

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 13, 2014

Week 33

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[Oregon's Diverse Crops Bring in Millions of Dollars, Stabilize Agricultural Economy](#) (8/2, *The World*)

[California Giant's Domestic Berry Programs go Well into Fall](#) (8/8, *Produce News*)

[Behind the Greens: HBF International's California Blueberries](#) Video (6/3, *And Now You Know*)

[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](#)

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

- **Blueberries:** (Monday, 8/11) I agree with the comment (*below from Whatcom County—TP*) on the heat. Today it was around 33 C (91 F) and believe it will be warmer tomorrow. It would be nice if it was 27 -ish for workers and fruit. There is a chance of showers Wednesday/Thursday for us so hoping growers have been throwing in some fungicides with swd sprays. Numbers have been climbing but not as rapidly as expected. Duke basically wrapped up everywhere and second pick of Reka finished. Depending on location in the valley some on second pick Bluecrop and some finishing first pick by machine. Elliot is ripening but I'm thinking a week away or more depending on the weather.
- **Blueberries:** (Monday, 8/11) As in your area, heat is the overwhelming driving force in early fruit maturation. We've had some early pick of Elliot over the weekend which is extraordinary. There will be more by next weekend I'm sure. First pick Liberty will wrap up by mid-week. This has been a good quality pick with reasonable yields. The forecast appears to be a continuance of heat (with maybe a brief chance of mid-week moisture) so the endurance of pickers and fruit sizing will be challenged.

Northern Washington, Whatcom County

- **Blueberries, fresh:** (Sunday, 8/10) Heat has taken toll on quality as of late. This weekend and Monday's temps will not help. Big volume push is over, and later varieties (remember, very few acres relative to Duke here in Whatcom) are coming on with warmer temps. SWD pressure has been very low this season. Heat? Early and regular prophylactic cover sprays? Cold winter? Inability to fine mates?? Two super moons in a single season? Shifting magnetic lines? Not sure we understand all we know about this little critter. Aphids seem to be more problematic than infestations of the vaunted fruit fly. Labor for late picks looks to be scarce and expensive. Have we mentioned before we need a machine that can give us fresh quality? I vote it gets moved up the priority list for research projects

Northern Washington, Skagit County

- **Blueberries,:** (Monday, 8/11) *Editor's note: The comments below on managing mummyberry in organic blueberry production are the contributor's opinions. Some of these methods/products have been used by other growers with inconsistent or no results. Mummyberry pressure can vary greatly from season to season due to environmental factors as well as treatment effects.--TP.*
We've started organic Liberty hand harvest in Skagit Sunday. Noticeable reduction in mummyberry this season in organics. A lot of various strategies were used including: applying mulch just prior to apothecia emergence; scotching up the soil right along the sides of weed mat with a Lilliston cultivator prior to apothecia emergence. One organic grower applied hydrogen dioxide (Oxidate or Jet-Ag) every 3-4 days throughout primary and secondary infection period in spring. The first I have seen this strategy used. SWD sprays still going on weekly via helicopter or ground equipment. Fly pressure is lower this season than in the past. However, I do know of three rejections for SWD on organic fields that were not sprayed at all or not consistently. The 3 applications per crop restriction on the Entrust label for blueberries has organic growers getting creative with tank mixes. Various alternative materials tried include: Oroboost, Oxidate, Pyganic and Grandevo.
Editor's note: There's no research data that I'm aware of that shows any of these materials is effective for the control of SWD. But since our organic growers find themselves with only one proven material for SWD control (Entrust) they are often turning to materials approved for organic production but with questionable SWD control capability. We need more & better options for SWD management in organic production! -- TP

Western Oregon, Willamette Valley

- **Blackberries, processed:** (Tuesday, 8/12) We started Evergreens on August 8, same day as last year. First picks are coming off heavy, 5 to 6 thousand pounds per acre. A little sunburn otherwise really good quality. There is some freeze damage starting to show up, very low percentage but have fruit spurs drying up. Yields should be very good. On the mid-season varieties fields are being trained up and watered. Lack of labor is making it slow going, hope everybody gets done by the end of the month.



