

# 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.

June 19, 2012

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### [Blueberry grower guide for using raptors for bird management](#)

(BerriesNW) This guide was funded by the Washington and Oregon Blueberry Commissions. It's got a good list of falconry services and resources as well as a section on how to choose a falconer.

### [The Environmental Working Group's 2012 'Dirty Dozen' list](#) (6/19)

Strawberries #6 and Domestic blueberries #11.

### ["Scared Fat": Are Consumers Being Scared Away From Healthy Foods?](#) (6/19, The Wall Street Journal)

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

## Oregon and SW Washington SWD Alert

### Strawberries

- Strawberries are well into harvest. We are picking up drosophila larvae in some of the fruit testing although most tests remain clean.
- Growers are advised to monitor the fruit closely for SWD larval contamination and evaluate whether a mid season insecticide application is needed.

### Raspberries

- Some early ripening cultivars are now being harvested and there's a lot of ripening fruit in all fields.
- We are already picking up larvae in some of the fruit samples taken from this early fruit.
- **Unlike the previous two seasons when SWD larvae were not found in raspberries until late season, there's very strong evidence that even first picks this year could see SWD larval contaminants.**
- It is advised to monitor fruit quality closely and take appropriate actions to prevent crop losses due to SWD.

### 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](#)

## Guidelines for checking the fruit for SWD larvae

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. We're all in this together.

## **Suggested methods:**

### **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.

## **Regional Reports**

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*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, 6/18)**

- **Blueberries:** Blueberry crop continues to fill but this incessant wet weather is worrisome as far as maintaining quality. Dukes still appear good but first pick days are moving toward mid July. Bluecrop looks light overall. Plants are really growing with all this rain though.
- **Raspberries:** Wet weather is playing havoc with field operations and plant health. Lots of root rot developing in raspberries. I don't think I've seen it come on this fast before. The raspberry crop itself appears to be lighter as time goes on. Mid-cane laterals are light in numbers, development and subsequently potential fruit numbers. This combined with poor pollination weather and root rot loss is not encouraging.

### **Northern Washington, Whatcom County (Saturday, 6/16)**

- **Blueberries:** We should apply the cleanup sprays real soon, before the rows close up. Bloom is over except for a bit in the Liberty and Draper. Big harvest potential doesn't look so big anymore, after all the incremental problems of weather and diseases. We're seeing a few leafrollers and a lot of aphids in some fields.
- **Raspberries:** Pollination issues and root rot the hot topics lately. Bloom sprays are on schedule. Looks like harvest in the Willamettes will start around the 4<sup>th</sup> of July, not a lot earlier than last year.
- **Strawberries:** We'll be lucky to pick strawberries by the 25<sup>th</sup>. Now it's supposed to rain thru Tuesday the 19<sup>th</sup>. Oh well. Weevils and aphids the main problems, also looks like powdery mildew making an appearance .

### **Northern Washington, Skagit County (Monday, 6/18)**

*Wet, very wet, 6/10th's inch of rain last pm.*

- **Blueberries:** Last of pollination struggling in Elliotts, just average so far. Lots of shoot growth in blues. Tipping canes in Liberty now. Big year for shock and mummyberry in organic blocks on susceptible varieties like Reka.
- **Strawberries:** SWD traps out not much activity yet. Monitoring strawberry fields being picked and trying to keep sanitation up in fields. Could use a few more pickers too...

### **Willamette Valley, Oregon and SW Washington**

- **Blackberries, processed:** (Tuesday, 6/19): Water is going on Marions or should be. I'm estimating 3 weeks to go, some red is showing up. Looks like a good crop but alternate bearing fields look down on

yield so I keep thinking there is something I am missing. Bloom sprays are going on evergreens, might be at 20% bloom.



*Marionberries on Monday, 6/18. Photos by Bill Dinger*



*Left: 6/17/11 Marionberries. Right: 6/18/12 Marionberries. Photos by Bill Dinger*

- **Blueberries:** (Tuesday, 6/19) There's a lot of color showing up in the Dukes and other early season varieties. The weather's been very temperate with some occasional showers and temperatures in the 60's mostly. We're due for a few warm days coming up but no sign of anything extreme. Harvest will get going in the Mid and Northern Valley starting July first with a lot more coming on around the second through the fourth. Down in the South valley they could be starting within the next few days. A really good looking crop. If we get the weather breaks and adequate labor it could be an excellent season. A couple of big 'ifs' there.

## **Pest Management Activities**

**As fruit colors, implement bird damage management activities: [Birds](#) blueberries**

- [Bye Bye Birdie –Bird Management Strategies for Small Fruit](#) (Cornell) 13 page PDF reviewing options and a nice bird species specific guide to feeding and flying habits.

