

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.

July 20, 2010

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Other links

[Photo of the week](#): Strawberry Crown Moth adult numbers have increased lately.
[Upcoming Meetings](#)
[The Weather Cafe](#) by Rufus La Lone
[Small Fruit Cold Storage Report](#)

Special Alert

[Spotted Wing Drosophila](#), all berries: We're seeing major increases in SWD trap counts in all regions.

This new pest poses unique difficulties for growers in that we don't have any track record to by which to accurately predict potential economic risk to our berry crops.

- In the southern areas, no large scale larval infestations of commercial fields have been identified and no major economic crop losses have been incurred.
- However, SWD larvae have been recovered from fruit in post harvest strawberry fields, some organically managed cherries and blackberries, and home grown raspberries, blackberries, strawberries, and cherries.
- Some commercial fields of raspberries, blackberries, and blueberries that received insecticide applications two weeks or longer ago are now seeing increased trap counts and should consider re-treatment.

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

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](#)

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

Great weather for harvest. We really could use a rain for the raspberries but definitely not for the blues, so I think we will opt for a continuation of what we have.

- **Blueberries:**
 - (7/19) Dukes should start machine picks this week. Hand pick first crop is well along and really doesn't seem to be a big second pick. Fruit size really has been an issue and volumes will be off. Reka has been very good with excellent quality and good size. Some Bluecrop starting to hand pick.
 - (7/19) Bluecrop field that I have seen looked pretty good – size will be an improvement over Duke. SWD numbers are still quite low in most areas, but we have a few hot spots in north Matsqui, Cloverdale, and East Chilliwack. Blueberry growers in these areas need to look at getting their protective sprays on.
- **Raspberries:** (7/19) Raspberries are a real mixed bag. Some may finish picking this week. A real short crop. I think, for the majority, there should be a of couple weeks left. Berries a lot firmer now, but size is off. Real peaks in production are hard to come by. Very strange pick and hard to gage just what's going to happen.

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Whatcom County, Northern Washington

SWD are on the move. I picked up 18 in one trap just over one night. It was in a cooler, shaded area under a wild cherry tree

- **Blueberries:** (7/17) Dukes are nearing harvest and birds are not as much of a problem. Bird traps are catching lots of starlings, and falconers are scaring away nearly everything. It's a small crop here too.
- **Raspberries:** (7/17) The raspberry harvest here is not looking even average, better plan for higher prices, it's going to be short. Quality is improving as berries are firming, following that stifling heat. Sunburn, sunscald, shrunken fruit due to the heat is really hurting.
- **Strawberries:** (7/17) Strawberries are being renovated, and herbicide applications are being watered in.

Skagit County, Northern Washington

- **Raspberries:** (7/18) Skagit's raspberry quality benefitting from the improved weather. Our Chemainus plot continues to look much better than Meeker. Far less crumble, firmer.

Willamette Valley, Oregon and SW Washington

- **Blueberries:** (7/17) Picking through some soft fruit from the heat, but now there's a lot of fruit coming on. Dukes are still going, but some fields are finished. Bluecrop, Draper, and other mid-season varieties are picking. Weather is great. Trying to keep up!
- **Blackberries:** (7/17) First Marionberry picks this year had berry size that was 20% less than last year. Pounds per pick are down, but I think there will be more picks since things are really spread out. I don't see any kind of typical harvest peak. Yields will be off, not sure how much, but a short crop gets shorter. We're fighting dry cell and sunburn in the plant, but because of the berry size they are flying through the IQF tunnel. If the weather forecast for the next couple of weeks holds, it looks good. We won't be harvesting in the rain and the berries won't get cooked (again) by heat. There are Marion fields that have not started, but everyone should be going by Monday (7/19) night.
- **Raspberries:** (7/19) Raspberry fruit quality has greatly improved after the heat wave. We're now getting ideal harvest weather, but are on the downswing on the season. At least we can optimize what's still out there. Some mite problems, but not bad. Some positive SWD trap counts, but growers are staying on top of it with some fields getting a second insecticide treatment. No rejections of loads for SWD that I've heard of so far. With the better fruit quality, we don't need any problems like that now.

