

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.

August 6, 2013

Week 32

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[SWD, a game-changing pest](#) (7/25, Growing Produce)

[Bumper crop could mean record year for U.S. blueberries](#) (8/2, Fresh Fruit Portal)

Chile: [Device monitors fruit en route to export markets](#) (8/2, Fresh Fruit Portal)

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

SWD Statement

The major caneberry harvest has ended successfully in the northwest. While there were some losses to SWD infestations, my impression right now is that there was a significant improvement in the overall industry response this year with most growers implementing disciplined management programs and processors/fruit receivers maintaining consistent on-the-dock fruit sampling procedures.

There are significant acres of late season caneberries still ripening (Evergreens, Chesters, Triple Crown, primocane raspberries, etc.) that are potentially under even greater SWD pressure. It might be necessary for those growers to shorten the interval between insecticide applications to maintain economic control. Monitor the fruit closely.

While caneberries are the preferred fruit of SWD, blueberries, especially the late season varieties, are at major risk. Maintain a seven day treatment program throughout the end of harvest. Monitor the fruit for infestations using the salt water test to verify that this program is maintaining effective control. In some areas with very high pressure the applications could need to be closer together.

Stay the course.

Tom Peerbolt, SFU Editor

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](#)

Regional crop information

Regional reports

These reports are from individuals within the region and are their particular observations. They are included to give an impression of the present 'state of the industry' and regional activities.

British Columbia, Fraser Valley (Monday, 8/5)

- **Blueberries:** Second pick of Drapers coming up and first pick on Liberty coming up this week. I think some rain on Friday and Saturday freshened up some fields without causing too much damage.
- **Raspberries:** Raspberries are pretty well wrapped up. Starting to attend to post-harvest issues. Lots of mites out there that may need some attention in more afflicted fields. Our SWD sprays really take a toll on the natural predators. There is a distinct difference in fields treated for mites early in the season as a precautionary move and those left untreated. You really have to think about the future, way back in the spring.



Willamette Valley Blueberry Harvest 8/1/13



Willamette Valley, Oregon and SW Washington

- **Blackberries** (Monday, 8/5) Basically done with the mid-season blacks. Evergreens will start Thursday night, eleven days ahead of last year. They look good so far, keeping the SWD control programs in full force. Nobody I am aware of did as well this year as last year on Marion yields. That said, was not a disaster by any means. Last year yields were exceptional. Bottom line is I think yields this year were average to slightly below. There were more acres harvested so overall crop size is difficult to estimate.



Willamette Valley Evergreen blackberries 8/5/13. Photos by Bill Dinger.

Blueberries (Monday, 8/5) Continuing with our dry, warm weather. It'll be around 90 today and tomorrow before cooling of about 8-10 degrees for the rest of the week. Fungal diseases like alternaria and anthracnose are at very low levels. Just a little being found in some of the fruit being left to hang to long. Quantity and quality of both machine harvested processed fruit and handpicked fresh market are very good. Some heat effects like shriveled and/or soft fruit are the most common problems. No more Dukes or Drapers but a lot of second & third pick Legacy and Liberty along with first pick Elliotts and Aurora. With the continuing warm weather this season, it is going to end a lot sooner than the previous couple of years. Crop is definitely going to be up significantly over last year.

Blueberry development—Western Willamette Valley

Notes:

- This will be the last week since we're now harvesting Auroras and Elliotts, our late season varieties.
- Aurora has an unusual look to its ripening pattern in many of the clusters as illustrated below. The left hand Aurora photo also shows some shriveled fruit in the center from our hot weather.
- [Click here](#) for MSU's growth stage table.

8-2-13—Week 31 (Below)

Elliott

Harvesting



Aurora

Harvesting



7-26-13—Week 30 (Below)

Liberty

Harvesting



Legacy

Harvesting



Elliott

25% blue



Aurora

5% blue



Aurora

Back of same cluster



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WSU small fruit plant physiologist candidate seminars

From Pat Moore, WSU small fruit breeder & chair of search committee: "We have set the schedule for the interviews for the Small Fruit Plant Physiologist faculty position at WSU Mt Vernon. Each of the candidates will give a seminar beginning at 9 am at the WSU Mt Vernon Auditorium followed by a question and answer session."

