

# BERRY COMMISSIONS News



A grower newsletter for the  
Oregon Raspberry & Blackberry Commission  
and the Oregon Strawberry Commission



## Oregon Produce Growers Food Safety Training and Education Opportunity for Growers, Crew Leaders, and Labor Contractors

- Provided by Oregon Fresh Produce Growers Food Safety Committee -

Following a 2011 E. coli related outbreak of illnesses and one death attributed to consumer purchases of fresh Oregon strawberries, Oregon berry industries are working together to minimize future berry related foodborne illnesses. They are sponsoring a 2012 season food safety training for any Oregon produce growers and berry harvesters, regardless of farm size.

Oregon's produce industry wants consumers to feel confident that farmers are doing everything they can to ensure they are providing the healthiest and safest produce.

Any foodborne illness associated with Oregon produce has the potential to drastically affect growers of any size as well as processors using that product.

**Take advantage of a FREE 3-hour program providing food safety training designed to appeal to all farmers and farms:** Attendees are expected to share this training information and accompanying study guides with their harvest crews, managers, and labor contractors. (Training will be based on the California Strawberry Commission Food Safety Practices for Strawberry Harvest Workers™ study guide, which will be provided.) **THERE IS NO COST TO THE ATTENDEES**

Each training site will conduct a morning class in English followed by an afternoon class in Spanish.

### - INSIDE -

Tiny Wasp Could be Stink Bugs' Downfall .....	3
Tell Me a Story: Communicating Produce Safety During a Recall .....	4



#### ORBC PAGES

2012 Oregon Berry Festival .....	6
Export Strategy Tools and Techniques Seminar .....	6
Creation of the Genetic Roadmap for Red Raspberries is Underway .....	7
Spotted Wing Drosophila - Don't Assume You Know What to do Just Yet .....	7
FOODEX - Japan 2012 .....	8
Quality of Advanced Blackberry Selections and Standard Cultivars .....	9
Blackberry Crops Have Expanded Worldwide ..	9
2011-12 Commissioner List .....	11
2011-12 Committee List .....	11

#### OSC PAGES

OSC Public Hearing Notice .....	12
Report from International Strawberry Symposium in China .....	12
2011-2012 Commissioner List .....	13
2012-2013 Proposed Research .....	13
2011-2012 Committee List .....	14
2012-2013 Proposed Budget .....	15

### - INSIDE -

# Oregon Produce Growers Food Safety Training and Education Opportunity for Growers, Crew Leaders, and Labor Contractors

- Continued from Page 1 -

## TO REGISTER FOR A CLASS, CONTACT:

Chuck Leonard  
Phone: 503-986-4711  
Fax: 503-986-4729  
Email: cleonard@oda.state.or.us

## Training dates, times and locations are as follows:

Date	Time	Language	Location
4/18/12	9 am -12pm 1 pm - 4 pm	English Spanish	Unger Farm Store 34880 SW Johnson School Road Cornelius, Oregon 97113
4/19/12	9 am -12 pm 1 pm - 4 pm	English Spanish	North Willamette Research Station 15210 NE Miley Road Aurora, Oregon 97002
4/24/12	9 am -12 pm 1 pm - 4 pm	English Spanish	Spencer Creek Grange No 855 86013 Lorane Hwy Eugene, Oregon 97402
5/02/12	9 am -12 pm 1 pm - 4 pm	English Spanish	Riverbend Organic Farm 35711 Helms Drive Jefferson, Oregon 97352



## ~ Newsletter Ads ~

The Berry Commissions News accepts advertisements and inserts on a first come, first served basis. Space is limited. Ad size is a maximum of 1/4 page and inserts are generally limited to one 8 x 11 inch sheet. Ad space in the newsletter is currently free of charge. Printing costs do apply for inserts and must be paid by the advertiser in advance. All ads and inserts must be relevant to the berry industry and are subject to approval. Inserts must be prepared and ready for printing by the advertiser.

