News and opinions from Peerbolt Crop Management and BerriesNW sent out weekly during the growing season, and sporadically when we have something to share in the off season.

July 13, 2010

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Other links

Video link of the week: 2009 Whatcom County raspberry festivals.

- Nice feature on Boxx Berry Farm.
- The Northwest Raspberry Festival in Lynden happens this coming Friday & Saturday, July 16 & 17.

Upcoming Meetings
The Weather Cafe by Rufus La Lone
Small Fruit Cold Storage Report

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.

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

British Columbia, Fraser Valley

- **Blueberries:** (7/12) Some hand picking of Dukes late last week and early this week. I noticed some soft fruit due to excessive heat and sunburned leaves, especially on Elliotts. Bluecrop is starting to colour a bit which we really don't want to see quite yet. Cooler temps may slow this down and allow that fruit to size some more. I don't know about this Duke crop. Size is not there in many fields.
- **Raspberries:** (7/12) Raspberry pick continues on with similar results as others report. Soft fruit, sunburn fruit and leaves, and an expectation of considerably lower yields. A turn to cooler weather will offer some relief and maybe firmer berries. Hopefully they continue to come off.

Whatcom County, Northern Washington

- **Blueberries:** (7/8) Reka and Duke are coloring nicely. It'll be a short crop over all with frost, hail, and non-pollination. Some of the Bluejay and 1613's (Hardiblues) are very thin. Birds, birds, birds.
- **Raspberries:** (7/8) Raspberries took the heat pretty well, better than the humans. Short crop and bet the yield estimates are going to be way off. Fruit still rather soft and juicy. Should push up the IQF price at least.
- **Strawberries:** (7/8) Low 90's up here, sure makes my white skin rosy. Strawberries are just a few days away from being done, average yield, good quality.

Skagit County, Northern Washington

Next Thursday(7/15),there will be TWO berry field days in the Skagit valley. At 1PM, Pat Moore, WSU small fruit breeder, will have his machine-harvested raspberry selection field day at Sakuma Bros. Just after that, at 3:15 PM, Tom Walters, WSU berry specialist, will host the berry field day at WSU-Mount Vernon. We'll meet at the Olsen House; contact Tom at twwalters@wsu.edu for more info or for directions.

- **Blueberries:**
  - (7/12) Saturday no starlings -- Sunday about 2500 arrived in a flock! More converging. Great year for birds. So now the birds are going to get both of the berries left hanging on the bush. At least harvest labor bill will be lower.
  - (7/9) Some fields here have Bluecrop ripening ahead of Duke (about 25-30%) from early bud break, and then the balance is late. Duke coming, should be ready to pick the week of the 19th, or so. Reka and Early Blue are set to go next week for hand pick, but not ready for machine yet.
  - (7/9) At WSU-Mt Vernon, we will probably do first harvest of our blueberry variety trial next week. Duke looks like it will be ready, as will some of the Arkansas selections.
- **Raspberries:**
  - (7/9) Our raspberries sound like everyone else's-- Soft and crumbly early, now just soft, some beginning to sunburn, and all are tough to make IQF.
  - (7/9) At WSU-Mt Vernon, we ran into a lot of soft Meeker fruit that's kept us from making IQF grade. Trying again today, though. We have a small plot of Chemainus that is really shining right now. Large, firm, high quality on the harvester. Looks like it would IQF well.
- **Strawberries** (7/9) Strawberries are wrapping up. Remarkably good quality, if not a bumper yield.

Eastern Washington

- **Blueberries:** (7/8) Second pickings of Duke are finished in Eastern Washington. Yields in established fields seem to be similar to that of last year. Male SWD were collected in Mattawa, Washington, making this the first detections of this species in Eastern Washington.

