

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.

May 20, 2014

Week 21

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[Washington State and British Columbia set for record blueberry harvest](#) (5/19, Fresh Fruit Portal)

Labor Dispute

- [Berry pickers sue Sakuma Brothers Farms, allege retaliation after last year's strikes](#) (5/19, KPLU)
- **Steve Sakuma Blog: [The plight of the undocumented domestic worker](#)** (5/12, Steve Sakuma Blog)
- [Why is this farm using guest workers as strike breakers?](#) (5/2, The Nation)

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

[First South American SWD Catches](#)

Thanks to Amy Dreves for passing on this very recent *Journal of Pest Science* article published 5/16/14.

Events over the next couple of weeks

- **May 21 — Workshop for Machine Harvesting Fresh Market Blueberries** ~ 9-4pm, [North Willamette Research and Extension Center](#). [Click here](#) for registration & agenda.
- **May 22 — OSU Extension Workshop—A warm-up: Management Tools for SWD** ~ 9-1pm, Free but space is limited. [North Willamette Research and Extension Center](#). [Click here](#) for registration & agenda.
- **May 29 — Willamette Valley Berry Fieldman/Grower meeting**, 8am at [North Willamette Research and Extension Center](#). [Dave Bryla](#), USDA horticulturist who's done a lot of research on irrigation & nutrition in berry crops will be joining us. Free for all. Coffee & donuts! Call or [email](#) Peerbolt Crop Management to RSVP 503-289-7287.
- **May 29 — National Processed Raspberry Council**, SeaTac Marriott, Seattle, WA. For information, call Tom Krugman at 360-354-0948. [Click here](#) for the Council's website.
- **May 31 —BC Blueberries Spring Field Day**. Bates Farm, 57 B Street between Deltaport Way and 34B Ave, Delta. 12-3:30 pm (lunch provided). Pollination, weed management, SWD, weevils, and more. [Click here](#) for the announcement.

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](#)

Industry Website Upgrades

We've been upgrading the Berriesnw.com website. Some of the improvements:

- Newly programmed for mobile uses (phones and tablets)
- A filtered search for pesticides (with REI and PHI) and a filtered search for insects and diseases with short descriptions (plus links to images and more information).
- Filtered search will take a word or part of a word and quickly return all instances where the word or letters are in the pesticide or the insect/disease name or description.
- Overall more readable and faster.
- The industry calendar is as up to date as it has always been.
- Easier and faster signup for the Small Fruit Update

Regional reports

British Columbia, Fraser Valley

- **Blueberries:** (Friday, 5/16) We have had great weather this week for Pollination. Dukes are about 80%+ finished bloom with Reka and Hardiblu around the same or a bit ahead. Bluecrop around 60% or more finished. We are supposed to have a couple days of showers coming up but it looks like it will be nice again after that, hopefully long enough to finish off Bluecrop. Fruit set at this point looks good. Should know more in a couple weeks. Not a lot of aphids present at this point.



Left: B.C. Reka blueberries on May 16. Right: B.C. Duke blueberries on May 16 Photos by Jason Smith

- **Blueberries:** (Monday, 5/19) Fruit is sizing very quickly in Dukes. For the most part I would say that pollination has been excellent this season in all varieties as indicated by the good fruit set and swiftness to size. Bees are more active than I can remember and quite aggressive. It could be one of our earlier starts to the pick if current conditions continue. Aphids are beginning to show in numbers now and controls will start as bloom ends. I'm starting to see blueberry midge damage as well, but at low levels. Irrigation has started in some fields as rain has failed to show up. Good soil moisture is important at this stage of green fruit development.
- **Raspberries:** (Monday, 5/19) Raspberries look very good after a good week of growth. Bloom is starting on baby Meeker fields with some early fruit formed. Last fruitworm beetle sprays just going on the next

couple days. Irrigation will be important now as we enter the floral period and continue with lateral extension.