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# Tiny Wasp Could be Stink Bug's Downfall

- By Matt Milkovich, Reprinted with permission from Fruit Growers News -



Starker Wright shared a horror story with New York state growers in January.

A scientist with USDA's Agricultural Research Service, Wright was a speaker at The 2012 Empire State Fruit & Vegetable Expo in Syracuse, N.Y.



Pesticides labeled for native stink bugs are mostly ineffective against BMSB, Leskey said, and the invasive bug exhibits avoidance behavior that shows it has the capacity to escape sprays and other treatments. To top it all off, BMSB has no natural enemies in the United States, Wright said.

The villain of Wright's horror story is the Brown Marmorated Stink Bug (BMSB), a voracious killer from a foreign land who will eat just about any crop and appears nearly impossible to kill.

Wright works in the insect behavior and ecology program at ARS' Appalachian Fruit Research Station in West Virginia. He said BMSB has done so much damage to fruit, vegetable and other crops in the mid-Atlantic region that about 90 percent of the program's focus these days is on finding ways to fight the bug.

BMSB is an invasive species native to China, Japan, Korea and Taiwan. The bug came to the United States (probably from northeast China) around 1996, via Allentown, Pa. ARS researchers first detected the bug in Hagerstown, Md., in 2003, and confirmed it in West Virginia in 2004. By 2008, they started getting reports of weird, late-season injuries in apples, but they didn't realize at first that BMSB was the cause, Wright said.

In 2009 and 2010, BMSB damage "exploded" in an "extraordinarily broad" range of host crops in mid-Atlantic states. Grower losses in Pennsylvania, Virginia, West Virginia, Maryland, Delaware and New Jersey have been "profound," he said. The bug has spread to other parts of the country – 35 states and counting – but its population still centers around its introduction point, Wright said.

Tracy Leskey, research entomologist at the Appalachian station, said BMSB feeds on more than 300 host plants including tree fruit, small fruit, grapes, vegetables, ornamentals and row crops. "If we can grow it, they can eat it," Wright said.

Wright laid out other reasons BMSB is such a tough, destructive pest in the mid-Atlantic region. The bug breeds two generations per year there, making it a season-long threat. Every life stage of the bug after first instar nymph feeds on the host plants. BMSB can survive winter in great numbers, whether in pole barns, garages and woodpiles or more natural shelters like dead trees and fallen logs. They often reside in the tops of tree canopies, where it's impossible to spray.

## Killing the killer

ARS' BMSB research is part of a national effort to push back at the invasive pest. Scientists across the country are working as rapidly as possible to develop management programs. Right now, BMSB management ideas are based mostly on chemical control. As researchers learn more, however, they expect to integrate cultural, biological and attract-and-kill strategies, according to Leskey.

Wright put it this way: The short-term goal is to figure out how to kill BMSB. The medium-term goal is to figure out where and when to kill it. The long-term solution will probably involve biological control. Meanwhile, a project is underway to identify a predator or parasite that can contain BMSB.

At the ARS quarantine laboratory in Newark, Del., research entomologist Kim Hoelmer is evaluating a tiny wasp, in the genus *Trissolcus*, from Asia. The *Trissolcus* wasp is a parasitoid that attacks BMSB's eggs.

Hoelmer's team found the wasp on a trip to China, South Korea and Japan. They collected live egg masses of BMSB and brought them to the ARS lab in Delaware (USDA permits allowed them to import the specimens). *Trissolcus* wasps emerged from most of the egg masses, and the team used those to establish research cultures, according to Hoelmer.

He's discovered that female *Trissolcus* wasps search the surfaces of host plant leaves looking for BMSB eggs. When the wasps find egg masses, they deposit their own parasitoid eggs inside each BMSB egg. After the *Trissolcus* egg hatches, it grows into an adult wasp by completely consuming the BMSB egg. Since BMSB eggs are usually laid in clusters of 28, each cluster can produce as many as 28 new wasps, according to Hoelmer.





