

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 20, 2015

Week 34

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B.C. Strawberries 8/20/14

Photo by Lora Liegel

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

[B.C. Strawberry Growers Association](#)
[Raspberry Industry Development Council](#)
[B.C. Blueberry Council](#)

National

[North American Blueberry Council](#)

Regional reports

British Columbia, Fraser Valley

[Go here](#) for the B.C. Blueberry Council's Blueberry IPM Report for 8/14.

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British Columbia, Fraser Valley (Sunday 8/16)

Spotty showers here and there over past couple days and a few areas had some heavy downpours but they didn't last too long. Not really any affect on quality from this round of precipitation.

- **Blueberries:** This different weather has really changed the harvest with areas that are usually ahead of others being harvested after this year. Bluecrop still finishing up in some areas. Most people finished first harvest of Elliott and Aurora. There is still a bit of Liberty being harvested as well. SWD pressure is back up after a couple weeks of much lower trap numbers. Some of the traps were showing zero for the first time this year but all that has changed again.

British Columbia, Fraser Valley (Saturday 8/15)

From [Tom Baumann](#), Director of the Pacific Berry Resource Centre & UFV's Ag Dept. Coordinator:

Had two attempts at rain this past week, none of which amounted to anything except to split the odd fruit. Highs are not too bad, humidity was high for quite a few days so I imagine the fungal spores are doing the happy dance. Temperatures in mid 20C (around 80F), tolerable. Days getting much shorter now, in a month we will be 12 hour days instead of 16 hour days, so high temps are not on too long during the day anymore and nights cool off nicely.

- **Comments:** Still in drought conditions, do NOT turn off water yet, the rain falls were skimpy at best. SWD love the native and the cultivated blackberries and raspberries! Finding them in the fall bearing raspberries and all blackberries. Primocane fruiting raspberries about half way done depending on variety.
- **Fresh strawberries:** Beautiful day neutrals! Although those pesky thrips are back in full force despite sprays. Thankfully the high temps are gone again and we won't have too many gaps to contend with anymore because of lack of flower induction. The North American Strawberry Growers Association (NASGA) annual summer tour was a great success last week in the Baltimore, MD area. Tour pictures from last year in BC up on their website <http://nasga.org/n-american-strawberry-growers-summer-conference-gallery-2014.htm>
- **Fresh raspberries:** Fall bearing in full swing watch SWDs, otherwise quality is great and they sure taste excellent.
- **Fresh blackberries:** Going strong, large fruit size still, but SWD are way too interested in them...
- **Blueberries:** Mid season for Elliott, Aurora a bit behind that. Good flavours, good size, good volume, we may make up for some of the gaps in supply earlier.
- **Misc crops:** Elderberries ripe now, excellent harvest. Goji keeps on giving.

British Columbia, Fraser Valley (Monday 8/17)

- **Blueberries:** Not a lot to add that the others haven't mentioned. A pretty good crop of Elliotts has come off the first picking in most cases, with some surprisingly good yields on some farms. Quality hasn't been unduly affected by whatever rain we've had. Auroras look good as well. What amazes me most about the latter stages of this season is the tremendous growth I've seen on the picked varieties, where field management has been good. Now we can see firsthand what the more southerly growing areas experience with long growing seasons and piles of sunshine. Rather than the typical BC growing period that struggles with cold, wet starts and uncertain June weather. No crop input beats the power of light and warmth.



Photo by Jason Myer

Northern Washington, Whatcom County (Tuesday, 8/18)

Harvest is getting over incredibly early, but have noticed it is darker in the morning already! Trees turning...(drought, or fall?) Heavy dew in mornings. Window by bed only half open all night. Could it be fall is early as well?

- **Blueberries:** Amazing the Blueberry season has stayed so close together for OR and WA this year. We, too, are finishing up Elliott. A few hand pickers, and machines doing some clean up in that and a few other fields. Rain (showers, really) only softened a little fruit and did not even settle dust. With dairies cutting grass, and many mowing fields, aphids have popped up again. Might be worthwhile to check, as many have finished picking and are not worrying about SWD sprays. **Northern Washington, Skagit County** (Saturday, 8/15)

Northern Washington, Skagit County (Saturday, 8/15)

- **Fresh strawberries:** Some very nice organic Albions coming off here too (selling by pint only!) Mites a problem from all the dust generated by adjacent cauliflower and cucumber harvesting. Skagit growers unable to burn for strawberry renovation as no permits were issued due to high fire danger.
- **Blueberries:** Last of Bluecrop being machined now and uncovered Elliott hand-picking ramping up. Elliott size and fruit quality appears excellent. SWD pressure increasing, particularly in organic blocks and fruit destined for export to markets with restrictive MRL's or without established tolerances for the popular insecticides.
- **Fresh blackberries:** Chester harvest in full swing with enough labor available for most growers to stay in rotation. Some red berry mite damage evident in fields where early sulfur or oil applications were missed. SWD larvae showing up in organic blocks and some conventional with poor field sanitation practices. Fruit quality and yield very good so far.