Western Oregon, Willamette Valley

- **Strawberries:** (Monday, 5/18) Fresh market fruit is showing up. Some Hoods and some Albions. I'm sure there are Honeoye and some others also. Quality problems that can be expected are apparent—some small fruit size, some sunburn and cat-facing. After a wet weekend, this week's weather is great—sunny and 70's. Spittle bugs and some slugs coming out with the recent rain.
- **Blackberries:** (Monday, 5/19) Bloom sprays going on all the blacks, bloom really took off with the heat. Pollination appears to be good. From bloom dates and degree days it looks like harvest will start earlier than normal but nothing extreme, maybe a week early, a couple days later than last year. The weaker, freeze damaged canes in Marions did not like the heat, some of the fruit spurs on those were folding up. Nothing unexpected there. It is too early to start water but as soon as bloom is done, barring additional moisture, it would be a good idea to start, last thing these damaged fields need is lack of moisture. No bloom in Evergreens yet, those look good.



Above: AY Marions, May 17 Near Gervais. Below: EY Black Diamonds, May 16 near Gervais. Photos by Bill Dinger.



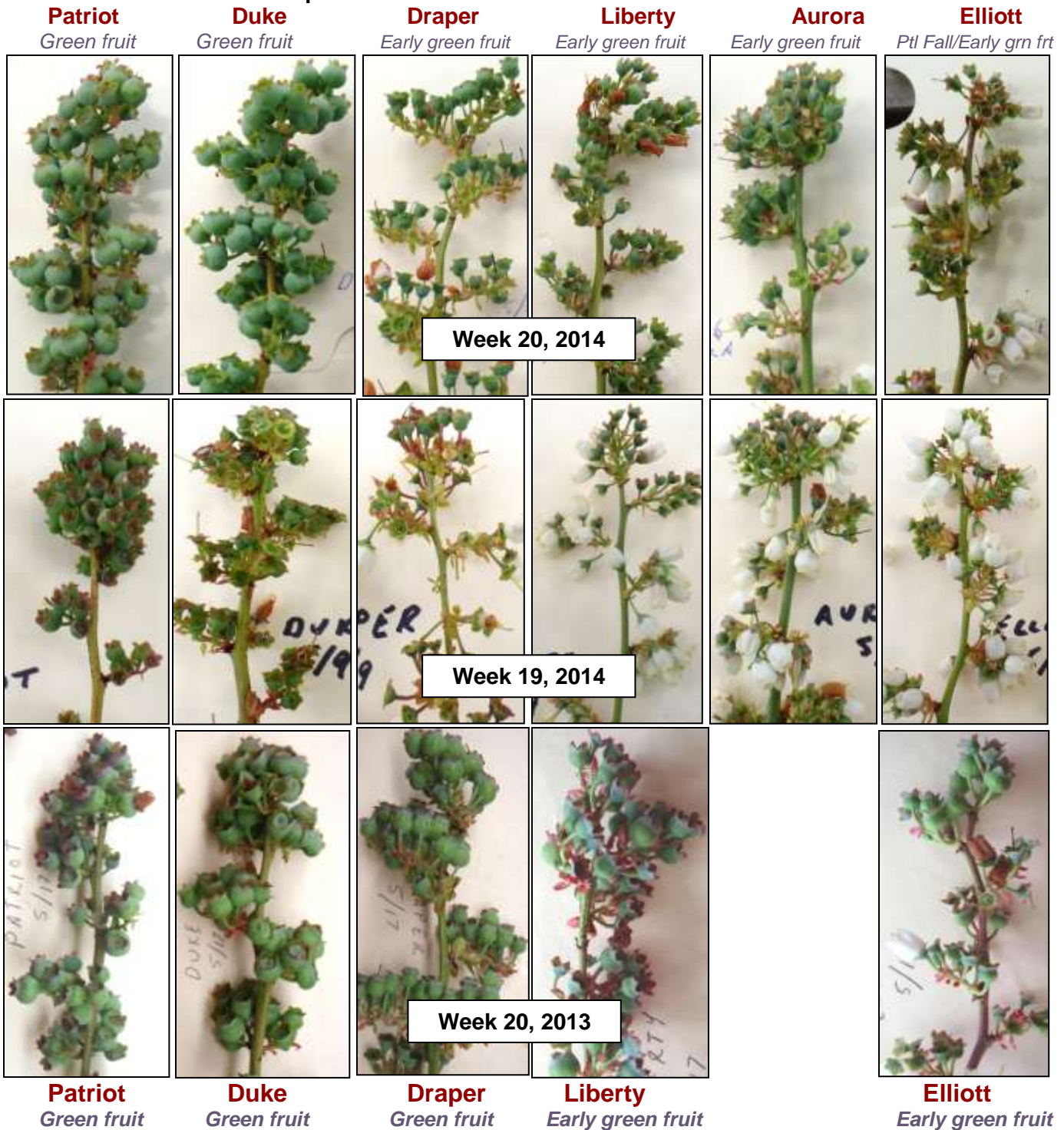
- **Blueberries:** (Monday, 5/18) Done with bloom on most fields. So far we're looking very good. Weather is ideal, soil moisture is up, pollination has been excellent. Just the beginnings of some fruit coloring in the earliest cultivars. Looks close to last year's timing which would mean starting Duke harvest around June 15-20.

