

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.

March 10, 2015

Week 11

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Regional reports

British Columbia, Fraser Valley

- **Blueberries:** (Sunday, 3/8) Cooler temperatures have slowed things down a bit but with high temperatures over weekend and into early this coming week of 18 C (61 F) things will continue to progress. I think we have avoided any significant damage from frost and cold overnight temperatures. I have heard of some open flowers on Hardiblu in Western Valley. Reka at about 40% early pink bud in Abbotsford, Duke at tight cluster beginning early pink bud with Bluecrop very close behind. Elliott at bud swell to tight cluster. A lot of spraying happening everywhere in the valley with some growers applying a bit early to be they are protected when the rains come. No sign of Spanworm yet. Kind of nice not making a mess in the fields for a change. Hopefully we will get enough moisture over the next week to get some of the pre-emerge herbicides on. Haven't seen a ton of weed growth yet though which helps.

British Columbia, Fraser Valley

- **Blueberries:** (Sunday, 3/8) Considerable spraying for the first round of mummyberry control this past week and this weekend (Mar 7-8). Cool, frosty mornings have slowed things a little but the incredible weekend weather will overcome this. We're very dry and I think warm showers later in the week could stimulate the plants more. I've a bit of concern with some pre-emergent herbicide failures showing up later due to the lack of precipitation and drier soil conditions onto which herbicides were sprayed. I can't see any frost

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

[B.C. Strawberry Growers Association](#)
[Raspberry Industry Development Council](#)
[B.C. Blueberry Council](#)

National

[North American Blueberry Council](#)

damage out there at the present. And I don't think there should be as most plant development at this time should be able to handle a bit of morning freeze. However, had some report of bloom showing up on Northland in the far western part of the Fraser valley (yikes!). That wouldn't take frost too well.

- **Raspberries:** (Sunday, 3/8) Raspberries continue to push with Meeker showing some green now. I'm expecting to see clay coloured weevils earlier than normal as well. So watch the raspberry buds and those baby blueberry plantings. Definitely a curious late winter. With the onset of some precipitation with mild temps and warmed up soils after this drought(?!), things could get even more interesting.

British Columbia, Fraser Valley

- **Blueberries:** (Friday, 3/6) In BC -5C (23F) at 6' above ground for two nights. Frost for about a week every morning now. No damage visible yet, will show up delayed.
- **Strawberries:** (Friday, 3/6) Still slow thankfully, it's just those blueberries poking flowers out, not good. Temps have now moderated at night to above freezing, however, day temps are around 17C (63F). Things are accelerating again and I can see bumble bees everywhere, with resident honey bees making an appearance as soon as we hit 10C (50 F). No bees needed yet, we will likely be another three weeks before we have any substantial bloom. Great time to work the fields, get everything in ship shape, it is dry, many fields ready to drive into.

Northern Washington, Skagit County

- **Raspberries & blueberries:** (Thursday, 3/5) *From Lisa Wasco DeVetter, WSU Small Fruit Horticulturist:* According to my records, we've had temperatures as low as 23F(-5C) and 27F (-3C) F in Lynden and Mount Vernon this past week, respectively. As mentioned last week, we have some of our varieties with a lot of southern highbush in the background in full bloom in Mount Vernon. 'Duke' and 'Bluecrop' range from early green tip to bud break (*photos below*). The last image is of an unnamed selection, which shows what selections with some southern in their pedigree look like! I agree with Bernadine that it's too early to bring in bees. I have seen buds swelling in raspberries and a few buds that have broken, but nothing too extensive.



Mt. Vernon 3/5/15: *From Left: Duke; Bluecrop; Unnamed selection (Photos by Lisa Wasco DeVetter)*

Western Oregon, Willamette Valley *From Bernadine Strik, OSU Small Fruit Horticulturist:*

- **Blueberries:** (Thursday, 3/5) We have the occasional open flower in Legacy which typically has this long extended bloom period, but not much moving beyond late bud swell stage or very tight cluster in the others. I would not bring in bees yet as they will go find some other crop to get pollen from and then be less likely to return to the blueberries when needed.
- **Strawberries:** (Thursday, 3/5) Strawberries are not moving much at all here.
- **Blackberries & Raspberries:** (Thursday, 3/5) Blackberries and raspberries are at about ¼ to ½ inch of growth depending on cultivar. This stage is quite frost tolerant (as are blueberry). I've not seen damage here yet. Our lowest temperature this week was 26.4 F. Hopefully, the cooler weather will make them sit still for a bit...but 68 to 70F is forecast for this weekend. Yikes!



