

# 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 16, 2014

Week 29

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- [Big Harvest Expected for Washington Blueberries](#)  
(7/9, The Bellingham Journal)
- [New Jersey blueberry crop one of the best in years](#)  
(7/15, Fresh Plaza)
- Spain: [Driscoll's 'learning a lot' about Drosophila control](#)  
(7/14, Fresh Fruit Portal)

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

**Spotted wing drosophila:** Risk of infestations are increasing across the region. Stay with the insecticide management programs we've used the last few years to ensure a quality, clean crop.

### Upcoming events:

- **July 16** — OSU Blueberry Field Day ~ [Click here](#) for details
- **July 17** — WSU Raspberry Selection Trials Machine Harvest Field Day ~ 1-3 pm - Honcoop Farm, Lynden WA. Contact [Pat Moore](#) 253-445-4524 for more information.
- **July 18** — B.C. Berry Field Day ~ 1-3 pm - Clearbrook substation in Abbotsford. Contact [Michael Dossett](#) 604-796-2221 ext 1284 for more information.
- **July 31** — Willamette Valley Berry Fieldman/Grower meeting ~ 8 am at [North Willamette Research and Extension Center](#). Chad Finn will be joining us to discuss blackberry variety developments.

Tom Peerbolt, SFU editor

### 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](#)

## Raspberry fruit comparisons from the 2014 Onfarm Trials



## Regional reports

### British Columbia, Fraser Valley

- **Blueberries:** (Tuesday, 7/15) First pick of Duke on going at different stages. First pick by hand still happening while machine first picks are just getting started. Last few days of high temperatures are starting to have some affect on the fruit. Some sunburn on Dukes but generally the damaged berries are kicked out by the color sorter. Looking like machines rolling into Reka mid-late next week. Bluecrop by hand potentially a week away. Swd pressure has been pretty light to this point but expecting that to change.

### Northern Washington, Whatcom County

- **Blueberries:** (Friday, 7/11) Early ripening Duke experienced quite a bit of scald from the Tue/Wed (2-3rd) 91 degree days. Duke started here on 7/8/14. Early picks are firm, good quality fruit. I fear those that wait will fall behind quickly. Hot coming will push things along. evapotranspiration rate very high until stomata close up. SWD not much of a factor....yet.
- **Raspberries:** (Tuesday, 7/15) The weaker fields are tailing off at this point. Wakefield and Meekers still going strong. Yields are decent. The winter damage we sustained will likely put a ceiling on the overall crop total. I'm thinking we'll be off significantly from last year's total. Still a good crop. Got up to 90 (32 C) over the weekend. It's cooled off some now. No SWD issues I've heard of but guys are pretty much sticking with the program although some are stretching the intervals between sprays.

### Western Oregon, Willamette Valley

- **Blueberries, fresh:** (Tuesday, 7/15) The heat we expected really backed off. Some heat damage and soft fruit especially in third pick Dukes but overall quality is decent. Dukes are finishing fast. First round Draper are almost done. Second round of Bluecrop are coming in. We started getting some Legacy and Liberty in last weekend. Guys were trying to get ahead of the expected heat so they were picked a little early. Next round should be great. There's blue showing up in both Elliotts and Auroras. Last year we started Elliotts on July 22<sup>nd</sup>. Looks like it'll be pretty close to the same this year.
- **Blueberries, processed:** (Tuesday, 7/15) We've got a lot of first pick machine harvested Dukes coming in right now. Probably get our first Drapers on Thursday (7/17). Reka, Bluejay and Patriot are picking. No Bluecrop yet but it won't be too long. Quality has been very good.
- **Black Raspberries:** (Monday, 7/14) Blackcaps are pretty well finished up. Great looking fruit with record yields on some fields. It was a great season for blackcaps.
- **Blackberries, processed:** (Tuesday, 7/15) Marion, Black Diamond and all other mid season processed blackberries are past their peak and trailing off. Guys had shortened machine picking intervals to try to beat the expected heat wave so some are on their fifth pick. Overall crop total could end up off as much as half because of the winter damage but some fields are still producing very good crops and yields. Ran the first Columbia Star fruit through the IQF tunnel this season. Fruit quality for IQF looks excellent. Pricing continues to reflect the short harvest as demand for what is coming in is high. SWD hasn't been an issue yet.

