

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.

July 23, 2013

Week 30

Table of Contents

- [Regional crop information](#)
- [Grower resources](#)
- [SWD resources](#)
- [Pest management activities](#)
- [Ongoing pest information](#)
- [Industry news](#)
- [Crop work](#)

[Monster crop pushes blueberry prices down](#) (7/17, Oregon Public Broadcasting) Audio and article about the Northwest crop featuring Alan Schreiber (Washington Blueberry Comm.) and Suzanne Wolter (Rainier Fruit).

[Rural Migration News](#) (July issue) "Rural Migration News summarizes and analyzes the most important migration-related issues affecting immigrant farm workers in California and the United States during the preceding quarter. Topics are grouped by category: Rural America, Farm Workers, Immigration, Other, and Resources."

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

[Small Fruit Cold Storage Report](#)

Stay the course with SWD management.

- Weather has been ideal for SWD development. Trap and fruit sampling procedures as well as processor and grower reports confirm the continued, expected build up.
- This past week we have found the occasional field where low numbers of larvae have been recovered in fruit samples even though the grower has been on a seven day treatment schedule. Monitor fruit closely and re-treat as needed quickly.
- As caneberry fields and early season blueberry fields finish harvest, they pose an additional threat to any adjacent field still in harvest. Post harvest treatments are recommended. This is also an opportunity for resistance management in that you aren't limited to low PHI and/or MRL restricted insecticides.
- Himalayan blackberries are now ripening in the Willamette Valley. This is a primary host of the pest. Take whatever steps you can to lower the risk that Himalayan blackberries pose to your crop.

Tom Peerbolt, SFU Editor

[Click here to jump to the SWD resource section](#)

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 (Saturday, 7/20)

- **Blueberries:** Lots of machine picking in the blues this week - a heavy week for Dukes. Still some to go in early next week. Bluecrop hand picking but not machining yet, but close. Draper will pick early next week and crop looks decent. Dukes have generally been down, as I noted before, and substantially (30-50%) down in a number of fields. Liberty starting to show blue fruit in most fields which is very early. Starting SWD sprays here now. Fortunately, Elliot is not colouring yet but I keep waiting for it (I'm purposely staying out of the Elliots). Prices are causing a lot of groans but the concentrated early season here combined with big crops elsewhere with the same timing is the perfect storm we've been anticipating
- **Raspberries:** Raspberries continue to pick decently. The end is in sight with about 7-10 days left. Volumes will be off but some fields have managed to deliver respectable yields. But even these fields will be less than previous year bests. Prices and the demand for product have raised grower expectations and spirits for this crop in the face of - well, in the face of all they face, no explanations required! Got to watch out for two spotted spider mites. There are some population buildups out there I've been seeing- especially where no pre-harvest controls were used. Yellow rust also making a return engagement.

Northern Washington, Whatcom County (Saturday, 7/20)

- **Blueberries:** Heavy Duke pickings with many fields not much for a follow up pick. Bluecrop is coming on, Draper ready by mid to end of next week. No Elliott's turning much here either. Soft fresh price giving many a reason to hold off and plan on machine picking for process. SWD spraying continues by ground and air here in Whatcom. Very interesting season.
- **Raspberries:** Raspberries have been going great. A great finish to a year that looked like another wreck when it started. They're going end (not slow down so much as come to a halt) by mid week next.

Willamette Valley, Oregon and SW Washington

- **Blackberries** (Tuesday, 7/23) Still some Mid season blacks coming in with some decent fruit for this late. We're still getting maybe 30% IQF out of the Marions. Black Diamond is going to harvest longer than the others with some very good looking stuff. The total crop tonnage will probably be down a little from last year's. We lost quite a bit of overall fruit weight from that heat wave at the beginning of harvest but then we've got new acreage coming on to offset some of that loss. As stated last week, there's a big difference in SWD depending on the grower's treatment program. Those on a regular 7 day spray schedule had basically no problems. Growers who didn't do that, had huge problems with load rejections on the dock. Evergreens have some black fruit and will start during the first week of August.



Evergreen Blackberries July 23, 2013

Photo by Bill Dinger

- **Blueberries** (Tuesday, 7/23) A lot of very good fruit is being picked both fresh and processed. Last of the Dukes, second pick Drapers, some Bluecrop, first pick Legacy and Liberty are all being handpicked for fresh. Machines are going strong on Bluecrop, Bluejay, etc. No major SWD problems in the commercial fields we're seeing so far but almost all the fruit we see is being treated on a good schedule. Trap counts in the border areas around the fields are way up so they're not far from the fruit!

Blueberry development—Western Willamette Valley

Notes:

- *What I've been doing each week is taking four examples from each field and then using what seemed to be the most representative of overall development for illustrating below.*
- *As we're into harvest, I'm switching things around, dropping fields after the first harvest.*
- *For week 30 below, the Bluejay and Legacy field were being harvested when photos were taken. Examples are from the unharvested part of fields.*
- *The Jersey field photo is not representative of overall fruit clusters. It's one of the larger ones included to illustrate the variations between cultivars (& because I had room for it).*
- [Click here](#) *for MSU's growth stage table.*
- *Dropped in previous weeks: Duke, Draper, Patriot and Legacy. This is the last week for Bluejay and Liberty. All of these are now either in or done with harvest.*

7-12-13—Week 28 (Bottom)

7-19-13—Week 29 (Top)