# Tell Me a Story: Communicating Produce Safety During a Recall

Benjamin Chapman, Asst. Professor, Food Safety Ext. Specialist, Dept. of 4-H Youth Development and Family & Consumer Sciences, North Carolina State University

Audrey Kreske, North Carolina State University & Doug Powell, Kansas State University

Foodborne disease causes an estimated 48 million illnesses and 3,000 deaths annually (Scallan, 2011), with U.S. economic costs estimated at 152 billion to 1.4 trillion annually (Roberts, 2007; Sharff, 2010). An increasing number of these illnesses are associated with fresh fruits and vegetables. An analysis of outbreaks from 1990-2003 found that 12% of outbreaks and 20% of outbreak-related illnesses were associated with produce (Klein and Smith DeWaal, 2008; Lynch, 2009). Once a product is implicated in an outbreak, all growers are affected although the contaminated product may have come from one grower in a different locale.

A Deloitte survey of 1,100 consumers in 2008, showed that the public is increasingly concerned about the food they eat (Deloitte Development LLC, 2008). Seventy-six per cent of those surveyed say they are more concerned about the food they eat than they were five years ago (Deloitte Development LLC, 2008). But surveys have limitations – what people report they do, or are concerned with, may not impact their purchasing habits. Recent outbreaks, especially those with high-profile national stories demonstrate that public confidence in risk management approach can lead to financial impacts. In 2008, tomato growers, wholesalers, and retailers in Florida lost an estimated \$250 million when they could not sell their product after an investigation of possible *Salmonella* spp. outbreak linked to their product resulting in a national health advisory (Alonso-Zaldivar, 2008). Consumer confidence in the safety of tomato products eroded, while food safety practices on farms and throughout the supply chain were called into question. Other producers were also affected by this health advisory and found themselves answering questions about growing conditions, the safety of inputs (including water) handling and distribution of products.

Recent fresh produce-related outbreaks have created an environment where commodity groups and producers are even more concerned about managing the fallout after a foodborne incident.

Crisis management in the food industry has four phases:

- Prevention: Employing a good food safety culture, including staying current on risk factors
- Preparation: Proactively planning for a problem and monitoring public discussion risk
- Management: Implementing the plan using multiple messages and media
- Recovery: Reassessing risk exposure and telling the story of changes.

**Prevention:** Food safety culture is how an organization or group approaches food safety risks, in thought and in behavior, and is a component of a larger organizational culture (Yiannas, 2009). Creating a culture of food safety

requires application of the best science with the best management and communication systems. Firm owners and operators need to know the risks associated with their products and how to manage those risks. Having technical staff in place to stay abreast of emerging food safety risks and conduct ongoing evaluations of procedures, supplier requirements and front-line staff practices provides a necessary foundation for a good food safety culture.

**Preparation:** Crises will happen. Companies who understand this, and are prepared to deal with them will survive Those who are not risk losing their market – and often do. While proactively managing microbiological risks, organizations with a strong culture of food safety also anticipate that outbreaks of foodborne illness may occur despite the use of sound food safety systems. Industries strong in crisis management including, information sharing, monitoring and reactive crisis communication skills, can drastically reduce the impact of deleterious and harmful media if an outbreak arises (Jacob *et al.*, 2011). Being prepared to speak openly speaking about risk reduction strategies and demonstrating risk management practices can reduce financial impacts and allow public trust to be regained quicker than if a firm/industry had not planned (Hrudey, 1997).