# Blueberry fruit development over the past week & compared to 2013

**Notes:**

- The same fields are being sampled each week are in the Forest Grove/Hillsboro area.
- This is an indication of stage of development only. Keep in mind that variations due to the subjective nature of the protocols are part of the process.

**The Duke & Draper fields previously pictured have now started picking.**

**Northwestern Willamette Valley**

Top – 7/11/14 Middle – 7/4/14 Bottom – 7/12/13

<b>Patriot</b> Starting 7-12-14	<b>Bluejay</b> Ready to start	<b>Liberty</b> 25-40% blue	<b>Aurora</b> Late green fruit	<b>Elliott</b> Starting to color
				
<b>Week 28, 2014</b>				
				
<b>Week 27, 2014</b>				
Patriot had started picking				
	<b>Week 28, 2013</b>			
<b>Patriot</b>	<b>Bluejay</b>	<b>Liberty</b>	<b>Aurora</b>	<b>Elliott</b>

# SWD report for week 29

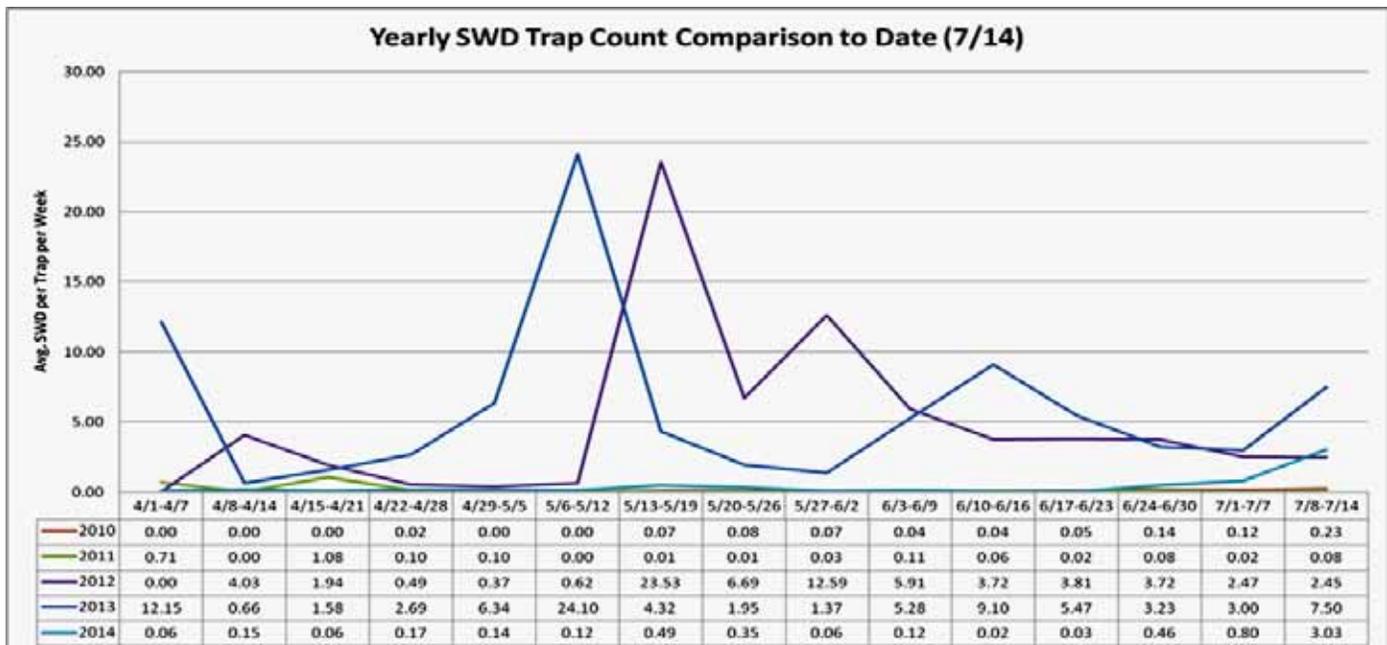
## Willamette Valley public scouting program trap count comparisons

