

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 26, 2013

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In the Willamette valley, we’re looking at highs in the sixties to seventies and lows in the mid forties this next week. Some showers but doesn’t look like much moisture. In the blueberries we’ll be seeing bloom in Earliblue, Legacy, Berkeley and Patriot with Duke not far behind.

Time to be planning for the arrival of the hives and, hopefully, seeing some wild bees getting to work. I saw my first one this week—an ‘Orange-rumped Bumble Bee’. We’ve got a guide to some of the common wild pollinators in Northwest blueberries on our website: [Click here](#).

With all the issues we’re running into with honey bees, knowing and conserving the wild ones is an important aspect of ensuring a good quality crop.

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](#)

Regional Crop Information

Disease Alerts

Mummyberry blueberries Time to be in prevention mode! In fields with a history of mummyberry and at green tip or beyond stage now's the time to be implementing your management program and keep it going as consistently as possible all the way through the end of bloom.

- **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.
 - About 12 hours of wetness is required for infection. If temperatures are warmer, leaf wetness time required is less.

Frost may increase susceptibility of blueberry shoots to infection.



Mummyberry apothecia, Willamette Valley blueberry field (photos by Tom Peerbolt)

- **Mummyberry information for B.C. Growers:** [Blueberry IPM Newsletter](#) (3/14) Compiled by Caroline Teasdale, [E.S. Cropconsult](#), for the BC Blueberry Council. Contains regional bud stages, photos & grower treatment recommendations with fungicide options.

Phytophthora Root Rot raspberries & blueberries: Warmer temperatures and saturated soils create ideal conditions for the spores of Phytophthora root rot to spread from plant to plant. All precautions should be taken to inhibit the disease in fields at risk with soil drenches of Ridomil and doing whatever you can to keep roots out of the saturated soil zone.

Regional Reports

These reports are from individuals within the region and are their particular observations. They are included to give an impression of the present 'state of the industry' and regional activities.

British Columbia, Fraser Valley (Sunday, 3/24)

We're finally into a better weather pattern in the Fraser Valley. The last three days have been much more conducive to field work and the pattern seems to be staying for next week. Three pretty good frosts in a row since the weather cleared.

- **Blueberries:** Mummyberry sprays really going on with better conditions, as well as herbicides. Should see some major movement in floral bud and leaf bud development this week with increasing day temps. Some floral buds are starting to open up to expose tight flower clusters, but so far it's minimal. Saw some overwintered aphids tight to buds - just a reminder as to why Fulfill spray is needed in a couple weeks.
- **Raspberries:** Raspberries are showing the most development in Chemainus, Saanich and Qualicum - an inch or so of leaf on the loops. Meekers are still at bud swell to early burst. We'll probably see some big changes here by the end of the week. Lime sulphur still going on and even pruning and tying unbelievably.

Whatcom County, Northern Washington (Monday, 3/25)

Well on Friday we saw sunshine, rain, hail, and snow, we could almost make a snow Easter Bunny. Nice weather now.

- **Blueberries:** Blueberries budding real well. First round of Indar for Mummyberry is finishing up, a bit late due to wet fields and wind. Last of the weed spray going on. No bug problems so far.
- **Raspberries:** We are finishing up lime sulfur on the raspberries. Looks like a great bud break so far. Slight bit of basal chewing that looks like snail/slug feeding. No clay weevils so far. Shoot burning likely by the end of the week. Lots of willow weed survived the winter, Aim works better than Goal on this weed. Cultivation as soil conditions allow. New plantings going in as the soil dries.
- **Strawberries:** Still nuthin.

Whatcom & Skagit Counties, Northern Washington (Thursday, 3/21)

- **Blueberries & raspberries:** Blueberry and raspberry bud break look very good in the Skagit and Whatcom fields I saw this past week. Many Meeker fields starting to show green on the loops. Saanich buds are well ahead of Meeker and Chemainus, however Chemainus primocanes seem ahead of the others. We dug a lot of root samples Monday and Tuesday, most fields had extensive white (new) roots, fits with the warm soil temps. With another week or two of this, we may be ready for cane burning.

