

# 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 1, 2012

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### [The awkward dance of the processed blueberry deal](#)

(7/30, Fresh Fruit Portal) An opinion piece by Cort Brazelton, Fall Creek Farm and Nursery manager. The dynamic he describes is one which greatly influences the relationships between Northwest growers and processors.

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

In putting this newsletter together every week. I've got a few cardinal rules I try to stick to:

- 1) Stay factual. Give the most accurate information I can for growers to base decisions on.
- 2) Stay as short as possible. This is tough. Anna (my wife) is constantly telling me it's too long, but it seems like each section is useful to different groups of recipients.
- 3) Keep it relevant. I take the phrase at the top of this newsletter very seriously, "Providing Northwest berry growers with the information they need when they need it." That is a constantly changing target rather than something that's accomplished.
- 4) Do no harm. This has gotten more complicated as the distribution has grown. Sometimes objective information that would benefit growers can be misconstrued by media and/or over-reacted to by buyers.
- 5) Stay away from farm politics. I've certainly got my own (sometimes very strong) opinions on 'conventional vs. organic', GMO crops, labor issues, etc. But this isn't the place for them.

With all that said, spotted wing drosophila challenges me on every one of those rules. We're still in a 'shake-down' phase in learning how to live with this insect.

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](#)

## The factual, short, relevant messages on SWD this season

- 1) It's causing major economic losses partly because the processors/buyers have gotten much better at checking for it and keeping it out of the final products.
- 2) It's worse this year than any past year.
- 3) Since we still don't know how to best predict its behavior or assess the risk, we need to make 'educated guesses' on how many and how often preventative insecticide applications are needed. This means we'll have both under and over treating going on. We need to learn as we go and adjust as we can.
- 4) A lack of knowledge can, and in some cases already has, cost growers big time. Ignorance may be the excuse but it won't undo the consequences of poor decisions. Be informed.

[Click here](#) to go directly to the full SWD report below.

## Regional Reports

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*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, 7/30)

- **Blueberries:** A big weekend for Dukes with large volumes sent to packers. Quality is generally very good. But there are reports of SWD larva being found. It appears to be in instances where there were no or limited spray programs. Trap counts may be a deceiving method for determining potential for infestation if growers are using them as threshold triggers. Some Bluecrop may be picked later in the week. Machining Dukes and Reka will get underway shortly this week. Coolish weather really impacting ripening process for machine fruit readiness.
- **Raspberries:** Raspberries are tapering off now as we are over peak. Volumes are not great and quality has been a struggle, especially with spot mould. Some SWD larva issues showing up as well. Not a lot of smiles in the raspberry fields these days.

### Northern Washington, Whatcom County (Tuesday, 7/31)

- **Blueberries:** Hand picking started in the Dukes, Rekas still a week or more off. Birds are a real big issue, also SWD.
- **Raspberries:** Raspberries winding down, tonnage down considerably, lots of juice.
- **Strawberries:** Strawberries getting their fall fertilizer.

### Northern Washington, Skagit County (Tuesday, 7/31)

- **Blueberries:** Starting blueberry field pack in Toro and organic Reka tomorrow. Pretty much through the first round of Duke. Scar, red back and immature ladybugs attached to the berry have made the field pack a better way to go on the organics. Healed botrytis scars and stems sticking to the fruit have been biggest defects along with mummyberry. Conventional fruit is solid, large and abundant. Not seeing elevated SWD trap numbers probably due to cool temps and spraying schedule using ground rigs and air applications. Admire Pro appeared less effective than Spinosad based on trap counts following spray apps.
- **Raspberries:** Raspberries still in IQF mode but just about finished.
- **Blackberries:** Black diamond machine pick winding down, IQF is done, remainder of fruit is destined for straight pack/juice.
- **Strawberries:** Some bronzing in Albion strawberries. We're not really seeing thrips so might be due to heat trapped between the canopy and black weed mat or reaction to Oxidate fungicide.

### Eastern Washington (Tuesday, 7/31)

- **Blueberries:** Eastern Washington has largely wrapped up Duke harvest which comprises the majority of our production. Harvest is well under way for our midseason varieties.

### Willamette Valley, Oregon and SW Washington

- **Blackberries, processed:** (Tuesday, 7/31) There's still 10 to 14 days left in the Marion harvest. We started on the 12<sup>th</sup> of July and should go until the 12<sup>th</sup> of August. About half the fruit we're receiving is still going for IQF. No Black Diamond is making IQF grade at this point. Hulls started harvest about a week ago with good quality (for Hulls). Evergreen blackberries have some color showing up. Should start harvest around August 15<sup>th</sup> to 20<sup>th</sup>. As far as SWD problems, there's a real difference between the various spray programs. Guys who went on with Asana pre-harvest and nothing else have the worse problems. Those who have been on a 7-10 day regular program (the majority of our growers) are in good shape.