**Scout for symptoms and send in sample as needed: [Scorch virus](#) British Columbia blueberries**

- Bloom is the best time to walk the fields to identify bushes showing virus symptoms.
- [Click here](#) for the BCAGRI blueberry scorch virus link.
- The BC Blueberry Council is providing free scorch and shock virus testing for all BC blueberry growers again in 2012 (up to a maximum of 10 samples per field).
- The BCAGRI Plant Diagnostics Laboratory in Abbotsford is now accepting virus samples.

- Email the B.C. Blueberry Council's research coordinator, Karina Sakalauskas at [ksakalauskas@yahoo.com.ar](mailto:ksakalauskas@yahoo.com.ar) or call her at 604-613-2133) for more information.

**This week--Put out Pheromone traps for: [Strawberry Crown Moth](#) southern strawberries** We picked up the first adult SCM in a pheromone trap in SW Washington on Monday (6/18). Correct insecticide timing is essential. The first application needs to be made 10 to 14 days after two or more adults are caught two days in a row, a second about 14 days later and, if adult flight continues, a third 14 days later.

**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. Infections remain latent until the fruit ripens. Infected fruits exhibit a shriveling or caving-in of the side of the berry and become watery in storage. ([Click here for expanded view of this disease.](#))

**Time for preventative fungicide applications: [Anthracnose Ripe Rot](#) blueberries**

If you've had problems with Anthracnose, prevention of a reoccurrence begins at petal fall. Symptoms: First, blighting of shoot tips; then, a few flowers turn brown or black. Under warm and rainy conditions, salmon-colored spore masses form on infected berries. 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 and evaluate if management action is needed: [Twospotted mites](#) raspberries**

**Scout for: Root Weevil adults, all crops [Black Vine](#), [Rough Strawberry](#), [Strawberry Root Weevils](#).**

Weevils are emerging as adults in all regions. About 30 days after emergence, these adults are capable of laying eggs for the next generation. This window of time right after emergence is the optimum time to kill them—*before egg laying begins!*

**Scout for: [Mummyberry](#) blueberries**

As the fruit sizes, infected fruit will become easy to distinguish. [Mummyberry primer from MSU](#)

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## Spotted Wing Drosophila Update for 6-19-12

*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](#)

### General Comments

Some important points to keep in mind:

- ***Our first and foremost goal remains minimizing crop losses for the industry in 2012.***
- The monitoring program is still a work in progress.
- While continuing to collect monitoring data, researchers are exploring various trap baiting materials, various trap height placements, and various trap field densities to improve our ability to monitor SWD, and better predict economic crop thresholds, and treatment types, and timing.
- While we've got two full season's experience with SWD, this is still another learning year for all of us especially since this year's mild winter and warmer spring present us with a different conditions and different SWD dynamics. There's still a lot we just don't know and can't predict about SWD.

### Regional Monitoring Comments

**Central and northern Willamette Valley and Southwest Washington**

- Two major factors are now impacting the monitoring trap counts: Ripe/ripening fruit competing with the attractiveness of the apple cider vinegar and insecticide applications.
- In comparing sites, trap counts are still higher than at the same time in 2010 and 2011.

- With strawberries now being harvested, we have begun some field sampling of fruit for the presence of larvae using inundation of the fruit in a salt solution to draw out the larvae.
- Larval detections this week have been from two strawberry fields sampled as well as from two raspberry fields with fruit just beginning to be picked.
- With blueberries starting to color we've begun monitoring for adult SWD in a much larger number of blueberry fields in the Willamette Valley and SW Washington.

## Updated SWD Resource

- Joe DeFrancesco, OSU pesticide specialist, has updated the list of SWD pesticide options for Oregon and Washington strawberries that was originally done in April of 2011. [Click here](#) for the new version of the list. The new list is essentially the same except for some critical MRL information for export markets.
- Updates for the other crops will be forth coming.

## Management Material Update

- **New Entrust (Spinosad) Formulation:** Entrust SC (suspension concentration) should be easier to mix and handle. It's approved for organic production.
  - [Click here](#) for the new label; [Click here](#) for the rate conversion card; [Click here](#) for the OMRI certificate.

## Regional Monitoring (South to North)

### Oregon Public Scouting Program count for the week ending on 6/15

(Number of traps checked this period in the crop in parentheses).