Skagit County, Northern Washington (Thursday, 3/25)

- **Blueberries:** Very few blueberry blossoms here at WSU-Mount Vernon, only on very low-chill varieties like O'Neal (in photo). Can see an open bud here and there on Berkeley. Bluecrop has some leaf buds out, looks like it is perfect time for mummy berry infection.

O'Neal blueberry variety, Mt Vernon, WA
3-24-13 (photo by Tom Walters)



Skagit County, Northern Washington (Thursday, 3/25)

Had a few cold, clear nights but don't think we had any damage so far.

•**Blueberries:** Found first apothecia in the blueberries today in 3 growers fields, one of which had lime-sulfur on Saturday. Lime sulfur on blues and Indar first rounds finishing up where guys can get into the fields. Trying the Zen-o-spore (New Zealand product) on organics for mummyberry and the Avenger-AG for weed burn down: I have no experience with either material so we'll see how they go. Some sawdust going on in blues too.

•**Strawberries:** Some fertilizer going on strawberries. Others are waiting. Cutting in and subsoiling are going on, too.

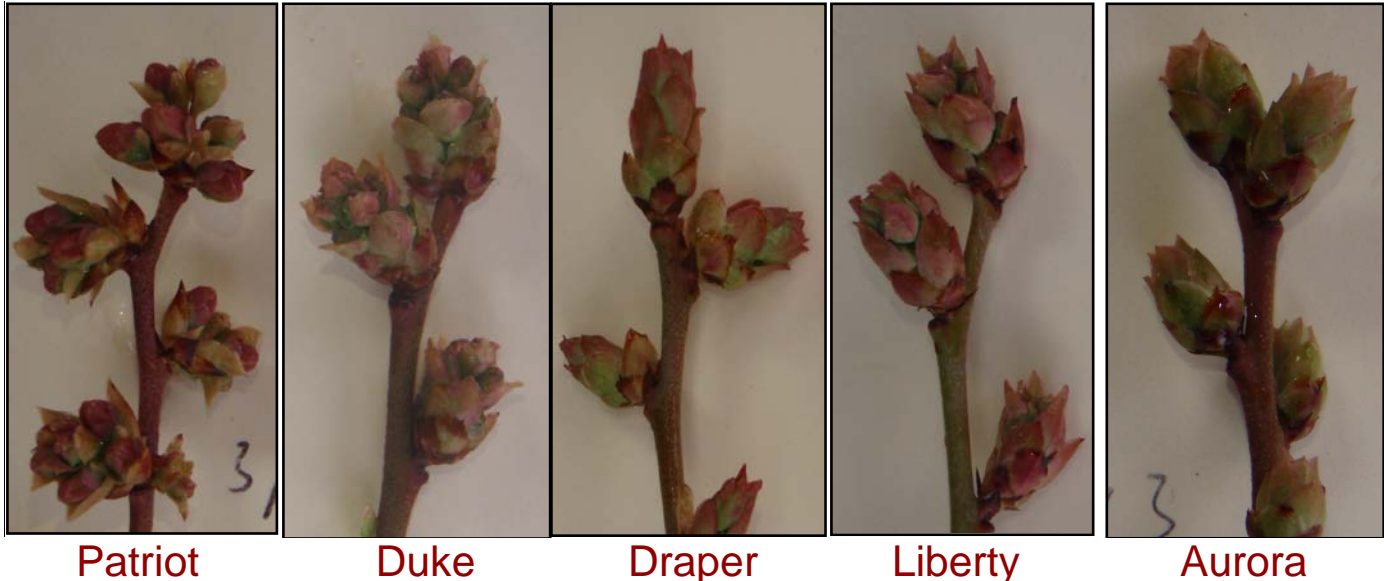
Central Washington (Sunday, 3/24)

•**Blueberries:** This morning at 4 am it was 19 degrees in the lower Columbia Basin. This is near a record low. In the next 10 days we have four days in the seventies. It remains to be seen what impact this will have on blueberries.

