

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, 2014

Week 32

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- [Big blueberry production out of Washington this year](#) (8/4, Fresh Plaza)
- [DOL's 'hot goods' tactics leave reps cold](#) (7/30, Capital Press)
- [Tests prove kochia weeds are glyphosate resistant](#) (8/4, Capital Press)

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



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](#)

It's great that we've seen very few problems with spotted wing drosophila this year but as we get into the latter part of the season populations are building. If you've got product still in the field, stay with the management programs that have worked for us in the past. Not a time for taking chances.

Tom Peerbolt, SFU Editor

Regional reports

British Columbia, Fraser Valley

- **Blueberries:** (Tuesday, 8/5) Really hot here the last couple days at 31-34C (88-93F). Some fruit softness issues in Bluecrop and any overripe fruit. Liberty began first pick a couple of days ago. Looks like Elliot will be early again this season with the current weather systems bringing everything on quickly.
- **Raspberries:** (Tuesday, 8/5) Process raspberries are just finished on the weekend. Generally, a decent crop with good sustained quality through the pick. Yield expectations were a bit reduced due to the heat impact on fruit size. But the late harvest rain did make a difference; it just would have had more impact if it had been a week earlier.

Northern Washington, Whatcom County

- **Blueberries, processed:** (Tuesday, 8/5) Duke and Bluecrop are coming in heavy right now. Given the great pollination we had this year it looks like we've got more fruit set per cluster with a little smaller fruit size than last year but overall yield potential is very good as is quality. Just takes a long time to get across a field with a machine when there's this heavy a fruit set.
- **Blueberries, fresh:** (Tuesday, 8/5) Heat has taken toll on 2nd Duke pick and again this year, virtually no Bluecrop made fresh. Most packers are swamped with fruit. Liberty is further behind here, and won't start until this weekend or next week. Labor continues to be an issue.
- **Raspberries:** (Tuesday, 8/5) The inch and a half of rain a couple of weeks ago really gave some of these fields a second life especially Wakefield which has a longer harvest season. Overall yields will be higher than first estimated due to it. It's great for the growers. Might want to get your soil and leaf sampling done before the canes start dropping right after harvest and make it tough to get into the fields.

Western Oregon, Willamette Valley

- **Blueberries, fresh:** (Tuesday, 8/5) Berry quality has suffered because of the heat this week. Sure nice to have it start cooling down a little especially at night. Gives the plants a chance to recharge. We're into first pick Aurora and 2nd pick Elliots. 3rd pick Liberty and Legacy. We hope for a 4th hand pick on some of these but given fruit quality, pricing and labor tightening some will be getting machine harvested for processed. Volumes are going down, labor is leaving and...the price is going up some.
- **Blueberries, processed:** (Tuesday, 8/5) Other than one Jersey field that's starting today, all the fields we receive fruit from have been picked at least once including all the Elliots. Fruit size is down from last year and probably yields a little also although there's a lot of good fruit coming through. Just a few SWD picked up nothing near economic for processed fruit.
- **Blackberries, processed:** (Tuesday, 8/5) This week we've got a very few Marions still coming in along with a few Black Pearl and some Waldo's. That should wrap up the mid season varieties. Evergreens should start this Thursday or Friday. Evergreen quality and yields look excellent. It's forecast to be just about perfect harvest weather for them—high's in the 80's, sunny and dry. SWD hasn't been an issue but we are starting to pick up more. The Evergreen guys know they're the most at risk to SWD damage being as late as they are and will be sticking to a tight spray regime.
- **Blackberries, fresh:** (Tuesday, 8/5) Chester's are coming in right now with good quality and yields. Just a little sunburn damage.

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 of, or too little.

- **Blueberries:** [OSU's Blueberry Nutrient \(and testing\) Guidelines](#) (2006)
- **Blackberries and Raspberries:** [OSU's Caneberry Nutrient \(and testing\) Guidelines](#) (2006)
- **Supplement to the guidelines linked above:** [Nutrient Management of Berry Crops in Oregon](#) (2013) from OSU Extension Berry Crops Specialist, Dr. Bernadine Strik
- **Video:** [Caneberry Nutrient Management](#) (37 minutes)
Dr. Bernadine Strik, 3/20/14, Raspberry & Blackberry Production Workshop, Woodburn, OR.