**Management:** An increasing number of consumers seek food safety information from Internet sources, including one-in-eight Canadian consumers and one-in-four American consumers (Cody and Hogue, 2003; Ipsos-Reid Corp., 2006). Beyond the online debate of South Koreans on the issue of imported U.S. beef, recent foodborne illness outbreaks linked to meat and produce in the U.S. have also stimulated blogging by consumers and others on food safety issues. Following 2006 (*E.coli* O157 in spinach) and 2008 (*Salmonella* Saintpaul in Serrano peppers) news spread through the Internet in an unprecedented fashion. Producers, processors, retailers and regulators of agricultural commodities must now pay particular attention to evolving discussion and engage in the public discussion while the crisis is occurring. A firm or industry that is not forthcoming with information of who knew what, when, and what decisions were made sets itself up for loss of trust because media and Internet discussion goes towards these questions. During a crisis it is necessary for a company or industry to talk about the science, discuss risks and tell an interested public about what is known, what is unknown and on what evidence decisions are made. Being available and understanding how media functions are also necessary skills for food industry members. Without recognizing deadlines or telling succinct stories of risk management, individuals risk the chance that others will fill the information vacuum with inaccurate information.

**Recovery:** A firm employing the best crisis management practices starts the recovery phase as soon as notification of a problem. Publicly, producers must address the problem, apologize to affected individuals; and, reach out to the media about risk-reduction changes. It is best to establish a dialogue with groups to demonstrate the organization's openness and commitment to public safety and health. Internally a firm plans for reentry to the market, logistics and how new risk-management strategies will impact other business activities. If there was media attention around the crisis event, the one-year anniversary will often garner further coverage. An organization must be able to demonstrate that they have learned something/ changed process in response and assess internally whether the same

# Tiny Wasp Could be Stink Bug's Downfall

- Continued from Page 3 -

The research has been underway for a year or two, and Hoelmer hopes to release *Trissolcus* into the field in the next one to two years.

Permission to introduce exotic species, however, is closely regulated by USDA's Animal and Plant Health Inspection Service. Hoelmer must demonstrate that the wasp will only attack stink bugs and will not significantly affect other species.

According to Hoelmer, *Trissolcus* wasps are specific enemies of stink bugs and do not attack other kinds of insects, animals or plants. The only potential risk he sees is the threat posed to other stink bug species. Some native stink bugs are pests, but others are beneficial because they prey on other insect pests.

"A common concern we often hear expressed is that newly introduced parasitic wasps might move to other hosts once they are here and once BMSB populations have been reduced to low levels, or will sting people and animals," Hoelmer wrote in an email. "This will not happen because *Trissolcus* are ecologically, behaviorally and physiologically tightly linked to their host species, and they are incapable of surviving in other types of hosts."

In general, parasitic wasps are incapable of stinging a person or animal due to their tiny size (*Trissolcus* adults are one-twentieth of an inch in length), he wrote.

BMSB in New York state

The Brown Marmorated Stink Bug hasn't hit New York like a "tsunami" as it did in the mid-Atlantic region.

However, the invasive bug has brought its own challenges to the state, according to Peter Jentsch, a senior Extension associate with Cornell University who spoke during The 2012 Empire State Fruit & Vegetable Expo.

Once BMSB nymphs reach the second instar stage, they start feeding on crops – not the case with the native green and brown stink bugs growers have contended with in the past, Jentsch said.

BMSB adults aggregate in overwintering sites, as well as on commodities. At this point, researchers believe there's only a single generation of BMSB per year in New York. However, there could be a partial second generation in some areas, depending on the season, he said.

In spring, BMSB migrates to forest hosts or agricultural commodities. Last year, they moved directly to deciduous host trees, but there wasn't much movement off those host trees into agricultural commodities. Jentsch wasn't sure why the ag crops were spared. Maybe the BMSB population wasn't high enough, or maybe the seasonal conditions weren't right, he said.

The first BMSB specimens were found in the Hudson Valley in 2008. They gradually increased in the southern part of the valley, and by 2010, they were moving across much of the state. Cornell personnel have created a working group to find ways to monitor and manage the pest, Jentsch said.



## Tell Me a Story: Communicating Produce Safety During a Recall

- Continued from Page 4 -

risks to public health exist by asking, "would we have the outbreak again today?"

Learning about a crisis: North Carolina specialty crop producers' crisis management workshops: A scan of producers in NC employing risk reduction practices showed 79% followed good agricultural practices and 21% had a crisis plan in place. Commodity groups (20) across the state were asked whether they provided producers with a crisis plan template of the four groups reached only three had templates.

