

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 30, 2013

Week 31

Table of Contents

- [Regional crop information](#)
- [Grower resources](#)
- [SWD resources](#)
- [Pest management activities](#)
- [Ongoing pest information](#)
- [Industry news](#)
- [Crop work](#)

[Blueberry harvest in home stretch; prices soften](#) (7/29, Capital Press)

[SWD research may lower insecticide use](#) (7/24, Western Farm Press)

[No 'hot good' orders yet this season in Oregon](#) (7/26, Capital Press)

[Japanese beetles threaten Oregon's agriculture, nursery industry](#)
(7/28, Oregonian) This is bad news. Japanese beetles are a major blueberry pest in Michigan and New Jersey blueberries. Turf grown between rows is a favored habitat.

[The Weather Cafe](#) by Rufus La Lone

[Small Fruit Cold Storage](#)

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.

British Columbia, Fraser Valley (Monday, 7/29)

- **Blueberries:** Draper first picks went last week with pretty good volumes and excellent quality although the fruit was a bit smaller than it should have been. Seems to be a trend this season. Dukes were similar. I think pollination was a big factor in the crop this season contributing to the lower volumes. I know bees didn't get into some fields in advance of flowering (some delayed 7 days or better). In a year where there was such a fast, concentrated flowering period, this tardiness would result in a lot of missed or poorly pollinated flowers. Guys really have to watch bee placement timing and communicate with beekeepers. Not the whole story but a contributor. Saw some Elliots starting to blue in the Abbotsford area. So there could be some picking in the next couple weeks.

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](#)

- **Raspberries:** Raspberries really winding down. Some fellows are done. By next weekend the balance should finish. Really good picking weather. But it's so dry that the small fruit that's left hasn't got a lot of weight to it. It'll be interesting to see the final volumes. Not a big year but looks better than expected.



Northern Washington, Whatcom County (Friday, 7/26)

- **Blueberries:** Duke first pick is all but done, with some waiting to machine and get as much as possible in one pick. Bluecrop coming in, with nice fruit for fresh, but a few of the king blooms already soft from the heat. Bluecrop just doesn't like the heat. First picks of Draper starting. Very firm, but maybe a little too much red yet. Labor is still a little on the tight side, but most are getting by with the hand pickers they have. SWD watch continues and we are testing every load that comes in. So far, everyone has been on a good tight spray program, and no issues here.
- **Raspberries:** Raspberries are all but finished with a few drums still wandering up and down the rows looking for the odd berry that might be left on the bush. Great season for RB's!! especially after the rocky start.

Raspberry variety comparison

- Below is a simple comparison of Meeker and Wakefield fruit between 'typical' berries picked on July 11th in Whatcom County, WA.
- Wakefield is on the left in the first photo & on the top in the second.
- Caution should be taken in generalizing too much from this. It's only one example from one particular day and field. Results can (& will) vary.



Willamette Valley, Oregon and SW Washington

- **Blueberries** (Tuesday, 7/30) Nice cool down this week. It's letting us pick longer into the afternoon and catch up in some of the fields. Good quality fruit of average size and average yields per acre. Labor has loosened up. We're into Legacy and Liberty heavy for fresh market. Bluecrop is harvesting for both fresh and processed. The machine harvesters are running full time—moving into Jerseys along with a lot of Bluecrop, Berkeley and the rest. Elliotts are close.

Blueberry development—Western Willamette Valley

Notes:

- As we're into harvest, I'm switching things around, usually dropping fields after the first harvest.
- With the concentrated fruit ripening this year it's been slow going for picking crews so some Legacy and Liberty are hanging in the field longer than is optimal.
- Aurora has an unusual look to its ripening pattern in many of the clusters as illustrated below. The left hand Aurora photo also shows some shriveled fruit in the center from our hot weather.
- For week 30 below, the Bluejay and Legacy field were being harvested when photos were taken. Examples are from the unharvested part of fields.
- The Jersey field photo is not representative of overall fruit clusters. It's one of the larger ones included to illustrate the variations between cultivars (& because I had room for it).
- [Click here](#) for MSU's growth stage table.
- Dropped in previous weeks: Duke, Draper, Patriot and Legacy. This is the probably the last week for Legacy and Liberty. All of these are now either in or done with harvest.
- Getting down to just Elliott and Aurora. I'll add some rabbiteye next week also.

7-26-13—Week 30 (Below)

Liberty
Harvesting



Legacy
Harvesting



Elliott
25% blue



Aurora
5% blue



Aurora
Back of same cluster



7-19-13—Week 29 (below)

Bluejay
75% blue

Liberty
25% blue

Jersey
35% blue

Elliott
15% blue

Aurora
fruit coloring



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

Grower resources

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.

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)

- **Recent change**

- Taiwan now has a Delegate (Spinetoram) tolerance in blueberries of 0.2 ppm. The table has no tolerance listed.

Spotted Wing Drosophila resources for 7-30-13 Week 31

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.