- **August 9** -- Sahap Kaan Kurtural, "Overview of Small Fruit Research and Extension Programs"
- **August 13** -- Kendra M. Blaker, "Fruit texture research in SHB and some ideas for advancing small fruit production practices in northwest Washington,"
- **August 20** -- Lisa Wasco DeVetter, "Thinking BIG About Small Fruit Horticulture: Past Experiences and Future Research Opportunities,"

Contact Pat Moore for more information at: moorepp@wsu.edu; 253-445-4525.

Grower resources

Leaf/tissue analysis and soil testing

Post harvest is the best time to do most soil and leaf testing for nutrient management planning. Nutrient levels are at their lowest and you can get the best information on what nutrients the recent crop might have had too much or too little of.

- **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 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.

Miticides for raspberries and blackberries (originally posted 7-25-12)

From Joe DeFrancesco, OSU small fruit pesticide specialist: "With so many registered miticides for caneberries, I put together a product chart with pertinent information to help growers decide which one to use." [Click here](#) for Joe's caneberry miticide chart.

Resources for identifying diseases and insects

- **British Columbia:** [Instructions on how to submit blueberry tissue to the BC Ministry of Agriculture Plant Diagnostic lab for insect or disease testing.](#)
- **For submitting samples to the Oregon State Plant Clinic** [click here](#).

Maximum Residue Levels (MRL's) for exported berries

The following lists cover MRLs for the US, Canada, Japan, Korea and Taiwan.

- [Blueberries](#) (Updated March 11, 2013)
- [Caneberries](#) (Updated March 11, 2013)
- [Strawberries](#) (Updated February 15, 2013)

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Spotted Wing Drosophila resources for 7-30-13 Week 32

Regional grower warning—Continued high risk of economic crop damage to berry crops in Oregon, Washington and British Columbia

The risk of economic damage from this insect is higher than in any of the previous three seasons we have dealt with it.

Alert for Oregon and SW Washington

Larvae have been recovered from some commercial blueberry, raspberry and blackberry fields in the Northwest. It is strongly recommended that all caneberry and blueberry growers with ripe or ripening fruit immediately implement and maintain through the end of harvest a regular 7 day insecticide application regime for SWD management.

WSU Extension alert for NW Washington

[Click here](#) for the alert

“SWD larvae have been recovered in red raspberries in Whatcom County and growers should make sure their berries are protected through harvest with 6-7 day applications of effective insecticides. Depending on target markets and stage of ripeness, growers should select among the list of insecticides registered for caneberries in Washington. [Click here](#) for the list. For further information, contact [Lynell Tanigoshi](#), WSU Small Fruit Entomologist. “

BC Blueberry IPM Newsletter for 7/26/13

[Click here](#) for the full newsletter

“The risk of SWD damage to ripe blueberries remains very high. SWD larvae were found inside ripe blueberries in most regions of the Fraser Valley this week. Trap catches of adult flies remain high....All ripe and ripening varieties should be protected with insecticide sprays at this time.”

SWD information websites

[Peerbolt Crop Management](#)

[Oregon State Univ.](#)

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

[WSU Westside](#)

[WSU Eastside](#)

[WSU Extension SWD degree day model for Whatcom and Skagit Counties](#)

SWD management material resources

Oregon and Washington

- **Blueberries:** [SWD pesticide options and information](#) updated 4/15/13
- **Raspberries and blackberries:** [SWD pesticide options and information](#) updated 4/15/13
- **Strawberries:** [SWD pesticide options and information](#) updated 4/15/13

British Columbia

- [Spotted Wing Drosophila \(SWD\) management in B.C. berry crops](#) updated 7/3/12

Monitoring berries for SWD larvae

For scouts/field checking ([We have created a video of this larvae-checking method.](#)):

1. Collect a sample of fruit to be tested (caneberries/blueberries: 50 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), hold 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:

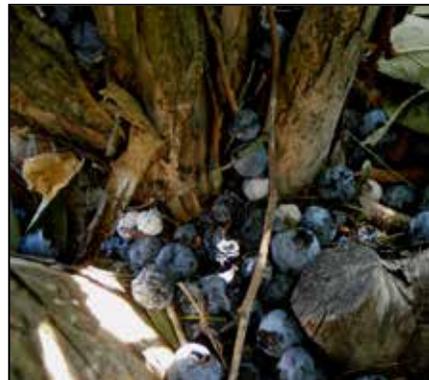
1. Collect a two pound sample of fruit to be tested.
2. Put the sample into a shallow tray and cover with the salt water solution (1 cup of salt per gallon of water).
3. After a designated period of time (at least 15 minutes), use a piece of wire mesh screen to hold the fruit down to make it easier to separate the larvae from the fruit.