Mummyberry apothecia, Willamette Valley blueberry field March 6, 2015



Blueberry Disease Alert

Mummyberry (blueberries) In the Willamette Valley we have open Mummyberry apothecia (see photo's above) and fields being vulnerable to infections. If we have prolonged periods of leaf/tissue wetness with temperatures in the 50's we'll be seeing infections. Get a management program in place in fields at risk. Green tip stage is the plant development stage when they can be infected.

- **So, what is "green tip stage"?** [Click here](#) for a chart from Michigan State of the various stages of blueberry growth development.
- [Mummyberry primer from MSU](#)
- **Some critical points:**
 - The optimum temperature for spore release and infection is 50 to 57°F (10 to 14°C). Figure on when temperatures go over 45F in our area you're into the danger zone.
 - **12 hours of leaf/tissue wetness is required for infection.**

Early Season Accelerated Development Information

- **Late winter/early spring weather risk information**
 - [Blueberry growth stages and critical spring temperatures](#) (Michigan State Extension)
The relevant stages & temperature thresholds from the chart:
 - **Bud Swell:** "Visible swelling of buds; scales separated. Can tolerate 10 to 15 F (-12 to -9 C)".
 - **Tight cluster:** "Individual flowers distinguishable. Can tolerate 20 to 23 F (-7 to -5 C)".
 - **Early pink bud:** "Expanding flowers are readily visible & have separated. The pink corolla tubes (petals) are short & closed. Can tolerate 23 to 25 F (-4 to -5 C)"
- **Early spring weather management information links**
 - [Using your sprinkler system to protect blueberries from freezes](#) (Eric Hansen, Michigan State Small Fruit Specialist)
 - (All berries) [Frost protection: Tips & techniques](#) (Kathy Demchek, Penn State)
 - [Frost & freeze protection: Blueberries \(www.eXtension.org\)](#)

Blueberry Bud Development Comparison for the Western Willamette Valley

I've been taking weekly bud development comparison photos from the same fields the last couple of years but have never started this early. Last year the first set of photos were taken on March 13th. It's the bottom row below.