Blueberry fruit development over the past week & compared to 2013

Notes:

- The same fields are being sampled each week are in the Forest Grove/Hillsboro area.
- This is an indication of stage of development only. Keep in mind that variations due to the subjective nature of the protocols are part of the process.

Northwestern Willamette Valley

Top – 8/1/14 Middle – 7/25/14 Bottom – 8/2/13

Elliott

Aurora

This Aurora field will start picking in week 32 in 2014

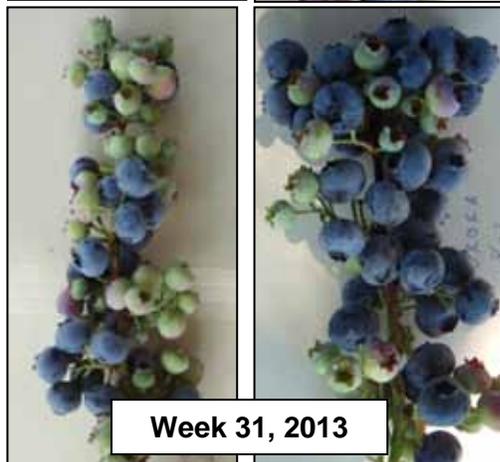
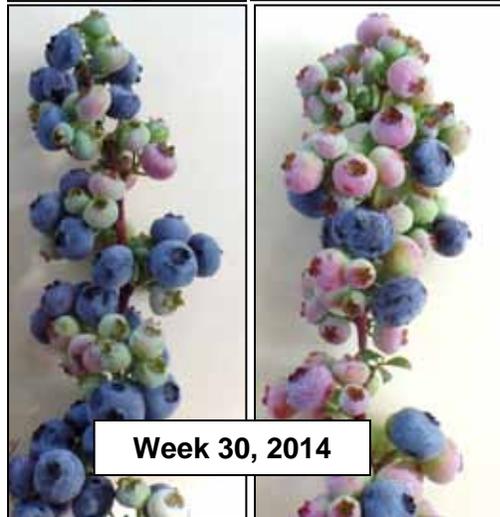
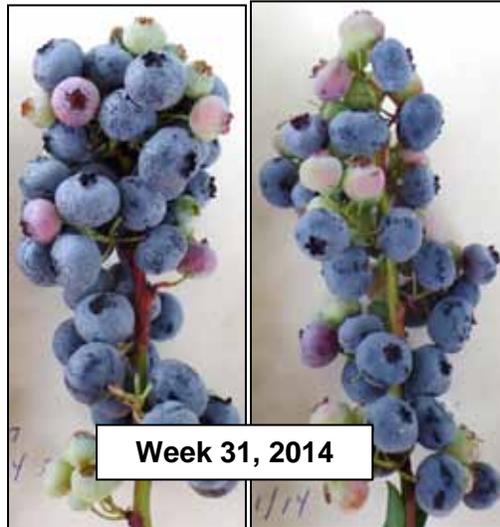
This Elliott field started picking in week 31 in 2014

A few Aurora fields started picking in week 31 in 2014

Many Elliott fields started picking in week 30 in 2014

This Aurora field started picking in week 31 in 2013

This Elliott field started picking in week 30 in 2013



Elliott

Aurora

SWD report for week 32

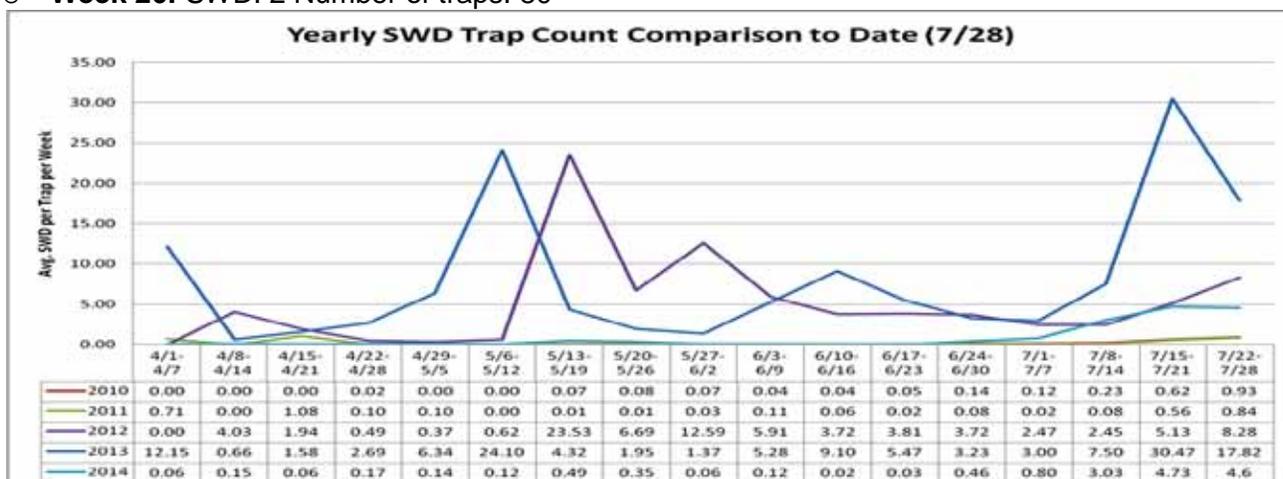
Willamette Valley public scouting program trap count comparisons