- **Blueberries** (Monday, 7/30) (Organic production) We are picking Bluegold this week, this is a new berry for us, it's been hanging for three weeks now blue and finally it tastes ok to pick. Fourth pick of Duke this week, quality has been very good, had some green berry botrytis this year early on but it's all cleared up now. SWD is a constant pressure, alternating Pyganic and Entrust, praying and crossing fingers and toes. The 3 day pre-harvest is hard to manage around with Entrust. The weather has been great! Very nice for fresh. So far we are seeing really nice growth, plants seem to be setting up well for next year. Yields have been average.
- **Blueberries** (Tuesday, 7/31) Duke is pretty much finished after three to four picks. Overall Duke volume was very good. Draper finished up in two picks with very good quality and yields. Liberty and Legacy are into their first picks and tomorrow will see the first Elliotts coming in. Not sure about the volumes on these present picks as they seem to be coming in lighter than we expected. As for SWD, we have rejected some loads. Common factors for most of these fields was overhead irrigation and older, softer fruit.

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## Event Calendar

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

- **August 3 and 4 — Mossyrock Blueberry Festival, Mossyrock, WA.** [Click here](#) for the website.
- **August 4 — Cloverdale Blueberry Festival, Cloverdale, B.C.** [Click here](#) for the website.
- **August 17 — Sutherlin Blackberry Festival, Sutherlin, OR.** [Click here](#) for the website.
- **August 23—USDA-ARS Blueberry Field Day** ~ 1-4 PM Lewis-Brown Horticultural Research Farm, 33447 DE Peoria Road, Corvallis, OR [Click here](#) for details. For more information, call David Bryla 541-738-4094 or email Dave at [david.bryla@ars.usda.gov](mailto:david.bryla@ars.usda.gov)

## Crop Management Related Information

- [Dealing with drought-stressed blueberries](#) (7/24, Growing Produce)
- [What is evapotranspiration and why it matters](#) (7/25, Michigan State Extension)
- [Oregon officials pin stink bug control hopes on tiny wasp](#) (7/26, The Grower)

## Pest Management Activities

- **Scout for and treat as needed: [Yellow rust](#) raspberries**
- **Scout for and treat as needed: [Aphids](#) northern raspberries**
- **Scout for and evaluate if management action is needed: [Twospotted mites](#) raspberries**
- **Scout for and treat as needed: [Aphids/Scorch Virus](#) B.C. Blueberries** –vector (aphid) management
  - From the B.C. Pest Alert: "Blueberry Scorch Virus is transmitted by aphids. An effective aphid control program should be used by all growers." You can email the B.C. Blueberry Council's research coordinator, [Karina Sakalauskas](#), for further information on testing and/or disease management.
- **Scout for and determine if management actions are needed: Root Weevil adults, all crops [Black Vine](#), [Rough Strawberry](#), [Strawberry Root Weevils](#).**
- **Time for preventative fungicide applications: [Alternaria Fruit Rot](#) blueberries**
  - Alternaria can infect the fruit beginning at the end of bloom and throughout the fruit development stage, up until harvest. ([Click here for expanded view of this disease.](#))
- **Time for preventative fungicide applications: [Anthracnose Ripe Rot](#) blueberries**
  - After harvest, spore masses form rapidly on infected fruit when in cellophane-covered baskets or in plastic clamshell packs. ([Click here for expanded view of this disease.](#))
- **Scout for: [Mummyberry](#) blueberries [Mummyberry primer from MSU](#)**
  - Infected fruit is now 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.

## Spotted Wing Drosophila Update for 7-31-12

*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](#)

## Spotted Wing Drosophila comments

*From Tom Peerbolt—This applies to the southern growing areas I'm directly familiar with. They could be true for other areas as well but I can't speak to that directly.*

- This past week has seen a major increase in larval infestations (see table below).
- While trap counts of adults continue to show major increases in many site, the more accurate way to assess risk to the crops is to use the [fruit monitoring/sampling procedures below](#) to aid in both assuring the grower and fruit buyers of the absence of infestation and/or discovering any infestations when they are still at low levels.
- Many processors are now using this method and rejecting some crop loads based on detection of larvae.
- Growers are advised to use the same method in the fields before picks to be able to react to developing problems *before* they have loads rejected.
- The midseason blackberry and raspberry crops are finishing quickly so the main attention on SWD management is moving to blueberries.
- Many blueberry fields with ripe fruit have seen a big increase in adult trap counts.
- Insecticide spray intervals will need to be shortened in order to maintain an equivalent level of control as was achieved earlier in the season.
- Be prepared. Be conservative and pro-active. If you or your neighbors had SWD pressure last year, expect higher pressure this year. Take all reasonable precautions to minimize the risk this insect poses to your crop.

