

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 & industry through their commissions & councils.

June 28, 2011

Table of Contents

- [Regional Reports](#)
- [Pest Alerts](#)
- [SWD Report](#)
- [Pest Management Info](#)
- [Industry News/ Resources](#)
- [Meeting Information](#)
- [Crop Work](#)

Featured Website:

[Plants for Human Health Institute](#) at North Carolina State
"Research on fruits and vegetables will enhance the health-protective value of food crops and has the potential to increase the economic impact..."

[The Weather Cafe](#) by Rufus La Lone

[Small Fruit Cold Storage Report](#)

Control Material Alert

**Black Vine & Obscure Root Weevil,
British Columbia raspberries.**

- **Actara 25WG (thiamethoxam)**
- [Click here](#) for a copy of the emergency label.
- Effective from June 21 – August 31, 2011.
- Application rate: 210-280 g/ha (84 to 112 g/acre).
- Preharvest interval is 3 days.
- Do not apply more than twice per season.
- Actara is very toxic to bees. Don't apply until bees are out of the field.
- Actara will not control Spotted Wing Drosophila.

Labor Issue Alert

- In Southwest Washington, the strawberry harvest has been disrupted by the [Federal Department of Labor](#) coming through, "seeking to measure compliance in a number of areas, including wages and check stubs, housing, the migrant and seasonal worker act, and other employment standards." (quote is from the Washington Farm Labor Association newsletter)
- [Click here](#) for the Washington Farm Labor Association June 10th newsletter that talks about this happening in the Wenatchee area just before they moved into SW Washington.

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](#)

- [Click here](#) for the WFLA's website to be better informed on an issue that could be impacting your operation.
- [Department of labor stepping up enforcement of farms](#) (June 28, Growing Produce) *This is about enforcement efforts in Florida.*
- [Checklist to make sure you're staying within the law when dealing with labor contractors](#) (May, 2011, Florida Grower)

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

- (Friday, 6/24) A return to some rain here in BC. Strawberries are finally being harvested. Raspberries looking much better than anticipated, but lots of root rot spots showing up. Blueberries look to have reasonable set depending on variety.

Northern Washington, Whatcom County

Not so sunny here. I get tired putting my jacket on and off all day.

- **Blueberries:** (Friday, 6/24) Many are sizing nicely, however we are seeing a lot of green berry botrytis. It seems to be heaviest in Duke and Bluejay. Also Shock in the Duke, Bluecrop, and Jersey. Leaf drop in the 1613's (Hardiblues), looks like it could be virus symptoms.
- **Raspberries:** (Friday 6/24) Coming along nicely.
- **Strawberries:** (Friday 6/24) Harvest will begin next week, doesn't look like a huge crop, but quality should be good.

Northern Washington, Skagit County

- **Blueberries:** (Friday, 6/24) Seeing a lot of Shock in blueberries here in Skagit, as well. Other than that, our blues are looking pretty good, although the crop will be a bit light.
- **Raspberries:** (Friday, 6/24) Some raspberries, especially weaker fields, still have some bare canes showing from cold injury. We're also seeing more than the usual number of collapsing floricanes, symptoms similar to root rot.

Willamette Valley, Oregon and SW Washington

Mild weather week with highs around 70 and overcast a lot of the time. Ground is drying out fast though and these mild temps hide most signs of water stress. Check that soil moisture...

- **Blackberries:** (Tuesday, 6/28) First bloom sprays are going on Evergreens, they are about 10%. Marions, Boysens, Kotatas and the like are sizing up nicely. We had ideal conditions for pollination. Water is going in most fields, if not it should be (even with the rain). Finding enough aphids in Marions to warrant spraying, not every field, still looking for a pattern to why. Could be pre-bloom cleanup spray? The cool weather has made some questionable fields look pretty good, much improved over a couple weeks ago.

