

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 1, 2015

Week 27

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- [BC Blueberry Council reveals high expectations for China](#) (6/26, Fresh Fruit Portal)
- [An Early Start for Whatcom Raspberry Harvest](#) (6/29, Bellingham Herald)

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

Of note this week:

- This prolonged hot spell is at least aiding us in suppressing spotted wing drosophila populations. Stay with the management programs but the risk threat is lessened somewhat.
- What the heat has also done is take a lot of weight out of the caneberries. Fruit numbers are what was expected but size and weight are reduced.
- Field days are coming. Check the schedule just below this intro. OSU's Caneberry field day is this afternoon (7/1) at the Aurora station. Better have a lot of ice cream.
- **Timing of Dukes in the Willamette Valley**
 - **2015** (earliest on record): Started about June 10 & done by July 4.
 - **2011** (latest on record): Started about July 8 & ended about August 1.
- **Timing of Marionberry harvest**
 - **2015** (earliest on record): Started on June 23.
 - **2011** (latest on record): Started on July 18.

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](#)

Congratulations to all the folks in B.C. who worked hard over many years to open the Chinese market to fresh blueberries (see stories above). What a fantastic development!

Tom Peerbolt, SFU editor

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

Spotted Wing Drosophila Resources for B.C.

The folks in B.C. sent out some updated SWD resource links. Here they are. Great resources for all of us.

- [Go here](#) for the BC SWD Management Document (Updated June 19, 2015) It has 2015 spray options.
- [Go here](#) for Weekly Monitoring Reports (Updated every Monday)
- [Go here](#) for updated SWD information brochure in English (Published June, 2015)
- [Go here](#) for updated SWD information brochure in Punjabi (Published June, 2015)

Regional Berry Field Day Events

- July 1 — OSU Caneberry Open House 1-5:00 [Go here](#) for details
- July 7 — B.C. Berry Field Day at the Clearbrook Station, Abbotsford, B.C. 1-3, Details TBA
- July 8 — Washington Raspberry Machine Harvesting Field Day, 2-4, Lynden, WA at Randy Honcoop's Farm. [Go here](#) for details.
- July 8 — OSU Blueberry Open House 1-5:00 [Go here](#) for details
- August 18 — Oregon Strawberry Commission Fresh Strawberry Plasticulture Workshop and Demonstration 9:30-5:00 [Go here for the agenda.](#)



Raspberry fruit comparisons

Clockwise from upper left: *Cascade Harvest*; *Rudi*; *Lewis*; *Wakefield*.

Location & Date: *Lewis*-6/24/15 near Portland. All others-6/22/15 in Whatcom County.

Photos by T. Peerbolt

Regional reports

British Columbia, Fraser Valley

[Go here](#) for the B.C. Blueberry Council's Blueberry IPM Report for 6/26.

British Columbia, Fraser Valley (Monday, 6/29)

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

- **General comments:** Hot hot hot. We did set all sorts of new temperature records over the past weekend. Eastern Fraser Valley clocked in at 35C (96F) in the shade. Also very humid, which made manual labour exhausting. Temps Monday somewhat cooler, then around 30C plus all week again. No rain in sight (yes we had about two little sprinkles that were gone and sucked up by the drying wind in less than an hour). On the positive side: what's fruit rot??? Brix in all fruit is way up and best flavour in years.
- **Irrigation:** Keep things moist, but not in a flood fashion. Way too many fields being over irrigated now. Unless it is overhead with the associated cooling, make sure no water puddles between rows, indicating over irrigation (or of course a line break....). And don't forget to irrigate yourself, dehydration and heat stroke is a real danger now.
- **Blueberries:** Everything is going way too fast. Eastern Fraser Valley is wrapping up Duke. Sizing is an issue in some fields, but not everywhere. Everyone running full out, receiving stations and packers are super busy. Everyone starting early in the morning to keep up the quality of fruit. Dark varieties including Bluecrop in danger to have sunburns.
- **Raspberries:** We're seeing heat effects-- Fruit of early and mid season varieties now difficult to come off the receptacles. Mornings glued to receptacle, afternoons just mush. Growers are out with every machine and person they can find harvesting. Sizing is an issue here and there. Terrible problems with dust, you can spot where a machine is working from 10 km away, except where a decent cover crop exists, even if just mowed weeds. This will increase incidents of mites.
- **Strawberries:** Dayneutrals will for sure take a big breather in about 4 weeks, no more flower initiation right now. Renovation of June bearers completed and fertilised and irrigated.
- **Misc Fruit:** *Black currants* ready for harvest. *Blackberry* quality best ever. Fruit size excellent. *Goji* being commercially picked now

British Columbia, Fraser Valley (Monday, 6/29)

It's been warm with temperatures reaching 33C (91.5F) and 34C (93F) Friday and Saturday but a bit cooler on Sunday. Steady winds for the bulk of the day and into the evenings. Growers working hard on keeping SWD out of fields. A lot of growers not happy about labour costs this year.