## Risk Factors and infestations in the Willamette Valley

- Blueberry fields reporting infestations have increased this week. Reported fields with infestations had certain risk factors such as:
  - A mature field relying on solely aerial applications (*risk factors: assumed inadequate coverage and dense foliage*).
  - Two older Berkeley fields that have ripe fruit hanging until they can be machine harvested (*risk factor: large plants with a lot of soft fruit left to hang for a long time*).
  - A few Duke fields on the last harvest (*risk factor: older, softer, overripe fruit*).
  - No spray or inconsistent spray fields such as U-Pick, and/or no spray organic fields. (*risk factor: inadequate control program*)
  - *Additional risk factor: overhead irrigation.* A number of fields with (and without) the above risk factors had overhead irrigation which would lead presumably to higher humidity levels and possibly reduce residual insecticide activity. Whatever the reasons, there appears to be a correlation between overhead irrigation and heightened risk of SWD infestation.
- Raspberry and blackberry fields have shown a big increase in confirmed infestations this week. This increase can be attributed to:
  - Increased SWD populations due to the ideal weather and new SWD generation hatching.
  - Fields that haven't been treated with an insecticide recently. Some growers have gotten by the last couple of seasons with just a pre-harvest clean up application. This year that was inadequate.
  - Fields have finished harvest and the left over, over-ripe fruit remaining is an ideal SWD breeding site.
- A couple a day-neutral strawberry fields have also be reported to have low levels of larval infestation.

## Advisory for all growers/all crops

- While monitoring traps give us some useful information on SWD populations and indications of potential overall crop risks, it is strongly advised to not make management decisions solely on monitoring trap numbers. *This monitoring system is not reliable enough to be able to do that.*
- Management decisions for SWD should be based on:
  - The presence of fruit at a vulnerable stage (Coloring/ripening).
  - The best judgment and experience of the grower/ manager with the input of regional advisors familiar with local and (hopefully) field specific conditions.

## Regional Reports

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### British Columbia, Fraser Valley (Monday, 7/30)

- **Blueberries:** There are reports of SWD larva being found. It appears to be in instances where there were no or limited spray programs. Trap counts may be a deceiving method for determining potential for infestation if growers are using them as threshold triggers
- **Raspberries:** Some SWD larva issues showing up.

### Northern Washington, Whatcom County (Tuesday, 7/31)

- SWD trap counts up earlier than usual.

### Northern Washington, Skagit County (Tuesday, 7/31)

- **Blueberries:** Not seeing elevated SWD trap numbers probably due to cool temps and spraying schedule using ground rigs and air applications. Admire Pro appeared less effective than Spinosad based on trap counts following spray applications.

### Willamette Valley, Oregon and SW Washington

- **Blackberries, processed:** (Tuesday, 7/31) As far as SWD problems, there's a real difference between the various spray programs. Guys who went on with Asana pre-harvest and nothing else (the 'business as usual' program) have the worse problems. Those who have been on a 7-10 day regular insecticide spray program (the majority of our growers) are in good shape.
- **Blueberries** (Monday, 7/30) (Organic production) SWD is a constant pressure, alternating Pyganic and Entrust, praying and crossing fingers and toes. The 3 day pre-harvest is hard to manage around with Entrust.
- **Blueberries** (Tuesday, 7/31) We have rejected some loads because of SWD. Common factors for most of these fields was overhead irrigation and older, softer fruit.

## SWD in the News

- [SWD detected in Arkansas](#) (7/12, Arkansas Fruit and Nut News)
- [\(Mass\) Valley growers watch for destructive new Spotted Wing Drosophila fruit fly](#) (7/30, Hampshire Gazette)

## Regional Monitoring (South to North)

### Oregon and SW Washington Public Scouting Program

*This scouting program and reporting system are being funded by a USDA SCRI grant, and a Northwest Center for Small Fruits Research grant.*

#### Adult Apple Cider Vinegar trapping results

*I've been reporting these in detail until now and am going to discontinue doing so. The adult trap numbers, while valuable in giving an overall impression of population dynamics, don't correlate well with the actual larval infestations now being found. The links below are the best context in which to view the adult trap count dynamics—in a chart form by county quadrants and crops along a timeline rather than single week counts.*

- [Click here](#) for the Home page for the Western Oregon and SW Washington Spotted Wing Drosophila Survey.
- [Click here](#) to go directly to the county quadrant crop SWD charts.