SWD report for week 33

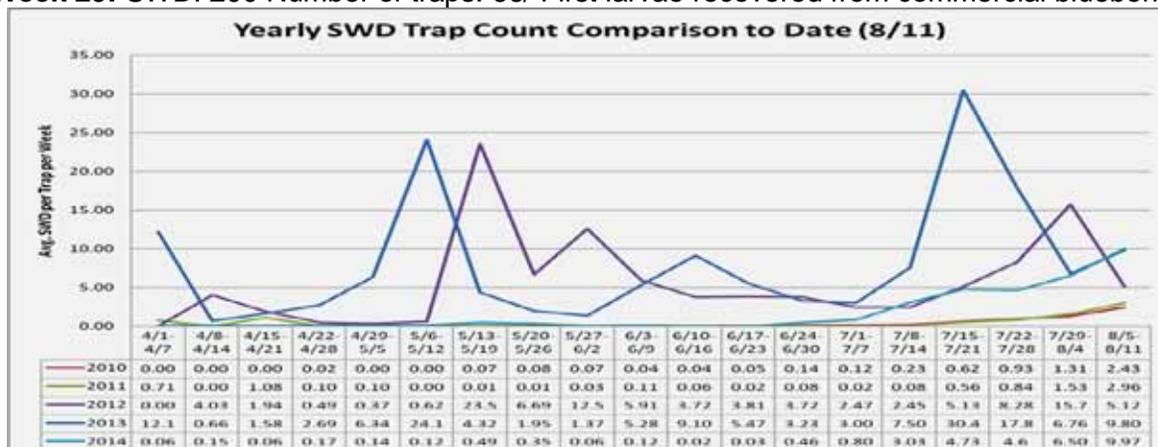
Willamette Valley public scouting program trap count comparisons

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

- *As soon as fruit starts coloring, it's recommended to take fruit samples to check for larvae along with checking the adult traps.*
- In sampling blueberries and caneberry fruits we are recovering occasional SWD larvae but the only large numbers of larvae found so far have been in Himalayan blackberries.
- The big majority of our sampling is from larger, commercial fields. U-pick, small fresh market, backyard berry plantings, etc. would likely have higher infestation rates.
- Post harvest raspberry fields as well as peach orchards we're monitoring took big jumps in trap numbers this week.
- We're also pulling traps out of many post harvest fields and putting them in fields/crops still harvesting which also skews overall trap numbers.
- The overall trend however is still going up.
- Counts from adult traps over the last six weeks (we'll update this chart next week):
 - **Week 33:** SWD: 738 Number of traps: 74
 - **Week 32:** SWD: 520 Number of traps: 80
 - **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.



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](#) (8/8) 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.
- [The Source](#) (8/11) 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 (8/8): Heat induced pollination problems in blackberry** *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.*

Climate/Water

- California: [Forecasters say El Nino too weak to end drought](#) (8/8, Capital Press)
- California: [Hotter than average summer continues](#) (8/5, Capital Press)

Technology

- [Salinas company releases high-tech blueberry packaging](#) (8/8, The Californian)

Labor/Immigration

- [Labor association resumes H-2A efforts](#) (8/6, Capital Press)

Regulatory Agencies

- [Dept. of Labor reaps bipartisan criticism](#) (8/8, Capital Press)

Marketing Research

- [Blueberry consumers prefer taste over health](#) (8/10, ANI News)

West

- California: [Strawberry production ahead of last year](#) (8/11, Fresh Plaza)
- [California Grape & Tree Fruit League changes name](#) (8/8, The Packer)
- B.C.: [Versatile blueberries take the cake as Canada aims to export 'nature's candy'](#) (8/11, Fresh Plaza)

