

# 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 31, 2010

## Table of Contents

[Regional Reports](#)  
[Meeting/Webinar Information](#)  
[Spotted Wing Drosophila Update](#)  
[Industry News/ Resources](#)  
[Ongoing Pest Management Info](#)  
[Crop Work](#)

## Other links

[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.*

### Whatcom County, Northern Washington

- **Blueberries/Raspberries: (8/30)** Finishing up Bluecrop, Bluejay, and Jersey. Yields are down considerably, most likely due to non-pollination. Regular SWD sprays are keeping the critter at bay. Raspberries being subsoiled and cultivated. Dry weather is requiring continued irrigation.

### Skagit River Valley, Northern Washington

- **Blueberries/Blackberries: (8/30) (Organic Production)** We've been spraying up organic blueberry and blackberry fields with Entrust for SWD as we finish picking. Maintained a 7-10 day spray interval through the season using air and ground equipment as needed based on trap counts. We found largest SWD numbers along edges of fields bordering woodlots and tree lines. We're finishing up second pick Liberty and first pick Elliotts. Sprayed up Chesters after picking this pm ahead of ½-inch rain forecast for tomorrow. Good quality and yields on blacks so far. Lots of labor available in Skagit this 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](#)

- **Blueberries: (8/30)** Blueberry harvest winding down, except for Elliott and other very late varieties. Liberty is winding down, as well. SWD larvae numbers in unprotected blueberry fruit shot up this past week; it was hard to find ripe fruit that was not infested.

### Willamette Valley, Oregon and SW Washington

- **Blackberries: (8/30)** We started Evergreens on August 23, six days later than last year. Excellent quality and should be good yields. Have not found any more SWD post harvest in the early season blackberry fields. I think it is because any remaining berries are now raisins.
- **Blueberries:**
  - **(8/28)** At Salem, picking continues at a steady pace in the late varieties. The SWD spray schedule has been tightened up a bit given the trap numbers in the surrounding area and the value of the late crop.
    - **Bluecrop:** Machine harvest of fourth pick Bluecrop is underway. We would have waited except that bird pressure is building.
    - **Legacy:** We just finished the last pick of Legacy . . . keep these away from children as a sugar buzz is sure to follow.
    - **Liberty:** Third pick Liberty is underway. Some blocks may hold a small fourth pick. Liberty size has been inconsistent, and some fields showing excess shrivel.
    - **Aurora & Elliott:** Second picks of Aurora and Elliott were large, but as usual, firmness and sweetness were in short supply. It appears that nice third and fourth picks of Aurora and Elliott will be possible if the weather cooperates.
  - **(8/30) (Organic Production)** We are still picking in the rain. It has been a bumper crop for us and no SWD problems yet. We've used GF-120 bait and Entrust. I am worried about the late season crop though as the trap numbers are increasing. It makes me wonder about planting late varieties. As soon as we are done we will be working on irrigation updates to some of the older fields, and sawdust applications.
    - **Reka:** We just finished machine harvest of Reka today.
    - **Bluecrop, Bluejay, Berkeley:** We'll be working on all of these this week.
    - **Jersey:** It'll probably wait until September 15<sup>th</sup>.

## Meeting/Webinar Information

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

- **September 1 — WSU Food Safety Webinar** ~ 10 am, WSU Extension Food Safety Specialist Karen Killinger. [Click here](#) for more information and how to participate.
- **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 22 — Oregon Strawberry Commission meeting** ~ 6 pm. Roth's in Salem ,OR. Contact [Philip Gutt](#) for more information.

## Industry News/Resources

### Newsletters

- [British Columbia Blueberry IPM Newsletter for 8/28](#)
- ['The Source' for 8/30](#) Market updates from The Produce News
- [Michigan State IPM Fruit Newsletter for 8/31](#)
- [US Highbush Blueberry Council's Bluespaper for August](#)

### Health

- [What are the top five fruits?](#) (8/30, HealthNewsDigest.com).  
*This list has raspberries, blackberries, and strawberries along with kiwis and oranges.*

### International

- (Argentina) [Blueberry exports increase due to high U.S. demand](#) (8/30, Freshplaza.com)
- (Japan/ Eastern Canada) [Prince Edward Island blueberries lure Japanese jam makers](#) (8/23, CBC News)
- (South Korea) [Blueberries a big hit in South Korea](#) (8/18, VOA News)

## Ongoing Pest Management Information

- [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.

- [Yellow Mites](#), northern raspberries
- [Twospotted Spider Mites](#), raspberries, blackberries.
- 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](#).

[Click here](#) to go back to the top of this newsletter.

### 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.

### **Spotted Wing Drosophila Update for 8-31-10**

*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.

### **SWD News Stories**

- [That fruit tree in your yard may be one big menace](#) (Tricity Herald, 8/23)
- [Tiny fly steals the stage at annual fruit fest](#) (Skagit Valley Herald, 8/29)

### **General SWD Comments**

#### **New comments**

- Another week—another big jump in overall trap counts.
- The ongoing insecticide management program has been very effective where implemented consistently.
- This is the last week of reporting on the Oregon/SW Washington 5- scout survey that was funded by the Oregon Department of Agriculture from April through August.
- 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, while SWD adults have been recovered from some border areas of vineyards, very few adults have been caught within the fields and no signs of larval infestations have been found.
- While peach numbers in monitored fields are low, much of this can be attributed to spray programs.
- One U-pick peach orchard was found to have infested fruit with the preferred SWD entry site at the stem end in the cavity so it wasn't easily seen.

#### **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 8/23-8/26— 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 8/28/10:** "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 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.

[Click here](#) to go back to the top of this newsletter.

### **SW Washington and Western Oregon (Monday, 8/23 – Friday, 8/27)**

*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	4,264	37%
<b>8/23-8/26</b>	<b>8,290</b>	<b>2,957</b>	<b>11,247</b>	<b>26%</b>

## Other Statistics for Oregon/SW Washington Survey:

- **Three 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>

- **Two weeks ago (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>

- **This past week (8/23-8/27) Total traps checked: 495 (312 with no catches in traps)**

No. of adults in the trap	Number of traps with that number	Total Adults	% Female
1-9	111	371 (169 M, 202 F)	54%
10-19	24	320 (164 M, 156 F)	49%
20-49	19	589 (322 M, 267 F)	45%
<b>50-99</b>	<b>11</b>	<b>799 (506 M, 293 F)</b>	<b>37%</b>
<b>100-999</b>	<b>14</b>	<b>3,435 (2,396 M, 1,039 F)</b>	<b>30%</b>
<b>1,000+</b>	<b>4</b>	<b>5,733 (4,733 M, 1,000 F*)</b>	<b>~20%*</b>

\*Female number is estimate. Actual number will be available next wk.

## Catches by Crop

- **Three 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

- **Two weeks ago (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

- **This past week (8/23-8/26)**

	# Traps w/catches	Males	Females	Total Adults
Blackberry (post harvest)	62	739	496	1235
<b>Raspberry (post harvest)</b>	<b>38</b>	<b>7226</b>	<b>1581</b>	<b>8807</b>
Black raspberry (post harvest)	8	21	17	38
Blueberry	56	236	194	430
Cherry (post harvest)	4	2	7	9
Peach	6	17	18	35
Strawberry (post harvest)	7	40	31	71

[Click here](#) to go back to the top of this newsletter.

## 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.
- Scout for Cane and Leaf Rust.

### 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

- 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.

[Click here](#) to go back to the top of this newsletter.

## Archived Small Fruit Updates

---

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

[08-17-10](#)

[08-17-10](#)

[08-10-10](#)