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Meeting Information

- **Cancelled:** July 27–29 — 3rd annual PNW Engineering Solutions for Specialty Crops Conference ~Tri Cities, WA. [See site for details.](#)

Industry News/Resources

Newsletters

- **The Source**, market updates from The Produce News for 7/19: [Click here.](#)
- **Michigan State IPM Fruit Newsletter** for 7/20: [Click here.](#)
- **Michigan State Blueberry Bulletin** for 7/20: [Click here.](#)
- **New Jersey Blueberry Bulletin** for 7/12: [Click here.](#)
- **British Columbia Blueberry IPM Newsletter** for 7/20: [Click here.](#)

West

- **Olsen Bros., Wyckoff Farms supply Driscoll's blueberries:** [Click here](#) (7/19, The Packer)

National

- **(FL) Industry feels labor pinch as support grows in Florida for immigration legislation:** [Click here](#) (7/16, Produce News)

International

- **New scientific report shoots down EGW's 'Dirty Dozen' list as misleading and an impediment to public health:** [Click here](#) (7/15, The Perishable Pundit)

Crop Protection Materials Information

- **July 27---Webinar on Understanding Maximum Residue Levels (MRL's):** 2 PM. [Click here](#) for information and to register. This is presented by the Growing Produce site (Western Fruit Grower magazine).
- **Stinger herbicide, Washington State blueberries:** Washington State has been issued a SLN (Special Local Needs) label for the use of Stinger (clopyralid) in blueberries for the control of Canada Thistle and 'certain other broadleaf weeds'. [Click here](#) for the supplemental label. [Click here](#) for the accompanying letter from the WSDA.
- **(CA) Record number of comments on fumigant:** [Click here](#) (7/12, Modesto Bee)
- **Regalia (extract of *Reynoutria sachalinensis*), biofungicide, OMRI certified:** The label has been expanded to include of berry crops. [Click here](#) for the label. [Click here](#) for more information on the product from the company. [Click here](#) for the Fruit Grower News write up.

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Pest Alerts

- **[Anthracnose Ripe Rot](#), blueberries:** The cool, wet spring has led to ideal conditions for this disease to get established. Infected fruit won't show symptoms until it ripens. Then it turns soft and leaky with salmon-orange colored spores appearing—often when fresh fruit is on display. Not a pretty site. For processed fruit, cooling as quickly as possible can suppress symptoms.
- **[Twospotted Spider Mites](#), raspberries:** The recent hot, dry weather has accelerated mite development and led to outbreaks needing applications of miticides to manage them.
- **[Strawberry Crown Moth](#), southern strawberries/caneberries:** This past week's trapping showed a big jump in the numbers of SCM adults emerging. Many blackberry fields in the Willamette Valley have significant populations with trap numbers in the 30-50 adults per week. The larvae of this clear wing moth girdles primocanes leading to collapsed or brittle canes that are then removed during cane tying. The field shows fewer and weaker canes tied up for the next year with little evidence of the causal agent. Insecticide drenches in the fall and/or spring will kill the larvae.

Ongoing Pest Management Information

- **[Birds](#), blueberries.**

Insects/Mites

- **[Orange Tortrix Leafrollers](#), southern blackberries and raspberries:** The larval hatch that causes our major crop contaminant problems has started in caneberry fields in SW Washington and Oregon.
- **[Aphids/Scorch virus](#) northern blueberries, [Root Weevils: Black Vine, Rough Strawberry](#), and [Strawberry Root Weevils, Yellow Mites](#), northern raspberries, [Redberry Mite](#) evergreen blackberries, [Blueberry Gall Midge](#), blueberries.**

Diseases

- **[Phytophthora Root Rot](#) raspberries.** Stress on root systems compromised by root rot is showing up a lot right now following the first major heat wave of the season.
- **[Alternaria Fruit Rot](#), blueberries.**
- **[Powdery Mildew](#), strawberries, [Blackberry Rust](#) (Phragmidium Rust) evergreen blackberries, [Yellow Rust](#), raspberries, [Shock virus](#), blueberries, [Scorch virus](#), British Columbia blueberries, [Mummyberry](#) blueberries.**

Spotted Wing Drosophila Update for 7-20-10

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.