## Fruit sampling for Larvae Totals

Date	# of fruit samples taken	# of larvae recovered
7/23 – 7/27	46	174
7/16 – 7/20	47	53
7/9 – 7/13	47	14
7/2 – 7/6	45	5

### Eastern Washington

- [Click here](#) for the WSU Eastern Washington SWD reporting site.
- **Latest report from the site--Friday, July 20: "SWD in the Yakima/Tieton region: A positive catch was reported from the region.."**

### Columbia Gorge

Report from [Steve Castagnoli](#), OSU Hood River Extension

- **The latest report: July 29: "Spotted wing Drosophila (SWD) -Total SWD trap catch this week was up from the previous week, with 68 males and 182 females versus 106 and 112, respectively, the week before. Trap catch continued to be widely distributed and included traps in the lower and upper Hood River Valley and the White Salmon Valley. Several traps in commercial orchards had SWD. The highest numbers were from traps near unmanaged cherries, wild blackberries, or both."**

Report from [Lyn Long](#), OSU Wasco County Extension

- **The latest report: July 20: "Spotted wing Drosophila (SWD) - Spotted wing Drosophila trap counts continue to climb this week. *From last week:* "As we approach the late (cherry) season time period be careful not to let SWD populations in harvested blocks next to unharvested get out of control. It is this type of scenario that has caused problems in California where infested citrus orchards located next to cherry blocks have caused an infestation in harvested cherries. The least that you will want to do is to place a vinegar trap in your harvested block to monitor SWD populations."**

### British Columbia

- [Click here](#) for the July 28<sup>th</sup> Monitoring report for South Western British Columbia (Coast).

*From that report:*

- "SWD numbers have increased significantly this week in berry fields:
  - 8 SWD caught in raspberry field traps.
  - 17 SWD in blueberry fields.
- Consider that:
  - 84 SWD flies caught in another project, including hedgerow and field edge traps (108 traps in total.
  - SWD flies are emerging for wild salmonberry and red elderberry collected through June and July.

**SWD is ACTIVE NOW and SEARCHING FOR RIPE FRUIT.**

**Protect ripening fruit**

## **Guidelines for checking the fruit for SWD larvae**

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

### 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.

## **SWD Management Resources**

- [Managing spotted wing drosophila update](#) (7/2/12, Michigan State Extension)
- [Spotted Wing Drosophila \(SWD\) Management in B.C. Berry Crops](#)
- [The latest APHIS Map of where SWD is in the United States.](#)
- SWD pesticide options for Oregon and Washington berry crops.
  - Blueberries: [click here](#). Strawberries: [click here](#). Caneberries: [click here](#).
- [NC Spotted Wing Drosophila—General Information and resources](#)

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

## **Industry News/Resources**

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### **Newsletters/ Berry Reports**

- [BC Blueberry IPM Newsletter](#) (7/27) Weekly by Carolyn Teasdale, [ES Cropconsult](#). Sponsored by the BC Blueberry Council.
- [New Jersey Blueberry Bulletin](#) (7/23) Weekly by Gary Pavlis, Rutgers blueberry agent.
- [Michigan State Extension news for Blueberries](#) (7/31)
- [The Source](#) (7/30) Market reports from The Produce News
- [National Berry Report](#) A daily-updated fresh market statistics report on all berry types hosted and maintained by the California Strawberry Commission

### **Magazine compilations**

- The Packer's Market scope: [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 blog](#) by Mark Bolda, UC Davis Berry Extension Agent. **Recent entry: 7/30—Tip dieback in Arapaho blackberry variety** Reports on recent insect and disease research and observations in California.
- [Team Rubus](#) by Gina Fernandez, North Carolina State Small Fruit Specialist. **Recent entry: 7/27—Blackberry virus project part 2** Reports on issues in blackberries and raspberries from the Southeast.
- [NC Small Fruit and Specialty Crop IPM](#) by Hannah Burrack, NCSU extension entomologist. **Recent entry: 7/23—Spotted wing drosophila detected in Arkansas.**

### **Breeding**

- [Cornell breeder releases two new raspberries](#) (Fruit Grower News)

### **Research**

- [Using CO2 levels to store highbush blueberry fruit](#) (July, The Grower)
  - Here's the link to the original article's abstract in HortScience: [Use of Combinations of Commercially Relevant O2 and CO2 Partial Pressures to Evaluate the Sensitivity of Nine Highbush Blueberry Cultivars to Controlled Atmosphere](#)