- **Blueberries:**
 - **Duke:** First pick Duke off by hand with many machines working away at it. Some areas on the second hand harvest.
 - **Bluecrop:** A number of growers are starting first Blue crop hand harvest in the next couple of days. It's ripening very quickly. Size and quality remains good. Machine harvest at least a week to 10 days off though.
 - **Elliott:** Elliot is sizing up nicely. Saw 3 completely blue Elliot berries in Eastern valley Friday morning which is scary.
 - **Reka:** Smaller Reka plants have started to be machine harvested. More mature plants over the weekend.

Northern Washington, Skagit County

Hot here too, intermittent weekend rain barely settled dust, some water restriction issues, nobody has enough pickers and available labor is expensive. Lot of fruit out there, blackberries are loaded.

- **Raspberries:** (Monday, 6/29) From what I've seen, the large volumes of raspberries coming off the machines looks like mostly "B" grade IQF, suspect it's going "splat" on the belt at the tunnels; large, very ripe fruit. Some going to night harvesting now to make grade.
- **SWD:** SWD larvae showing up in lightly sprayed fresh market raspberries. Some comments from organic blueberry growers indicating trap counts not dropping following Entrust applications as in prior years? Yeast slurry baits continue to attract SWD to traps while apple cider vinegar baited traps remain empty.
- **Blueberries:** Picking blues just getting started here, so more will be revealed.

Eastern Washington (Monday, 6/29)

- **Blueberries:** 106-112F (41-44.5C) over here Friday thru Sunday, only 102F (40C) today, the forecast is for at least 9 more days 100F (35.5C) or higher. Looks like the blueberry plants took the heat better this time, but more cooked, sunburnt, shriveled fruit to sort out. SWD laying low for now, but remember it's much

cooler under the thick bushes right next to the soil, and shade cloth and overhead irrigation make it even cooler.

Western Oregon, Willamette Valley

Didn't get as hot as originally forecast over the weekend. 'Only' into the mid 90's (34C). Continuing high's from 90-95F (32-35C) through next Monday predicted. This is going to be a fast harvest.

- **Blueberries:** (Monday, 6/29) Dukes are into the last of the hand picking and clean up machine harvests. Some fields had much lighter second picks than expected. Fruit quality has been good. Picking schedules are working around the heat—starting and ending early. Overhead cooling is paying for itself this year. Legacy and Draper have both started hand picking. Coloring already in the Liberty, Aurora and Elliott.
- **Blueberries:** (Tuesday, 6/30) *Processed/machine harvested:* Getting in Dukes right now. A little on the small size but really they're pretty good quality. Reka machine harvest started yesterday (6/29) and we'll be getting in some Patriots at the processing plant tomorrow (7/1).
- **Blackberries:** (Tuesday, 6/30) *Just not enough crates and tunnel space to go around right now so some fruit is getting picked directly into drums. Probably end up with less IQF and more puree and juice stock out of this season.*
 - **Marionberries:** Most fields are on their second picks. Should be starting the third by Thursday (7/2). Been quite a drop off from first to second picks in many fields. We're starting to get a fair amount of sunburnt fruit. Size is down significantly due to the heat. Some guys are overhead watering which is a judgment call—seems like we get more red berries as well as a possible increase in mold with overhead. But with this weather—might be necessary. Maybe go another two weeks on Marions.
 - **Black Diamond:** We're into the third pick on Black Diamond. Still quite a bit of fruit to go.
 - **Columbia Star:** Just getting enough of it in to be able to get a good read on how well it picks and processes. After three picks it still looks great on all fronts. Yields look OK. Be good to get more of it in next year when we'll have a few more acres of it maturing. Lots of interest in it.
 - **Evergreens:** Just looking at them at 55 miles per hour right now. The way this season is going they might pay off for growers. We'll likely need the late season fruit and maybe the heat will keep the SWD pressure a little lower on the late season fruit.



