

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 5, 2015

Week 32

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- Chile: [Eco-packs a Punch Against Blueberry Rot In-transit](#) (8/3, *Fresh Fruit Portal*)

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

Items of note this week:

- I've ended the blueberry development comparisons section on the SFU since all fields involved have finished harvest.
- SWD pressure is out there but not as heavy as might have been expected. Interesting year for SWD - My thinking is that we had the highest potential risk we've ever seen in the spring and then the heat came along and had a suppression effect. Still, there's plenty of risk out there for the late harvests.
- Anna booked our fall vacation for mid-September this year and I was thinking that was too early. I guess not.
- Water/irrigation is the major concern. Keep those fields as watered up as you can. Looks like we'll have an extended post-harvest period.

Tom Peerbolt, SFU Editor

Spotted Wing Drosophila Alert

**High risk of fruit infestations in
Northwest Berry Crops**

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](#)

For the SWD resources and other crop management information go to the [Grower Resources](#) section.

Regional Berry Events

- **August 18 — Oregon Strawberry Commission Fresh Strawberry Plasticulture Workshop and Demonstration** ~ 9:30-5:00 Hillsboro, OR [Go here for the agenda](#).
- **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.



Regional reports

British Columbia, Fraser Valley

[Go here](#) for the B.C. Blueberry Council's Blueberry IPM Report for 7/31.

British Columbia, Fraser Valley (Monday 8/3)

We have been experiencing high temperatures the last 4-5 days in the 32-34 degree Celsius area and heavy dew in the mornings. The nights haven't been cooling down much at all either. The rains we had last Friday and Sunday were needed and caused minimal splitting damage. Looking forward to actually spending some time with kids in August. Who would have ever thought!

- **Blueberries:** General comments are that Duke is down but Bluecrop is definitely improved from last year. Elliott looks good and for the first time ever I am happily eating them by the handful as they have great flavor. Size doesn't appear to be an issue.
 - **Bluecrop:** Most of the Bluecrop is off with growers waiting for the cleanup pick some time later this week. Reka has been finishing up this past week with maybe a little more to go in some areas.
 - **Elliott:** Elliott harvest began early last week for some growers on sandier soils and a lot of the other fields on higher organic matter soils began mid-late week.
 - **Liberty:** It's been coming off for about a week with some growers rolling machines into fields over the last couple days.
- **Spotted wing Drosophila:** SWD applications being made and pressure is there but seems to be some interesting things happening with it in some areas. There were traps this past week that didn't pick up anything that were picking up mid-season numbers long before harvest began.
- **British Columbia, Fraser Valley (Monday 8/3)**
- **Blueberries:** We're into Elliotts now (some fields are done with first pick) with pretty good quality fruit with what should be good volumes. A little softness of the early ripening fruit that endured heavy heat. Bluecrop should wrap this week. First pick Liberty pretty well off and there appears to be not a bad second pick. Still some pretty tired looking fields out there that need a little post harvest remedial work. Hopefully this week lives up to a promise of cooler air.
- **Raspberries:** Need some moisture for the recovering raspberry fields but I'm afraid to wish for too much since it could damage the Elliotts picking. Lots of mite issues in raspberries. And I don't think I've ever seen so many thrips show up in so many different crops (berry and veggie) as I have this season.

British Columbia, Fraser Valley (Monday 8/3)

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

Hot again past week, now getting into perfect temperature range around 25C or 77F and relatively dry with rain for Wednesday and a bit for Thursday too, well needed. generally the season is wrapping up.

- **Strawberries:** Dayneutral strawberries going gangbusters.
- **Fall bearing raspberries:** Way too early, some sun burns, but not bad for quality!
- **Blueberries:** Wrapping up mid season varieties completely, not much there for pick 3 and 4... More complaints about reduce fruit size. Some counting the beans now after finishing with no late varieties and find themselves short by 20%. Late varieties looking great though.... Also, more dead plants from drought and plants in general have not looked so haggard after a season, this does not bode well for next year. Irrigation running wild still, lots of work, many sleepless nights. In particular where drip is old and not maintained, many plants are dead. No time to fix things when harvest takes priority. Some rethinking going on with double drip instead of single also.
- **Other crops:** *Blackberries:* Even late ones now fully ripe. *Haskap:* suffering with too hot and dry, irrigation running often. *Persimmons:* Good crop set, already enlarging. *Figs:* Second crop developing, might be successful to ripen that this year.