Photos by Bill Dinger



Marionberry field near Dundee. OR 6/24/11

Marionberries sizing 6/27/11

- **Raspberries:** (Monday, 6/27) There will be some hand picking of baby Meeker fields in Southwest Washington by the end of this week. Yes, there are reddening raspberries out there. Don't taste like much right now but they will, they will.
- **Strawberries:** (Monday, 6/27) Strawberries for processing have been picking for about a week. Slow, but the fruit has been holding well. We could see some mold issues with the showery weather moving in for a couple of days.
- **Blueberries:** (Monday, 6/27) Blues love this weather with very little stress showing up even with good sized crop loads. We've got fruit coloring in Duke, Draper, and the other early season varieties. Birds moving in—we seem to be feeding a population explosion of Cedar Waxwings. Some green fruit botrytis is coming through even in fields that had a high regime of bloom fungicides. Some weed issues especially with smart weed again coming through the usual herbicide programs with a huge flush of germination the last couple of weeks. The late harvest season has also contributed to the pre-emergent fungicides running out earlier in the crop development than usual.
- **Blueberries:** (Monday, 6/27) At Salem, the warm weekend brought on first blue in Bluegold and Draper. Aphid pressure is down considerably with the warmer weather and increased predator populations. For most of May and early June, a quick shot of water kept soils evenly moist; but in the last two weeks, differences in water demand among the blocks and varieties is becoming apparent. Row middles are closing in quickly and it looks like we may switch over to helicopter work for the next few rounds of fungicide/insecticide.

Photos by Jeff Flake



Aphids on the undersides of a blueberry leaf



Parasitized aphids on the new blueberry shoots leaves



This little wasp emerged from a mummified aphid. I tried to catch it emerging but it was too quick.

Classifieds

I've tried running classifieds like this in the past without much response. If this is a service you'd like to see in the Update, let me know! If you've got something to list, send it along. Email me by clicking [here](#). T.P.

- **1986-87 BEI over the row full size rotary harvester:** Customized to new style BEI with all fruit going up to top deck of picker. Can fill either Tote boxes or flats. Aluminum Littau picking heads with 3/8" fiberglass rods. Korvan catcher plates, Cummins engine with 3,411 hrs, all hydraulic motors. 2 new tires plus many spare parts. Asking \$30,000; email craigduyck@yahoo.com for pics or questions. (2nd week running)
- **Boysenberry liners:** We are a nursery in central Florida with a fairly large berry program and are looking into adding boysenberries to our mix. We're seeking information/ sources for liners. We also would like any information on tissue culture labs working with boysenberries. Contact [Valerie Cooper](#), Dewar Nurseries Inc. 1-800-329-1188. (1st week running)

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

Spotted Wing Drosophila Update for 6-28-11

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

SWD Information Websites

[Peerbolt Crop Management](#)

[Oregon State Univ.](#)

[B.C. Ministry of Ag.](#)

[WSU Westside](#)

[WSU Eastside](#)

Our first and foremost goal remains minimizing crop losses for the industry in 2011

- The continuing low trap catches are good news but don't take them as any indication of less SWD pressure than we had last season from mid-July on.
- While we've got one full season's experience with SWD, this is still another learning year for all of us—researchers, extension agents, growers, and industry consultants. There's a lot we just don't know yet.
- ***This monitoring program is still a work in progress.*** We're getting good indications now of specific attractant and trap changes would improved trap catches but we don't want to make changes mid season both for logistics reasons and seasonal comparison issues.
- Please take a very conservative approach to SWD management decisions.
- Be prepared for geometric increases in SWD populations and pest pressure during blackberry and raspberry harvests when they get rolling in a couple of weeks.
- Trials are ongoing on management material efficacy and residual length for both conventional and organic cropping systems.
- Organic growers have only one dependable control agent, Entrust. Entrust can be applied up to four times at 2 ounces per acre up to a maximum of 8 ounces for the season.

Draft guidelines for checking the fruit for SWD larvae in the field

These suggestions are based on techniques that various public researchers and industry personnel have been developing over the past year and a half. If any of you have ideas for improvements to these protocols, please pass them along. We're all in this together.

- Collect a sample of fruit to be tested.
- Put fruit in a salt water solution (1 cup of salt per gallon of water).
- Depending on size of fruit (strawberries take longer than caneberries or blueberries), the larvae will emerge from the fruit into the salt solution in a very short period of time. Probably should wait 15 minutes or so before concluding that there's a low probability larvae are present.
- For streamlining the process, we're putting samples into a salt solution in baggies in the field and then checking all the samples later at the office/lab by pouring them out into a shallow tray and using a piece of wire mesh screen to hold the fruit down and make it easier to separate the larvae from the fruit.
- The smaller the larvae and the lighter the infestation, the more difficult to see the larvae. In heavily infested fruit this is very reliable and easy to do.
- A major difficulty is in being able to detect SWD problems in the field quickly and at an early stage when the infestation will most likely be spotty, larvae small, and not very many larvae per fruit.