Northwestern Willamette Valley Top – 3/6/15 Middle – 2/27/15 Bottom – 3/13/14

Patriot

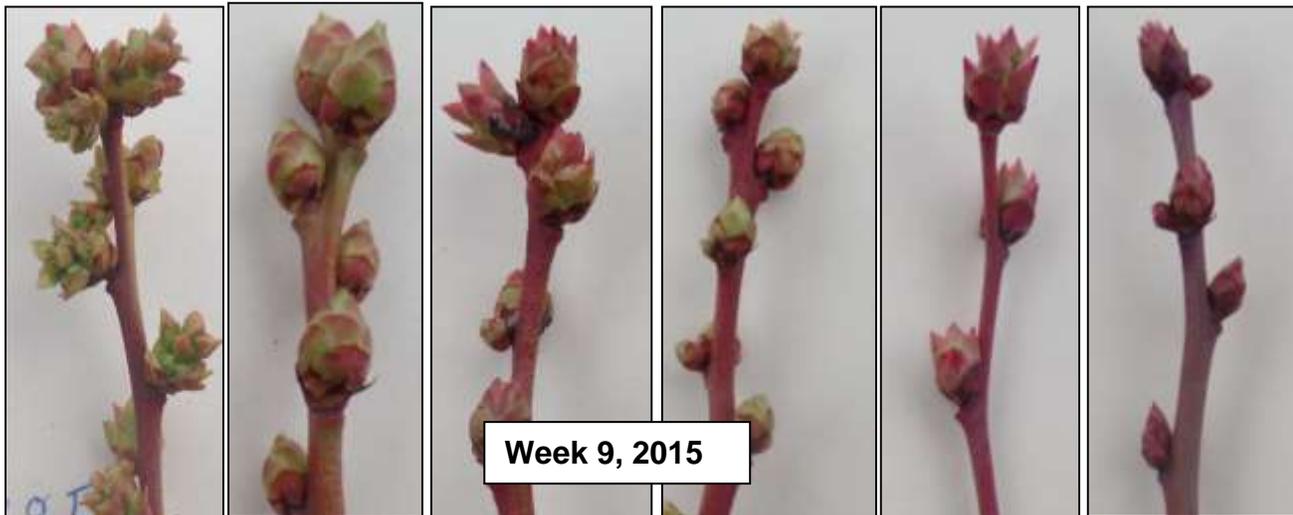
Bluejay

Draper

Duke

Liberty

Aurora



Patriot

Bluejay

Draper

Duke

Liberty

Aurora

Upcoming Commission Meetings

- **March 10 — Oregon Blueberry Commission** ~ At noon Chemeketa Events at Winema, Building 48, Room 210. Contact Bryan Ostlund for more information at 503-364-2944 or [by email](#)
- **March 11 — Oregon Strawberry Commission** ~ McMenamins Restaurant, 310 NE Evans St., McMinnville. **10:30** Research Committee; **11:15** Promotion Committee; **Noon:** Regular Commission Meeting. Call 541-758-4043 or [email Philip Gutt](#) for more information.
- **March 17 — Oregon Raspberry and Blackberry Commission** ~ Chevy's Restaurant, 14991 Bangy Road, Lake Oswego. **10:00** Legislative/Labor/Education Committee; **10:30** Research Committee; **11:00** Budget Committee; **Noon:** Regular Commission Meeting. Call 541-758-4043 or [email Philip Gutt](#) for more information.
- **April 8 — Washington Red Raspberry Commission** ~ Puyallup, WA, WSU Research Station. Contact Henry Bierlink for more information by [email](#) or phone 360-354-8767.

WA Berry Grower Workshops on Food Safety & Labor Regulations

Sponsored by the Washington Blueberry & Raspberry Commissions

All Sites: 9 - 5, RSVP Required, [Go here](#) for the agenda and to register.

Purpose:

- *What do growers need to know about Food Safety to protect themselves and their customers?*
- *What do growers need to know about Labor regulations to protect themselves and their workers?*

Dates & Locations

- **March 23 — Prosser** ~ WSU-IAREC, 24106 North Bunn Road.
- **March 24 — Battle Ground** ~ Manor Grange # 1101, 17901 NE 72nd Avenue.
- **March 25 — Mt. Vernon** ~ WSU-NWREC, 16650 Highway 536.
- **March 26 — Lynden** ~ NW Washington Fair- Rotary Building, 1775 Front Street.

Upcoming Regional Events

[Go here for Full Event Calendar](#)

- **March 6 — WSU Whatcom Extension Irrigation Workshop “Strategies for Improved Delivery”** ~ [Go here](#) for the agenda and registration information.
- **March 16-17 — OSU Blueberry School** ~ LaSells Stuart Center, Corvallis. [Go here](#) for the event website.
- **New Posting: March 17-18 — Precision Farming Expo** ~ Salem Convention Center. [Go here](#) for the event website.

Upcoming National & International Berry Events

- **March 23-25 — Global Berry Congress** ~ Rotterdam. [Go here](#) for their webpage.
- **New Posting: April 9 — British Columbia Blueberry Council 25th Anniversary** ~ The Royal King Palace, Surrey, BC. 5:30. Call the Council's office at 604-864-2117 for tickets. [Go here](#) for information.
- **May 18-19 — National Processed Raspberry Council** ~ Semiahmoo Resort in Blaine, WA. [Go here](#) to make hotel reservations or call phone 360-318-2000. Be sure to identify yourself as part of the National Processed Raspberry Council. For more information, please contact Tom Krugman, 360-354-0948, TKrugman@redrazz.org
- **June 18-24 — Eleventh International Rubus and Ribes Symposium** ~ Charlotte & Asheville, North Carolina. [Go here](#) for their website with all the details.
- **September 7-9 — 5th Annual International Blueberry Organization Summit**~ Coffs Harbor, Australia. [Go here](#) for meeting information.
- **September 13-16 — International Symposium on Mechanical Harvesting & Handling of Fruits and Nuts** ~ Richland, Washington. [Go here](#) for meeting information.

Nutrient Management

We're getting into a traditional time for applying fertilizer. Many growers still apply the first blueberry application just before the buds break. Research has shown that the plant takes up very little nitrogen before late April. Recommended timing for split applications in the Willamette Valley is 1/3 in late April, 1/3 in mid-May and 1/3 in mid-June.

- [Click here](#) For OSU's "Nutrient Management in Blueberries" (16 page pdf).
- [Click here](#) for OSU's "Nutrient Management Guide—Caneberries" (8 page pdf)

Classified



Peerbolt Crop Management Field Services for 2015

We're in the process of planning our field season and are about to begin scout hiring. Please contact us soon if you might be interested in contracting for field services for 2015. Once our seasonal scouts are hired & trained our ability to add new field work is limited.

