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 & industry through their commissions & councils.

August 9, 2011

Table of Contents

A bad week for Northwest strawberries

- Lethal E. coli Outbreak in Oregon linked to strawberries (8/8, Food Safety News)
- Did deer cause Oregon's strawberry outbreak? (8/9, Food Safety News)

The Weather Cafe by Rufus La Lone

Small Fruit Cold Storage Report

Alert

Spotted Wing Drosophila, all berries

- The risk to berry crops still harvesting is increasing.
- Be prepared. Be conservative & pro-active. If you or your neighbors had SWD pressure last year, take all reasonable precautions to minimize the risk this insect poses to your crop.
- Many caneberry fields are close to the end of harvest and fruit quality is declining. As there is less economic incentive to maintain an insecticide program for SWD management in these fields, growers are tending to let up.
- In blueberries last year, and this year, serious SWD pressure has held off until just about the end of Duke season. There are now more reports of higher trap counts and isolated, sporadic fruit infestation in blues.
- Growers should rely on past experience, fruit ripening stage and fruit sampling for larvae for making decisions on the timing of insecticide applications.
- The protocols for checking fruit for larvae are listed below. Many growers and processors have now implemented these to maintain fruit quality.

See the Weekly SWD Update Below

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

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

- **Blueberries:** (Tuesday, August 8) Dukes continue to be hand harvested and machined, and should be done after this week. Fruit a bit under-sized. Bluecrop being hand-picked and quality and size is good, but volumes may be off overall. Saw the first Elliotts starting to colour late last week.
- **Raspberries:** (Tuesday, August 8) The raspberry harvest is entering the last week and continues to produce with surprising consistency. Consistent daytime temps with lack of extremes and cool nights have allowed the crop to continue without drying up. Quality has remained good but we should start to see some SWD issues in the late fruit showing up now if there is a letdown in spraying. Wild blackberries are starting to colour up so the fly numbers should really start to ramp up now.

Northern Washington, Whatcom County

- **Blueberries:** (Friday 8/5) We're starting to harvest Dukes which look pretty good so far as far as size and quality. Also applying SWD sprays here, although there have been very few caught in the traps. Fruit drop is still an issue, due to shock, Mummyberry, weather etc., etc.
- **Raspberries:** (Friday 8/5) Winding down, starting third round of SWD sprays. Tonnage will be down a bit from last year. Finally got a good stretch of weather, it should hold till the end now.
- **Strawberries:** (Friday 8/5) We're finishing fertilizer applications.

Willamette Valley, Oregon and SW Washington

- **Blueberries:** (Tuesday, August 9) Great harvest weather has continued. We're in the end of Bluecrop with Draper, Bluegold, Rubel, Legacy, Jersey and Liberty now all coming in. Excellent fruit quality and pretty good yields. SWD insecticide applications are getting more attention as trap counts are going up. No Elliotts yet but they won't be too long.
- **Blackberries:** (Monday, August 8) Marions are into fifth pick this week, good quality and size for this late but won't last much longer. We never had a peak, slow and steady all the way but are starting to decline now. Usually day's seven through 10 are the peak and then it starts to drop off, but this year days 18 and 19 were the same as nine and 10. We are at day 21 of harvest with about 10 days to go. Perfect, ideal; whatever positive attribute you want to use to describe the harvest weather. Evergreen blackberries are two weeks off from starting harvest.

Leaf/tissue analysis & Soil testing

***Post harvest** is the best time to do most soil and leaf testing for nutrient management planning.*

- **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.

Event Calendar

For more comprehensive event calendar, click here.

- **August 25—USDA-ARS Blueberry Field Day** ~ 1-4 PM Lewis-Brown Horticultural Research Farm, 33447 DE Peoria Road, Corvallis, OR Click here for the agenda. For more information, call David Bryla 541-738-4094 or email Dave at david.bryla@ars.usda.gov

- **September 15 — Oregon Raspberry & Blackberry Commission meeting** ~ 6pm, Langdon Farms. Call 541-758-4043 or email Philip Gutt for more information.

- **September 20 — Oregon Blueberry Commission meeting** ~ 12pm. Santiam Room, West Salem Roth's IGA Salem, Oregon. Call (503) 364-2944 for more information or email Brian Ostlund.

- **September 21 — Washington Red Raspberry Commission meeting** ~ Mt. Vernon, WA. Contact Henry Bierlink or call 360-354-8767 for more information.

