no trap catches. *The monitoring program for SWD is still very much a work in progress.* There are many variables we're still working out, so take this into consideration when making management decision.
- For machine harvesters, this is the time to assess the economic impact of having a lot of fruit on the ground and whether it's necessary to invest more into research/methods of coping with this situation.

- This is also the window in time to evaluate the economic impact of Himalayan blackberries on SWD and whether it's necessary to invest more into research/methods of coping with blackberries around the fields.
- Placing berries in a sealed baggie at room temperature with no liquid added is proving to be an easy monitoring technique for checking for SWD larvae. The larvae generally emerge from the fruit within a day of bagging. Warmth also encourages them to come out.
- As blueberry and caneberry fields finish harvest, a post harvest insecticide treatment is recommended to prevent the field from harboring a breeding population of SWD.

Northwest Monitoring Weekly Update for 8/29-9/6— North to South

The following information comes primarily from public monitoring programs. Number of crop types, fields, and traps varies greatly so the numbers should be viewed as indicators only. This pest can be very site specific. Any treatment decisions should be based on monitoring data/observations gathered directly from the field to be treated and the individual grower's best judgment.

British Columbia (Same as last week, more recent reports not yet available):

From the B.C. Blueberry IPM Newsletter for 8/28/10: "SWD trap catches continue to increase in most regions of the Fraser Valley. Adult SWD flies have been observed on overripe fruit, foliage and cull piles in many berry fields. Late season berries remain very susceptible to SWD damage. Late season blueberry, raspberry, strawberry and blackberry fields should be sprayed at 10-14 day intervals until the end of harvest. Fields should be sprayed between pickings to minimize fruit loss. Insecticides registered for SWD are Delegate, Malathion, Ripcord and Entrust." [Click here](#) for the entire newsletter that includes a table of regional trap counts.

- [SWD Monitoring Update for Coastal British Columbia for 8/30](#)
- [SWD Monitoring Report for Southern Interior of British Columbia for 8/25](#)

Whatcom, Skagit, and Pierce Counties, Washington

WSU Extension in the following counties have organized SWD public monitoring programs placing traps in sites where growers have volunteered to share information. Click on the blue county name to go to the interactive mapping sites with trap numbers and location

- [Whatcom County](#)
- [Skagit County](#)
- **New:** [Pierce County](#)

Hood River County, Oregon:

"For the week ending September 3, 10 Hood River Valley locations had SWD catches. A total of 29 SWD (20 male, 9 female) were caught in 25 traps with at least one detection in each section of the valley (Hood River, Rockford, Odell, Pine Grove, Dee Flat, Parkdale). This is a lower number of SWD caught compared to last week, but still suggests that SWD is now distributed throughout the valley. If you have yet to be harvested host crops, you should be monitoring in and around your field to determine the potential for infestation. SWD management plans for several susceptible host crops are available at <http://swd.hort.oregonstate.edu/>."

SW Washington and Western Oregon (8/29-9/6)

The Washington berry commissions and the Oregon Department of Ag. along with the USDA, OSU extension, and Peerbolt Crop Management have supported and organized the survey from which the following information is taken. Grower identification as well as specific field sites are anonymous. [Click here](#) to go to the PCM SWD site for charts of county quadrants being scouted and regularly updated monitoring data from these counties. [Click here](#) to go to the OSU Extension SWD population county mapping site.

Weekly Summaries of SW Washington/Western Oregon—Public SWD Monitoring Program—Last week

This table shows recorded catches over the last 11 weeks. There are survey factors that have varied somewhat over the nine weeks, including number of fields, number of traps, type of crops. There are also field factors such as insecticide treatments and amount of ripe fruit in the field that have impacted the insect trap dynamics. These numbers should be viewed within that context. Still, some overall trends seem to stand out such as the male to female ratios, the increasing overall trap counts.

Dates	Total Males	Total Females	Overall Total	Percent females
6/14-6/18	11	51	62	82%
6/21-6/24	16	35	51	69%
6/28-7/2	32	63	95	66%
7/5-7/9	47	44	91	48%

7/12-7/16	75	70	145	48%
7/19-7/23	263	209	472	44%
7/26-7/30	344	334	678	49%
8/2-8/6	330	263	593	44%
8/9-8/14	1,085	762	1,847	41%
8/16-8/20	2,706	1,558	4,206	37%
8/23-8/26	8,290	2,957	11,247	26%

8/29-9/6—Transition week. SWD populations are continuing to build. Maintain an appropriate management/control program for any crop still being harvested.