### 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

- *When fruit starts coloring, it's recommended to take fruit samples to check for larvae along with checking the adult traps.*
- Counts went up again this past week with the biggest increases coming in the stone fruits (peaches and plums).
- Counts from adult traps over the last three weeks:
  - **Week 29:** SWD: 200 Number of traps: 66/ First larvae recovered from commercial blueberry fields.
  - **Week 28:** SWD: 63 Number of traps: 79/ First larvae recovered from commercial caneberry fields.
  - **Week 27:** SWD: 37 Number of traps: 79
  - **Week 26:** SWD: 2 Number of traps: 80



### 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

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### Newsletters/ berry reports

- [BC Blueberry IPM Newsletter](#) (7/13) 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.
- [Weekly Market Report](#) (7/14) from General Produce Company
- [The Source](#) (7/14) 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. *Reports on recent insect and disease research and observations in California.*
- [Team Rubus](#) by Gina Fernandez, North Carolina State Small Fruit Specialist. **Recent Entry (6/29): Blackberry flowers to fruit June 27 seeing red to black!** *Reports on issues in blackberries and raspberries from the Southeast.*

### Research/Breeding

- Arkansas: [New varieties could mean longer blackberry season](#) (7/14, Fresh Plaza)

### Labor

- Michigan: [Cooperative approach could overcome H-2A challenges](#) (7/8, Fruit Grower News)

### Business/Marketing

- [Naturipe Farms introduces 'Just Add Blues' promotion](#) (7/14, The Packer)
- [Inventure Foods, Inc. to introduce vitamin-enhanced whole fruit under its Rader Farms brand](#) (7/9, Market Watch)

### Pollination

- [Oregon commercial honey bee population drops again](#) (6/30, Growing Produce)
- [Winter bee kill continues to sting west, threatens hive industry](#) (7/10, Western Farmer-Stockman)

### Nutrition

- [Organic crops have significantly more antioxidants, study finds](#) (7/14, Fresh Fruit Portal)

### West

- [Washington's blueberry crop growing to 45,000 tons](#) (7/14, Capital Press)
- British Columbia: [Aldergrove farmer believes goji berries have a bright future in B.C.](#) (7/15, Fresh Plaza)

### North America

- Indiana: [Damage to blueberries varies widely after winter's beating](#) (7/14, Fresh Plaza)
- Quebec: [Raspberry growers angry about imports](#) (7/11, Fresh Plaza)
- Quebec: [10% of Quebec's blueberry production damaged](#) (7/9, Fresh Plaza)

## International

- UK: [Soft fruit industry still strong despite decline in amount grown](#) (7/15, Fresh Plaza)



## **Event calendar**

- **July 16 — OSU Blueberry Field Day** ~ 1:00-5:00pm [North Willamette Research and Extension Center](#) (NWREC) *A focus on the breeding program & research on conventional and organic production systems for commercial growers. [Here is the agenda.](#)*
- **July 17 — WSU Raspberry Selection Trials Machine Harvest Field Day** ~ 1-3 pm - Honcoop Farm, Lynden WA. Contact [Pat Moore](#) 253-445-4524 for more information. *We will be harvesting the 2011 and 2012 machine harvesting plantings that day prior to the field day. Harvested fruit from the plots will be on display.*
- **July 18 — B.C. Berry Field Day** ~ 1-3 pm -Clearbrook substation in Abbotsford. We will have fruit on display from our machine-harvested raspberries as well as some fruit from Agassiz blueberry selections and will be giving an update on research projects in BC.
- **July 18 & 19 — 4<sup>th</sup> Annual Lifewise Oregon Berry Festival** ~ Ecotrust Space, Portland, OR. [Click here](#) for details.
- **July 20-23 — International Precision Ag Conference** ~ Sacramento, CA. [Click here](#) for article. [Click here](#) for website with all the details.
- **New Posting: July 31 — Willamette Valley Berry Fieldman/Grower meeting** ~ 8 am at [North Willamette Research and Extension Center](#) Chad Finn will be joining us to discuss variety development—strawberries, caneberries and blueberries.
- **New Posting: August 14 — Smart Sprayer Demonstration** ~ 10 am at Hans Nelson and Sons Nursery, 31020 SE Waybill Road, Boring OR. [Click here](#) for more information.
- **August 20 & 21 — North American Strawberry Growers Association** ~ Summer tour, in BC. [Click here](#) for the NASGA website. More details coming soon.