Triple Crown Blackberries

Photo by Tom Peerbolt

Research Update

- [Research Update: Root Inoculum Removal as a Tool to Improve Soilborne Disease Management in Red Raspberry](#) (8/15, Whatcom Ag Monthly)

Industry news/resources

Newsletters/ berry reports

- [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.
- [Market Report from General Produce for Week 33](#) (8/17)
- [USDA Market News \(Fruits & Vegetables\)](#)

Magazine/website compilations

- **The Packer:** [blueberries](#), [blackberries](#), [raspberries](#), [strawberries](#).

- **Growing Produce:** [recent berry articles](#).
- **Andnowyouknow.com:** [blueberries](#), [blackberries](#), [raspberries](#), [strawberries](#).
- **Fruitnet-Eurofruit:** [recent berry articles](#).
- **Fresh Fruit Portal:** [blueberries](#), [blackberries](#), [raspberries](#), [strawberries](#).

Berry research blogs

- [Strawberries and Caneberries](#) by Mark Bolda, UC Davis Berry Extension Agent. **Recent Entry: (8/10) Nifty plastic mulch removal machine can save a lot of money.** *Reports on recent insect and disease research and observations in California.*
- [Team Rubus](#) by Gina Fernandez, North Carolina State Small Fruit Specialist. **Recent Entry: (8/10) Topics for NARBA Grower meetings in 2016.** *Reports on issues in blackberries and raspberries from the Southeast.*

Climate/water

- California: [Strong El Nino now likely, but don't expect end to drought](#) (8/13, Capital Press)
- [Washington falls deeper into 'extreme' drought](#) (8/13, Capital Press)

Commission/Council News

- [National Processed Raspberry Council Newsletter](#) (Summer, 2015)

Marketing/Promotions

- [Blueberry group celebrates milestone](#) (8/17, The Packer)

International

- [Wish Farms expands Argentina blueberry production](#) (8/12, The Packer)
- [Chilean nurseries court Peruvian growers](#) (8/13, Eurofruit)
- [Driscoll's to expand organic berry nursery model throughout the Americas](#) (8/12, Fresh Fruit Portal)

Grower Resources ---- Week 34

New Extension Publications & Videos—All free online

Useful information from OSU Extension.

- **Blueberries: [Mummy Berry Management in the Pacific Northwest](#)** *Jade Florence, Jay W. Pscheidt*
4 pages. Briefly describes the mummy berry disease cycle and available management methods.
- **Integrated Pest Management Videos** *Silvia I. Rondon, Mary K. Corp, Stephen M. Van Vleet, Stuart Reitz, Pamela Hutchinson*
 - [Integrated Pest Management: Pest management Integration](#) 4 minute video
Explores Integrated Pest Management (IPM) as an approach to protecting your crop from insects, weeds and plant pathogens.
 - [Monitoring Diseases in The Field](#) 3 minute video.
How to do field scouting for diseases and vectors. Recognizing diseases and vectors early will help you control them and minimize economic loss on a crop.
 - [How to Identify a Plant or Weed](#) 3 minute video.
Take a picture of it. Then collect and press the entire plant and record where you collected it, the date and any key characteristics.
 - [Detecting Plant Diseases in the Lab](#) 3 minute video.
Describes how the Hermiston Agricultural Research and Extension Center examines



Photo by Jason Myer

- plant disease samples to determine pathogens and plant diseases.
- o [Using A Plant Press](#) 4 minute video.
Preserving plant specimens -- best (if possible) to collect the entire plant specimen at peak production, including roots, flowers and potentially the seeds of the plant.

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.

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** [go here.](#)

Pest Alerts

Monitor & apply preventative insecticides as needed:

Spotted wing drosophila

SWD Resources

- [SWD I.D. Card](#) (UC Extension)
- [Spottedwing.org](#) Information from the 5 year SCRI regional project that just concluded. Cooperating organizations: OSU, WSU, Agriculture and Agri-Food Canada (AAFC), UC Davis, UC Berkeley, Peerbolt Crop Management & the USDA.
- [Spottedwing.org/SWD external links resources](#)

British Columbia

- [BC SWD Management](#) (Updated June 19, 2015) *It has 2015 spray options.*
- [Weekly Monitoring Reports](#) (Updated every Monday)
- [SWD information brochure in English](#) (Published June, 2015)
- [SWD information brochure in Punjabi](#) (Published June, 2015)
- [Online SWD Resources list from AAFC's Technical Working Group](#)

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

- [USpest.org SWD Extension Documents](#) *Many of Amy Dreves' generated SWD materials on managing and monitoring SWD.*
- Blueberries: [SWD pesticide options and information](#)
- Raspberries and blackberries: [SWD pesticide options and information](#)
- Strawberries: [SWD pesticide options and information](#)

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 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.