Blueberry floral bud development over the past week & compared to same week in 2013

Note: The fields being sampled each week are in the Forest Grove/Hillsboro area. Other areas in the Willamette Valley are as much as a week ahead of these fields in degree days and in plant development.

Northwestern Willamette Valley

Top – 5/16/14 Middle – 5/9/14 Bottom – 5/17/13



SWD Report for week 21

SWD Articles/News

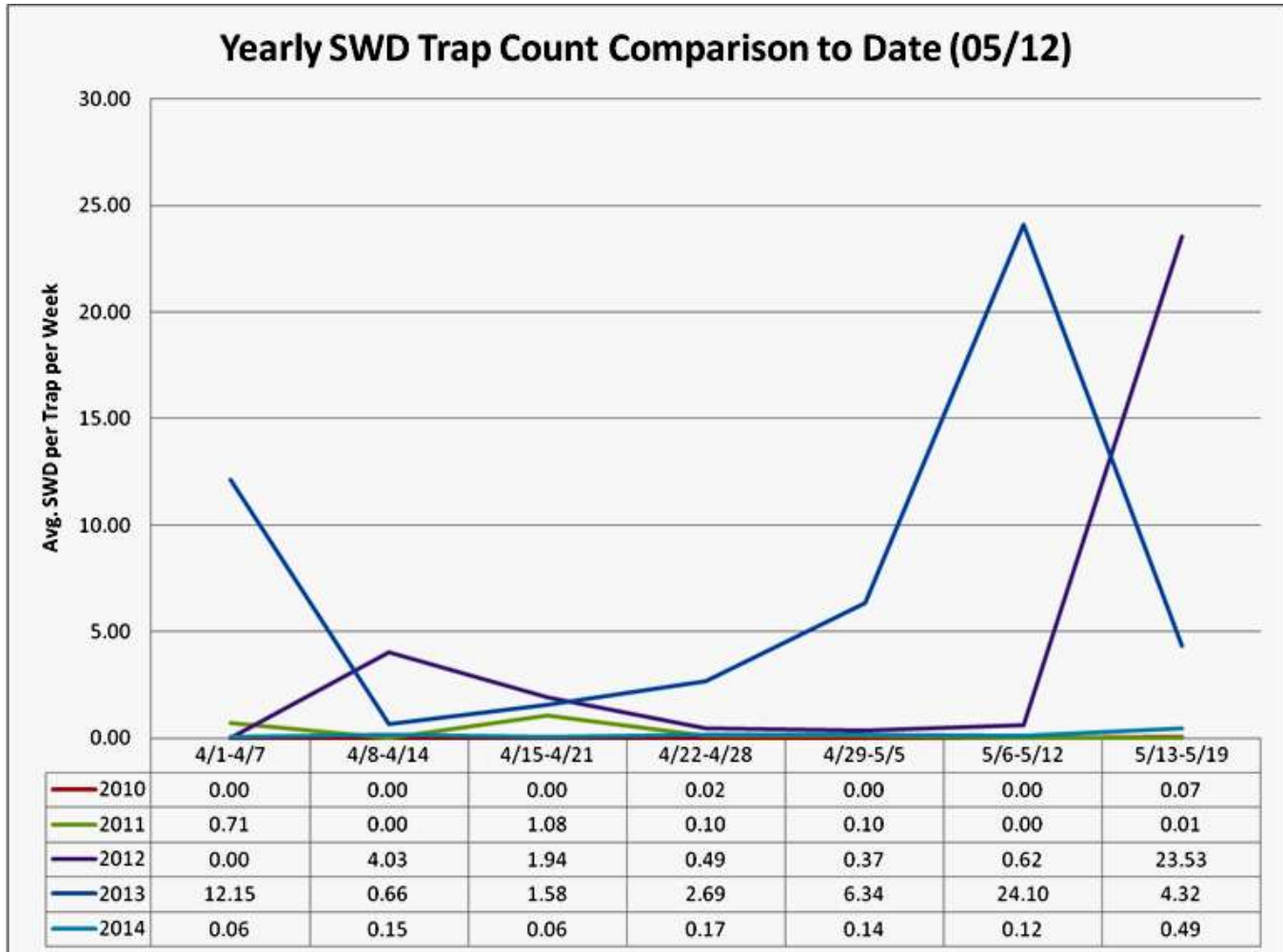
- [SWD management viewed for Southeast berry crops](#) (5/3, Fruit Grower News)
- [Answering questions about what time to treat spotted wing drosophila](#) (5/15, NC Cooperative Extension)
- [SWD Impacts, 2013—Eastern U.S.](#) (NC Cooperative Extension)