Willamette Valley, Oregon and SW Washington

- **Blueberries:**
  - (7/10) At Salem, Bluecrop pick began today. This was a schizophrenic pick as the fruit was too red, but — this week's heat had it going soft in a hurry. We posted 85, 95, 96 and 95 deg high temps on July 6, 7, 8 and 9, respectively. Bluecrop fruit did come in very large and, after the red/soft sort out, the pack looks good. Blueray will also pick today. The sun/heat was very unkind to our second pick Duke that's still on the bush. Our first SWD trap catch was made this week. We called in aerial Mustang Max.
  - (7/9) This heat is sure a lot of fun. We're just starting baby field of Dukes. The fruit looks nice, we thought the yield was going to be higher, and I guess it still might if we cool down in time. Thinking of starting machine harvest next Wednesday in Reka. We had a large aphid population but the warm temps are helping to reduce them. Trying to keep up with water, and have been dealing with high salt levels in the drip tubing, with low levels at the pumps. What's going on with that?
- **Blackberries:** (7/11) We received our first Marions on Saturday (7/10), same date as last year. The quality was OK but on the small side. We still have fields that are a week away from starting harvest. The hot sun these past few days really took a toll, lots of sunburn and shrivel in all the black fruit. The heat also is making the cold-damaged fields that were hanging in there very apparent. As I said about a month ago, "Cold damage from the winter, cool and wet spring, pollination problems — all we need now is 100 degrees and SWD and the season will be complete". We got the 100 degree heat, now I'm waiting for SWD problems to make the season complete. I would now add rain to the potential disaster list. It would be really bad if we got any after this recent heat. The sun damaged fruit would mold quickly. On the positive side, evergreens still look good.
- **Raspberries:** (7/12) The past heat wave turned soft, crumbly fruit into puree before it even got to the processor, but right now fruit doesn't look so bad. Maybe we can still get some decent fruit. Still it's going to be a down year for IQF quality and yields overall. Probably near or past the midpoint on Meekers. It's kind of hard to tell how long the harvest will go on given the long, drawn out bloom time. Mite problems are popping up in some fields. Nothing like combining pyrethroid insecticides and hot weather to bring them out

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Field Day / Meeting Information

- **July 14 — OSU Blueberry Field Day:** 1-5 pm at the North Willamette Research Station in Aurora. Click here for the agenda and details.
- **July 14 — UC Davis Precision Ag Workshop:** Full day at the UC Davis campus. $50 registration fee. Click here for details. "The workshop will cover fertility and yield variability, practical uses of remote sensing, soils electrical

conductivity, yield monitors, and site-specific weed control. There also will be an overview of concepts and techniques used to identify and manage in-field variability."

- **July 15— Raspberry Machine Harvesting Field Day:** 1:00-3:00 pm at the machine harvesting plots at Sakuma Bros (on the east side of Avon Allen Road between Cook Road and Benson Road) in Burlington, Washington. There are 200 raspberry selection and variety plots that are fruiting this year, and we will have fruit of these on display. Following the machine harvesting field day, **Tom Walters will have a berry field day at the WSU Mt Vernon Research Center starting at 3:15.**
- **July 27–29 — 3rd annual PNW Engineering Solutions for Specialty Crops Conference** ~Tri Cities, WA. Topics to be covered include: the path and cost of commercialization, alternative equipment power sources, data collection and decision assist technologies, format will include presentations, open mike, roundtable discussions, field tours and participation at the WSU Sunrise Orchard Field Day. See site for details.

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Industry News/Resources

Newsletters

- **The Source,** market updates from The Produce News for 7/12: Click here.
- **B.C. Blueberry Council Blueberry IPM Newsletter** for 7/12: Click here.
- **Michigan State IPM Fruit Newsletter** for 7/13: Click here.
- **New Jersey Blueberry Bulletin** for 7/6: Click here.