Field services offered:

- **Field scouting/monitoring:** Weekly or every other week field scouting/monitoring for pests & diseases. We're implementing our newly developed GPS based system this year for quicker and more accurate reporting.
- **Scouting/monitoring for Spotted Wing Drosophila:** Field and fruit monitoring specifically for SWD.
- **Certified third party monitoring for blueberry export to Korea:** These pest monitoring protocols require third party pest consultant certification.
- **Custom services:** We can talk with you about adapting our scouting & online reporting resources to meet whatever your specific field management needs might be.

Please call 503-289-7287 or [email](#) for more information or [click here](#) to go to our business website.

Pest Management

- [SWD Research Continues](#) (2/25, Good Fruit Grower)

Bacterial Blight (*Pseudomonas syringae*), blueberries.

- [Click here](#) for a PCM Research Update on bacterial blight first posted on 1/3/13.



Pseudomonas syringae (bacterial canker) symptoms in blueberries

- The swelling buds are vulnerable to infection by the ever present bacteria, *Pseudomonas syringae*, especially during warm, wet weather.
- Once infected, those buds are vulnerable to subsequent freeze damage at a higher temperature than buds that aren't infected.
- If warm, wet weather is predicted, applications of copper can help prevent *Pseudomonas* infections

- **Caution:** Many strains of this bacteria are resistant to copper compounds. Avoid over applying to help minimize resistance.

Starling management

- Right now starlings are about to fledge. Population control becomes very difficult once that starts because they multiply rapidly. This is a major pest species that needs year round management attention.
 - [Click here](#) for a starling fact sheet.
 - [Click here](#) for a starling nesting fact sheet.

Usual March Pest Management

In most years activities involving the management of the following pests happen during March. They're associated with the warming temperatures and renewed plant growth.

Insects/Mites

- **[Raspberry Crown Borer](#) caneberrries:** If you've had borer problems in the past, March is the time to drench for crown borer management in caneberrries.
- **[Strawberry Crown Moth](#) southern caneberrries:** In Oregon and Southwest Washington, this borer looks to do as much, if not more, damage in caneberrries as the Raspberry Crown Borer. The treatment is the same as for RCB- a spring (or fall) insecticide drench.
- **[Clay Colored Weevils](#) southern strawberries:** This early emerging species is usually just considered a pest of raspberries in northern growing areas where it feeds on newly emerging shoots and buds. But in the last few years emerged adult Clay Colored Weevils have been recovered from SW Washington southern strawberry fields and blueberry fields.
- **[Redberry Mite](#) evergreen blackberries:** Dormant sprays of lime/sulfur or elemental sulfur for Blackberry Rust and Redberry Mite are recommended in March.

Diseases

- **[Phytophthora Root Rot](#) raspberries:** March is the time to use a fungicide drench in raspberries. Warm, saturated soils are the conditions that favor this organism, allowing it to spread quickly.
- **[Blackberry Rust \(Phragmidium Rust\)](#) Evergreen blackberries:** Dormant spray of lime/sulfur or elemental sulfur for Blackberry Rust and Redberry Mites is recommended in March to prevent later problems.
- **[Cane Blight](#) raspberries:** A good time to spot symptoms of cane blight is as the buds break. Infected canes will show either no bud break if the cane has been girdled or one-sided bud break if the infection is on one side. Scrape canes to look for rust colored streaks usually coming up from machine harvester scars. There is no treatment for cane blight once it's present, only prevention. The time to prevent next year's canes from getting infected is to apply an appropriate fungicide immediately after harvest when fresh wounds normally become infected.
- **[Purple Blotch](#) blackberries:** Check for cane lesions that are easy to see as the weather warms but the foliage has not yet emerged. It's a good time to assess disease level.



Industry news/resources

Newsletters/ berry reports

- [B.C. Blueberry IPM Newsletter for March 3, 2015](#)
- Whatcom Ag Monthly *Produced by WSU Whatcom County Extension. Includes excellent berry crop information.*
- [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.*
- [The Source](#) (3/4) *Produce marketing news from Pro*Act.*

Magazine/website compilations

- **The Packer:** [blueberries](#), [blackberries](#), [raspberries](#), [strawberries](#).
- **Growing Produce:** [recent berry articles](#).
- **Fruitnet-Eurofruit:** [recent berry articles](#).
- **Fresh Fruit Portal:** [blueberries](#), [blackberries](#), [raspberries](#), [strawberries](#).