Using role-play food safety experts guided students through a unique outbreak scenario resulting in an emotional engagement with the material and deeper understanding of the need for crisis preparedness. Learning objectives for this program included developing crisis management skills that are needed to remain viable, instill greater preparedness on how to handle a foodborne illness outbreak by participants, and increased understanding of what happens during an outbreak leading to greater coordination and an overall higher level of knowledge around food safety risks. The 2.5 hr table-top scenario on crisis management was designed as a role-play based on an real-life

outbreak investigation, public discussion and market repercussion situations

Following the workshop, participants identified having crisis plans in place (34%) as the top area where they could improve their crisis management capacity. Participants identified financial loss/sales as an area they worry about the most when thinking of a crisis (pre- and follow-up). In follow up interviews, traceability was the number one change participants reported they could make to address their ability to respond to an outbreak.

The top five areas participants identified were they could improve in crisis management was plans (34%), traceability (28%), and education/training, media/public relations, and communications (10%). After participation in the role-play, participants reported learning for the first time about media/public relations, crisis plans, and the process and timeline of an outbreak.



Berry News



# Raspberry & Blackberry News

## 2012 Oregon Berry Festival

- By Food First Marketing -

The Oregon Berry Festival is back for its second great year, offering the public a chance to taste, buy and celebrate Oregon's berries. The festival will be held July 20-21, 2012 at the Ecotrust event space in Portland.

If you came to last year's event you know that this is a family friendly, berry centric way to have a great time at the peak of berry harvest. Last year thousands of folks a day came by to participate and we anticipate crowds again this year!

The festival will have space for Oregon berry growers and those who produce value added products with berries to display, sell and sample their wares.

The parking lot of the Ecotrust building will host a "farmer's market" featuring berries or food items made with berries. Inside the Ecotrust building we will have an Oregon berry product showcase featuring products made with berries. Please come prepared to sample, display and sell your products.

There is a minimum cost for a booth space to help cover festival costs. Outdoor booth spaces are available in premium and standard locations. Premium locations will cost \$100 per booth and standard locations will cost \$75 per booth. Booth sizes are 10'x10' and vendors must provide tents. Electricity hook ups are available for an added cost. Indoor booths will have a tabletop space with tables and chairs provided. Indoor booths will cost \$50.



There will be a special time for retailers, restaurants and buyers to visit the festival and the ORBC is working to get as many local businesses that might want to use or sell Oregon berry products to the show.

We cannot make this the best berry event in the country without your help! Please visit our website [www.oregonberryfestival.com](http://www.oregonberryfestival.com)

to sign up to sell and display your berry products. We have just 44 booths available and they are going to be gone very quickly. So be sure to sign up right away! Questions? Call Darcy Kochis at 503-505-3876.



## Export Strategy Tools and Techniques Seminar

- By Food First Marketing -

With consumer and manufacturing interest in berries growing all over the globe, and markets opening for berries in countries like Korea, learning the basics of exporting our Oregon berries is strategically important to our industry.

The ORBC marketing and promotions team attended the Export Strategy Tools and Techniques Seminar, put on by US Export Assistance Center, an arm of the Small Business Administration of the US Government and Expeditors International, a Fortune 500 company whose services include air and ocean freight consolidation and forwarding, vendor consolidation, customs clearance, cargo insurance, distribution and other value added logistics services.

The one-day workshop focused on helping companies who have not previously been involved in the export marketplace get prepared to deal with the many facets of marketing, sales, and shipping to an overseas client.

The workshop began with a look at how to find potential buyers and evaluate the overall risk associated with sales to geographic areas while assessing the

costs of doing business overseas versus the potential profit margin. Sessions during the workshop gave clear guidelines and worksheets aimed at getting a novice in the export world a toolbox of items and contacts that could answer concerns and questions on how to be effective in getting products out to the expanding global customers.

