

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, 2013

Week 33

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SWD's impact on Maine's wild blueberry crop:

[The race to save blueberries in Down East](#) (8/11, Boston Globe)

[Low blueberry prices great for fruit lovers, hard for farmers](#)

(8/8, Boise State Public Radio) Article as well as audio of radio piece.

[New proposed food safety rule affects management of soil amendments](#) (8/7, Ag Alert)

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

Regional crop information

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.

Regional SWD Observations included below

In the request for information from my usual regional sources this week, I asked specifically about SWD pressure in their region. Many of the comments below are in response to that request.

Please keep in mind that these are always individual observations/judgments made this past week and are not meant as anything other than that.

Tom Peerbolt, SFU Editor

My own comments on SWD pressure in the Willamette Valley:

Willamette Valley, Oregon and SW Washington

(Thursday, 8/8)

- SWD population/pressure in blueberries seems to have dropped off from what we were predicting. The only SWD

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](#)

larvae scouts are finding in the salt water sampling from the fields we're covering are coming out of caneberries-- post harvest fields, border Himalayans and some primocane raspberries on their first pick. I'm sure late season blackberries will be under similar pressure. But the commercial blues (that I'm aware of) are picking very clean right now. Almost all are on 7 day (or close) spray schedules but this is the second year in a row that late season expected pressure hasn't shown up in blues. Although I do know of some u-pick and no spray fields that have problems. Trap counts in border areas are also off previous highs when we expected them to be going up.

- These seem to be a few of the main factors:
 - Our hot, dry weather (low nineties/high eighties) has impacted them in ways our present draft modeling systems haven't been able to account for.
 - There is a big difference in susceptibility between caneberries and blueberries.
 - Comparing blueberry fields--fruit allowed to get soft in the field and/or are within a shaded/dense canopy and/or are irrigated overhead are at much higher risk than those that are grown with an open canopy, picked frequently and drip irrigated.
- **Additional comments added Tuesday, 8/13:** In the last couple of days we have picked up SWD larvae at very low levels in a small peach orchard (4 larvae in five fruit) and in a day neutral strawberry field (2 larvae in 80 fruit). The strawberry field is being treated immediately and should show no economic losses.

British Columbia, Fraser Valley (Monday, 8/12)

- **Blueberries:** We're probably going to start to pick some of the Elliott fields this week. A bit of softness showing up here and there. Very early as with everything this season. Liberty first pick pretty well done by early this week. Very nice fruit quality. It is certainly very dry and has been very warm this past week with temps in the 28-30C (82-87F) range. A few late weekend showers cleared the air but really don't help a lot. As you noted the SWD numbers appear lower than expected and fruit is coming off clean. But we are not letting down our guard and continue the seven day apps intervals. Acres of wild blackberries ripening everywhere so there is a lots of egg laying potential to continue the threat. However, I think the higher heat and extended dry weather of the past few weeks has had an impact on the population dynamics. As well, over ripe raspberries are fewer now and wild blacks dry up pretty quickly.

Eastern Washington (Thursday, 8/8) There are little to no SWD in commercial blueberries, but in our SWD blackberry management trials we have significant larvae in our untreated control plots.



WSU entomologist, Dr. Lynell Tanigoshi visiting with SW Washington grower, George Thoeny, Jr.

Whatcom County, Northern Washington

- **Blueberries** (Tuesday, 8/13) Blueberry yields not looking for the record book. Dukes done, Rekas almost done, Draper close, Bluecrop and Bluejay and 1613's barely ½ done, still waiting on the Liberty and Jersey. Don't let up on the SWD sprays, they are still around.
- **Raspberries** (Tuesday, 8/13) Raspberries all but done, except for the later varieties, still trapping SWD, so don't let up on the sprays here either. Better quality than last year, it would have been super if not for the real hot weather and occasional gusty winds. Watch for mites after harvest too, and there are a lot of predators in some fields.
- **Strawberries** (Tuesday, 8/13) Strawberry renovation and fertilizing should all be done by now, watch for mildew, cyclamen, and weevils.