Regional Monitoring

Oregon Public Scouting Program –South to North (Number of traps checked this week in the crop in parentheses).

- **Jackson County: Strawberries (3):** no males/2 females. **Raspberries (1):** no males/1 female. **Blueberries (1):** 3 males/14 females. **Cherries (1):** none. **Peaches (2):** no males/1 female. **Grapes (1):** none.
- **Lane County: Wild blackberries (5):** no males/4 females.
- **Linn County: Strawberries (6):** none. **Blueberry (21):** none. **Honeysuckle (1):** none
- **Marion County: Strawberries (13):** none. **Cherries (1):** no males/2 females.
- **Yamhill County: Strawberries (8):** none. **Cherry (1):** no males/1 female.
- **Clackamas County: Strawberries (2):** none. **Tayberry (1):** none. **Honeysuckle (1):** none.
- **Washington: Strawberries (1):** none. **Cherries (1):** none. **Blueberries (2):** none.
- **Multnomah County: Strawberries (13):** none. **Cherries (1):** no males/2 females. **Salmonberries (3):** no males/1 female.

Southwest Washington Public Scouting Program

- **Clark/Cowlitz/Lewis Counties: Strawberries (6):** none. **Cherries (2):** none. **Blueberries (9):** none. **Raspberries (20):** no males/1 female.

Western British Columbia

- Out of 10 traps checked weekly, on June 22, one SWD female was recovered from the trap placed in ripening currants at Clearbrook substation in Abbotsford, BC, Canada.

SWD in the news

- (Southern OR) [Pests return to crops](#) (6/21, KDRV News)

Pest Alerts

Strawberries (SW Washington & Oregon) – [Strawberry Crown Moth](#) *This week we began recovering SCM adults in pheromone traps. First control treatments should be timed to go on 10-14 days after first consistent trap catches.*

Raspberries & Blackberries (SW Washington & Oregon) – [Orange Tortrix Leafrollers](#) *The larval hatch that causes our major crop contaminant problems is already a couple of weeks later than normal and will be starting in area caneberry fields (if it hasn't already). Fields that have been recording high adult pheromone trap counts are at high risk of having larval contaminant problems at harvest. Control materials, containing active ingredients specifically targeted at leafroller larvae such as *Bacillus thuringiensis* and Spinosad, are much more effective on these larvae when they're small.*

Strawberries & caneberries – Root Weevil management

After emergence, it takes about 30 days before an adult (and they're all female) begins laying eggs. So, treatments for these adults should take place before that 30 day window is up, but after sizable amounts have emerged. Monitoring the larvae and pupae development is the best way to know the status of these pests. It's also very time consuming and difficult to quantify. In addition, there are a number of factors that complicate weevil management, A couple of those factors are:

Some weevil adults overwinter and emerge early in the season ready to lay eggs. These overwintering adults would not be controlled before they lay eggs under the usual management regimes.

There many different weevil species affecting our crops. Each one has its own unique lifecycle. Management activities and timing of control applications need to be geared to the particular species.

For more information on our major pest weevil species, click on the following: [Black Vine](#), [Rough Strawberry](#), and [Strawberry Root Weevils](#).

Blueberries – [Green Berry Botrytis](#)

We're seeing a lot of reports of green fruit botrytis over the past couple of weeks. It's been heaviest in the northern growing areas. Fungicide treatments are of limited efficacy in controlling the infections at the green fruit stage. To paraphrase OSU plant pathologist, Jay Pscheidt: The best treatment right now is warm, dry weather.

Blueberries - [Alternaria Fruit Rot](#)

As blueberry bloom starts to finish, it's time to consider whether you need to prevent Alternaria and Anthracnose problems from showing up in the fruit. 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 can become watery in storage.

Blueberries - [Anthracnose Ripe Rot](#)

If you've had problems with Anthracnose, prevention of a reoccurrence needs to begin at petal fall. Symptoms: first, blighting of shoot tips, then, a few flowers turn brown or black. Leaf spots, when they occur, are large or small and roughly circular. As infected berries ripen, the flower end may soften and pucker. 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.