Areas such as how to handle export financing and keep your company risk at a minimum showed that even a small company could benefit from working with the right banks and government agencies in selling goods overseas.

Shipping regulations, terminology and compliance guidelines were covered by experts in the field who supplied lists of terminology to aid in sorting through the large amount of paper work involved in international commerce.

A workbook with power point outlines of presentations, terminology dictionaries, listings of field contacts, and sample worksheets for use in exporting, is available for use by interested ORBC members. Please contact the ORBC office at 541-758-4043 if you're interested.



# Creation of the Genetic Roadmap for Red Raspberries is Underway

- Reprinted with permission from The Bramble -

In 2011, the USDA National Institute of Food and Agriculture (NIFA) funded a planning grant to develop a “Genetic Roadmap for Red Raspberry”. The team behind the grant is made up of researchers and extension specialists from the USDA-ARS, six land grant universities, and Agriculture and Agri-Food Canada. Together the team represents all of the publicly funded red raspberry breeding programs in the US. The term “genetic roadmap” really means a step-by-step description of how to: (1) quickly identify traits of interest using genetic markers; (2) coordinate seedling tests across the U.S., and (3) increase the overall speed and reliability of new cultivar release. After the roadmap is developed it will be widely shared with grower groups, researchers, extension specialists and other interested stakeholders.

As part of the first steps in developing the roadmap, members of the grant team held the New Paths for Red Raspberry Genetics Workshop during the January 2012 NARBA meeting in Sandusky, OH. Goals for the workshop were to describe the current state of US public breeding programs (e.g., screening capability, release timelines, etc.); to discuss new molecular tools that could expedite screening of breeding populations; and to gather input from growers and other stakeholders on limitations and opportunities in the red raspberry industry. Two workshop discussion panels included nurserymen, growers, private breeding program consultants and propagators. Together, with active audience participation issues that hinder rapid development of new cultivars and geographic limitations that need to be overcome were identified. Additionally, panel members pointed out economic necessities of production and listed plant characteristics they felt would increase sales and consumer purchases of red raspberries. All of this information will be used in drawing up the roadmap. Next steps include hosting a second stakeholder/listening session in early summer and recruiting advisory board members. We are looking for growers, processors, and buyers who want to help improve raspberry cultivars for the future and can devote 10 hours of their time. Advisory board meetings will be held via 1-800 teleconference or web sessions, in one to two-hour blocks, throughout the remainder of 2012. Contact a member of the grant team:

- ◆ Pat Moore: moorepp@wsu.edu
- ◆ Chad Finn: chad.finn@ars.usda.gov
- ◆ Courtney Weber: caw34@cornell.edu
- ◆ J.D. Swanson: jd.swanson@salve.edu
- ◆ Gina Fernandez: gina\_fernandez@ncsu.edu
- ◆ Michael Dossett: michael.dossett@agr.gc.ca
- ◆ Carolyn Ross: cfross@wsu.edu
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# Spotted Wing Drosophila –Don’t Assume You Know What to do Just Yet

**Subtitle: We still don’t know enough...**

- By Peerbolt Crop Management -

We’ve gotten through two seasons of living with this newest pest with minimal economic damage for most Oregon caneberry growers. Don’t assume this year will be the same. Why not?

- 1) For one thing, we’ve had a milder winter with no real deep cold snaps. We just got our traps out for this season and in the first week have picked up an adult SWD. In previous years this first adult wasn’t picked up until much later.
- 2) We know enough to know that our present trapping system (Apple cider vinegar attractant in a clear plastic cup) is not up to the task of giving us a good enough early warning. We’ve had instances of the first adults being caught in the trap at the same time as the first larvae being found in berries. We’re working hard on improved systems but we aren’t there yet.
- 3) I think we know enough at this point to prevent major regional train wrecks but not enough to predict where or when individual fields could get caught and suffer unexpected big losses. The bug still has a lot of potential for damaging lot of fruit quickly.

