

# Small Fruit Update



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

March 8, 2011

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## Featured links:

- OSU blueberry extension agent Wei Yang's blueberry blog: [Click here](#).
- National Agricultural Pest Information System (NAPIS) Pest Tracker [Click here](#).

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

## Regional Reports

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

### British Columbia, Fraser Valley

- **Blueberries:** (Monday, 3/7) (*Affects of record cold last week—first impressions*) Looked at quite a few blues and raspberries the last few days and I'd say that though damage is definitely present I'm optimistic that losses will not be large. Seem to see more dead flowers (1-3) in Duke buds than other varieties. Some leaf buds dead as well. Cane cuttings (Duke, Bluecrop) from various upper Fraser Valley fields brought inside last Monday are generally all in good shape with only minor bud damage evident. Getting some late copper sprays on in advance of cool, wet stuff to come and pre-emerge herbicides.
- **Raspberries:** (Monday, 3/7) (*Affects of record cold last week—first impressions*) Meekers look OK so far and are still relatively tight. Chemainus and Saanich showing some burned early leaf margins on burst buds and some obvious dead buds. The proof of damage will come later when we try to get these laterals to expand. Going to try and get some lime sulphur going if the weather cooperates this week and next. That could be a stretch.

### Northern Washington

- **Raspberries:** (Friday, 3/4) Time to finish tying new raspberry fields, lime sulfur sure to be close behind.

## 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](#)

- **Blueberries:** (Friday, 3/4) Herbicides going on blueberries, also a bit of mouse control. We sure could use a WSU vertebrate guy/gal. We all wonder how much damage those mice/moles/voles are doing.
- **Blueberries & Raspberries:** (Friday, 3/4) (*Affects of record cold last week—first impressions*) I've been looking at plantings here on the WSU Mt. Vernon research station. The good news is that Elliot and Meeker look OK. We have heavy damage on many blueberries (vegetative as well as flower buds), and on some raspberry varieties.

**Blues:**

- **Duke:** flowering and vegetative buds were fine pre-freeze. Flowering buds stage 1-3. Post-freeze we had 0-50% flower bud damage, 30-80% vegetative bud damage.
- **Bluecrop:** flowering and vegetative buds fine pre-freeze, flowering buds stage 1-2. Post-freeze about 40% of the flower buds damaged, about 60% of the vegetative buds damaged.
- **Elliot:** flowering and vegetative buds fine pre-freeze, flowering buds stage 2. Fine post-freeze as well.
- **Liberty:** flowering and vegetative buds fine pre-freeze, flowering buds stage 1-2. Post-freeze about all flower buds damaged, level of damage 30-80%, about 60% of the vegetative buds damaged.
- **Reka:** no pre-freeze data, flowering buds stage 1-2. Post-freeze all flower buds damaged, but most of them only slightly (30%) damage. **All vegetative buds examined were dead.** A local grower came in with a sample from his field that looked even worse.
- **Bluejay:** no pre-freeze data, flowering buds stage 2-3. Post-freeze about 60% flower buds damaged, but most of those only moderately (50%) damage. 40% of vegetative buds dead, the rest slightly-moderately damaged.