Management material Update

Results of Trial Testing the Efficacy of Several Organically Registered Pesticides for Control of Spotted Wing *Drosophila* in Raspberry: [Click here](#) (7/16, Mark Bolda, U.C. Davis berry extension agent's blog)

- **Major Points:**
 - "It appears that a single application of Entrust or two applications of a high rate of Pyganic can offer organic growers up to five days of SWD control."
 - Paraphrased from conversation with Mark: Entrust is very pH sensitive. The tank mix should be around 7.0, below 6.0 it's probably useless.
 - Pyganic 5.0 was used at two rates: 9 oz./acre and 18 oz./acre. Two applications at the 18 oz. rate (3 days apart) gave control equivalent to the single application of Entrust.
 - Applications were made with 75 gal water/acre.
- This trial indicates possible options for an organic insecticide rotation that will manage insect resistance.

SWD Related News

- **Damaging species of fruit fly found in Washington Orchards:** [Click here](#) (7/15, The Seattle Times)
- **(CA) Tree's fruit packs an unpleasant surprise:** [Click here](#) (7/18, S.F. Chronicle)

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General SWD Comments

- The overall ratio of males to females was close to 50-50 (75 M & 70 F) this week, but individual fields showed much greater variations in the ratios.
- Growers and fieldmen using the sticky cards & counting only males could see this method become more useful from now on since males are making up a much greater percentage of the population.
- Watch for recently emerged males that might differ in appearance in that they're lighter in color and smaller size with some that have the wing spot just starting to color. Females are also lighter in color than previous catches.
- Blackberry and raspberry fields in Oregon & SW Washington are all increasing in overall counts as well as wider distribution across the region.
- Most of these raspberry fields were treated with a pyrethroid two to three weeks ago and are now seeing their first significant trap catches.
- Many blackberry and blueberry fields just got their first insecticide applications within the last 10 days. Some of these also had trap counts of 1-3.
- Cherry trees adjacent to fields and/or where they haven't been treated are often showing larval infestations.
- Post harvest and/or newly planted strawberry fields that have viable fruit present have, in a number of situations, also been found to harbor infested fruit. Take precautions as needed particularly when an adjacent field has ripening blueberries or caneberries.
- Baggie tests have been useful in finding the larvae in cherries. It's less successful but still useful in strawberries and should work well with caneberries and blueberries for checking for larval infestations ([Click here](#) to see how the procedure is done).
- If there's not the need for immediate results, instead of the baggie test with sugar water, just putting fruit in a sealed baggie and leaving it at room temperature for a couple of days will usually bring the larvae out of the fruit and easy to detect.

Blueberry mass trapping trial report (Benton County, OR):

- Over 200 traps in trial.
- Weekly fly numbers increased from 4 flies to 8 flies to 116 flies(21 males:95 females) captured in yeast & apple cider vinegar traps over this past week.

- Increased numbers of flies were primarily caught in variety, Blueray.

Northwest Monitoring Weekly Update for 7/12-7/16 — 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.

(Counts of ten or over are highlighted in red)

British Columbia:

- From Mark Sweeney, Berry Crops Specialist with the British Columbia Ministry of Agriculture: "SWD numbers are still quite low in most areas, but we have a few hot spots in north Matsqui, Cloverdale and East Chilliwack. Blueberry growers in these areas need to look at getting their protective sprays on."
- From the B.C. Blueberry IPM Newsletter for 7/20: "A significantly higher number of SWD flies were caught in traps last week in East Chilliwack raspberries, Abbotsford strawberries, Matsqui blueberries and Surrey blueberries than in previous weeks. Growers in these regions should consider an insecticide spray for SWD this week." [Click here](#) for the entire newsletter that includes a table of regional trap counts.