Columbia Star Blackberry, Trial planting & fruit -- Near Hillsboro, OR. June 26, 2015
Photos by T. Peerbolt

Blueberry Bud Development Comparison for the Western Willamette Valley

Protocols for these photos: 1) Each Friday I take 5-7 cuttings from the same fields in the NW Willamette Valley. 2) Later in the day I look over the cuttings and choose what seems the most 'representative' (not the most advanced or the least advanced). I'm aiming for the development stage that best represents the fruit that would be the first harvested. **We continue ahead in development over the last two years.**

Northwestern Willamette Valley Top – 6/26/15

Middle – 6/27/14

Bottom – 6/28/13

Patriot

Bluejay

Draper

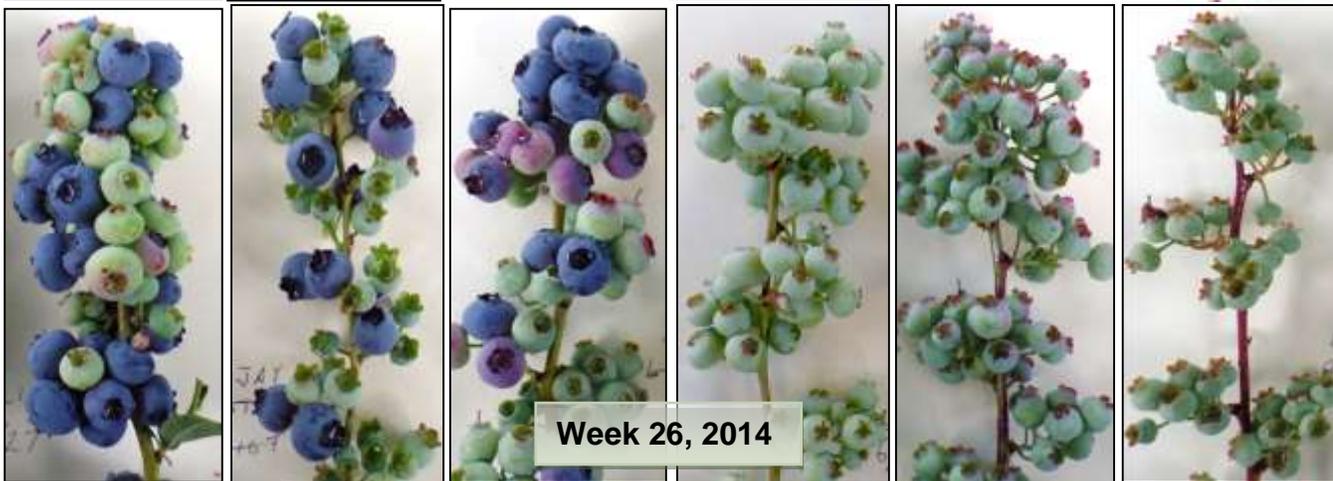
Liberty

Aurora

Elliott



Week 26, 2015



Week 26, 2014



Week 26, 2013

Patriot

Bluejay

Draper

Liberty

Aurora

Elliott

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 26](#) (6/29)
- [The Source](#) from Pro*Act (6/29)
- [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: (6/26) Lygus in raspberry** Reports on recent insect and disease research and observations in California.
- [Team Rubus](#) by Gina Fernandez, North Carolina State Small Fruit Specialist. . **Recent entry: (6/17) More on the heat and fruit harvest** Reports on issues in blackberries and raspberries from the Southeast.

Climate/Water

- Washington: [Drought conditions take hold in Western Washington](#) (6/26, Capital Press)

Technology

- [17 innovations that shaped the precision ag revolution](#) (6/17, Precision Ag)
- [Plastic mulch machine can cut labor costs in half](#) (6/22, Fruit Grower News)

Business/Marketing

- [Early West Coast crops and pack flexibility in the spotlight](#) (6/26, Fresh Fruit Portal)
- [Naturipe CEO “bullish and optimistic” about berry future](#) (6/24, Fresh Fruit Portal)
- [USDA forecasts low inflation for fresh produce](#) (6/26, The Packer)
- [Lights, camera, strawberries for Cal Giant](#) (6/26, Fresh Plaza)

Land Grant Universities

- [OSU poised to expand research, extension](#) (6/29, Capital Press)

Plant Breeding

- [New ‘winter hardy’ blueberry variety ideal for home growers](#) (6/26, Fresh Fruit Portal)

North America

- Michigan: [Estimates for apple, cherry and blueberry crops](#) (6/26, Fresh Plaza)
- Florida: [University leads way in building a better blueberry](#) (6/28, Washington Times)



Cascade Harvest Raspberries, June 22, 2015, Whatcom County, WA. – photo by T. Peerbolt

Grower Resources

- [Warm temperatures a boon for stink bug](#) (6/24, Capital Press)
- [Drone scarecrows the future of B.C. blueberry farming?](#) (6/24, Vancouver Sun)

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, Agri-Foods Canada, 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)

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.