Northern Washington, Whatcom County (Monday, 8/3)

- **All berries:** Heat is making soft fruit everywhere. Even Elliott's are spongy already. Best picking has been in the AM, as fruit is getting very soft in afternoon. Everything finished in raspberries and blueberries except for some Liberty, a little (**very little**) Legacy, and the Elliott. Short, compact season. As reported elsewhere, SWD has been very spotty. Flies are around, but even extra sampling has not shown any in most fruit. Aphids are back, and even with hot conditions. Water stress has really taken a toll on size and weight (for the most part). Under pruning was very costly this year. Looks like the whole thing is over before mid August!! Fishing anyone???

Western Oregon, Willamette Valley

- **Blueberries:** (Monday, 8/3) *Processed:* Into the second and third machine picks on everything coming in pretty much. Most fields coming to us are actually finished other than Elliotts (and Aurora on the fresh side). We've got one grower though that says he's got a couple of weeks left so there's some variation.
- **Blueberries:** (Monday, 8/3) *Fresh:* Legacy, Liberty, Aurora and Elliott are still coming in although in much reduced overall numbers. Season is wrapping up. Even got a weekend off!
- **Blackberries:** (Monday, 8/3) Finished with all the mid season varieties. We'll be doing a test machine pick in the Evergreens tomorrow and probably start on them Wednesday. Thought there'd be more sunburn in them but they're looking pretty good.

Heat Stress

This is passed along from Joe DeFrancesco, OSU IR-4 Program Coordinator and Pesticide Specialist:

- "Photo shared this week by Melodie Putnam, Chief Diagnostician, OSU Plant Clinic. "Heat stress in blueberry." (With recent heat waves, the Clinic is seeing a lot of plants come in with heat stress, scorched leaves, and other symptoms due to heat, sun, or water stress.)"





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 31](#) (8/3)
- [USDA Market News \(Fruits & Vegetables\)](#)

Magazine/website compilations

- The Packer: [blueberries](#), [blackberries](#), [raspberries](#), [strawberries](#).
- **Growing Produce:** [recent berry articles](#).
- **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: (7/14) Central Coast Organic Strawberry Tour set for August 20.** Reports on recent insect and disease research and observations in California.
- [Team Rubus](#) by Gina Fernandez, North Carolina State Small Fruit Specialist. Reports on issues in blackberries and raspberries from the Southeast.

Climate/water

- [Heat wave on West Coast breaks record temperatures](#) (7/30, andnowyouknow.com)
- California: [Ag Council aims to set record straight on water use](#) (7/31, Fresh Fruit Portal)

West Coast

- [Berry producers keep pace despite drought, summer heat](#) (8/3, Capital Press)
- California: [Strawberry production keeps pace despite heat, fewer acres](#) (7/31, Capital Press)

North America

- Michigan: [Northwest Michigan assesses storm impact](#) (8/3, FGN)
- Michigan: [Cold spares late-season Michigan blueberries](#) (7/30, The Packer)
- New York State: [Blueberry production up](#) (7/29, the Packer)

International

- [Berry Bust: Diluted cocaine discovered in Colombian blackberry pulp shipment to Mexico](#) (7/30, andnowyouknow.com)



Grower Resources ---- Week 32

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 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

- *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.

Raspberries

- 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.
- 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 [aphids](#) and treat as needed.
- Scout for leafroller larvae. ([Orange tortrix](#) and [obliquebanded](#))

Blackberries

- 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

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.

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

Upcoming Regional Events & Commission Meetings

[Go here for Full Event Calendar](#)

- **September 9 — Washington Red Raspberry Commission meeting.** In Lynden, WA. Contact Henry Bierlink for more information by [email](#) or phone 360-354-8767.

Upcoming 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.

Archived Small Fruit Updates

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

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

[30-SFU07-22-15](#)

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