North America

- Maine: [Above average \(wild\) blueberry yield expected for 2014 harvest](#) (8/6, Fresh Plaza)

International

- Russia: [Forget about summer blueberries or affordable pears](#) (8/11, FFP)
- Russia: [Russian produce embargo: North America in focus](#) (8/11, FFP)



Event calendar

- **August 14 — Smart Sprayer Demonstration** ~ 10 am at Hans Nelson and Sons Nursery, 31020 SE Waybill Road, Boring OR. [More information.](#)
- **August 20 & 21 — North American Strawberry Growers Association** ~ Summer tour, in BC. [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 33--- Pest management & field work

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.

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.

Yellow rust left untreated at this time of year can defoliate raspberry primocanes potentially impacting next year's yields & overwintering hardiness. The black overwintering spore stage now showing up is resistant to fungicides—if you've got a serious problem, treat ASAP.



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 caneberries

Crop Work/Pest Management Activities Week 33

All crops

- Pay attention to new plantings of all berries for weeds, water, insects, diseases, and nutrient deficiencies.
- Harvesting--Maintain SWD fruit sampling, monitoring and management plan.
- Weed management.
- Post-harvest—soil and leaf test for evaluation of nutrients.
- Post harvest—can treat for SWD management if field is adjacent to vulnerable fruit crop.
- Scout for Root Weevil adults [Black Vine](#), [Rough Strawberry](#), [Strawberry Root Weevils](#).

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

Processed harvest finished.

- Scout for virus symptoms and send in samples for testing as needed ([RBDV](#), [TRsV](#))
- Scout for [Yellow Rust](#) and assess treatment options.
- Scout for [Two-spotted Mites](#) and treat as needed (other major mite pest species: [Yellow mites](#)).
- Scout for cane collapse symptoms & determine cause ([Phytophthora Root Rot](#), Verticillium, crown borers, overwatering, etc.)

Blackberries

Late season variety harvest ongoing

- Scout for leafroller larvae ([O.T.](#), [OBLR](#)) and treat as needed to prevent fruit contaminant problems.
- Scout for virus symptoms and send in samples for testing as needed. ([RBDV](#))
- Can apply clean up insecticide just before harvest for crop contaminant management.
- Scout for and treat as needed [Blackberry rust](#) in Evergreen blackberries.
- Scout for [Twospotted Spider Mites](#) and treat as needed in susceptible cultivars.
- Can apply fungicides for [fruit/blossom rot](#) through the end of bloom.
- Scout for [Cane and Leaf Rust](#).
- Scout for [aphids](#) and treat as needed.

- Scout for cane collapse symptoms & determine cause ([Phytophthora Root Rot](#), Verticillium, crown borers, overwatering, etc.)

Strawberries

Processed harvest (June bearers) 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.
- (South) Can scout for [Strawberry Crown Moth Larvae](#) ..
- Scout for weevil adults and notching.

Processed market-June bearers—finished harvesting

- [Weed Control at strawberry renovation](#) (6/26/12, Michigan State Extension)
- Mow and treat immediately for [SCM/SWD](#) if needed.
- Mow and renovate 2-4 weeks after harvest unless pest pressure require mowing and treating sooner.
- Apply main fertilizer application as needed.

Fresh market-still harvesting

- Scout for [Lygus Bugs](#).
- Scout for fruit quality symptoms like mold ([Botrytis](#)), cat facing, [slug damage](#), anthracnose, etc.
- Can apply slug bait as needed.
- Scout for [Powdery Mildew](#) and treat as needed.
- Scout for [Twospotted Spider Mites](#) and predatory, beneficial mites.
- Scout for [aphids](#), lady beetles, aphid mummies (parasitized aphids), and other beneficial insects that feed on aphids.

Archived Small Fruit Updates

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

[32-SFU08-06-14](#) [31-SFU07-30-14](#) [30-SFU07-23-14](#)