West

- **(CA) Farm overtime bill's fate up to governor:** Click here (7/7, Sacramento Bee)

National

- **Push resumes for agjobs bill to allow farmerworker illegals to stay:** Click here (7/10, Naplesnews.com)
- **National blueberry conference set for October:** Click here (7/12, The Produce News)
- **Web seminar planned to combat "the Dirty Dozen":** Click here (7/8, The Packer)

International

- **Fertilizer demand rebounding:** Click here (7/7, growingproduce.com)

Crop Protection Materials Information

- **(CA) California screamin' over fruit fumigant:** Click here (7/6, The Big Money)

Pest Alerts

- **Anthracnose Ripe Rot**, **blueberries.**
- **Alternaria Fruit Rot, blueberries.**
- **Twospotted Spider Mites, raspberries.** The recent hot, dry weather has accelerated mite development and led to outbreaks needing applications of miticides to manage.
- **Orange Tortrix Leafrollers**, **southern blackberries and raspberries:** The larval hatch that causes our major crop contaminant problems has started in caneberry fields in SW Washington and Oregon.
- **Birds, blueberries.** A lot of bird problems this year. In particular, Cedar Waxwings are at much higher levels than usual.
- **Phytophthora Root Rot raspberries.** Stress on root systems compromised by root rot is showing up a lot right now following the first major heat wave of the season.

Ongoing Pest Management Information

Insects/Mites

Aphids/Scorch virus northern blueberries, Root Weevils: Black Vine, Rough Strawberry, and Strawberry Root Weevils, **Yellow Mites, northern raspberries, Strawberry Crown Moth, southern strawberries/caneberries, Redberry Mite evergreen blackberries, Blueberry Gall Midge, blueberries.**

Diseases

Powdery Mildew, strawberries, Blackberry Rust (Phragmidium Rust) **evergreen blackberries, Yellow Rust, raspberries, Shock virus, blueberries, Scorch virus, British Columbia blueberries, Mummyberry blueberries**

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Pest management---Spotted Wing Drosophila Update for 7-13-10

This Update is a collaborative effort with contributions from OSU, USDA-ARS, WSU, and Peerbolt Crop Management

- *Click here for information links from PCM.*
- *Click here for the OSU SWD website.*
- *Click here for the BC Ministry of Agriculture and Lands SWD website.*
- *Click here for the WSU, Mt. Vernon SWD website.*

Alert: Restricted use of Entrust insecticide in organic berry production *(Click here for label)*

There are limitations on the use of Entrust that need to be strictly followed. Spinosad, the active ingredient, is very susceptible to insects developing resistance to it. You can't afford to 'burn up' this control option by overuse. So far, Entrust is showing much better residual control of SWD than Pyganic, the only other major material that can be used in an SWD organic insecticide program. (Click here for the label for Pyganic EC 5.0) You can't afford to 'burn up' Entrust as a control option by overuse. So far, it's showing much better residual control of SWD than Pyganic.

Blueberries

Resistance Management

- Do not apply Entrust more than 3 times in any 30 day period.
- Whenever Entrust is applied three times in succession this should be followed by no use of Entrust for a 30 day period or rotation to another insecticide class.

Restrictions

- Do not apply more than a total of 9 oz of Entrust (0.45 lb a.i. of spinosad) per acre per crop or make more than 6 applications per calendar year.
- **Minimum Treatment Interval:** Do not make applications less than 6 days apart.

Caneberries

Resistance Management:

- Do not apply Entrust more than 3 times in any 30 day period.
- Whenever Entrust is applied three times in succession, this should be followed by no use of Entrust for a 30 day period or rotation to another insecticide class.

Restrictions

- Do not apply more than a total of 9 oz of Entrust (0.45 lb a.i. of spinosad) per acre per crop
- Or make more than 6 applications per calendar year.
- **Minimum Treatment Interval:** Do not make applications less than 5 days apart.

SWD Related News

- **(Florida) Spotted Wing Drosophila is pest for region's berry growers, but manageable:** Click here (7/6, Univ. of Florida News)
- **(Florida) Tiny fly could pose threat to berry crops:** Click here ((7/6, Tampa Bay Online)