Whatcom County, Northern Washington

- **Blueberries** (Tuesday, 8/13) We have Liberty fields that will not be ready to pick until the end of the week...at least! Same for Elliott. All other fresh pretty much done, and I am not aware of any Bluecrop making fresh market quality at this point. Heat is most likely the culprit, as Bluecrop doesn't seem to like the heat very much. The rain we had last weekend did nothing to improve its quality. Process picking underway, but no doubt, the crop is down from its potential. The only thing keeping it even close, is the increased acres being picked, and the maturing of baby crops. Tight spray programs have kept SWD at bay (mostly). The knock down of predators has had an effect on both mites and aphids. Despite that, some predators are making it back. Looks like wasps, but lady bugs also showing up here and there. Whatever climactic events that were bad for Duke, has been good for Liberty. All fields up North look the best they have in years. It's clear... We need to learn how to dial in the weather to better accommodate our needs. Ahhh, if only!

Skagit County, Northern Washington

- **Blueberries & Blackberries** (Friday, 8/9) SWD pressure here has been severe, particularly in blackberries. Some guys are into 4 day rotations. Several growers, on tight rotations, reported finding high trap counts but nothing showing up in the fruit itself. With the various offshore destinations for the fruit plus rigorous food safety compliance protocols, it takes good management to stay on top of spray rotations. Fruit quality and yields look very good with more daytime heat than we usually get in Skagit and cool night temps to build brix. Labor issues have clouded an otherwise exceptional season. Growers are distracted by labor concerns raised that have to be addressed, regardless of merit, due to misunderstanding, multiple agendas and media pressure.

Willamette Valley, Oregon and SW Washington

- **Blueberries** (Monday, 8/12) Great weather for harvest. Still have a lot of very good quality fruit for both the processed and fresh market coming in. We're past the main bulk of the blues and well into Elliotts and Aurora. Keep those fields watered up. They dry out fast this season.

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Grower resources

[Helping geese and farmers co-exist](#) (8/12, Ag Professional)

[New nematicide boasts novel mode of action](#) (8/12, Growing Produce)

[Brown Marmorated Stink Bug in Oregon](#) (OSU website) *Excellent resource site for BMSB information and the place to report any sightings of this potential berry pest.*

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 or too little of.

- **Blueberries:** Leaf/tissue testing and pH monitoring are most critical. Complete soil tests don't correlate well with plant needs as leaf/tissue tests. [Click here](#) to view OSU's Blueberry Nutrient (and testing) Guidelines.
- **Blackberries and Raspberries:** While annual soil testing has been the industry norm, Oregon State's updated nutritional guide recommends annual leaf/tissue testing, with soil tests done just every few years. [Click here](#) to view OSU's Caneberry Nutrient (and testing) Guidelines.

New overview & supplement to the OSU nutrient management guides. From Bernadine Strik, OSU Berry Specialist: "Please share this with growers. I think it will be handy having this info all in one relatively short (6 page) handout:

- I've added new information on time of sampling in some of the new crops.
- Also, amount of nutrients removed in fruit at harvest and when pruning blueberries.
- Please note that I decided not to do this as an official OSU Extension publication at this time.
- As we get more info in on tissue testing research in blueberry and blackberry and nutrient removal this information will be added and used to update our existing nutrient management guides."
- [Click here](#) for this supplement. The full nutrient guides are linked below.

Miticides for raspberries and blackberries (originally posted 7-25-12)

From Joe DeFrancesco, OSU small fruit pesticide specialist: "With so many registered miticides for caneberries, I put together a product chart with pertinent information to help growers decide which one to use." [Click here](#) for Joe's caneberry miticide chart.

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** [click here.](#)

Maximum Residue Levels (MRL's) for exported berries

The following lists cover MRLs for the US, Canada, Japan, Korea and Taiwan.