*This scouting program and reporting system are being funded by a USDA SCRI grant, and a Northwest Center for Small Fruits Research grant*

- **Linn County: Apples(1):** no males/1 female. **Blackberries (7):** no males/2 females. **Black Raspberries (2):** none. **Blueberries (7):** no males/ 2 females. **Other caneberries (4):** none. **Cherries (2): 11males/15 females.** **Grapes (2):** none. **Honeysuckle (1):** no males/1 female. **Peaches (2): 2 males/14 females.** **Plums (2)** 1 male/no females. **Raspberries (3):** no males/1 female. **Strawberries (9):** none. **Tayberries (1):** none. **Wild Habitat (22) 24 males/328 females.**
- **Benton County: Cherry (2): 2 males/10 females.** **Nectarines (1):** 2males/7 females **Peaches (2):** 3 males/3 females. **Raspberries (1):** no males/1 female. **Strawberries (1):** none. **Wild Habitat (4):** no males/2 females.
- **Marion County: Blackberries (3):**5 males/5 females. **Strawberries (15):** none. **Raspberries (1):** none. **Cherries (3): 85 males/113 females.**
- **Clackamas County: Blackberries (3):**3 males/3 females. **Blueberries (2):**1 male/1 female. **Strawberries (6):** 3 males/ no females. **Raspberries (2):** 3 males/2 females. **Honeysuckle (2):** none. **Tayberries (2):** no males/1 female.
- **Yamhill County: Blackberries (5):**none. **Cherries (2): 1 male/ 23 females.** **Strawberries (9):** none.
- **Multnomah County: Blackberries (5): 3 males/10 females.** **Boysenberries(2):**no males/ 4 females. **Raspberries (2):** none. **Strawberries (13):** 4 males/ 5 females. **Cherries (1):** 1 male/5 females. **Salmonberry (3):** 6 males/2 females.

### Southwest Washington Public Scouting Program for the week ending on 6/15

- **Clark/Cowlitz/Lewis Counties: Blackberries (1):**1 males/7 females. **Raspberries (1):** no males/1 female. **Strawberries (15):** 6 males/7 females. **Cherries (2): 27 males/5 females.**

## Eastern Washington

- [Click here](#) for the WSU Eastern Washington SWD reporting site.
- **Latest report from the this site--Thursday, June 14:** "A trap collected in the Brewster region on June 12th contained a single female SWD."

## Western Washington--WSU Extension Scouting Program

*This scouting program and reporting system are being coordinated by Whatcom County Extension and funded in part by the Washington Red Raspberry Commission.*

[Click here](#) for the program's website. "A limited number of raspberry fields are now being scouted covering a diverse range of area in Whatcom, Skagit, and Pierce counties." For more information contact Colleen Burrows at 360-676-6736 x 22 or [cburrows@wsu.edu](mailto:cburrows@wsu.edu).

### **Latest reports from this site:**

- **June 12:** "1 female found in Bayview region of Skagit County."
- **June 8:** "23 female and 9 male SWD were found in Lynden region of Whatcom County."
- **June 7:** "1 female found in Sumas North region. 1 male and 3 females found in Sumas South region."
- **June 5:** "First female SWD was found in LaConner region of Skagit County. She was an overwintering female with shriveled eggs."

## British Columbia

- [Click here](#) for the SWD Ministry of Agriculture site.
- [Click here](#) for the June 11<sup>th</sup> report for coastal B.C. From that report:
  - "SWD traps are up in 28 blueberry fields and 10 raspberry fields from Delta to Chilliwack. There are 2 traps per field, 50 steps within the field, at least 40 meters apart, totaling 76 traps. Traps are checked once per week and SWD fly numbers will be presented here. We are using Contech Fruit Fly Traps baited with apple cider vinegar."
  - "1 female fly was caught in an Abbotsford blueberry field."
- [Click here](#) for the B.C. Southern Interior Valleys report for the week of June 1-7 (latest report posted): During this past week, with more than 180 traps set up, there have been six confirmed females trapped primarily in cherry orchards.

## SWD Management Material Resources

### **Oregon and Washington**

- **Blueberries:** [SWD pesticide options and information](#)
- **Raspberries and blackberries:** [SWD pesticide options and information](#)
- **Strawberries:** (Updated 6/1/12) [SWD pesticide options and information](#)

**British Columbia** (6/28/11): [SWD Management in BC Berry Crops](#) (with insecticide options listed)

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## **Industry News/Resources**

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### Newsletters/ Berry Reports

- [BC Blueberry IPM Newsletter](#) (6/17) *Weekly by Carolyn Teasdale, [ES Cropconsult](#). Sponsored by the BC Blueberry Council.*
- [New Jersey Blueberry Bulletin](#) (6/11) *Weekly by Gary Pavlis, Rutgers blueberry agent.*
- [Michigan State Extension news for Blueberries](#) (6/17)
- [The Source](#) (6/18) *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. **Most recent entry: 6/14—Finding California Oakworm in Local Berry Fields** *Reports on recent insect and disease research and observations in California.*

- [Team Rubus](#) by Gina Fernandez, North Carolina State Small Fruit Specialist. **Recent entry: 6/15—Blackberry anthracnose—What’s happening in the field?** *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: 6/18—Do it yourself: take insect photos and collect samples for diagnosis.**

## Research

- [Raspberry fumigation research shows less might be more](#) (WSU)