Willamette Valley, Oregon and SW Washington

- **Blueberries:** (Monday, 3/25) We have had good weather windows to stay on top of spraying. Getting drip irrigation ready to start injecting fertilizer. Found first shock symptoms in Bluegold last week. Some flower clusters in duke (and other earlier varieties) are showing a lot of separation. I found an open blossom in Earliblue last week but went out again this morning and couldn't find any....soon though. Still getting biological fungicides on for preventative mummy berry control.

Blueberry bud development—Western Willamette Valley 3-22-13 (photos by Tom Peerbolt)



Early Spring Weather Risks

Pictorial blueberry growth stages with temperature damage thresholds

- [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 10-15 F (-12 to -9 C).”
 - **Tight cluster:** “Individual flowers distinguishable. Can tolerate 20-23 F (-7 to -5 C).”
 - **Early pink bud:** “Expanding flowers are readily visible and have separated. The pink corolla tubes (petals) are short and closed. This bud stage can tolerate 23 to 25°F (-5 to -4°C).”

Early Spring Weather Management Information

- [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)**

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)

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Food Safety Events

Washington Food Safety Training Offered

by the Washington Blueberry & Red Raspberry commissions

- [Click here](#) for a detailed information sheet.
- Class is free of charge but RSVP is required.
- **Remaining dates & locations:**
 - **March 27** WSU-NWREC – 16650 Highway 536, Mt. Vernon
 - **March 28** NW WA Fairgrounds, Rotary Building – 1775 Front Street, Lynden
- Buyers of Washington berries and berry products are increasingly requiring growers be third party certified to meet minimum requirements for food safety.
- The minimum standard for this is GAP (Good Agricultural Practices).
- It is very likely that new federal legislation will require growers to implement these standards soon.
- In order to help you meet these new standards the Washington Blueberry and Red Raspberry commissions will host a series of food safety meetings around the state.
- The training will have capabilities for a Spanish translation for employees and Punjabi at the Lynden location.

Oregon Food Safety Training Offered

by the Oregon Raspberry & Blackberry, Blueberry, and Strawberry commissions

- [Click here](#) for the website with registration and detailed information.
- Class is free of charge but RSVP is required.
- **Dates & locations:**
 - **April 4** North Willamette Research Extension Center – 15210 NE Miley Rd., Aurora
 - **April 9** Unger Farm Store – 34880 SW Johnson School Rd, Cornelius
 - **April 18** Woodburn Fertilizer – 868 N Front Street, Woodburn
 - **April 23** Scenic Fruit Co. – 7510 SE Altman Rd., Gresham
 - **May 2** Riverbend Organic Farm – 35711 Helms Dr., Jefferson
 - **May 7** Willamette Valley Fruit Co. – 2994 82nd Ave NE, Salem
 - **May 16** HBF International – 310 NE Kirby St, McMinnville
 - **May 21** Western Star Grange Hall #309 – 30423 Tangent Dr., Albany

FDA Informational Workshops on the Proposed FSMA Rules

The Food Safety Modernization Act will significantly impact growers, packers and processors in the coming years. Members of the food industry have the opportunity to submit comments to FDA on the proposed rules that will be used to regulate the food industry in the coming years. There is a need to be familiar with the proposed rules in order to submit relevant comments to FDA by the May 16, 2013 deadline. A multi-state team involving universities and regulatory agencies in partnership with FDA is offering five opportunities to review the proposed rules. FDA will be presenting information and offering input throughout the workshop.”

- [Click here](#) for the flyer with more details on the meetings.
- Cost is \$20 with a registration cutoff date of 4 days prior to the meeting date.
- **Remaining dates & locations:**
 - **April 15** WSU Snohomish County Extension, Everett, WA
 - **April 17** Unitarian Universalist Church, Eugene, OR
 - **April 19** Four Rivers Cultural Center, Ontario, OR

FDA Public Hearing in Portland on Food Safety Modernization Act

- **March 27 & 28** — 8:30-5:00, Crown Plaza, Downtown Portland Convention Center. [Click here](#) for details.
- For more information on the FMSA including factsheets [click here](#).