- [Blueberries](#) (Updated March 11, 2013)
- [Caneberries](#) (Updated March 11, 2013)
- [Strawberries](#) (Updated February 15, 2013)

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Spotted Wing Drosophila resources for 8-13-13 Week 33

Regional grower warning—Continued high risk of economic crop damage to berry crops in Oregon, Washington and British Columbia

The risk of economic damage from this insect is higher than in any of the previous three seasons we have dealt with it.

Monitoring berries for SWD larvae

For scouts/field checking ([We have created a video of this larvae-checking method.](#)):

1. Collect a sample of fruit to be tested (caneberries/blueberries: 50 per sample)
2. Put fruit in a gallon size sealable plastic bag.
3. Pour in enough of the salt water solution to allow the fruit to float (solution is: 1 cup of salt per gallon of water).
4. Mark bag with field code/date.
5. 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.

6. 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.

For processors or fruit handling stations:

1. Collect a two pound sample of fruit to be tested.
2. Put the sample into a shallow tray and cover with the salt water solution (1 cup of salt per gallon of water).
3. After a designated period of time (at least 15 minutes), use a piece of wire mesh screen to hold the fruit down to make it easier to separate the larvae from the fruit.

SWD information websites

[Peerbolt Crop Management](#)

[Oregon State Univ.](#)

[B.C. Ministry of Ag.](#)

[WSU Westside](#)

[WSU Eastside](#)

[WSU Extension SWD degree day model for Whatcom and Skagit Counties](#)

SWD management material resources

Oregon and Washington

- **Blueberries:** [SWD pesticide options and information](#) updated 4/15/13
- **Raspberries and blackberries:** [SWD pesticide options and information](#) updated 4/15/13
- **Strawberries:** [SWD pesticide options and information](#) updated 4/15/13

British Columbia

- [Spotted Wing Drosophila \(SWD\) management in B.C. berry crops](#) updated 7/3/12

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Pest management activities

Scout for: [Mummyberry](#), blueberries. [Mummyberry primer from MSU](#).

- *Evaluate the level of mummyberry infections and the areas of the field that are infected.*
- Infected fruit is now easy to distinguish.
- 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.
- 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 over wintering 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.

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Industry news/resources

Newsletters/ Berry reports

- [BC Blueberry IPM Newsletter](#) (8/9) Weekly by Carolyn Teasdale, [ES Cropconsult](#). Sponsored by the BC Blueberry Council.
- [New Jersey Blueberry Bulletin](#) (8/5) Weekly newsletter by Gary Pavlis, Rutgers blueberry agent.
- [Michigan State Extension Blueberry News](#) (8/7)
- [The Source](#) (8/12) Marketing report from The Produce News.
- [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.

Magazine 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](#).

Berry research blogs

- [Strawberries and Caneberries](#) by Mark Bolda, UC Davis Berry Extension Agent. **Recent entries: 8/12—Presentations from twospotted mite management meeting now available; 8/6—Fusarium wilt of strawberry** Reports on recent insect and disease research and observations in California.
- [Team Rubus](#) by Gina Fernandez, North Carolina State Small Fruit Specialist. **Recent entry: 8/5—Report from agent training on caneberry viruses** Reports on issues in blackberries and raspberries from the Southeast.
- [NC Small Fruit IPM](#) by Hannah Burrack, North Carolina Extension Entomologist. **Recent Entry: 7/24—End of harvest concerns in blueberries** Reports on recent insect research and observations in North Carolina.

Technology

- [Agriculture on the brink of technical revolution](#) (8/8, Growing Produce)

Immigration & Labor

- Washington State: [Debate continues over farm labor contracting](#) (8/12, Yakima Herald)
- [Grower groups push Goodlatte immigration bill](#) (8/7, Capitol Press)
- [Migrant workers who fuel Maine blueberry harvest receive state, federal services](#) (8/7, Boston Globe)

Politics & Ag

- [Lawmakers weigh aggressive tactic on immigration](#) (8/8, The Wall Street Journal)
- Opinion: [The problem with federal food labeling laws](#) (8/10, Reason.com)