Season to date, 2010-2014

Note: This chart is an indicator of SWD population levels as compared from year to year but is just an indicator. We have changed some fields, some trap locations, and some trap baits and types as well as other factors that influence trap catches over the last five years as we learn and adapt. This is a dynamic, developing process—our ability to monitor and forecast this pest and the risks it poses has improved each year. Keep that in mind when interpreting this information.

Comments

- *When fruit starts coloring, it's recommended to take fruit samples to check for larvae along with checking the adult traps.*
- The chart and numbers below are the same as last week. We'll have updated numbers next week. Our scout supervisor who keeps track of all that, Jason Myer, is on his honeymoon this week.
- The overall number of SWD larvae being recovered from both caneberry and blueberry samples increased this week but still remain much below last year's levels.
- We regularly sample wild blackberries on field borders to monitor SWD pressure. This week some of those border samples registered levels of over 20 larvae per 50 berry sample.
- Counts from adult traps over the last six weeks (we'll update this chart next week):
 - **Week 31:** SWD: 299 Number of traps: 65
 - **Week 30:** SWD: 317 Number of traps: 67
 - **Week 29:** SWD: 200 Number of traps: 66/ First larvae recovered from commercial blueberry fields.
 - **Week 28:** SWD: 63 Number of traps: 79/ First larvae recovered from commercial caneberry fields.
 - **Week 27:** SWD: 37 Number of traps: 79
 - **Week 26:** SWD: 2 Number of traps: 80



Monitoring berries for SWD larvae in the field

[We have created a video of the larvae-checking method.](#) It's from 2010 but still pretty good.

- Put a sample of fruit to be tested (Caneberries/blueberries ~50 per sample) in a gallon size sealable plastic bag.
- Pour in enough salt water solution to allow the fruit to float (solution is: 1 cup of salt per gallon of water). Mark bag with field code/date. Gently crush/break open fruit.
- 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.
- 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.

Maximum Residue Levels (MRLs) for Most Common Export Markets (last updated 5/9/14)

[Blueberries](#)

[Caneberries](#)

[Strawberries](#)

SWD Management Material Resources

Oregon and Washington (last updated 2/24/14)

- **Blueberries:** [SWD pesticide options and information](#)
- **Raspberries and blackberries:** [SWD pesticide options and information](#)
- **Strawberries:** [SWD pesticide options and information](#)

British Columbia

- [Spotted Wing Drosophila \(SWD\) Management in B.C. Berry Crops](#) last updated 6/24/14.



Industry news/resources

Newsletters/ berry reports

- [BC Blueberry IPM Newsletter](#) (8/3) Weekly by [ES Cropconsult](#). Sponsored by the BC Blueberry Council.
- [Whatcom Ag Monthly](#) Produced by WSU Whatcom County Extension. Includes excellent berry crop information.
- [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.
- [Weekly Market Report](#) (8/4) from General Produce Company
- [The Source](#) (8/4) Market reports from The Produce News.

Magazine/website 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](#).
- **Fresh Fruit Portal:** [blueberries](#), [blackberries](#), [raspberries](#), [strawberries](#).
Recent stories for the various berries from Fresh Fruit Portal.