Berry research blogs

- [Strawberries and Caneberries](#) by Mark Bolda, UC Davis Berry Extension Agent. **Recent entry (3/8): Diagnosing dry calyx problems on strawberry fruit** *Reports on recent insect and disease research and observations in California.*
- [Team Rubus](#) by Gina Fernandez, North Carolina State Small Fruit Specialist. **Recent entry (3/9): Monitoring flower to fruit development of blackberries** *Reports on issues in blackberries and raspberries from the Southeast.*

Climate/Water

- Oregon: [Low snowpack threatens E. Oregon water supply](#) (3/5, Capital Press)
- California: [California manual survey show 5% of normal snowpack](#) (3/3, Capital Press)
- California: [This El Nino is weak, weird and too late](#) (3/5, Capital Press)
- California: [Lack of snow and rain worries Californians](#) (3/6, The Produce News)

Breeding/Research

- [Arkansas releases second thornless blackberry](#) (3/6, The Packer)

Government

- Oregon: [Lawmakers consider new lime fee](#) (3/3, Capital Press)

Business

- Washington: [Sakuma reaches outside family to replace retiring CEO](#) (3/5, Capital Press)

Labor

- Washington: [Washington House passes wage, paid leave bills to uninterested Senate](#) (3/4, Capital Press)

Food Safety

- [Expert: Cleanliness, good hygiene key to food safety](#) (3/6, Capital Press)

Technology

- Oregon: [Expo examines precision farming tools](#) (3/4, Capital Press)

North America

- Michigan: [2014 Berry growing season challenges and lessons for the 2015 crop season](#) (3/2, MSU Extension)
- Georgia: [Georgia's blueberry boom](#) (3/9, The Packer)

International

Chile

- [Chilean Crop & Export Report for Week 10](#) (3/2-3/8)
- [Chilean government declares agricultural emergency after Villarica volcano eruption](#) (3/3, Fresh Fruit Portal)

Mexico

- [Making berries trendy in China](#) (3/9, Fresh Plaza)

Ongoing Possible Field Management Activities

All crops

- Weed management.

- Plan fertilizer program.
- **Scout for and plan for [Voles](#):** Vole activity is apparent in many blueberry, caneberry, and strawberry fields. Management of voles is most effective in the spring before they start multiplying like...voles. Kind of like weeds (& starlings)—get them before their reproduction cycle kicks in! [Click here](#) for some background and biology information on voles (or meadow mice). [Click here](#) for information on how to construct bait stations.

Blueberries

- **Treat for [Mummyberry](#) as needed.** (See Alert at top of newsletter) *You can scout for sprouting mummyberries on the ground but they can be very difficult to find. Base treatments on plant stage, environmental conditions and the past history of the field and surrounding fields.*
- **Scout for [Pseudomonas \(Bacterial Blight\)](#)** Water-soaked lesions usually appear in February in some fields that then develop into reddish brown to black cankers.
- **Plan for [Bird](#) issues: Starling management:** Right now starlings are beginning to fledge. Population control becomes very difficult later into the season because they multiply rapidly. This is a major pest species — plan your control strategy now.
 - [European starlings and their control](#) (Cornell University)
 - [Starling Population Control Methods](#).(Wild Wing Company)
- **[Winter Moth/ Bruce Span Worm](#) blueberries:** Scouting for winter moth larvae should start as soon as the buds start swelling. We've had reports in problems beginning this last week. More of an ongoing issue in the northern growing regions but also an occasional, locally severe problem in some Oregon and SW Washington fields.
- **[Scale](#) blueberries:** A dormant oil or Esteem (pyriproxyfen) can be used while blueberries are dormant.

Blackberries

- Scout for [Purple Blotch](#) lesions in Marion berries to assess field disease levels for later treatments.
- Can apply lime sulfur for [Redberry Mites](#) and/or disease management.
- Can drench for [crown borer](#) management.

Evergreen Blackberries

- Can apply lime/sulfur for [blackberry rust](#).

Raspberries

- Can apply lime sulfur for disease management.
- Can apply Ridomil for [Phytophthora root rot](#) management.
- Can drench for [crown borer](#) management.
- Scout for [Cane Blight](#) symptoms as buds break.

Strawberries

- Can apply pre-emergent herbicides.
- As plants start to grow, watch for weak growing areas and check rots for [weevil larvae](#), [root rot](#) and/or cold damage.

Archived Small Fruit Updates

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

[10-SFU03-03-15](#)

[09-SFU02-24-15](#)

[08-SFU02-18-15](#)