Eastern Washington: According to the 7/15 news story linked above, "A group of male and female spotted-wing drosophila... were found last week in a trap set in a semi-abandoned apricot-tree orchard in Pasco..."

A single male spotted-wing drosophila also was found near the sewage-treatment plant in Prosser, and an infestation has been confirmed in a cherry orchard in the Mattawa area....One also was captured in Douglas County."

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. [Click here](#) to go to an interactive mapping site with trap numbers and locations.

- **Whatcom County:**
 - As of 7/18, Recent public report not yet posted.
 - **Commercial raspberry & blueberry berry fieldman report (7/17):** "Put out a trap at 5 p.m. yesterday, caught **18 SWD** overnight. Cooler area right next to a wild cherry tree with wild blackberries nearby."
- **Skagit County:** Reported on 7/15. **Blackberry:** 1 male. **Raspberry:** 3 males, 5 females (all in one field).

SW Washington and Western Oregon (Monday, 7/12 – Friday, 7/16)

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. There are well over 600 traps in total. [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.

- **Clark, Cowlitz and Lewis Counties, Southwest WA: Blackberry: 6 males, 7 females. Raspberry: 12 males, 5 females. Strawberry:** 2 males, 1 female.
- **Multnomah and Washington Counties, OR: Blackberry: 4 males, 3 females. Blueberry: Cherry: 1 male. Raspberry: 2 males, 3 females. Cherry: 1 female. Wild habitat: 9 males, 3 females. Raspberry: 12 males, 8 females.**
- **Yamhill and Clackamas Counties, OR: Blackberry: 6 males, 7 females. Blueberry: 1 female. Lonicera: 4 males, 3 females. Raspberry: 1 male, 4 females. Strawberry: 2 females.**
- **Polk and Marion Counties, OR: Blackberry: 3 males, 3 females. Cherry: 3 females. Strawberry: 7 males, 2 females.**
- **Linn and Lane Counties, OR: Blackberry: 1 female. Blueberry: 3 females. Raspberry: 6 females. Strawberry: 8 males, 1 female.**
- **Benton County (50 traps), OR: Strawberry: 0 flies. Raspberry: 5 males, 6 females. Cherry: 10 males, 8 females. Blackberry: 17 males, 5 females, Peach: 0 flies. Wild habitat: 7 males, 4 females. Compost: 2 males. Nectarine: 3 males, 1 female. Marionberry: 1 male, 0 females.**
- **Douglas County, OR: Blueberry: 3 females, 2 males. Peach: 2 females. Cherry: 5 females, 4 males. Raspberry: 5 females, 5 males.**
- **Jackson and Josephine Counties, Southern OR: Blueberry: 1 female. Cherry: 2 females. Fig: 1 female. Peach: 1 female. Strawberries: 2 males, 2 females.**
- **Wasco County: Cherry (7/9): 3 males, 1 female. Cherry (7/16): No catches.**

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

This table shows recorded catches over the last 9 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, overall trap counts and the increased activity of the last week—up over 50% over the previous week.

Dates	Total Males	Total Females	Overall Total	Percent females
5/17-5/21		38	38	100%
5/24-5/28	4	37	41	90%
5/31-6/4	6	48	54	89%
6/7-6/11	15	29	44	66%
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%

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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. In contrast to most of our field trapping information, which so far has shown SWD numbers at slowly increasing but relatively low numbers, 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. The fruits involved are cherries, raspberries, and strawberries. 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.)

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Crop work

All crops—

- 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. [Click here](#) for example of the procedure.
- Weed management.

Blueberries—Harvest beginning in all regions

- 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 beginning in Oregon and SW Washington

- Scout for virus symptoms and send in samples for testing as needed.
- 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 ongoing in SW Washington and Oregon

- Can apply clean up insecticide just before harvest for crop contaminant 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.
- Put out pheromone traps for leafrollers.
- 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.

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Archived Small Fruit Updates

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

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