Berry research blogs

- [Strawberries and Caneberries](#) by Mark Bolda, UC Davis Berry Extension Agent. **Recent Entry (7/28):** **Management tips for spotted wing drosophila on a small scale** Reports on recent insect and disease research and observations in California.
- [Team Rubus](#) by Gina Fernandez, North Carolina State Small Fruit Specialist. **Recent Entry (7/24):** **Summer tissue sampling for fertility recommendations** Reports on issues in blackberries and raspberries from the Southeast.

Technology

- [Don't let drones fly by](#) (7/28, Good Fruit Grower) Using drones in vineyards & orchards.

Food Safety

- [Study bolsters Dow safety system for processors](#) (8/4, The Packer)

Research/Breeding

- [UC Davis and the Strawberry Commission wrestle over strawberry breeding program's future](#) (7/29, Santa Maria Sun)

Pest Management

- [Pheromone works to help catch stink bugs](#) (7/30, Delaware online)

Labor/immigration

- [H-2A visa processing halted for pickers](#) (7/30, Capital Press)

Markets

- [Expect promotable volumes of Labor Day favorites](#) (7/31, The Packer)

Commissions/Councils

- [USHBC website gets makeover](#) (8/1, The Packer)

North America

- Eastern Canada: [Blueberry growers feel squeezed after Nova Scotia company gets land](#) (8/2, CBC News)
- Iowa: [Farm invests in antioxidant-rich aronia berry](#) (8/5, Fresh Plaza)

International

- Chile: [Chile steps up Grapevine moth control regulations](#) (7/31, FFP)



Event calendar

- **August 14 — Smart Sprayer Demonstration** ~ 10 am at Hans Nelson and Sons Nursery, 31020 SE Waybill Road, Boring OR. [Click here](#) for more information.
- **August 21 — Willamette Valley Berry Fieldman/Grower meeting** ~ 8 am at [North Willamette Research and Extension Center](#) We'll be having an update on blueberry and blackberry markets. Call or [email](#) Peerbolt Crop Management for more information.
- **August 20 & 21 — North American Strawberry Growers Association** ~ Summer tour, in BC. [Click here](#) for the NASGA website.
- **September 10 — Washington Red Raspberry Commission** ~ Board meeting in Lynden. [Contact Henry Bierlink](#) for more information.
- **September 18 — Oregon Raspberry and Blackberry Commission** ~ At Langdon Farms Golf Club. Call 541-758-4043 or [email Phillip Gutt](#) for more information.
- **September 23 — Oregon Blueberry Commission** ~ 12 pm, at Chemeketa Events at Winema, Building 48, Room 210. Contact Bryan Ostlund for more information at 503-364-2944 or [by email](#).
- **September 24 — Oregon Strawberry Commission** ~ At Langdon Farms Golf Club. Call 541-758-4043 or [email Phillip Gutt](#) for more information.
- **October 1 — North American Blueberry Council (NABC) 2014 Fall Meeting.** Rosemont, Illinois, Hyatt Rosemont Hotel. The USHBC will hold meetings at the same hotel on Oct 1-3. [Click here](#) for the registration form and more information. [Click here](#) for the tentative schedule.
- **October 29 — Washington Red Raspberry Commission** ~ Board meeting in Lynden. [Contact Henry Bierlink](#) for more information.
- **November 11 — Oregon Blueberry Commission** ~ 12 pm, at Chemeketa Events at Winema, Building 48, Room 210. Contact Bryan Ostlund for more information at 503-364-2944 or [by email](#).

- **November 16 — 19 Entomological Society of America Annual Meeting** at the Oregon Convention Center, downtown Portland. [Click here](#) for more information and to register.
- **November 19 — Oregon Strawberry Commission workshop** "Fresh market strawberries: What it takes to be successful." 8am-7pm, lunch and dinner provided. Admittance is free. Woodburn, OR. More details to follow. Contact Lora Liegel by phone (503-289-7287) or [email](#) for more info.

Week 32--- Pest management & field work

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.

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](#).

Additional, ongoing pest information

Diseases

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

Insects/Mites

- [Azalea Bark Scale](#), blueberries.
- [Raspberry Beetle](#), northern raspberries.
- [Blueberry Gall Midge](#), blueberries.
- [Strawberry Crown Moth](#) southern strawberries and caneberrries

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.
- Fertility soil and leaf sampling—After harvest
- Water management.

Blueberries

- ***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

- **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.

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**
- [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.](#))

[31-SFU07-30-14](#) [30-SFU07-23-14](#) [29-SFU07-16-14](#)