Willamette Valley public scouting program trap count comparisons—season to date, 2010-2014

Note: This chart is an indicator of SWD population levels as compared from year to year but is *just an indicator*. We have changed some fields, some trap locations, and some trap baits and types as well as other factors that influence trap catches over the last five years as we learn and adapt. This is a dynamic, developing process—our ability to monitor and forecast this pest and the risks it poses has improved each year. Keep that in mind when interpreting this information.

Comments:

- There was a (relative) spike this week in numbers that was due almost exclusively (in the public scouting program) to higher catches in cherries where all of the past weeks SWD also were caught.
- We are picking up catches in some blueberry fields in our client traps but the numbers are still very low.
- This was also the week in 2012 where we saw a big spike in trap numbers which were correlated with a heat wave.
- In 2013 there was a big rise a week earlier which also correlated with hot weather. The week that followed had a sharp drop in numbers.



Grower resources

- [Stinkbug derails IPM](#) (3/3, Good Fruit Grower)
- Canada: [New regulations for applying fumigants in Canada](#) (May Issue, The Grower)

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Industry news/resources

Newsletters/ berry reports

- [BC Blueberry IPM Newsletter](#) (5/16) Weekly by [ES Cropconsult](#). Sponsored by the BC Blueberry Council.
- [Whatcom Ag Monthly](#) Produced by WSU Whatcom County Extension. Includes excellent berry crop information.
- [The New Jersey Blueberry Bulletin](#) (5/12) A weekly grower update from Gary Pavlis, Rutgers Extension agent.
- [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.
- [Market Report](#) (5/19) from General Produce Company
- [The Source](#) (5/19) Market reports from The Produce News.

Magazine/website compilations

- **The Packer:** [blueberries](#), [blackberries](#), [raspberries](#), [strawberries](#).
Recent stories and fresh market pricing for the various berries from The Packer.
- **Growing Produce:** [recent berry articles](#).
- **Fresh Fruit Portal:** [blueberries](#), [blackberries](#), [raspberries](#), [strawberries](#).
Recent stories for the various berries from Fresh Fruit Portal.