Alert for Oregon and SW Washington

Larvae have been recovered from some commercial blueberry, raspberry and blackberry fields in the Northwest. It is strongly recommended that all caneberry and blueberry growers with ripe or ripening fruit immediately implement and maintain through the end of harvest a regular 7 day insecticide application regime for SWD management.

WSU Extension alert for NW Washington

[Click here](#) for the alert

“SWD larvae have been recovered in red raspberries in Whatcom County and growers should make sure their berries are protected through harvest with 6-7 day applications of effective insecticides. Depending on target markets and stage of ripeness, growers should select among the list of insecticides registered for caneberries in Washington. [Click here](#) for the list. For further information, contact [Lynell Tanigoshi](#), WSU Small Fruit Entomologist. “

BC Blueberry IPM Newsletter for 7/26/13

[Click here](#) for the full newsletter

“The risk of SWD damage to ripe blueberries remains very high. SWD larvae were found inside ripe blueberries in most regions of the Fraser Valley this week. Trap catches of adult flies remain high....All ripe and ripening varieties should be protected with insecticide sprays at this time.”

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

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.

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

Pest management activities

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.



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.

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.

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

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

Industry news/resources

Newsletters/ Berry reports

- [BC Blueberry IPM Newsletter](#) (7/26) Weekly by Carolyn Teasdale, [ES Cropconsult](#). Sponsored by the BC Blueberry Council.
- [New Jersey Blueberry Bulletin](#) (7/22) Weekly newsletter by Gary Pavlis, Rutgers blueberry agent.
- [Michigan State Extension Blueberry News](#) (7/24)
- [The Source](#) (7/29) 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 entry: 7/19—Data driven decision making: Finding success in plant diagnostics and stock speculation** Reports on recent insect and disease research and observations in California.
- [Team Rubus](#) by Gina Fernandez, North Carolina State Small Fruit Specialist. **Recent entry: 7/19—Von blackberry variety holding up in wet weather** 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

- [Pen and paper crop scouting becoming obsolete](#) (7/29, Ag Professional)

- [USDA releases report showing rural households with internet](#) (7/30, Ag Professional)

Labor/Immigration

- [Labor situation eases at berry farm](#) (7/26, Capital Press)
- California: [Shortage of farm workers to pick strawberries](#) (7/25, KGO-TV (San Francisco))
- Michigan: [Labor shortage has farmers seeking workers for harvest](#) (7/30, Fresh Plaza)
- [Farmers, laborers caught in middle of immigrant debate](#) (7/28, Arizona Republic)
- California: [Labor crunch stunts growth of fig industry](#) (7/29, Capital Press)

Politics & Ag

- [California strawberry growers unite on immigration reform](#) (7/26, Fresh Plaza)
- [Food stamps at the heart of farm bill political drama](#) (7/29, NPR)

Regulatory Agencies

- [USDA's path of ill regulations](#) (7/24, Western Farm Press)
- [Proposed rule for food processors alarms some, confuses many](#) (7/29, Food Safety News)
- [FDA issues proposed rules focusing on imported food](#) (7/26, Fruit Growers News)

Food Safety

- Canada: [New interactive web tools explain complex food safety processes](#) (7/25, Canadian Food Inspection Agencies)

Pesticides

- [Honey bees in trouble? Blame farm chemicals, study says](#) (7/24, NBC News)

West

- [Increased volumes for BC blueberries](#) (7/29, Fresh Plaza)

North America

- Maine: [New fruit fly could hurt Maine wild blueberry crop](#) (7/28, San Jose Mercury News)
- Nova Scotia: [Blueberry growers resist plan for processing plant](#) (7/30, Fresh Plaza)

International

- United Kingdom: [Company trialing black raspberry varieties](#) (7/26, Fresh Plaza)

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

Crop Work Week 31

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.*
- 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.
- Scout for berry symptoms like green fruit botrytis, hail damage, Mummyberry, etc.

Raspberries

- **Sample fruit for SWD infestation, continue sampling throughout harvest and treat as needed.**
- **Harvest ongoing in north. Finishing in South.**
- 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.
- Scout for weevils and treat as needed.
- (North) Scout for raspberry beetle feeding symptoms.
- Scout for fruit mold and treat as needed.
- Scout for yellow rust and assess treatment options.
- Scout for aphids and treat as needed.
- Scout for leafroller larvae.

Blackberries

- **As fruit starts coloring, begin sampling fruit for SWD infestation, continue sampling throughout harvest and treat as needed.**
- **Harvest ongoing.**
- Scout for leafroller larvae and treat as needed to prevent fruit contaminant problems.
- Can have pheromone traps out to monitor for leafrollers.
- 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.
- 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 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.
- 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.
- Scout for fruit quality issues such as mold and cat facing.

Archived Small Fruit Updates

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

[SFU07-23-13](#) [SFU07-16-13](#) [SFU07-09-13](#)

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

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