Stay in touch. Get online. Know where to go to get regular, real-time updates:

- Berries NW ([www.berriesnw.com](http://www.berriesnw.com)) and PCM’s SWD Website ([www.peerbolt.com/swd](http://www.peerbolt.com/swd)). Peerbolt Crop Management’s (PCM) sites have real time regional scouting and monitoring information, the latest management recommendations and links needed to other sources.
- Oregon State University SWD Website (<http://swd.hort.oregonstate.edu/>). OSU’s SWD dedicated site has very comprehensive SWD information and the latest research findings as well as all the needed links to other sources.
- Northwest Berry & Grape Information Network (<http://berrygrape.org/>). This OSU site has an interactive Oregon map with scouting report data collected through the regional scouting program.





# FOODEX – Japan 2012

- By Food First Marketing -



**The show got off to a great start with a visit by the US Ambassador to Japan, John V. Roos.**

The ORBC attended the International Food & Beverage Exhibition - FOODEX Japan 2012, March 6-9, 2012, at Makuhari Messe, Chiba City, Japan. FOODEX is one of the biggest and most popular food exhibitions in Asia and drew more than 70,000 buyers this year. There were 2,393 companies represented from 70 countries around the world. FOODEX attracts traders, retailers, wholesalers, food processors, hotel and restaurant industry buyers and anyone seeking food products to meet their current demands or to allow them to offer something unique and innovative.

The ORBC was able to attend the show as part of a Specialty Crop Block Grant from the USDA and the Oregon Department of Agriculture. The grant, which also allowed the Oregon Strawberry Commission to be part of the booth, provided all transport, per diem and booth fees for the show. The ORBC booth was located in the USA Pavilion, which had 70 US companies participating.

The ORBC booth was a standout with large images of Oregon berries and Mt. Hood attracting many visitors. Displays of Oregon berry jam and Oregon Marionberry fruit bars along with copies of "The Berry Bible" by ORBC Commissioner Janie Hibler helped round out the display.

Foot traffic at the show was brisk and representatives from numerous Far East countries including Taiwan, Korea, Viet Nam, the Philippines and China

as well as Japan learned more about how processed Oregon berries can be used in many applications and offer an alternative to fresh berries that is economical and puts the taste of the Great Northwest at their fingertips.

The ORBC was one of only eight companies selected to put on a tasting and talk at the ATO (Agricultural Trade Office of the US Embassy) booth in the American Pavilion. ORBC Commissioner Janie Hibler gave a slide presentation and talk on what makes Oregon berries the best tasting premium berry on the market. A tasting of Triple Berry Topping from Norpac Foods over cheesecake bites was offered during the talk and the combination of both resulted in the largest crowds of the day for each of the presentations.

The ORBC booth also featured an interactive online survey and a preview of the new ORBC smart phone app on iPads mounted on the booth counter. This was a popular attraction in a country where technology is always cutting edge and resulted in great interaction with people walking by. Survey results from the devices are being analyzed and will be available soon.

The Oregon Berries App can be downloaded free to all smart phones by going to either the iTunes store or the Android Marketplace and searching under "Oregon Berries". The app brings the ORBC website and Twitter Feed to your smart phone and lets you access hundreds of recipes, data on horticulture and many other interesting topics on Oregon berries. Be sure to tell your friends and relatives about ORBC's newest outreach tool.

ORBC's first time attendance at FOODEX will help buyers in the Far East realize that processed Oregon berries are delicious, are equal to fresh in health benefits and provide a way to keep berries available year round.



# Quality Evaluation of Advanced Blackberry Selections and Standard Cultivars

Brian Yorgey, Dept of Food Science and Technology, OSU  
 Chad Finn, USDA-ARS, NCSFR  
 Mary Peterson, USDA-ARS, NCSFR  
 Bernadine Strik, Dept. of Horticulture, OSU

Changes in Northwest economic and labor conditions have led to major changes in the Oregon caneberry industry. Berries that have been picked by hand since the birth of the universe are now often picked by machine. These changes have added extra factors to the list of desirable attributes in our commercial cultivars, the chief being thornlessness. This has been a major push in the USDA-ARS/OSU blackberry breeding program since the early 1990's.