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Pest management activities

Scout for: [Mummyberry](#), blueberries. [Mummyberry primer from MSU](#).

- During harvest evaluate the level of mummyberry infections and the areas of the field that are infected.
- Infected fruit is now easy to distinguish from healthy fruit.
- The infected fruit colors earlier, shrivels, whitens and drops from the bushes easily when disturbed.
- The inside of an infected berry will be filled with white fungal mycelium.
- Sort out and remove from field as much of the infected fruit as possible.
- Use this yearly mummyberry information to assess and plan next year's Mummyberry prevention program.



Right now is an excellent time to scout for the mummyberry, especially if you've got weed mat.

Scout for and treat as needed: [Yellow rust](#), raspberries.

Scout for: [Aphids](#), blueberries.

- The action threshold for aphids in blueberries is very low in any area where [Scorch virus](#) is a concern.
- Aphids spread Scorch Virus and killing the aphids is the most effective way to prevent new infections.
- In areas where Scorch Virus is not a concern, the potential economic damage from aphids is much less and larger populations can be tolerated before management actions are taken.
- With Scorch Virus, infected bushes **do not** return to productivity and should be removed ASAP to limit the disease spread.

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Additional, ongoing pest information

Diseases

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

Insects/Mites

- [Azalea Bark Scale](#), blueberries.
- [Raspberry Beetle](#), northern raspberries.
- Root Weevils, strawberries and blueberries. [Black Vine](#), [Rough Strawberry](#), [Strawberry Root Weevils](#).
- [Blueberry Gall Midge](#), blueberries.
- Mites in raspberries: [Twospotted mites](#) and [Yellow mites](#).
- [Strawberry Crown Moth](#) southern strawberries

Industry news/resources

Newsletters/ Berry reports

- [BC Blueberry IPM Newsletter](#) (8/2) Weekly by Carolyn Teasdale, [ES Cropconsult](#). Sponsored by the BC Blueberry Council.
- [New Jersey Blueberry Bulletin](#) (7/29) Weekly newsletter by Gary Pavlis, Rutgers blueberry agent.
- [Michigan State Extension Blueberry News](#) (8/5)
- [The Source](#) (8/5) Marketing report from The Produce News.
- [National Berry Report](#) Daily fresh market berry reports. Hosted by the California Strawberry Commission, this report is generated from data from the USDA Agricultural Marketing Service and is updated daily.

Magazine compilations

- The Packer: [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](#) by Mark Bolda, UC Davis Berry Extension Agent. **Recent entry: 8/2—Verticillium Wilt in strawberries: California 2013 report** Reports on recent insect and disease research and observations in California.
- [Team Rubus](#) by Gina Fernandez, North Carolina State Small Fruit Specialist. **Recent entry: 7/19—Von blackberry variety holding up in wet weather** Reports on issues in blackberries and raspberries from the Southeast.
- [NC Small Fruit IPM](#) by Hannah Burrack, North Carolina Extension Entomologist. **Recent Entry: 7/24—End of harvest concerns in blueberries** Reports on recent insect research and observations in North Carolina.

Politics & Ag

- [House refuses to appoint conferees on farm bill](#) (8/6, The Dickinson Press)
- [Farm bill negotiations to continue into September as expiration looms](#) (8/4, Roll Call)
- [Congress leaves with big problems unsolved](#) (8/2, Politico)
- [Immigration groups target House GOP](#) (7/31, Politico)

Food Safety

- [Importers transformed into food safety “detectives” under FSMA](#) (8/1, Food Chemical News)

North America

- Minnesota: [New fruit fly threatens Minnesota berries](#) (8/5, Fresh Plaza)
- Nova Scotia: [Strawberry damage from new virus is extensive](#) (8/2, Fresh Plaza)

International

- Australia: [Coast's blueberry shift](#) (8/5, Fresh Plaza)

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Crop Work Week 32

All crops

- ***As fruit starts coloring, begin sampling fruit for SWD infestation, continue sampling throughout harvest and treat as needed.***
- Weed management.
- Fertility management.
- Water management.