**Raspberries:**

- **Meeker:** mature field has very minor bud and vascular damage. Baby crop damage to buds is minor, but looks like considerable vascular system damage.
  - **Cascade Bounty:** About like Meeker, except that the baby crop has only moderate damage to buds and vascular system
  - **Chemainus:** severe bud and vascular system damage. Anticipating a near-total loss on this one.
  - **Malahat:** Moderate to severe damage to buds and vascular system. Severe loss. Don't have baby crop data for this one.
  - **Saanich baby crop:** Buds moderately damaged, but vascular system very badly damaged. I'm anticipating a total loss for our Saanich plots here.
- **Raspberries:** (Friday, 3/4) (*Affects of record cold last week—first impressions*) Minimal outright damage in Whatcom County on most varieties (both blues and reds). I covered a lot of ground in a panic wondering what I was missing, but there is just no visible necrosis. That does not mean that damage wasn't sustained - Last year the same thing happened. The buds of raspberries looked fine but many never pushed much past 4 inches on the top loop in a lot of fields.
  - **Blueberries:** (Friday, 3/4) Field operations are starting up. Some of the applications: Ridomil going on for phytophthora root rot, pre emergent herbicide tank mixes with Gramoxone for weed management, lime sulfur and a few late coppers for disease management. Don't forget to kill the cover crops; they're going down very slowly. Some light insect chewing on blues before the cold. I imagine that Mother Nature took care of the first round, but there's more on the way soon.
  - **Blueberries, organic production:** (Friday, 3/4) (*Affects of record cold last week—first impressions*) Frost alarms went off around 12:30 last night, hit 24° F in one block. We've had very large vole/mice populations this winter. Gave up using the Tigrid3 bait (Vitamin D3) in favor of the old Victor snap traps. Been catching 80-90/row for a total of a couple thousand total so far. By far the worst damage is coming from the blocks with "hog fuel" (large chunks of wood - fir) incorporated into the planting when row cover installed. Blocks with sawdust/compost only have little rodent activity and damage. That is the only difference in the plantings.

## Willamette Valley, Oregon and SW Washington

- **Blueberries:** (Friday, 3/4) (*Affects of record cold last week—first impressions*) Everyone's pretty much backed off from much speculation on cold damage although from my quick checks and from calling around I think that blueberries escaped any major damage (this *is just a first impression*). It's been so wet down here that checking anything has been difficult anyway. We've gotten around 50°F for a couple of days with just drenching rains. The plants are all just aching to grow. Can just about see the buds swelling with any excuse of warmth they get.
- **Blueberries:** (Tuesday, 3/8) (*Affects of record cold last week—first impressions*) After looking at the samples collected last Friday from the Hillsboro area of Duke, Legacy, Patriot, Ozarkblue, and Powderblue, there's no obvious, significant cold damage symptoms. Copper and Serenade applications are going on for bacterial blight prevention as well as herbicide applications. Still no sprouting mummyberries in the check samples set aside in a couple of the infected fields. Expect to see some activity with those guys in the next week.
- **Raspberries:** (Saturday, 3/5) (*Affects of record cold last week—first impressions*) There's been definite extensive damage in raspberries in some of the SW Washington fields with quite a few obviously winter killed buds. We'll know a lot better in a couple of weeks when the plants are leafing out more.
- **Blackberries:** (Saturday, 3/5) Pretty much in assessment mode for everyone. Most likely, as mentioned last week, there's some cold damage in the obvious suspects (Marions & Silvans) and in the coldest and weakest fields. No way to know how much this will impact the individual fields right now let alone the overall crop. Always takes some patience to sort these things out.

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## Assessing Cold Damage

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- [Pictorial blueberry growth stages with temperature damage thresholds](#) (Michigan State University)
- [Assessing cold damage in caneberries](#) (Michele Warmund, University of Missouri & Bernadine Strik, Oregon State University)

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## Industry News/Resources

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### Newsletters/Blogs

- **New resource:** [OSU Blueberry Blog](#) This blog will be a quick way for NWREC to 'talk' to growers about things happening in blueberries anywhere when it's interesting. Entry 3/3: Information/discussion on phytophthora in blueberries.
- ['The Source'](#) (3/7) Market updates from *The Produce News*.
- [UC Strawberry & Caneberry Blog](#) (Latest entry 2/8) Fertilizer management in strawberries.

### Labor

- [Georgia Fruit and Vegetable Growers Association Urges Growers to Act on Immigration Bill](#) (3/2 Growing Produce)

### West

- [California strawberry crop production rising](#) (3/2, The Packer)
- [Deputy U.S. Agriculture Secretary Merrigan Discusses Local Foods and Ag policy with University Students in Oregon](#) (3/7, USDA Blog)
- [In New Food Culture, a Young Generation of Farmers Emerges](#) (3/5, New York Times) Highlights a non-traditional farmer in Corvallis, OR.