Related articles

- [10 things you need to know about the produce safety rule](#) (3/6, Growing Produce)
- [Teleconferences to answer industry food safety questions](#) (3/15) The Packer)
- [FDA takes food safety meetings to Chicago and Portland](#) (2/12, The Packer)
- [Stakeholders offer broad range of feedback on FSMA in first public meeting](#) (3/5, Food Safety News)

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Crop/Growing Information

- [Sustainability is more attainable with high tunnel initiative](#) (3/14, Growing Produce)

Maximum Residue Levels as of March 11, 2013

The following information comes from Joe DeFrancesco, Oregon State Pesticide specialist.

- **Joe's contact information:** Phone: 541-737-0718 ; Email: defranci@science.oregonstate.edu
- **MRL lists for: USA, Codex, EU/UK, Canada, Japan, Korea & Taiwan**
 - [Blueberries](#)
 - [Caneberries](#)
- **Some relevant changes that occurred between January 1, 2013 and March 11, 2013.**
 - Blueberries**
 - Fluazinam (Omega): Korea was 5.0 ppm, now = 0.05 ppm
 - Boscalid (Pristine): Taiwan was 1.0 ppm, now = 10.0 ppm
 - Glufosinate (Rely): Taiwan was "NT, now = 0.1 ppm
 - Spinosad (Success, Entrust): Japan was 1.0 ppm, now = 0.3 ppm
 - Methoxyfenozide (Intrepid): Japan was NT, now = 4.0 ppm
 - Caneberries**
 - Spinosad (Success, Entrust): EU/UK was 0.3 ppm for blackberry and 0.9 ppm for raspberry, now = 1.5 ppm for both blackberry and raspberry
 - Spinosad (Success, Entrust): Japan was 1.0 ppm; now = 0.7 ppm

Pest Management

Voles

- [Vole Trapping Technique](#) (Video on YouTube) I ran this a couple of years ago and some folks found it useful. Obviously too labor intensive for large growers but it would at least be a way to monitor voles, their level of activity and see what species you've got, if not actually giving control.
- [Click here](#) for some background and biology information on voles (or meadow mice).
- [Click here](#) for information on how to construct bait stations.
- **Zinc Phosphide baits cannot be used after budbreak**

Weeds

- [Superweeds a growing nightmare for agriculture](#) (3/21, Western Farm Press)

Usual March Pest Management in the Northwest

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](#) **caneberries:** If you've had borer problems in the past, March is the time to drench for crown borer management in caneberries.
- [Strawberry Crown Moth](#) **southern caneberries:** In Oregon and Southwest Washington, this borer looks to do as much, if not more, damage in caneberries 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.

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Ongoing Possible Field Management Activities

All crops

- Weed management.
- Plan fertilizer program.
- **Scout for and plan for [Voles](#):** (see information above under Pest Management for more on 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!

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.
- **[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.

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Industry News/Resources

Newsletters/ Berry Reports

- [Michigan State Extension Blueberry News](#) (3/25)
- [The Source](#) (3/25) Market reports from *The Produce News*
- [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.

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](#) by Mark Bolda, UC Davis Berry Extension Agent. **Recent entry: 3/17—**
What does cheap natural gas do for California berry growers? Reports on recent insect and disease research and observations in California.
- [Strawberries and Vegetables](#) by Surendra Dara, UC Davis Extension Specialist. **Recent entry: 3/22—**
Managing strawberry pests with chemical, botanical, and microbial pesticides.
- [Team Rubus](#) by Gina Fernandez, North Carolina State Small Fruit Specialist. **Recent entry: 3/20—**
Budbreak 2013 Reports on issues in blackberries and raspberries from the Southeast.