Berry research blogs

- [Strawberries and Caneberries](#) by Mark Bolda, UC Davis Berry Extension Agent. **Recent Entry (5/13):**
Light Brown Apple Moth (LBAM) larvae found in berry fields Reports on recent insect and disease research and observations in California.
- [Team Rubus](#) by Gina Fernandez, North Carolina State Small Fruit Specialist. **Recent Entry (5/14):**
Blackberry Flowers damaged by cold temperatures Reports on issues in blackberries and raspberries from the Southeast.

Research

- [Seasonal occurrence of lygus bugs in organic and conventional strawberries](#) (5/16, UC Davis)

Labor/Immigration

- Oregon: [Department of Labor considering 'hot goods' appeal](#) (5/19, Capital Press)
- Washington: [Hundreds may face layoffs after immigration audit](#) (5/15, Fresh Plaza)
- Washington: [ICE audit finds mismatches at Crunch Pak](#) (5/14, Capital Press)
- California: [Farmer locked in battle with union](#) (5/11, Capital Press)
- [Three reasons immigration reform could pass in 2014](#) (5/7, Wall Street Journal)

Climate/Water

- Washington: [Snowpack, stream flows look good](#) (5/13, Capital Press)
- Oregon: [3 more counties seek emergency drought declarations](#) (5/14, Capital Press)
- California: [Water boost for San Joaquin Valley excludes citrus belt](#) (5/13, Capital Press)

Pollination

- [Fewer honeybees lost last winter, survey reports](#) (5/16, Good Fruit Grower)
- [Bees crucial to many crops still dying at worrisome rate](#) (5/15/ Scientific American)
- [Bee deaths prompt calls for U.S. to follow EU pesticides ban](#) (5/14, Bloomberg News)

Pesticides

- Oregon: [Grape growers say drift taking toll on vineyards](#) (5/14, Capital Press)

Company News

- [Naturipe promotes 'Very Berry Month of May'](#) (5/12, The Packer)
- [California Giant starts Central Valley blueberry harvest](#) (5/13, The Packer)
- [Patriot Farms Update on Initial Harvest to Dole](#) (5/12, Patriot Farms Report)

North America

- Michigan: [Growth, development of fruit crops returning to normal](#) (5/14, Fresh Plaza)

- Michigan: [Southwest Michigan fruit regional report](#) (5/20, MSU Extension)
- Florida: [Panhandle blueberries on track for good yields](#) (5/13, Southeast Farm Press)
- South Carolina: [High quality strawberry crop offers a ray of hope for fruit farmers](#) (5/15, Fresh Plaza)
- [Fruits and vegetables lead U.S. organic sector's sales surge](#) (5/15, Fresh Fruit Portal)

International

- [Columbia to boost ag acreage in response to U.S. free trade deal](#) (5/20, The Packer)

Event calendar

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- **June 11 — OSU Strawberry Open House** ~ 1:00-4:30 pm North [Willamette Research and Extension Center](#) (NWREC) *A focus on the breeding program & research for commercial growers. Details TBA.*
- **June 18-19 — [Annual Maximum Residue Limit \(MRL\) Harmonization Workshop](#)** (4/14, Growing Produce) In San Francisco. Organized by the California Specialty Crops Council. [Click here](#) for registration & agenda information.
- **June 26 — Willamette Valley Berry Fieldman/Grower meeting**, 8am at [North Willamette Research and Extension Center](#). Call or [email](#) Peerbolt Crop Management for information, 503-289-7287.
- **July 9 — OSU Caneberry Field Day** ~ 1:00-5:00 pm [North Willamette Research and Extension Center](#) (NWREC) *A focus on the breeding program & research on conventional and organic production systems for commercial growers. Details TBA.*
- **July 16 — OSU Blueberry Field Day** ~ 1:00-5:00pm [North Willamette Research and Extension Center](#) (NWREC) *A focus on the breeding program & research on conventional and organic production systems for commercial growers. Details TBA.*
- **New Posting: July 17 — WSU Raspberry Selection Trials Machine Harvest Field Day** ~ 1-3 pm - Honcoop Farm, Lynden WA. Contact [Pat Moore](#) 253-445-4524 for more information. *We will be harvesting the 2011 and 2012 machine harvesting plantings that day prior to the field day. Harvested fruit from the plots will be on display.*
- **New Posting: July 20-23 — International Precision Ag Conference** ~ Sacramento, CA. [Click here](#) for article. [Click here](#) for website with all the details.
- **August 20 & 21—North American Strawberry Growers Association** ~ Summer tour, in BC. [Click here](#) for the NARBA website. More details coming soon.
- **November 19 — Oregon Strawberry Commission workshop** "Fresh market strawberries: What it takes to be successful." 8am-7pm, lunch and dinner provided. Admittance is free. Woodburn, OR. More details to follow. Contact lora@peerbolt.com for more info.