### National

- [Successful disease management means looking at field history](#) (2/28, Purdue University)

### International

- (New Zealand) [T&G announces blueberry development as it launches Enzablue™](#) (3/3, FreshPlaza)
- [China on Food Safety: Seriously, This Time We Mean It](#) (3/7, Time Magazine)

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## Recent U.S. Herbicide Registrations

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We've gotten a lot of recent herbicide labels on both blueberries and caneberries. Thanks to OSU's Joe DeFrancesco & Ed Peachey for contributing to this section. Click on the blue chemical name for a link to the label.

### Blueberries

[Click here](#) to view a primer from OSU's Ed Peachey on Chateau and the following four new weed control options in blueberries.

- [Select Max \(Clethodim\)](#) Supplemental label issued March 2011. Post emergence grass weed control. PHI 14 days.
- [Stinger \(clopyralid\)](#) Label issued August 2010 (SLN/24c labels for OR and WA). Systemic, post-emergence herbicide. HRCC #4; same as 2, 4-D. Controls broadleaf weeds esp. Canada thistle, clover, dandelion. [Click here](#) for the Oregon label. [Click here](#) for the Washington label. (No MRL tolerance established for Japan)
- [Sanda](#) ([halosulfuron](#)) Gowan Company just issued a supplemental label (1/27/11) for use in blueberries. Sandea will be a nice addition in the herbicide toolbox, especially since it does such a good job of controlling yellow nutsedge (and broad leaf weeds, too). (Japan and Canada don't yet have an MRL established for halosulfuron (Sanda). The EU and UK have an MRL of 0.01 ppm (USA = 0.05ppm).)
- [Dual Magnum \(S-Metolachlor\)](#) SLN registration (24c) Oregon. Targets grasses, small seeded broadleaves, **and nutsedge**. Not all blueberry cultivars have been tested; so, injury may occur on some types of blueberry. Growers are encouraged to treat a few plants as a test and evaluate crop injury. Also, blueberry plants that have been established for less than one year may be more sensitive to applications of Dual Magnum than those plants established for more than one year. PHI = 28 days; REI = 24 hours; HRG #15. (**Note from Joe D.:** I don't know if WA has granted a label yet. I'm positive WA will issue their label but one never knows for sure about these things.)

### Caneberries

- [Callisto \(mesotrione\)](#) Now registered for raspberries and blackberries on a Section 3 label. PHI use pre-bloom only; and REI 12 hours. HRG #27.
- [Dual Magnum \(S-metolachlor\)](#) Special local needs (SLN) registration (24c) Oregon. Targets grasses, small seeded broadleaves, and nutsedge. PHI = 28 days; REI = 24 hours; HRG #15. (**Note from Joe D.:** I don't know if WA has granted a label yet. I'm positive WA will issue their label but one never knows for sure about these things.)
- [Select Max \(Clethodim\)](#) Supplemental label issued March 2011. Post emergence grass weed control. PHI 7 days. Real nice to have an option to Poast.

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## Pest Alerts

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The weather is turning warmer (really it is!) and the plants start showing new growth-- blueberry plant risk of infection from both mummyberry & bacterial blight is higher than normal due to frost/freeze damaged tissue. Be ready.

- **Risk is High:** [Pseudomonas \(Bacterial Blight\)](#) blueberries- **Recommended management:** To prevent future lesions from forming, copper sprays are recommended as the temperatures get warmer. Good coverage is essential with copper.
- [Mummyberry](#) blueberries
  - [Click here](#) for a pictorial guide put together by Michigan State University of the various stages of blueberry growth development. Fields are at risk of mummyberry infections at 'green tip stage'.
  - [Click here](#) for a mummyberry fact sheet from MSU.

## Pest Management & IPM Information

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### Vertebrates

- **Voles all berries:** [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 can only be used up until budbreak.