Pollination issues

- [Bumblebee numbers plummet, according to study](#) (3/19, The Grower)
- California: [Beekeepers sue EPA to ban pesticide, protect bees](#) (3/22, Capital Press)

Technology

- [Honey bee robots coming to agriculture?](#) (3/19, Western Farm Press)
- [Two new monitors from TeeJet](#) (3/21, Ag Professional) Video

Marketing

- [Majority of shoppers confused about frozen foods](#) (3/20, Supermarket Guru)

Food Safety

- [Documents show White House edits to FSMA rules](#) (3/22, Food Safety News)
- [FDA reorganizes food safety website for easier access](#) (3/20, The Packer)

Labor & Immigration

- [Bill would exempt perishable crops from 'hot goods' orders](#) (3/22, Capital Press)
- [New I-9 form released](#) (3/20, Fruit Grower News)
 - [Eleven things to consider with the new I-9 form](#) (3/21, Oregon Blueberry Commission via the Oregon Farm Bureau)
- [Obama: 'Time has come' to move immigration reform in Congress](#) (3/25, The Hill)
- [Chuck Schumer: 'Gang of 8' close to immigration bill](#) (3/21, Politico)

West

- Washington: [Native berries hold value as alternative crop](#) (3/19, Capital Press)

North America

- North Carolina: [Upcoming freeze puts NC strawberry growers in prevention mode](#) (3/22, AndNowUKnow)

International

- Chile: [Blueberry export volumes slow as harvest heads towards end](#) (3/26, Fresh Plaza)
- Mexico: [Growing interest in raspberry crops in Mexico](#) (3/25, Fresh Fruit Portal)
- [Blueberry leaders to convene in Santiago, Chile](#) (3/21, Fresh Fruit Portal)

- Chile: [Hortifrut reports strong sales growth for 2012](#) (3/20, Fresh Fruit Portal)
- [Poland a leader in global raspberry production](#) (3/21, Fruit-Inform)
- Ukraine: [International berry conference to be held in Mykolaiv, Ukraine, for the first time](#) (3/18, Fruit-inform)

Event Calendar

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

- **April 10** — **Washington Red Raspberry Commission** ~ Puyallup, WA. Call 360-354-8767 or [email](#) Henry Bierlink for more information.
- **New posting: April 11** — **WSU Skagit County Extension Berry Breakfast & Workshop** ~ 8-noon, 11768 Westar Lane, Suite A, Burlington WA 98233. For directions [click here](#). \$5 with RSVP, \$10 at the door. Breakfast & lunch provided, 3 pesticide credits applied for. Please RSVP with Talea Price by Monday, April 8th. tprice@co.skagit.wa.us
- **April 16** — **Oregon Strawberry Commission** ~ 6 pm [Langdon Farms Golf Club](#). Call 541-758-4043 or [email](#) Phillip Gutt for more information.
- **April 22-23** — **International Blueberry Organization's 2nd Annual Meeting** ~ Santiago, Chile. [Click here](#) for the website with the agenda and registration information.
- **April 30** — **Oregon Raspberry & Blackberry Commission** ~ 6 pm [Langdon Farms Golf Club](#). Call 541-758-4043 or [email](#) Phillip Gutt for more information.
- **New posting: May 6** — **Oregon Blueberry Commission** ~ Noon at [Chemeteka Community College](#), Chemeteka Events at Winema, building 48, room 210. For more details call (503) 364-2944 or email [Lisa Ostlund](#).
- **New posting: June 5** — **OSU Strawberry Open House** ~ 1-4:30 pm, North Willamette Research & Extension Station, Aurora Details TBA
- **June 18-20** — **Berry Health Benefits Symposium** ~ Charlotte, North Carolina. [Click here](#) for registration and agenda information.
- **New posting: July 10** — **OSU Caneberry Open House** ~ 1-5 pm, [North Willamette Research & Extension Station](#), Aurora Details TBA
- **New posting: July 12-13** — **Oregon Berry Festival** ~ Portland, Sponsored by the Oregon berry commissions as well as many Oregon berry farms and berry related businesses. [Click here](#) for the website with a schedule of events and more details.
- **New posting: July 17** — **OSU Blueberry Field Day** ~ 1-5 pm, [North Willamette Research & Extension Station](#), Aurora Details TBA
- **New posting: July 19 - 20** — **Northwest Raspberry Festival** ~ Lynden, Sponsored by the Lynden Chamber of Commerce. [Click here](#) for the website with a schedule of events and more details.

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Archived Small Fruit Updates

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

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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.