- The large scouting program has ended as planned.
- A smaller, modified reporting program is being set up to cover late season crops such as grapes, late blueberries, and late raspberries & blackberries.

Ongoing Spotted Wing Drosophila Management Information

Timely Harvesting. It is important to harvest fruit in a timely fashion to avoid susceptibility to SWD. The spotted wing Drosophila appears to prefer ripe fruit.

Field Sanitation. A key to managing SWD is going to be keeping fields as clean of potential fruit hosts as possible. Getting improved fruit handling and cull disposal protocols in place early could mean the difference between a successful season and a train wreck. Remove any intact, over-ripe, and/or culled fruit from areas in and around the fields.

Adjacent habitat & Urban Site Infestations. Some habitat adjacent to berry fields and some urban sites in Western Oregon and Washington have been confirmed to have high SWD trap counts, as well as fruit that is heavily infested with SWD larvae. There is a high probability of 'hotspots' in both urban areas and unmanaged habitats that can act as a source for a large number of SWD to move into a commercial field when the fruit is at the vulnerable stage.

Pesticide tank mixes. In an effort to manage the risk involved with this new pest, some growers are using combinations of pesticides that they have not used in the past. Before applying an unfamiliar tank mix, be sure to check with your supplier, crop consultant, or other advisor to be sure it won't cause damage. Some mixes have the potential for unexpected, economically damaging effects—just the thing we're trying to avoid by using them.

SWD Management Recommendations

Entomologists from the USDA-ARS, WSU, OSU have collaborated to produce updated SWD management plans for blueberries and caneberries. They've been posted on the OSU SWD website.

- For the blueberry management plan, [Click here](#).
- For the caneberry management plan, [Click here](#).

Other related links on the site:

- SWD Chemical control considerations: [Click here](#). (Includes many links and information including pollinator conservation information and alert postings)
- Insecticides registered in Oregon and Washington along with relevant SWD management information for each: [Click here](#). (includes relevant MRL issues, PHI's, REI's, efficacy, etc.)

Leaf/tissue analysis & Soil testing

Post harvest is the best time to do most soil and leaf testing for nutrient management planning.

- **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 recently 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

All crops—

- Pay attention to new plantings of all berries for weeds, water, insects, diseases, and nutrient deficiencies.
- Weed management.
- Post-harvest—soil and leaf test for evaluation of nutrients.

Blueberries—Harvest ongoing in late ripening cultivars

- Scout for Spotted Wing Drosophila.
- Scout for fruit disease problems (e.g. Mummyberry, Botrytis, Alternaria, Anthracnose).
- Scout for fall webworm and remove from field.
- Prune out canker killed branches and remove them from the field.

- Scout for weevils and weevil notching.

Caneberries that are finished with harvest:

- Can cane out old floricanes now and tie up primocanes
- If cane disease isn't a problem, you can wait to do cane work on raspberries until October or later for better plant health, improved cold hardiness and less overwintering habitat for leafrollers.
- Can subsoil and till in raspberries after harvest. The soil fractures much better when it is dry so it's best to do this now before the fall rains start.
- For fields coming out this year, can basally spray with Roundup if perennial weeds are present.

Blackberries—Harvest ongoing in late ripening cultivars

- Scout for Spotted Wing Drosophila.
- Scout for rust and treat as needed.
- Scout for mites and treat as needed.
- Scout for Redberry Mite infested fruit.
- Scout for potential crop contaminants. Treat as needed.
- Scout for fruit mold and treat as needed.
- Scout for fruit disorders (e.g. crumbly fruit, dry cell) and determine cause.

Raspberries—Processed harvest finished in all regions

- Can apply post harvest insecticide just after harvest SWD management.
- Scout for Yellow Rust and assess treatment options.
- Scout for spider mites and treat as needed.
- Scout for virus symptoms and send in samples for testing as needed.
- Scout for aphids and treat as needed.

Strawberries—Processed harvest is finished in all regions

- Can apply fertilizer.
- Scout weak areas for root weevil larvae, Strawberry Crown Moth, root disease or soil problems.
- Scout for weevil notching on leaves.

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Archived Small Fruit Updates

(for older Updates [click here](#))

[08-31-10](#)

[08-24-10](#)

[08-17-10](#)