

# 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.

August 24, 2010

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## Other links

[Video of the week](#): A Washington Blueberry Commission promotional video made a few years ago including interview with Richard Sakuma.  
[Upcoming Meetings](#)  
[The Weather Cafe](#) by Rufus La Lone  
[Small Fruit Cold Storage Report](#)

## 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:** (8/23) This week should wrap up most of the Bluecrop pick with the Elliot pick getting underway on the mature fields. We're starting to do some post season cleanup and phosphites on harvested varieties. Aphid populations are pretty low due to predators and SWD sprays. Good new cane development in most fields.
- **Raspberries** (8/23) Applying the last of the post harvest cleanup fungicides to raspberries. Lots of yellow rust and mildew appearing, but really only providing protection to baby plantings if needed.

### Willamette Valley, Oregon and SW Washington

- **Blackberries:** (8/23) Chesters are harvesting with some excellent quality. Evergreens are just starting and look good. SWD pressure is very high on late blackberries but so far the insecticide program has kept them under control. Some mite issues are showing up with warmer weather coming on right now.

## 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](#)

- **Blueberries:** (8/23) We're into Elliotts along with Aurora, Legacy, Liberty also picking. Some soft fruit coming out of the few hot days last week but there's still a lot of good quality right now. Hope the weather holds to let us stretch out the picks.

## Industry News/Resources

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### Newsletters

- [British Columbia Blueberry IPM Newsletter for 8/20](#)
- ['The Source' for 8/23](#) Market updates from *The Produce News*
- [Michigan State IPM Fruit Newsletter for 8/24](#)

## Ongoing Pest Management Information

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- [Birds](#), blueberries.

### Insects/Mites

- [Redberry Mites](#), late ripening blackberries: Evergreens are usually the hardest hit. The berries turn brick red and hard instead of ripening.
- [Cane Blight](#), raspberries: Right after harvest is the time to protect the open catcher plate wounds from cane blight infections with a fungicide application.
- [Yellow Mites](#), northern raspberries
- [Twospotted Spider Mites](#), raspberries.
- [Strawberry Crown Moth](#), southern strawberries/caneberries.
- [Orange Tortrix Leafrollers](#), southern blackberries and raspberries:
- Root Weevils: [Black Vine](#), [Rough Strawberry](#), and [Strawberry Root Weevils](#)

### 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: [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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## 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.

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## Spotted Wing Drosophila Update for 8-23-10

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*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.

## General SWD Comments

### New comments

- This week saw another geometric increase in overall SWD trap counts in the Oregon/SW Washington survey (see numbers below)

- The differences between fields treated with insecticides and non-treated fields and other areas also increased. With fields being treated seeing very low trap counts.
- There will be just one more weekly report week for the Oregon/SW Washington survey as the funding support for the field scouting from the state of Oregon only goes through the end of August.
- Some vineyard and late season caneberry and blueberry SWD trapping will continue through the end of September in these areas with the scout being funded through the Northwest Center for Small Fruits Research (USDA0 grant).
- From an industry source--An alternative method for checking ripe fruit for SWD larvae infestation is to use one teaspoon of salt per one cup of water and to cover a fresh fruit sample in an open container with the solution. Within 5-7 minutes larvae are reported to emerge into the salt solution.
- This week, many more larvae are being recovered from wild Himalayan blackberry fruit than the previous week.
- There's speculation within the industry that there seems to have been a 'turning point' around the latter part of July before which there were no major SWD larval issues and after which the population reached a point when larval contamination in untreated or undertreated fields became much more likely to be at economically damaging levels.
- Caneberries appear to be the preferred host although blueberries, strawberries, and other stone fruits and berries are also at high risk. If untreated caneberries (domestic or wild) are nearby, the risk to other crops is greatly increased.

### 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 8/16-8/20— 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:

**From the B.C. Blueberry IPM Newsletter for 8/21/10:** "SWD trap catches have increased in most regions this week. 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 8/16](#)
- [SWD Monitoring Report for Southern Interior of British Columbia for 8/18](#)

### **Whatcom and Skagit Counties, Northern WA:**

*WSU Extension in Whatcom and Skagit Counties have organized an SWD public monitoring program placing traps in fields of growers who have volunteered to share information.*

- **Whatcom County:**
  - [Click here](#) to go to the Whatcom County interactive mapping site with trap numbers and locations.
- **Skagit County:**
  - [Click here](#) to go to the Skagit Count SWD website with an interactive survey map.