Blueberries

- ***As fruit starts coloring, begin sampling fruit for SWD infestation, continue sampling throughout harvest and treat as needed.***
- ***Harvest ongoing.***
- Bird management.
- Scout for [mummyberry](#) infected fruit.
- Stay on top of aphid management where scorch virus transmission is an issue.
- Scout for [leafroller larvae](#) and treat as needed.
- Scout for virus symptoms and send in samples for testing as needed ([Shock virus](#); [Scorch virus](#)).
- Scout for [winter moth/bruce spanworm](#) larvae.
- Scout for scale insects.
- Scout for weevil notching on leaves and for adult weevils.
- Scout for azalea bark scale in southern fields.
- Scout for blueberry gall midge damage.
- Can use pheromone traps to monitor for leafrollers.
- Scout for berry symptoms like green fruit botrytis, hail damage, mummyberry, etc.
- Can apply clean up insecticide just before harvest for crop contaminant management.
- Scout for berry symptoms like green fruit botrytis, hail damage, Mummyberry, etc.

Raspberries

- ***Sample fruit for SWD infestation, continue sampling throughout harvest and treat as needed.***
- ***Harvest ongoing in north. Finishing in South.***
- Scout for yellow rust and assess treatment options.
- Scout for yellow mites and [twospotted mites](#).
- Scout for virus symptoms and send in samples for testing as needed.
- Can have pheromone traps out to monitor for leafrollers.
- Scout for Cane Blight and Cane Botrytis symptoms.
- Watch for fruit molds and treat as needed.
- Scout for weevils and treat as needed.
- (North) Scout for raspberry beetle feeding symptoms.
- Scout for fruit mold and treat as needed.
- Scout for yellow rust and assess treatment options.
- Scout for aphids and treat as needed.
- Scout for leafroller larvae.

Blackberries

- ***As fruit starts coloring, begin sampling fruit for SWD infestation, continue sampling throughout harvest and treat as needed.***
- ***Harvest ongoing.***
- Scout for leafroller larvae and treat as needed to prevent fruit contaminant problems.
- Can have pheromone traps out to monitor for leafrollers.
- Can apply fungicides for fruit/blossom rot from 10% bloom through the end of bloom.

- Scout for virus symptoms and send in samples for testing as needed.
- Scout for Cane and Leaf Rust.
- Watch for fruit molds and treat as needed.
- Scout for and treat as needed blackberry rust in Evergreen blackberries.
- Scout for two spotted spider mites and treat as needed in susceptible cultivars.
- Can apply horticultural oil for Redberry mite management at green fruit stage in susceptible cultivars.

Strawberries

- ***Processed harvest finished throughout region. Fresh market harvest ongoing.***

All strawberries

- Evaluate weak growing areas and check plants for weevil larvae, root rot and/or cold damage.
- Scout for weevil adults and notching.

Processed market June-bearers—finished harvesting

- *After harvest, can treat for SWD control if field is adjacent to other susceptible, ripening, crops.*
- [Weed control at strawberry renovation](#) (6/26/12, Michigan State Extension)
- Treat post harvest for SWD if needed especially if field is in close proximity to other ripening berry/stone fruit crops.
- Mow and treat immediately for SCM if needed.
- Mow and renovate 2-4 weeks after harvest unless pest pressure require mowing and treating sooner.

Fresh market-still harvesting

- Scout for Lygus bugs.
- Scout for fruit damage symptoms like cat facing, slug damage, anthracnose, etc.
- Monitor ripe and ripening fruit for SWD larvae.
- 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, lady beetles, aphid mummies (parasitized aphids), and other beneficial insects that feed on aphids.
- Scout for fruit quality issues such as mold and cat facing.

Archived Small Fruit Updates

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

[SFU07-30-13](#) [SFU07-23-13](#) [SFU07-16-13](#)

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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