Food Safety

- [Global food safety compliance: Preparing for the rules ahead](#) (8/12, The Wall Street Journal)
- [FDA extends comment period 60 days on two food safety rules](#) (8/8, FDA Release)
- [Food safety and China: Scandal and consequence](#) (8/7, World Policy Blog)

Marketing

- [Super food fight: Raspberries vs. blueberries for 'Best Waist Whittler'](#) (August edition of 'O' magazine) Oprah has taken sides...blueberries are in trouble now.
- [Frozen food sales' decline paves the way for fresh food innovation](#) (8/6, Food Processing)
- [Raspberries one of the best sources of antioxidants](#) (8/12, Fresh Plaza)

West

- Washington State: [Hot, dry July weather breaks records across state](#) (8/7, WSU News)
- Washington State: [Government sues blueberry farm](#) (8/7, AgInfo.net)
- Washington State: [Record blueberry crop](#) (8/9, AgInfo.net)
- Washington State: [More on record blueberry crop](#) (8/12, AgInfo.net)
- California: [Climate change is impacting California](#) (8/8, Capital Press)
- California: [Local strawberry growers battle a crop disease linked to last year's whitefly infestation](#) (8/9, Sun)

North America

- Maine: [Experts predict blueberry crop size](#) (8/9, WABI)
- Georgia: [The Blueberry state?](#) (8/6, Atlanta Journal)

International

- Chile: [Dole Chile focuses on major facility expansion](#) (8/7, Fresh Fruit Portal)
- [Argentine project aims to lengthen strawberry shelf life](#) (8/8, Fresh Fruit Portal)
- U.K.: [Angus Soft Fruits bets on South American blueberries](#) (8/13, Fresh Fruit Portal)
- E.U.: [Difficult summer period for strawberries](#) (8/13, Fresh Plaza)
- Netherlands: [Dutch blueberry area increased by 110% in five years](#) (8/13, Fresh Plaza)
- Mexico: [Strawberry exports fell by 16%](#) (8/13, Fresh Plaza)

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Event Calendar

For more comprehensive event calendar, [click here](#).

- **August 14 — FDA to discuss proposed produce food safety regulations** ~ 8-3 pm, Howard Johnson Hotel in Yakima, WA. [Click here](#) for more information.
- **September 11 — Washington Red Raspberry Commission** ~ 1 pm, Bellewood Acres, Lynden, WA. Call 360-354-8767 or [email Henry Bierlink](#) for more information.
- **September 24 — Oregon Blueberry Commission** ~ 12 pm, at Chemeketa Events at Winema, Building 48, Room 210.
- **September 24 — Oregon Strawberry Commission** 6 pm [Langdon Farms Golf Club](#). Call 541-758-4043 or [email](#) Phillip Gutt for more information.
- **October 2-4 — US Highbush Blueberry Council, Fall Meeting** ~ in Wilmington, NC. Details and registration coming soon.
- **October 23 — Washington Red Raspberry Commission** ~ in Lynden, WA. Call 360-354-8767 or [email Henry Bierlink](#) for more information.

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.
- 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](#).

Blueberries

Harvest ongoing

- Maintain [bird damage management](#).
- Scout for weevil notching on leaves and for adult weevils.
- Scout for [leafroller larvae](#) feeding.
- Stay on top of [Aphids/Scorch Virus](#) management where Scorch virus transmission is an issue.

- Scout for virus symptoms and send in samples for testing as needed. ([Scorch](#), [Shock](#)).
- Scout for [Blueberry Gall Midge](#) damage.
- Scout for berry symptoms like green fruit botrytis, hail damage, [Mummyberry](#), etc.
- Can treat for [Alternaria Fruit Rot](#) and [Anthracnose Ripe Rot](#) prevention if needed.

Raspberries

Harvest finished.

- (North) Scout for [Raspberry Fruitworm](#) feeding symptoms.
- 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.](#))

[SFU08-06-13](#) [SFU07-30-13](#) [SFU07-23-13](#)

This document is a guide and not intended as a recommendation or endorsement.
Consult with your supplier, field representative, or pest consultant.

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