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General SWD Comments

- In some cases, since we started the trapping/monitoring survey in SW Washington and Western Oregon, the number of males caught are a lot more than the number of females. The most likely explanation is that we're picking up more of the newer generations and fewer of the overwintering generation.
- Some of the males caught also differ slightly in appearance in that they're lighter in color and smaller size with some that have the wing spot just starting to color, signaling that they just recently emerged.
- This implies that the overall SWD population will start building to much higher levels and present more of an economic threat to berry crops.
- We've even picked up both adults and suspected larvae in the PCM garden raspberries in residential Portland this week.
- Fields that previously had no trap catches are also now recovering more than one adult, indicating a greater dispersal of the insect. Most of these new catches seem to be correlated to the presence of ripe berries in the fields.
- The processed strawberry crop in SW Washington/Western Oregon is now complete with no reported economic damage from SWD.
- In cherries, it's particularly difficult to identify whether they have Cherry Fruit Fly and/or SWD larvae infesting them.
- In late season strawberries, the primary confusion appears to be between our regular fruit flies and SWD with some growers showing concern with what is most likely our usual over-ripe fruit insect.

- Some cherry and raspberry fields that were treated with a broad spectrum insecticide a couple of weeks ago are now showing new, low catches of SWD, so many of these locations are receiving another application of insecticide (alternating with a different mode of action from the previous one to manage insect resistance).
- Scouts are now doing baggie tests (also called fruit dunk flotation method) on fruit samples in the fields to test a means of field monitoring for SWD larvae along with the apple cider vinegar trap monitoring for the adults. Click here to see how the procedure is done.
- So far, scouts have found no larvae in the field baggie tests.
- Reported this week: "Male SWD were collected in Mattawa, Washington, making the first detections of this species in Eastern Washington"

Northwest Monitoring Weekly Update for 7/4-7/10 — North to South

The following information comes primarily from public monitoring programs. Number of crop types, fields, and traps varies greatly so the numbers should be viewed as indicators only. This pest can be very site specific. Any treatment decisions should be based on monitoring data/observations gathered directly from the field to be treated and the individual grower's best judgment.

British Columbia: From the July 11 British Columbia Blueberry IPM newsletter, "Low numbers of SWD flies were caught this week in East Chilliwack, Sumas Prairie, Abbotsford, Matsqui, and Langley. Fewer flies were caught in traps this week than last week, possibly because the ripening fruit is more attractive to the flies than the bait in the traps."

Click here to view the entire newsletter including a table of SWD trapping data.

- **Whatcom and Skagit Counties, Northern WA:**
  WSU Extension in Whatcom and Skagit Counties have organized an SWD public monitoring program placing traps in fields of *growers who have volunteered to share information. Click here to go to an interactive mapping site with trap numbers and locations.*
  - **Whatcom County: Raspberry:** 1 male reported since 7/2.
  - **Skagit County:** As of 7/11, report not yet posted.

- **SW Washington and Western Oregon (Monday, 7/5-Friday 7/9)**
  The Washington berry commissions and the Oregon Department of Ag. along with the USDA, OSU extension, and Peerbolt Crop Management have supported and organized the survey from which the following information is taken. Grower identification as well as specific field sites are anonymous. There are well over 600 traps in total. Click here to go to the PCM SWD site for charts of county quadrants being scouted and regularly updated monitoring data from these counties. Click here to go to the OSU Extension SWD population county mapping site.

  - **Clark, Cowlitz and Lewis Counties, Southwest WA: Cherry:** 1 male, 1 female. **Raspberry:** 3 males, 1 female. **Strawberry:** 1 female.
  - **Multnomah and Washington Counties, OR: Cherry:** 1 male. **Raspberry:** males. **Wild habitat:** 18 males, 5 females. **Strawberry:** 3 males, 2 females.
  - **Yamhill and Clackamas Counties, OR: Blueberry:** 1 female. **Cherry:** 2 males, 1 female. **Caneberry:** 1 female**. Lonicera:** 3 males, 3 females. **Raspberry:** 1 female. **Strawberry:** 1 female.
  - **Polk and Marion Counties, OR: Blackberry:** 1 female. **Blueberry:** 1 female. **Cherry:** 2 males, 2 females.
  - **Linn and Lane Counties, OR: Blueberry: 1** females. **Cherry:** 1 male. **Raspberry:** 1 male, 1 female. **Strawberry:** 2 males.
  - **Benton County, OR: Strawberry**: 1 male. **Raspberry**: 1 male. **Cherry**: 32 males, 7 females. **Blackberry** 15 males, 9 females. **Peach**: 1 male. **Wild habitat**: 19 males, 2 females. **Compost**: 5 males, 3 females. **Nectarine:** 1 male, 1 female **Blueberry:** 2 females.
  - **Douglas County, OR: Blueberry:** 1 female. **Peach:** 1 female. **Strawberry:** 7 males, 10 females.
  - **Jackson and Josephine Counties, Southern OR: Blackberry:** 3 females. **Blueberry:** 1 male, 1 female. **Cherry:** 2 females. **Strawberries:** 2 males. **Wild Blackberry**: 1 female.
  - **Hood River, Dalles, Wasco Counties: Cherry:** 8 males, 3 females