### **Labor**

- [Seasonal workers are lifeline for horticulture...and families at home](#) (July, The Grower)
- [Immigrant labor reports from the Midwest, Northeast and Northwest](#) (July, Rural Migration News)

- In depth analysis of: [1\) Arizona's law and the Supreme Court ruling and 2\) The Development, Relief and Education for Alien Minors \(DREAM\) Act](#) (July, Rural Migration News)

### **Farm Bill**

- [Farm bill may idle until after election](#) (7/24, The Packer)
- [Drought bill may carry mammoth farm bill into law](#) (7/27, Reuters)
- [Tom Vilsack: Farm bill extension 'an excuse'](#) (7/31, Politico)

### **Technology**

- [Crop monitoring helicopter could help specialty growers](#) (7/30, Capitol Press)
- [New app helps farmers monitor insects](#) (7/30, Western Farm Press)

### **Berry marketing**

- [Dole's brainberries complete for snack food share](#) (7/26, The Packer)

### **The West**

- (B.C.) [A sweet and sour spring for berry growers](#) (7/27, Abbotsford Times)
- [BC blueberry season underway](#) (7/26, Fresh Plaza)
- (Cal) [Raspberries gaining ground in Ventura County](#) (7/25, Fresh Plaza)
- (Cal) [Raspberries gaining on strawberries](#) (7/31, Fresh Plaza)
- (Cal) [California pesticide levels show low health risks](#) (7/26, Western Farm Press)

### **National**

- [Drought seen boosting food prices](#) (7/25, Wall Street Journal)
- [Drought ripples to food processors](#) (7/29, Wall Street Journal)
- [Forecast to bring temporary break to Michigan drought conditions](#) (7/27, Fruit Grower News)
- [Maine expects largest blueberry harvest since 2000](#) (7/30, Food Manufacturing)

### **International**

- (South America and China) [South American countries unite towards agricultural goals](#) *They're taking a united approach to "harness China's growing agricultural export opportunities."*

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## **Additional, Ongoing Pest Management and IPM Information**

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### **Diseases**

- [Phytophthora Root Rot](#) raspberries.
- [Shock virus](#), Blueberries.
- [Blackberry Rust](#) (Phragmidium Rust) Evergreen blackberries

### **Insects/Mites**

- [Raspberry Beetle](#), northern raspberries.
- [Azalea Bark Scale](#), southern blueberries.
- [Blueberry Gall Midge](#), blueberries.

## **Crop Work**

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### **All crops**

- As fruit starts coloring and throughout harvest monitor fruit for SWD infestation and treat as needed.
- Can put out monitoring traps for adult spotted wing drosophila.
- Weed management.

### **Blueberries**

#### **Harvest ongoing**

- Plan for/maintain bird damage management.
- Scout for weevil notching on leaves and for adult weevils.
- Scout for leafroller larvae feeding.
- Stay on top of aphid management where Scorch virus transmission is an issue.
- Scout for virus symptoms and send in samples for testing as needed.
- Scout for Blueberry gall midge damage.

- After petal fall until harvest starts, can treat for Alternaria and anthracnose prevention if needed.
- Scout for berry symptoms like green fruit botrytis, hail damage, Mummyberry, etc.
- Can apply clean up insecticide just before harvest for crop contaminant management.
- Can apply SWD management insecticides.
- Can treat for Alternaria and Anthracnose prevention if needed.

## **Raspberries**

### ***Harvest finished in south, ongoing in north***

- Scout for weevils and treat as needed.
- (North) Scout for raspberry beetle feeding symptoms.
- Scout for virus symptoms and send in samples for testing as needed.
- Scout for fruit mold and treat as needed.
- Scout for yellow rust and assess treatment options.
- Scout for spider mites and treat as needed.
- Can apply SWD management insecticides.
- Scout for aphids and treat as needed.
- Scout for leafroller larvae.

## **Blackberries**

### ***Harvest ongoing***

- Scout for leafroller larvae and treat as needed to prevent fruit contaminant problems.
- Scout for virus symptoms and send in samples for testing as needed.
- Can apply SWD management insecticides.
- 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 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.
- 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.

## **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 and put out pheromone monitoring traps.
- Scout for weevil adults and notching.

#### **Processed market-June bearers—finished harvesting**

- [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/SWD 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.

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## Archived Small Fruit Updates

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

[07-25-12](#)

[07-17-12](#)

[07-10-12](#)

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This document is a guide and not intended as a recommendation or endorsement.

Consult with your supplier, field representative, or pest consultant.