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Week 21 --- Pest management & field work

Pest Alerts/Scouting Information

Ripe Blueberry Fruit Diseases—Time now to prevent

Time for preventative fungicide applications: [Alternaria Fruit Rot](#)

As blueberry bloom starts to finish, it's time to consider whether you need to prevent Alternaria and Anthracnose problems from showing up in the fruit. Alternaria can infect the fruit beginning at the end of bloom and throughout the fruit development stage, up until harvest. Infections remain latent until the fruit ripens. Infected fruits exhibit a shriveling or caving-in of the side of the berry and become watery in storage.



Alternaria fruit rot. Photos by Caroline Teasdale

Time for preventative fungicide applications: [Anthracnose Ripe Rot](#)

If you've had problems with Anthracnose, prevention of a reoccurrence begins at petal fall. Symptoms: First, blighting of shoot tips; then, a few flowers turn brown or black. Leaf spots, when they occur, are large or small and roughly circular. As infected berries ripen, the flower end may soften and pucker. Under warm and rainy conditions, salmon-colored spore masses form on infected berries. After harvest, spore masses form rapidly on infected fruit when in cellophane-covered baskets or in plastic clamshell packs.



Anthracnose ripe rot. Photos by Caroline Teasdale

Time to scout for & treat if needed: **Yellow Rust** Raspberries



Stages of Yellow Rust (from left) spermagonia, aecia, uredinia: It has not yet reached the uredinia stage.
(Middle photo by Carolyn Teasdale, others by Tom Peerbolt)

- Yellow rust is now moving through its spore stages from yellow/orange colored 'blisters' (spermagonia) on the top surface of leaves to a very visible, almost day-glow orange/yellow spore stage (aecia) and, in southern regional fields, the fourth spore stage (uredinia).
- This fourth spore stage (uredinia) appears later in the season as yellow 'dust' on the bottom of leaves. This last stage is the one that multiplies quickly & can quickly defoliate canes if left untreated.
- Evaluate disease incidence and stage to determine whether (& when) fungicide applications are warranted.

Time to Scout for: **Scorch virus** Blueberries

- Symptoms are becoming visible.
- This disease is vectored aphids.
- *There is no treatment or cure. Infected bushes never return to productivity & should be removed ASAP.*
- **The BC Blueberry Council is accepting samples for the free Scorch & Shock testing program.** For more information call Karina Sakalauskas, Research Coordinator for the BC Blueberry Council (604) 613 2133 or [click here](#) to email her.

Time to scout for: **Shock virus** Blueberries.

- Symptoms are visible in many area fields.
- This disease is vectored by pollinators.
- There is no treatment or cure.
- Infected bushes generally display symptoms for one year and then return to productivity.

Time to scout for and evaluate if management action is needed:

Powdery Mildew southern strawberries.

- Dry, warm, humid conditions favor powdery mildew in strawberries.



Time to scout for and prevent: [Mummyberry](#), blueberries.

Fields at risk should have a protective fungicide on the susceptible tissue at this time to minimize infections.

- [Managing mummy berry shoot strike infections](#) (MSU Extension, 5/3/13) Great charts on effectiveness of fungicide choices and on weather variables that favor infections.
- [Mummyberry primer from MSU](#).

Time to scout for and evaluate if management action is needed: [Yellow mites](#), raspberries

- This early season mite is smaller and paler than two-spotted mite and has less webbing.