Bluejay
75% blue

Liberty
25% blue

Jersey
35% blue

Elliott
15% blue

Aurora
fruit coloring



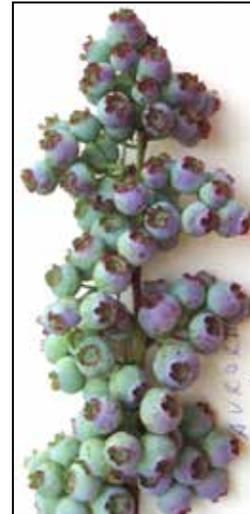
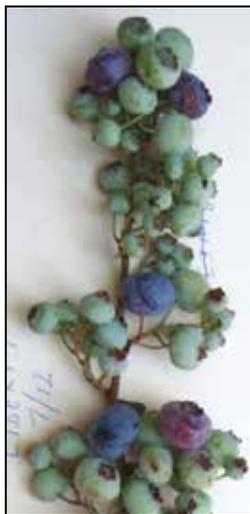
Bluejay
60% blue

Liberty
10% blue

Legacy
10% blue

Elliott
10% blue

Aurora
fruit coloring



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

Grower resources

- **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)

Recent change

- Taiwan now has a Delegate (Spinetoram) tolerance in blueberries of 0.2 ppm. The table has no tolerance listed.

Spotted Wing Drosophila resources for 7-23-13 Week 30

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 and earlier 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 7/19/13

[Click here](#) for the full newsletter

“The risk of SWD damage to early season blueberry varieties is now very high. SWD larvae were found inside ripe blueberries in many regions of the Fraser Valley this week. Trap catches have increased significantly in nearly all regions of the Fraser Valley over the past week, even in fields that have been sprayed with insecticides at 7-10 day intervals.”

From previous newsletter:

“SWD populations are larger than in previous years for this time of year. Larvae have already been found in Fraser Valley raspberries. Trap catches of adult SWD flies have increased in many regions of the Fraser Valley over the past week...All ripening varieties should be protected with insecticide sprays before the first pick.”

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.

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

Pest management activities

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.

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

- Infected fruit is now becoming easy to distinguish from healthy fruit in some Oregon fields.
- The infected fruit colors earlier, shrivels, whitens and drops from the bushes easily when disturbed.
- Right now this fruit could be mistaken for green berry botrytis infected fruit.
- 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.
- During harvest evaluate the level of Mummyberry infections and the areas of the field that are infected.
- Use this yearly Mummyberry information to assess and plan next year's Mummyberry prevention program.

Scout for and evaluate if management action is needed: [Twospotted mites](#), raspberries.

Scout for and determine if management actions are needed: Root Weevil adults, all crops [Black Vine](#), [Rough Strawberry](#), [Strawberry Root Weevils](#).

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

- Infected fruit is now becoming easy to distinguish from healthy fruit.
- The infected fruit colors earlier, shrivels, whitens and drops from the bushes easily when disturbed.
- Right now this fruit could be mistaken for green berry botrytis infected fruit.
- 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.
- During harvest evaluate the level of Mummyberry infections and the areas of the field that are infected.
- Use this yearly Mummyberry information to assess and plan next year's Mummyberry prevention program.

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

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](#) (7/19) Weekly by Carolyn Teasdale, [ES Cropconsult](#). Sponsored by the BC Blueberry Council.
- [New Jersey Blueberry Bulletin](#) (7/15) Weekly newsletter by Gary Pavlis, Rutgers blueberry agent.
- [Michigan State Extension Blueberry News](#) (7/24)
- [The Source](#) (7/29) 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: 7/19—Data driven decision making: Finding success in plant diagnostics and stock speculation** 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.

Technology

- [Trimble offers new options for rugged handheld computer](#) (7/17, The Grower)

- [Drones and pesticide spraying a promising partnership](#) (7/22, Western Farm Press)
- [Robots to revolutionize farming, ease labor woes](#) (7/14, Bloomberg Business Week)

Labor/Immigration

- [Farm workers at Skagit County farm return to work](#) (7/18, Capital Press)
- [Skagit farmworkers go back on strike over wages](#) (7/23, Capital Press)

Politics & Ag

- [Immigration faces critical weeks](#) (7/22, Politico)
- [Obama: Immigration debate will slip into fall](#) (7/17, Capital Press)
- [What happens next for food stamps and the farm bill?](#) (7/22, The Seattle Times)

Food Safety

- Russia: [Norovirus found in frozen raspberries](#) (7/17, Fresh Plaza)
- [Pew: Frozen berry hepatitis A outbreak underscores need for Food Safety Modernization Act](#) (7/22, Food Safety News)
- [Last big Cyclospora outbreak was traced to Guatemalan raspberries](#) (7/19, Food Safety News)

Marketing

- [Chefs in training tour Well-Pict berries](#) (7/21, The Packer) *Video & article*

North America

- Georgia: [Peach State turns to blueberries](#) (7/22, Fresh Plaza)
- [Michigan blueberry harvest kicks off](#) (7/23, The Packer)

International

- Europe: [Blueberry harvest almost a month later](#) (7/17, Fresh Plaza)

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

Crop Work Week 30

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.](#))

[SFU07-16-13](#) [SFU07-09-13](#) [SFU07-02-13](#)

This document is a guide and not intended as a recommendation or endorsement.
Consult with your supplier, field representative, or pest consultant.

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