Scout for: [Silver leaf disease](#) symptoms in **blueberries**.

- *This is a recently identified disease that has so far been confirmed only in a few Draper variety fields in western Oregon. It's unknown how economic this disease will be.*



Silver Leaf disease symptoms—Draper blueberry field, Willamette valley 5/22/15. Photos by Tom Peerbolt

Additional, Ongoing Pest Information

Diseases

- **Scout for:** [Phytophthora root rot](#) raspberries. Look for primocane collapse.
- **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.
- **Scout for:** [blackberry rust](#), (Phragmidium Rust) **Evergreen blackberries**.

Insects/Mites

- **Scout for:** [azalea Bark Scale](#), blueberries. This scale's telltale bright white egg sacs on the lower branches of infested plants are now apparent in some southern blueberry fields.
- **Scout for:** **Root Weevils, strawberries & blueberries**. Larvae & adults of [black vine](#), [rough strawberry](#), and [strawberry root weevils](#) are now being recovered from some fields.
- **Scout for:** [blueberry gall midge](#), blueberries. tip damage from this midge is showing up in blueberries. damage is usually deemed to not be economic except in specific situations like new vigorous fields where gall midge can occasionally cause too much stunting of new growth.
- **Scout for:** **Mites in raspberries (northern growing areas):** [twospotted mites](#) [yellow mites](#)
- **Scout for:** [strawberry crown moth](#) **southern strawberries:** Infested plants will have a weakened crown and will often break off with a pull on the top growth.

Crop Work

All crops

- **Sample for & treat as needed for SWD fruit infestation as soon as fruit begins to color.**
- Vole management.
- Weed management.
- Fertilizer program.
- Water management.

Blueberries

- *If ripe/coloring fruit is in field, can begin treating for prevention of SWD infestation.*
- Scout for [mummyberry](#) infected fruit.
- Stay on top of aphid management where Scorch virus transmission is an issue.
- Scout for [leafroller larvae](#) & treat as needed.
- Scout for virus symptoms & send in samples for testing as needed ([shock virus](#); [scorch virus](#)).
- Scout for scale insects.
- Scout for weevil notching.
- Scout for [azalea bark scale](#) in southern blueberries
- Scout for blueberry [gall midge](#) damage.
- Can put out pheromone traps to monitor for leafrollers. ([orange Tortrix](#) and [oblique Banded](#))
- Scout for berry symptoms like green fruit botrytis, hail damage, mummyberry, etc.

Blackberries

- *Treat for prevention of SWD infestation.*
- Can put out pheromone trap to monitor for leafrollers. ([orange Tortrix](#) and [oblique Banded](#))
- 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.

Evergreen Blackberries

- Scout for [blackberry rust](#) and treat as needed.

Raspberries

- *Treat for prevention of SWD infestation.*
- Scout for [yellow rust](#) and assess treatment options.
- Scout for yellow mites and [twospotted mites](#).
- Scout for virus symptoms & send in samples for testing as needed.
- Can put out pheromone traps to monitor for leafrollers. ([orange Tortrix](#) and [oblique Banded](#))
- Scout for [cane blight](#) and [cane botrytis](#) symptoms.

Strawberries

- *After harvest, can treat for SWD control if field is adjacent to other susceptible, ripening, crops.*
- (Southern strawberries) Can scout for [strawberry crown moth](#) larvae.
- Scout for fruit damage symptoms like cat facing, slug damage, anthracnose, etc.
- Monitor ripe and ripening fruit for [SWD larvae](#).
- Scout for weevil adults & notching.
- Scout for [powdery mildew](#) and treat as needed.
- Scout for [two spotted spider mites](#) and predatory, beneficial mites.
- Scout for [aphids](#).
- In day neutral varieties scout for [lygus bug](#) and assess need for treatment.

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](#)

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 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.](#))

[26-SFU06-24-15](#)

[25-SFU06-17-15](#)

[24-SFU06-10-15](#)