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### **SW Washington and Western Oregon (Monday, 8/16 – Saturday, 8/20)**

*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

This table shows recorded catches over the last 10 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%
<b>8/16-8/20</b>	<b>2,706</b>	<b>1,558</b>	<b>4,206</b>	<b>37%</b>

## Other Statistics for Oregon/SW Washington Survey:

- Two Weeks Ago (8/9-8/13)** Total traps checked: 519 (329 with no catches in traps)

No. of adults in the trap	Number of traps with that number	Total Adults
1-9	144	472
10-19	27	382
20-49	14	361
<b>50+</b>	<b>5</b>	<b>632</b>

- This Past Week (8/16-8/20)** Total traps checked: 469 (268 with no catches in traps)

No. of adults in the trap	Number of traps with that number	Total Adults	% Female
1-9	133	380 (187 M, 193 F)	51%
10-19	25	362 (207 M, 155 F)	43%
20-49	23	773 (418 M, 355 F)	46%
<b>50-99</b>	<b>12</b>	<b>866 (555 M, 311 F)</b>	<b>36%</b>
<b>100+</b>	<b>8</b>	<b>1,883 (1,339 M, 544 F)</b>	<b>29%</b>

## Catches by Crop

- Two Weeks Ago (8/9-8/13)**

	#Traps w/catches	Males	Females	Total Adults
Blackberry (post harvest)	50	158	149	307
<b>Raspberry (post harvest)</b>	<b>74</b>	<b>682</b>	<b>439</b>	<b>1121</b>
Black raspberry (post harvest)	5	42	29	71
Blueberry	33	50	55	105
Cherry (post harvest)	5	4	5	9
Peach	5	34	5	39
Strawberry (post harvest)	6	81	64	145

- This Past Week (8/16-8/20)**

	# Traps w/catches	Males	Females	Total Adults
Blackberry (post harvest)	59	362	282	644
<b>Raspberry (post harvest)</b>	<b>64</b>	<b>2077</b>	<b>1113</b>	<b>3190</b>
Black raspberry (post harvest)	5	45	22	67

Blueberry	45	125	73	198
Cherry (post harvest)	5	5	4	9
Peach	7	13	14	27
Strawberry (post harvest)	8	11	13	24

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## 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 Updated 6/22/10

*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.)

## Crop work

### All crops—

- Pay attention to new plantings of all berries for weeds, water, insects, diseases, and nutrient deficiencies.
- Can put out monitoring traps for Spotted Wing Drosophila
- If ripe fruit is in the field, can monitor for SWD larvae by using a 'baggie' test on fruit samples.
- Weed management.
- Post-harvest—soil and leaf test for evaluation of nutrients.
- Post harvest—can treat for SWD management.

### Blueberries—Harvest ongoing in late ripening cultivars

- Scout for fruit disease symptoms and/or disorders.
- Scout for leafroller larvae feeding.
- Scout for aphids and treat as needed, particularly in northern growing areas where aphids vector Scorch virus.
- Scout for weevils and weevil notching.
- Scout for virus symptoms and send in samples for testing as needed.
- Maintain bird damage management.

### Blackberries—Harvest ongoing in late ripening cultivars

- Scout for virus symptoms and send in samples for testing as needed.
- Can apply post harvest insecticide just after harvest SWD management.
- Can apply fungicides for fruit/blossom rot in late season crops.
- Can apply clean up insecticide just before harvest for crop contaminant management.
- Scout for Phragmidium Rust in evergreen blackberries.
- Scout for Cane and Leaf Rust.
- Scout for leafroller larvae and treat as needed to prevent fruit contaminant problems.

### 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.
- Scout for leafroller larvae and other insect crop contaminants.
- Scout for ripe fruit fungal diseases.

**Strawberries—Processed harvest is finished in all regions**

- Post harvest—Treat post harvest for SWD if needed especially if field is in close proximity to other ripening berry or stone fruit crops.
- Have pheromone traps out for Strawberry Crown Moth in southern fields and treat as needed.
- Can treat post-harvest for SWD, root weevils, and/or Strawberry Crown Moth.
- Mow and renovate fields 2-4 weeks after harvest unless pest pressures require mowing and treating sooner than that.
- Take soil tests.
- Fertilize as needed.

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## Archived Small Fruit Updates

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

[08-17-10](#)

[08-10-10](#)

[08-03-10](#)