## Farm Bill

- [Farm bill progress hits snag](#) (6/14, The Packer)
- [Farm bill advances under pressure over healthy food](#) (6/18, Food Safety News)
- [Farm bill dodges its first bullet](#) (US News)

## Labor

- [Ag Labor shortage looms across west](#) (6/14, Capital Press)
- [Idaho ag has enough workers, for now](#) (6/15, Capital Press)

## The West

- [Whatcom’s berry harvest looks promising, about to get in full swing](#) (6/18, Bellingham Herald)
- [Gourmet Trading looks to start Oregon season](#) (6/15, The Packer)
- [Blueberry shipments exceed Japan’s pesticide residue standard](#) (6/19, Capital Press)

## National

- [The mother of all blueberries](#) (6/18, New Jersey Monthly)
- [Blueberry outstrips peach as Georgia’s top crop](#) (6/18, Timesfreepress.com)
- [New Jersey blueberries ready ahead of schedule](#) (6/18, FreshFruitPortal.com)

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## Event Calendar

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

- **July 11 — OSU Caneberry Open House**, starting at 1pm at the North Willamette Research and Extension Center in Aurora. [Click here for an agenda](#).
- **July 12 — OSU Blueberry Field Day**, from 1 to 5pm at the North Willamette Research and Extension Center in Aurora. [Click here for an agenda](#)
- **July 20 and 21 — Northwest Raspberry Festival, Lynden, WA.** [Click here](#) for the website.
- **July 20 and 21 — Oregon Berry Festival** ~ Portland, [Click here](#) for the Website. Sponsors and vendors are welcome!
- **August 3 and 4 — Mossyrock Blueberry Festival, Mossyrock, WA.** [Click here](#) for the website.
- **August 4 — Cloverdale Blueberry Festival, Cloverdale, B.C.** [Click here](#) for the website.
- **August 17 — Sutherlin Blackberry Festival, Sutherlin, OR.** [Click here](#) for the website.

## Additional, Ongoing Pest Management and IPM Information

### Diseases

- [Phytophthora Root Rot](#) raspberries.
- [Shock virus](#), Blueberries.
- [Blackberry Rust](#) (Phragmidium Rust) Evergreen blackberries

### Insects/Mites

- **Scout for:** [Raspberry Beetle](#), northern raspberries.
- **Scout for:** [Yellow mites](#) Raspberries ([Click here for expanded view of this pest.](#))
- **Scout for:** [Winter Moth/Bruce Span Worm](#) blueberries.
- **Scout for:** [Clay Colored Weevils](#) northern raspberries and blueberries.
- **Scout for:** [Azalea Bark Scale](#), southern blueberries.
- **Scout for:** [Blueberry Gall Midge](#), blueberries.

## Crop Work

## All crops

- ***As fruit starts coloring, monitor fruit for SWD infestation and treat as needed.***
- Vole management.
- Weed management.
- Can put out monitoring traps for Spotted Wing Drosophila.

## Blueberries

- Scout for Winter Moth/Spanworm and treat as needed.
- Scout for mummyberry.
- 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, can treat for alternaria and anthracnose prevention if needed.
- Scout for berry symptoms like green fruit botrytis, hail damage, mummyberry, etc.

## Blackberries

- Scout for virus symptoms and send in samples for testing as needed.
- Can put out pheromone trap to monitor for leafrollers.
- Have bees in by 10% bloom.
- Can apply fungicides for fruit/blossom rot from 10% bloom through the end of bloom.

## Evergreen Blackberries

- (South) Scout for and treat as needed for Blackberry rust.

## Raspberries

- (North) Scout for Clay Colored weevils.
- (North) Scout for raspberry beetle feeding symptoms.
- Scout for virus symptoms and send in samples for testing as needed.
- Scout for Cane Blight and Cane Botrytis symptoms.
- Can apply a phosphite material for stronger root growth and root rot prevention.
- Can put out pheromone traps to monitor for leafrollers.
- Scout for Yellow Rust and assess treatment options.
- Scout for spider mites and treat as needed.
- Can apply fungicides for fruit/blossom rot from 10% bloom through the end of bloom.

## Strawberries

### ***Harvest ongoing in South***

- Watch for weak growing areas and check plants for weevil larvae, root rot and/or cold damage.
- Scout for fruit damage symptoms like cat facing, slug damage, anthracnose, etc.
- Monitor ripe and ripening fruit for SWD larvae.
- (South) Can scout for Strawberry Crown Moth larvae and put out pheromone monitoring traps.
- Can apply fungicide starting at 10% bloom for fruit/blossom rot.
- (South) Scout for weevil adults and notching.
- 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.

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## Archived Small Fruit Updates

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

[06-12-12](#)

[06-06-12](#)

[05-29-12](#)

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This document is a guide and not intended as a recommendation or endorsement.

Consult with your supplier, field representative, or pest consultant.

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