Pest Management & IPM Information

Diseases

- **Prime Time to scout for:** [Blackberry Rust](#) (Phragmidium Rust): evergreen blackberries. There are infections now becoming visible in some Evergreen blackberry fields. Growers should evaluate their fields to see if a fungicide application is needed.
- **Prime Time to scout for:** [Powdery Mildew](#) strawberries. Warm, humid, dry weather with a lot of new growth provide ideal conditions for Powdery Mildew. Unlike most fungal diseases, this one prefers drier, but humid conditions. Susceptibility is cultivar dependent.

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

- [Yellow Rust](#) raspberries
- [Purple Blotch](#) blackberries.
- [Phytophthora Root Rot](#) raspberries.
- **Prime Time to scout for:** [Mummyberry](#) blueberries. [Click here](#) for a Mummyberry fact sheet from MSU.

Viruses

- **Prime Time to scout for:** [Aphids/Scorch Virus](#) British Columbia blueberries - vector (aphid) management
From the B.C. Pest Alert: "Blueberry Scorch Virus is transmitted by aphids. An effective aphid control program should be used by all growers." You can email the B.C. Blueberry Council's research coordinator, [Karina Sakalauskas](#) (or call her at 604-613-2133) for more information
- **Prime Time to scout for:** [Shock Virus](#) blueberries *Reports this season indicate a much higher level of Shock Virus symptoms than usual. If plants are suspected of showing symptoms in successive seasons, send in a test to make sure it isn't [Scorch Virus](#).*
- **Prime Time to scout for:** [Raspberry Bushy Dwarf Virus](#) Marion blackberries. The telltale yellow chevron-shaped leaves are becoming apparent along with the yellow squiggly leaf patterns of the more common (and innocuous) [Calico Virus](#).

Insects/Mites

- [Two-spotted Spider Mites](#) northern raspberries.
- [Raspberry Beetle](#) northern raspberries.
- **Prime Time to scout for:** [Twospotted Spider Mites](#) raspberries, strawberries.
- [Azalea Bark Scale](#) blueberries.
- **Prime Time to monitor for with pheromone trap:** [Obliquebanded Leafrollers](#) in [Blueberries](#), [Raspberries](#), [Blackberries](#).
- [Leafroller larvae](#) blueberries, caneberries.
- **Prime Time to scout for:** [Blueberry Gall Midge](#) blueberries.

Industry News/Resources

Newsletters/Blogs

- [B.C. Blueberry IPM Newsletter for June 24](#)
- [New Jersey Blueberry Bulletin](#) (6/20/11)
- Market scope: [blueberries](#) [blackberries](#) [raspberries](#) [strawberries](#)
Recent stories & fresh market pricing for the various berries from The Packer.
- ['The Source'](#) (6/27) *Market updates from The Produce News.*

Immigration/Labor

- Federal Department of Labor doing audits in SW Washington [see alert above](#)
- [California governor must decide on card heck bill June 28](#) (6/28, The Packer)
- (Oregon) [Many farm workers living in poor conditions](#) (6/23, OPB News)
- [Immigration law already hitting Georgia farmers](#) (6/26, The Gainesville Times)
- [Common thread present in immigration law challenges](#) (6/28, CNN)

West

- [Abbotsford's getting berry late season](#) (6/23, The Vancouver Sun)

Berry health news

- [N.C. State scientists to share berry discoveries at global health conference](#) (6/20, Plants for Human Health Institute)

National

- [Early start for NJ blueberry season](#) (6/23, Bloomberg Business Week)

- [As university budgets take a beating, agricultural colleges and extension programs feel impact](#) (6/27, Washington Post)
- [House votes to cut food safety funding](#) (6/20, Growing Produce)
- [What appeals most to Americans on a food product label? Survey finds 'Grown in the USA' surging in popularity, right behind 'Natural' & 'Organic'](#) (6/28, Business Wire)

International

- [Worldwide fertilizer demand high](#) (6/23, Ag Weekly)

Meeting Information

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

July 6 — North Willamette Research Station Caneberry Open House ~ 1pm. 15210 NE Miley Road, Aurora, OR 97002. [Click here](#) for the agenda and other information.

July 13 — North Willamette Research Station Blueberry Field Day ~ 1pm. 15210 NE Miley Road, Aurora, OR 97002. [Click here](#) for the agenda and other information.

July 20 — Raspberry Machine Harvesting Selection Evaluation ~ 1-3pm. Sakuma Brothers Farm, Mt. Vernon, WA. Call Pat Moore at 253-445-4525 or Tom Walters at 360-848-6124 for information.