- **October 4-7—NABC & USHBC Fall meetings** ~ Caesar's Atlantic City, Atlantic City, New Jersey. Click here for the informational flyer and tentative schedule.

***Click here** to go back to the top of this newsletter.*

Spotted Wing Drosophila Update for 8-9-11

This Update is a collective effort. It is composed by Peerbolt Crop Management with contributions from OSU, USDA-ARS, WSU, B.C. Ministry of Agriculture and various northwest berry industry people.

SWD Information Websites

Peerbolt Crop Management | Oregon State Univ. | B.C. Ministry of Ag. | WSU Westside | WSU Eastside

Comments

- As expected, the risk from SWD to berry crops still harvesting is increasing.
- Growers should rely on past experience, regional reports, fruit ripening stage and fruit sampling for larvae for making decisions on the timing of insecticide applications.
- Many caneberry fields are close to the end of harvest and fruit quality is declining. As there is less economic incentive to maintain an insecticide program for SWD management in these fields, some growers are tending to let up. These are the fields where we're recovering the most larvae in the fruit.
- In blueberries (last year & this year) serious SWD pressure has held off until just about the end of Duke season. There are now more reports of higher trap counts and sporadic, isolated cases of fruit infestation in blues.
- It is strongly recommended that growers with fruit coloring and/or harvesting have a SWD management program in place that includes both fruit sampling for larvae and regular control applications.
- Increases in adult trap counts, incidences of larval infestations, and the levels of those infestations are all anticipated from now through the end on the season.
- The salt solution sampling method is a valuable additional tool for growers and processors. Allowing them to determine infestation levels well before the fruit enters the processing plant.

SWD in the news

- Dreaded pest a virtual no-show (8/4, Capital Press)

Guidelines for checking the fruit for SWD larvae in the field

These suggestions are based on techniques that various public researchers and industry personnel have been developing over the past year and a half. If any of you have ideas for improvements to these protocols, please pass them along. We're all in this together.

- Depending on size of fruit (strawberries take longer than caneberries or blueberries), the larvae will emerge from the fruit into the salt solution in a short period of time.
- The smaller the larvae and the lighter the infestation, the more difficult it is to see the larvae.
- Excellent lighting when looking for the larvae is critical to being able to see the smaller ones.

Present suggested methods:

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

1. Collect a sample of fruit to be tested (Strawberries: 25-30 per sample, Caneberries/blueberries: 75 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) holding 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.

Regional Monitoring *(South to North)*

Oregon Public Scouting Program *(Number of traps checked this week in the crop in parentheses).*

This scouting program & reporting system are being funded by a USDA SCRI grant, A Northwest Center for Small Fruit Research grant; the Washington Red Raspberry Commission & the Washington Blueberry Commission.

- **Lane County: Strawberries (1):** no males/1 female. **Cherries (2): 5 males/ 8 females**. **Raspberries (1):** no males/ 1 female. **Blackberries (2): 1 males/9 females**.
- **Linn County: Strawberries (10): 13 males/8 females**. **Cherries (2): 75 males/ 28 females**. **Raspberries (2):** 3 males/3 females. **Blackberries (7): 10 males/13 females**. **Blueberries (8):** 1 males/2 females. **Peaches/Nectarines (3)**:**7 males/17 females**. **Honeysuckle (1):** no males/3 females. **Wild Habitat (19): 137 males/109 females**. **Apple (2):** 5 males/4 females.
- **Benton County: Cherries (2):** 3 males/1 females. **Raspberries (1):** 1 male/no females. **Blueberries (2):** none. **Peaches (3)**:2 males/1 female. **Wild Habitat (4):** 1 male/4 females.
- **Marion County: Strawberries (1):** 2 males/1 female. **Blackberries (3):16 males/13 females**. **Blueberries (4):** none.
- **Clackamas County: Strawberries (1):** 1 male/2 females. **Raspberries (2):** 2 males/1 female. **Blackberries (2): 6 males/8 females**. **Blueberries (6):** 5 males/2 females**. Tayberries (1):** 9 male/no females. **Honeysuckle (1):** 1 male/no females.
- **Yamhill County: Cherries (4): 5 males/6 females**. **Blackberries (5):** 2 males/1 female. **Blueberries (1):** none.
- **Washington: Blueberries (4):** none. **Peaches (1):** none.
- **Multnomah County: Cherries (1): 7 males/9 females**. **Raspberries (3):** 1 male/1 female. **Blackberries (3):** 4 males/3 females. **Blueberries (2):** 2 males/5 females**. Peaches (3):** none. **Boysenberries (1):** 4 males/1 female.