- **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 29--- Pest management & field work

### Pest management activities

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[SWD monitoring and management is recommended in all crops.](#)  
[Comments & recommendations above.](#)

**As fruit colors, implement bird damage management activities:** [Birds](#), blueberries.

- [Bye bye birdie – Bird management strategies for small fruit](#) (Cornell) 13 page PDF reviewing options and a nice bird species specific guide to feeding and flying habits.

**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 treat if needed:** [Orange Tortrix Leafrollers](#), raspberries & blackberries (SW Washington & Oregon).

- The larval hatch that, before SWD, caused our major crop contaminant problems is ongoing at this time.
- Fields that have been recording high adult pheromone trap counts are at high risk of having larval contaminant problems at harvest.
- Control materials, containing active ingredients specifically targeted at leafroller larvae such as Bacillus thuringiensis and Spinosad, are much more effective on these larvae when they're small and could be used at this time.

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

- Infected fruit is now becoming easy to distinguish from healthy fruit in some Oregon fields.
- 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.
- Sort out and remove from field as much of the infected fruit as possible.
- During harvest evaluate the level of Mummyberry infections and the areas of the field that are infected.
- Use this yearly Mummyberry information to assess and plan next year's Mummyberry prevention program.

**Scout for and evaluate if management action is needed:** [Twospotted mites](#), raspberries.

### Additional, ongoing pest information

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#### Diseases

- [Phytophthora Root Rot](#), raspberries. *Look for primocane collapse.*
- [Blackberry Rust](#), (Phragmidium Rust) Evergreen blackberries.

#### Insects/Mites

- [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.*

[Click here](#) to go back to the top of this newsletter.

- [Raspberry Beetle](#), **northern raspberries**. This small beetle can cause fruit damage and be a major contaminant in northern raspberry fields. Leaf feeding pattern is very distinctive.
- **Root Weevils, strawberries and blueberries**. Larvae and adults of [Black Vine](#), [Rough Strawberry](#), [Strawberry Root Weevils](#) are now being recovered.
- [Blueberry Gall Midge](#), **blueberries**. Tip damage from this midge is evident 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.
- **Mites in raspberries:** [Twospotted mites](#) and [Yellow mites](#).

## Crop Work Week 29

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### 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

- ***As fruit starts coloring, begin sampling fruit for SWD infestation, continue sampling throughout harvest and treat as needed.***
- ***Harvest ongoing in all regions.***
- 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 & 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.

### Blackberries

- ***As fruit starts coloring, begin sampling fruit for SWD infestation, continue sampling throughout harvest and treat as needed.***
- ***Harvest ongoing in Oregon & Eastern Washington.***
- Can have pheromone traps out to monitor for leafrollers.
- 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.
- Can apply SWD management insecticides.

### Evergreen blackberries

- Scout for blackberry rust and treat as needed.

### Raspberries

- ***Sample fruit for SWD infestation, continue sampling throughout harvest and treat as needed.***
- ***Harvest ongoing in south.***
- Scout for raspberry beetle feeding symptoms
- Scout for Yellow Rust and assess treatment options.

- Scout for yellow mites and [twospotted 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.

### **Strawberries**

- ***Processed harvest 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 and put out pheromone monitoring traps.
- 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 requires 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.
- Scout for fruit quality issues such as mold.

## **Archived Small Fruit Updates**

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

[28-SFU07-08-14](#) [27-SFU07-01-14](#) [26-SFU06-24-14](#)