Time to scout for and evaluate if management action is needed: [Blackberry Rust](#) (*Phragmidium Rust*) Evergreen blackberries

- This disease is of economic threat to only to Evergreen blackberries where it can be devastating. *There are reports of it being present in fields at this time.* Treatment is recommended. Rally (myclobutanil) is particularly effective.

Additional Ongoing Pest Information

Diseases

- **Scout for:** [Phytophthora Root Rot](#) raspberries *Look for primocane collapse.*

Insects/Mites

- **Scout for:** [Azalea Bark Scale](#), blueberries. This scale's telltale bright white egg sacs on the lower branches of infested plants are now apparent in some southern blueberry fields.
- **Scout for:** [Raspberry Beetle](#), northern raspberries. This small beetle can cause fruit damage and be a major contaminant in northern raspberry fields.
- **Scout for:** [Root Weevils](#), strawberries. Larvae & adults of [Black Vine](#), [Rough Strawberry](#), [Strawberry Root Weevils](#) are now being recovered from some strawberry fields.
- **Scout for:** [Blueberry Gall Midge](#), southern blueberries. Tip damage from this midge is showing up in blueberries. Damage is usually deemed to not be economic except in specific situations like new vigorous fields where gall midge can occasionally cause too much stunting of new growth.
- **Prime Time to Scout for:** **Mites in raspberries (northern growing areas):** [Twospotted mites](#) [Yellow mites](#)
- **Prime Time to Scout for:** [Winter Moth/Bruce Span Worm](#) blueberries
- **Prime Time to Scout for:** [Clay Colored Weevils](#) northern raspberries & blueberries: This early emerging species is a pest in northern growing areas where it feeds on newly emerging shoots and buds.
- **Prime Time to Scout for:** [Strawberry Crown Moth](#) southern strawberries: As plant growth resumes, plants weakened by SCM can be spotted. Infested plants will had a weakened crown and often will break off with a pull on the top growth.



Crop Work

All crops

- Vole management.
- Weed management.
- Fertilizer program.
- Can put out monitoring traps for spotted wing drosophila.

Blueberries

- Bring in bees around 10% bloom.
- Apply bloom applications to prevent fruit molds.
- Treat for [Mummyberry](#) as needed.
- Scout for [leafroller larvae](#) feeding.
- Scout for virus symptoms & 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.
- Scout for azalea bark scale in southern blueberries.
- Scout for blueberry gall midge damage.
- Can apply fungicides for fruit/blossom rot from 10% bloom through the end of bloom.
- After petal fall, can treat for alternaria and anthracnose prevention if needed.

Blackberries

- Bring in bees around 10% bloom.
- Can put out pheromone trap to monitor for leafrollers.
- Apply bloom applications to prevent fruit molds.
- Scout for virus symptoms & send in samples for testing as needed.

Evergreen Blackberries

- Scout for and treat as needed for blackberry rust.

Raspberries

- Scout for yellow mites and [twospotted mites](#).
- back primocanes as needed.
- (northern areas) Scout for [clay colored weevil](#) feeding and treat as needed.
- Scout for [twospotted mites](#).
- Scout for virus symptoms & send in samples for testing as needed.
- Can apply a phosphite material for stronger root growth and root rot prevention.
- Scout for yellow rust and assess treatment options.
- Bring in bees around 10% bloom.
- Can apply fungicides for fruit/blossom rot from 10% bloom through the end of bloom.
- Can put out pheromone traps to monitor for leafrollers.

Strawberries

- (Southern strawberries) Can scout for strawberry crown moth larvae.
- Can apply fungicides starting at 10% bloom to prevent fruit mold
- Scout for weevil adults and notching.
- Can apply slug bait.
- Scout for powdery mildew and treat as needed.
- Scout for two spotted spider mites and predatory, beneficial mites.
- Scout for aphids.
- In day neutral varieties scout for lygus bug and assess need for treatment.

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Archived Small Fruit Updates

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

[20-SFU05-13-14](#) [19-SFU05-06-14](#) [18-SFU04-29-14](#)