Southwest Washington Public Scouting Program

- **Clark/Cowlitz/Lewis Counties: Cherries (2):** 4 males/6 females. **Raspberries (27): 30 males/32 females**. **Blackberries (6):** 2 males/4 females. **Blueberries (22):** 1 male/ no females. **Peaches (1):** 5 males/1 female.

Eastern Washington--WSU Reporting Site

Click here for the WSU Eastern Washington SWD reporting site.

- Most recent posts on the WSU site:
  - **Friday, 5 August:** *"First fly has been found in the Wenatchee area. This makes 8 regions with positive traps."*
  - **Thursday, 4 August:** *"6 males in 4 traps found yesterday, in Orondo, Rock Island, and Mattawa districts; the latter two are first catches for these districts. To date, 7 regions have positive catches."*

Western Washington--WSU Public Scouting Program

This scouting program & reporting system are being coordinated by Whatcom County Extension & funded by the Washington Red Raspberry Commission, the Washington Blueberry Commission & the Washington State Commission for Pesticide Registrations.

Click here for the Home site with links to all the counties and site use information.

- Click here for the demonstration video on how to use this resource.
- Here are individual county links (south to north): Clark County, Cowlitz County, Lewis County, Pierce County, King County, Snohomish County, Skagit County, Whatcom County.

Southwestern British Columbia

Click here for the 8/8/11 SWD Monitoring Report for Southwestern BC from the BC Ministry of Ag.

- **Information from this recent report:**
  - **"***Trap catches of SWD flies continue to increase. Fruit is susceptible to damage from SWD when it ripens (colours). Expect numbers to increase from now on.* ***Treatment is critical now.***
  - ***Raspberries:*** *Consider a post-harvest full-canopy spray to decrease the potential of SWD moving into neighbouring blueberry fields.*
  - ***Blueberries:*** *Incorporate SWD sprays into your harvesting schedule at ten-day intervals."*

Management Material Resources

Oregon & Washington

- **Blueberries:** SWD pesticide options & information
- **Raspberries & blackberries**: SWD pesticide options & information
- **Strawberries:** SWD pesticide options & information

British Columbia (6/28/11): SWD Management in BC Berry Crops (with insecticide options listed)

Pest Management & IPM Information

- **Redberry Mites, late ripening blackberries:** Right on schedule, we're seeing a few Redberry Mites in late ripening blackberries. They've been verified in some late season Marions and early ripening Chesters, so far. Evergreens are usually the hardest hit. The berries turn brick red and hard instead of ripening.
  - **New treatment method** Click here for UC management guidelines for this pest. They've come up with an improvement over our traditional sulfur applications, namely: **"**Horticultural oils, such as Natur'l Oil and Golden Pest Spray Oil, when used at the rate of 1.2 to 2% volume to volume, applied after green fruit or first pink fruit stage in four consecutive applications spaced 2 or 3 weeks apart give significant control of Redberry Mite, while causing less harm to fruit yield than sulfur sprays."
- **Cane Blight, raspberries:** Right after harvest is the time to protect the open catcher plate wounds from cane blight infections with a fungicide application.

Ongoing Pest Management Information

Birds, blueberries.

Diseases

- **Blueberry fungal diseases: Anthracnose Ripe Rot, Alternaria Fruit Rot, Botrytis Fruit Mold, Mummyberry.**
- **Blueberry virus diseases: Scorch virus, British Columbia blueberries.**
- **Raspberry and blackberry fungal diseases: Blackberry Rust** (Phragmidium Rust) **evergreen blackberries, Yellow Rust, raspberries, Phytophthora Root Rot raspberries.**
- **Raspberry and blackberry virus diseases:** Raspberry Bushy Dwarf virus, **Raspberries, Marionberries.**

Insects/Mites

- **Blueberries, Strawberries, Caneberries – Root Weevils** *For more information on our major pest weevil species, click on the following: Black Vine, Rough Strawberry, and Strawberry Root Weevils.*
- **Aphids,** northern raspberries
- **Orange Tortrix Leafrollers**, southern raspberries & blackberries.
- **Two-spotted Spider Mites** raspberries.
- **Orange tortrix Leafrollers** in **Blueberries**, **Raspberries**, **Blackberries**.
- **Leafroller larvae** blueberries, caneberries.