### 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 budbreak if the cane has been girdled or one-sided budbreak 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 and 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.
- **Mummyberry blueberries:** See [alert section](#) above.
- **[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.

### Insects/Mites

- **[Winter Moth/ Bruce Span Worm](#) blueberries:** Scouting for winter moth larvae should start as soon as the buds start swelling. More of an ongoing issue in the northern growing regions but also an occasional, locally severe problem in some Oregon and SW Washington fields.
- **[Lecanium scale](#) blueberries:** A dormant oil or Esteem (pyriproxyfen) can be used while blueberries are dormant.
- **Brown Marmorated Stink Bug:** [Click here](#) for a U.S. map tracking this potential pest. Also, an article from The Baltimore Sun (2/28): [Tiny wasps could curb a massive stink bug invasion](#).
- **[Raspberry Crown Borer](#) caneberries:** If you've had borer problems in the past, March is the time to drench for crown borer control 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 couple of 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.

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## Meeting Information

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For more comprehensive meeting schedule, [click here](#).

- **March 8 — Oregon Blueberry Commission meeting** ~ noon. Budget Preparation. Santiam Room, West Salem Roth's IGA in Salem. Contact [Bryan Ostlund](#) for more information, or call 503-364-2944.
- **March 15 — OSU Bee Identification Workshop** ~ 1-4, North Willamette Research & Extension Center, Aurora. [Click here](#) for agenda and registration form. \$25 per person. Pre-registration is required due to space limitations. Registration: Jan Engli 503-678-1264 x 110. Organizer: [Wei Yang](#), 503-678-1264 x 116. Instructors: Sujaya Rao & W.P. Stephen, OSU Crop & Soil Science.

- **March 17 — Oregon Strawberry Commission meeting** ~ Noon. Roth's IGA, Salem, OR. Contact [Philip Gutt](#), or call 541-758-4043 for more information or see attached [agenda](#) for more details.
- **March 22 — Oregon Raspberry and Blackberry Commission meeting** ~ Noon. Langdon Farms Golf Course, Aurora, OR. Contact [Philip Gutt](#), or call 541-758-4043 for more information.
- **April 1 — Ecological Raspberry Production Systems (ECORAZ)** ~ Time TBA. WSU-Mount Vernon Northwestern Washington Research and Extension Center. An educational symposium exploring productivity, soil health, water and nutrient management. Lunch provided. [Click here](#) for details or contact [Colleen Burrows](#) for more information.
- **April 12 — Washington Blueberry Commission meeting** ~ Regular commission meeting to be held in Eastern WA. Location TBA. Contact [Alan Schreiber](#) 509-266-4300 for more information.
- **April 13 — Washington Red Raspberry Commission meeting** ~ Puyallup, WA. Contact [Henry Bierlink](#) or call 360-354-8767 for more information.
- **April 19-20 — New meeting posting — Soil & Water Conservation Society: “Protecting Natural Resources with Conservation Buffers”** ~ [Click here](#) for details. Portland, OR. Someone from EPA will be giving the keynote address. This conference will address many of the issues that are at the center of ongoing legal efforts to limit the use of many pesticides.

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## Nutrient Management

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*We're getting to a traditional time for applying fertilizer. Many growers still apply the first blueberry application just before the buds break. Recent research shows 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).

## Crop work

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### All crops

- Scout for voles and treat as needed.
- Weed management.
- Plan fertilizer program.

### Blueberries

- Scout for bud damage & determine cause.
- Dormant oil can be applied for scale and winter moth egg control.
- Scout for sprouting mummyberries.
- Scout for winter moth/span worm/leafroller larvae feeding in buds.
- Can apply Bacterial Blight (*Pseudomonas*) management materials.
- Make preparations for bringing in bees around 10% bloom.

### 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 a dormant spray of lime/sulfur or elemental sulfur in mid-February for Redberry mites and blackberry rust.

### Raspberries

- Can apply lime sulfur for Redberry Mites and/or 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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## **Archived Small Fruit Updates**

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

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[02-23-11](#)

[02-15-11](#)