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 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](#).

- *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.



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

Crop Work Week 34

All crops

- Pay attention to new plantings of all berries for weeds, water, insects, diseases, and nutrient deficiencies.
- Maintain SWD fruit sampling, monitoring and management plan. ([blueberries](#), [raspberries](#), [blackberries](#), [strawberries](#))
- Weed management.
- Post-harvest—soil and leaf test for evaluation of nutrients.
 - [OSU's Blueberry Nutrient \(and testing\) Guidelines](#)
 - [OSU's Caneberry Nutrient \(and testing\) Guidelines](#).
- 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](#).
- 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.

Raspberries

Processed harvest finished.

- Scout for cane collapse symptoms & determine cause ([Phytophthora Root Rot](#), Verticillium, crown borers, overwatering, etc.)
- Scout for [yellow rust](#) and assess treatment options.
- Scout for [twospotted mites](#) and [yellow mites](#).
- Scout for virus symptoms and send in samples for testing as needed.
- Scout for [cane blight](#) and [cane botrytis](#) symptoms.
- (North) Scout for [raspberry beetle](#) feeding symptoms.
- Scout for [aphids](#) and treat as needed.

For late season, fresh market:

- Scout for weevils and treat as needed ([Black Vine](#), [Rough Strawberry](#), [Strawberry Root Weevils](#)).
- (North) Scout for [Raspberry Fruitworm](#) feeding symptoms.
- Scout for virus symptoms and send in samples for testing as needed ([RBDV](#), [TRsV](#))
- Scout for [fruit mold](#) and treat as needed.
- Scout for [Yellow Rust](#) and assess treatment options.
- Scout for [Two-spotted Mites](#) , [Yellow mites](#) and treat as needed.
- Scout for [aphids](#) and treat as needed.
- Scout for [leafroller larvae](#).

Blackberries

Late season variety harvest ongoing

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

- Scout for leafroller larvae and treat as needed to prevent fruit contaminant problems. ([orange Tortrix](#) and [oblique Banded](#))
- Can apply fungicides for [fruit/blossom rot](#) .
- 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 (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.

Degree Day Updates

- [WSU Extension—Whatcom County](#)
- [Regional sites—Updated by Len Coop, OSU-IPPC](#) *click on the link, go to right hand column & click on the Degree day icon.*

Events [Go here for Full Event Calendar](#)

Regional Berry Events

- **August 20 — Red Raspberry Soilborne Diseases Field Day** ~ 3-4:30 pm, Lynden, WA [Go here](#) for the details. **Participants/Sponsors:** WSU, USDA, & Walters Ag Research.
- **December 2-4 — Washington Small Fruit Conference** ~ at the NW Washington Fairgrounds, Lynden, WA. [Go here](#) for more information and to register.

National & International Berry Events

- **September 7-9 — 5th Annual International Blueberry Organization Summit** ~ Coffs Harbor, Australia. [Go here](#) for meeting information.
- **September 13-16 — International Symposium on Mechanical Harvesting & Handling of Fruits and Nuts** ~ Richland, Washington. [Go here](#) for meeting information.
- **October 7-9 — [North American Blueberry Council](#) & [US Highbush Blueberry Council](#) Fall Meetings** ~ Las Vegas, Nevada. Details [Go here](#) for details
- **October 13-15 — 6th Biennial Berry Health Benefits Symposium** ~ Madison, Wisconsin. [Go here](#) for all the details.

Regional Commission/Council meeting schedules

I'll update the commission/council meeting schedules, agendas and locations as the information becomes available. It's a little spotty right now. You can also contact the individual commission/council office for further information. Their website links are in the sponsor box at the top of this newsletter.

Washington Red Raspberry Commission Email Contact: henry@red-raspberry.org

- **September 16** — Lynden, WA.
- **October 28** — Lynden, WA.
- **December 2**— at the [Washington Small Fruit Conference](#), Lynden, WA.

Oregon Blueberry Commission Email Contact: jenny@ostlund.com

(all meetings are scheduled for noon at the Chemeketa Events at Winema, Building 48, Room 210, Salem)

- **September 22**
- **November 10**
- **January 12** (research updates 7:30-11:30 am; committee mtngs 11:30am-12:30pm; Commission mtng 12:30pm)
- **March 15**
- **April 26**

Oregon Raspberry and Blackberry Commission Email Contact: berries@oregon-berries.com

- **September 16**

Oregon Strawberry Commission Email Contact: berries@oregon-berries.com

- **September 23**
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Archived Small Fruit Updates

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

[33-SFU08-12-15](#)

[32-SFU08-05-15](#)

[31-SFU07-29-15](#)