- **Blueberry Gall Midge** blueberries.

Industry News/Resources

Newsletters

- B.C. Blueberry IPM Newsletter (8/7)
- New Jersey Blueberry Bulletin (8/1)
- Michigan State Fruit News (8/9)
- Michigan Blueberry Newsletter (8/2)
- Market scope: blueberries blackberries raspberries strawberries
  Recent stories & fresh market pricing for the various berries from The Packer.
- 'The Source' (8/8) *Market updates from The Produce News.*

Immigration/Labor

- 3 strawberry farms in Washington state fined $73,000 for employing children as young as 6 (8/5, Washington Post)

West

- Washington fruit campaign seeks $32 million for research (8/9, The Packer) *This is about the Washington tree fruit growers initiative to fund six endowed positions at WSU for tree fruit research. Endowed extension and applied research positions are becoming a major strategy for preserving industry support resources at both WSU & OSU. Could our berry industries step up to help us maintain some of our berry extension & research?*

North America

- Blueberry peels may promote healthy cholesterol levels (7/7, Better health Research)

International

- 'Buy local' won't affect southern hemisphere growers (8/8, FreshFruitPortal.com)
- (UK) Arctic winter and hot spring brings out bumper blackberry crop a month early (8/9, FreshPlaza.com)

***Click here* to go back to the top of this newsletter.**

Crop work

All crops—

- Pay attention to new plantings of all berries for weeds, water, insects, diseases, and nutrient deficiencies.
- Can put out monitoring traps for Spotted Wing Drosophila
- If ripe fruit is in the field, can monitor for SWD larvae by using a 'baggie' test on fruit samples.
- Weed management.
- Post-harvest—soil and leaf test for evaluation of nutrients.
- Post harvest—can treat for SWD management if field is adjacent to vulnerable fruit crop..

Blueberries—Harvest ongoing in all regions

- Scout for fruit disease symptoms and/or disorders.
- Scout for leafroller larvae feeding.
- Scout for aphids and treat as needed, particularly in northern growing areas where aphids vector Scorch virus.
- Scout for weevils and weevil notching.
- Scout for virus symptoms and send in samples for testing as needed.
- Maintain bird damage management.
- Scout for Mummyberry.
- Can apply SWD management insecticides.
- Can apply clean up insecticide just before harvest for crop contaminant management.

Blackberries—Harvest ongoing in Oregon and SW Washington

- Scout for virus symptoms and send in samples for testing as needed.
- Can apply fungicides for fruit/blossom rot in late season crops.
- Can apply clean up insecticide just before harvest for crop contaminant management.

- Scout for Phragmidium Rust in evergreen blackberries.
- Scout for Cane and Leaf Rust.
- Scout for leafroller larvae and treat as needed to prevent fruit contaminant problems.
- Can apply SWD management insecticides.

Raspberries—processed harvest wrapping up in SW Washington and Oregon, and ongoing in Northern Washington and B.C.

- Scout for Yellow Rust and assess treatment options.
- Scout for spider mites and treat as needed.
- Scout for virus symptoms and send in samples for testing as needed.
- Scout for aphids and treat as needed.
- Scout for leafroller larvae and other insect crop contaminants.
- Scout for ripe fruit fungal diseases.

Strawberries —Processed harvest is finished in all regions.

- Scout for weevil adults and notching.
- (Southern strawberries) Can treat for Strawberry Crown Moth. Adults are now flying.
- Scout for Powdery Mildew and treat as needed.
- Scout for Two-Spotted Spider Mites and predatory, beneficial mites.
- Scout for aphids and treat as needed.
- Scout for fruit formation issues like cat-facing.
- Scout for fruit quality issues such as mold.
- Scout for virus symptoms/send in sample for testing to confirm.
- **Post-harvest**
- Mow & treat for SCM in south if needed.
- Mow & renovate 2-4 weeks after harvest unless pest pressure require mowing & treating sooner.
- Take soil tests.
- Fertilize as needed.

***Click here* to go back to the top of this newsletter.**

Archived Small Fruit Updates

(For older Updates click here.)

08-02-11 **07-26-11** **07-19-11**