July 20 — Berry Grower Field Day ~ 3-5pm. WSU Mt. Vernon Research Station, WA. Call Pat Moore at 253-445-4525 or Tom Walters at 360-848-6124 for information.

July 21 — Raspberry Machine Harvesting Selection Evaluation ~ 11am-1pm. Randy Honcoop's farm in Lynden, WA. Fumigation Field Day to follow. Time TBA. Call Pat Moore at 253-445-4525 or Tom Walters at 360-848-6124 for information.

July 22 — B.C. Berry Field Day 1-4 pm. Contact [Chaim Kempler](#) for more information: 604-853-1551 or 604-819-0175.

July 22 & 23 — "Eat Your Berries! - The Oregon Berry Festival" ~ 11am- 6pm. Portland, OR. Ecotrust Building, 721 NW 9th Ave (NW 10th & Johnson). Taste and buy some of the season's best berries and also sample amazing products made with Oregon's berry bounty. [Click here](#) for details.

Summer Field days

Oregon State – OSU North Willamette Research Station

15210 NE Miley Road, Aurora, OR 97002. Call 503-678-1264 for more information.

- **July 6 — Caneberry Open House** ~ 1pm. [Click here](#) for the agenda and other information.
- **July 13 — Blueberry Field Day** ~ 1pm. [Click here](#) for the agenda and other information.

Washington State – Mt. Vernon

Call Pat Moore at 253-445-4525 or Tom Walters at 360-848-6124 for information.

- **July 20 — Raspberry Machine Harvesting Selection Evaluation**~ 1-3pm at Sakuma Brothers Farm, Mt. Vernon.
- **July 20 — Berry Grower Field Day**~3-5pm at the WSU Mt. Vernon Research Station.
- **July 21 — Raspberry Machine Harvesting Selection Evaluation**~ 11am-1pm at Randy Honcoop's farm in Lynden.
- **July 21 — Fumigation Field Day** following the mechanical harvest trial at Randy's ~ Lynden location TBA.

British Columbia

- **July 22 — B.C. Berry Field Day** ~ 1-4pm. Contact [Chaim Kempler](#) for more information or call 604-853-1551 or 604-819-0175.

Crop work

All crops

- Scout for voles and treat as needed.
- Weed management.

Blueberries

- 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 weevils and weevil notching.
- Can apply fungicides for fruit/blossom rot from through the end of bloom.
- After petal fall, can treat for Alternaria and Anthracnose prevention if needed.
- Scout for scale insects.
- Scout for fruit disease symptoms and/or disorders.

Blackberries

- Can put out pheromone trap to monitor for leafrollers.
- Scout for leafroller larvae and treat as needed to prevent fruit contaminant problems.
- Scout for Phragmidium Rust in Evergreen blackberries
- Scout for virus symptoms & send in samples for testing as needed.
- Can apply fungicides for fruit/blossom rot through the end of bloom.
- Scout for Cane and Leaf Rust.
- Can apply clean up insecticide just before harvest for crop contaminant management.

Raspberries

- Scout for virus symptoms & send in samples for testing as needed.
- Can apply a phosphite material for stronger root growth and root rot prevention.
- Scout for Yellow Rust and assess treatment options.
- Scout for spider mites and treat as needed.
- Can put out pheromone trap to monitor for leafrollers.
- Scout for leafroller larvae.
- Can apply fungicides for fruit/blossom rot through the end of bloom.
- Can apply clean up insecticide just before harvest for crop contaminant management.
- Scout for aphids and treat as needed.

Strawberries

- Watch for weak growing areas and check plants for weevil larvae, root rot and/or cold damage.
- Scout for weevil adults and notching.
- (Southern strawberries) Scout for Strawberry Crown Moth larvae & put out pheromone monitoring traps.
- Can apply a fungicide for fruit/blossom rot through the end of bloom.
- Can apply a phosphite material for stronger root growth and root rot prevention.
- Can apply slug bait.
- Scout for Powdery Mildew and treat as needed.
- Scout for Two-Spotted Spider Mites and predatory, beneficial mites.
- Scout for aphids and treat as needed.
- Scout for fruit formation issues like cat-facing.
- Scout for fruit quality issues such as mold.
- Scout for virus symptoms/send in sample for testing to confirm.

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

Archived Small Fruit Updates

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

[06-22-11](#)

[06/14/11](#)

[06-07-11](#)