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Ongoing Spotted Wing Drosophila Management Information

Field Sanitation. A key to managing SWD is going to be keeping fields as clean of potential fruit hosts as possible. Getting improved fruit handling and cull disposal protocols in place early could mean the difference between a successful season and a train wreck. Remove any intact, over-ripe, and/or culled fruit from areas in and around the fields.

Urban Site Infestations. In contrast to our field trapping information, which so far has shown SWD numbers at slowly increasing but low numbers, four urban sites in Western Oregon and Washington have been confirmed to have very high SWD trap counts as well as fruit that is heavily infested with SWD larvae. The fruits involved are cherries, raspberries, and strawberries. One inference that can be drawn from this is that there is a high probability of 'hotspots' in both urban areas

and unmanaged habitats that could act as a source for a large number of SWD to move into a commercial field when the fruit is at the vulnerable stage.

Pesticide tank mixes. In an effort to manage the risk involved with this new pest, some growers are using combinations of pesticides that they have not used in the past. Before applying an unfamiliar tank mix, be sure to check with your supplier, crop consultant, or other advisor to be sure it won't cause damage. Some mixes have the potential for unexpected, economically damaging effects—just the thing we're trying to avoid by using them.

SWD Management Recommendations Updated 6/22/10

Entomologists from the USDA-ARS, WSU, OSU have collaborated to produce updated SWD management plans for blueberries and caneberries. They've been posted on the OSU SWD website.

- For the blueberry management plan, Click here.
- For the caneberry management plan, Click here.

Other related links on the site:

- SWD Chemical control considerations: Click here. Includes many links and information including pollinator conservation information and alert postings.
- Insecticides registered in Oregon and Washington along with relevant SWD management information for each: Click here. (includes relevant MRL issues, PHI's, REI's, efficacy, etc.)

Crop work

All crops—

- 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. Click here for example of the procedure.
- Weed management.

Blueberries—Harvest beginning 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.

Blackberries—Harvest beginning 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.

Raspberries—processed harvest ongoing in SW Washington and Oregon

- Can apply clean up insecticide just before harvest for crop contaminant management.
- 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.
- Put out pheromone traps for leafrollers.
- 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 finishing in northern Washington. Processed harvest over in Oregon

- Scout for virus symptoms/send in sample for testing to confirm.
- Scout for Twospotted Spider Mites and predatory, beneficial mites.
- Scout for aphids.
- Scout for fruit quality issues such as mold .
- Post harvest—scout for SWD in left over fruit to ensure the field won't be a breeding site for SWD moving into other nearby crops.
- Treat post harvest for SWD if needed especially if field is in close proximity to other ripening berry or stone fruit crops
- Have pheromone traps out for Strawberry Crown Moth in southern fields & treat as needed.
- Can treat post-harvest for SWD, root weevils and/or strawberry crown moth.
- Check weak areas for root weevil larvae, Strawberry Crown Borers and/or root disease problems.
- Watch for weevil leaf notching and plan for weevil management if needed.

- Mow and renovate fields 2-4 weeks after harvest unless pest pressures require mowing and treating sooner than that.

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Archived Small Fruit Updates

(for older Updates click here)

07-06-10 ***06-29-10*** ***06-22-10*** ***06-15-10***