On March 7<sup>th</sup> of this year, a blind tasting of blackberry purees made from four advanced thornless selections and two industry standards (one thornless, one thorny) was held at the Seventh Annual Raspberry and Blackberry Production Workshop organized by Peerbolt Crop Management. Purees of fruit of the selections and cultivars were evaluated for Overall Quality, Aroma, Flavor, and Color. Just under fifty industry members participated in the evaluation.

Berries were harvested during the summer of 2011 from plots at the OSU North Willamette Research and Extension Farm and processed as IQF fruit at the OSU Food Science and Technology Pilot Plant. Thawed berries were finished to puree through .045" screens. Sugar was added to taste to balance the acids without covering berry flavors. The samples were randomly assigned test numbers and were sampled in a random order.

**RESULTS:** Three of the four selections came out of a trailing background while ORUS 2867-2 is ¾ eastern blackberry (i.e. 'Chester Thornless', 'Navaho') and ¼ western trailing blackberry (i.e. 'Kotata'). For each attribute except color, the thornless selections except ORUS 2867-2 were scored numerically higher but statistically equivalent to 'Marion'. The three thornless, trailing selections scored better than Black Diamond for flavor and overall fruit quality and similar for aroma and color.

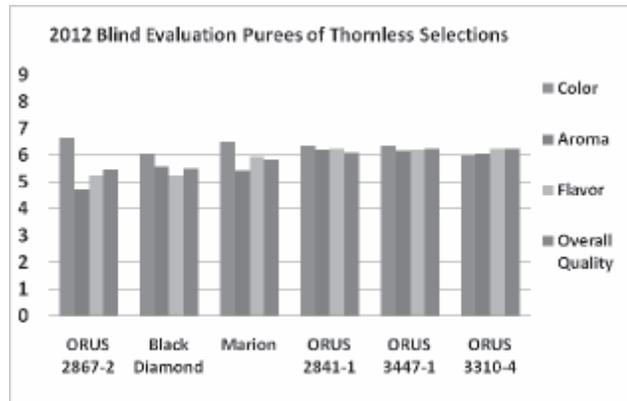
OVERALL QUALITY		
ORUS 3310-4	6.26	a
ORUS 3447-1	6.23	a
ORUS 2841-1	6.10	ab
Marion	5.83	ab
Black Diamond	5.51	b
ORUS 2867-2	5.45	b

AROMA		
ORUS 2841-1	6.20	a
ORUS 3447-1	6.17	a
ORUS 3310-4	6.07	a
Black Diamond	5.57	a
Marion	5.41	ab
ORUS 2867-2	4.72	b

FLAVOR		
ORUS 3310-4	6.22	a
ORUS 2841-1	6.21	a
ORUS 3447-1	6.19	a
Marion	5.94	ab
ORUS 2867-2	5.24	b
Black Diamond	5.23	b

COLOR		
ORUS 2867-2	6.65	a
Marion	6.50	ab
ORUS 3447-1	6.38	ab
ORUS 2841-1	6.35	ab
Black Diamond	6.02	ab
ORUS 3310-4	6.00	b

I think this is great. We now have three new THORNLESS selections that in a blind evaluation have scored as highly as Marion - ORUS 3310-4, ORUS 3447-1, and ORUS 2841-1. More tastings to come



## Blackberry Crops Have Expanded Worldwide

- By John Clark, University of Arkansas, Chad Finn, USDA / Reprinted with permission from [Fruitgrowernews.com](http://Fruitgrowernews.com) -

Blackberries are native across much of Eurasia and North America. This presence, combined with their tendency to colonize disturbed areas, has made them a food source for humans for thousands of years.

The various members of the genus have had a multitude of uses throughout human history, as documented in archaeological studies and in art and herbals. For most of their history, they were a fruit to be gathered from the wild. It wasn't until the mid to late 1800s that people started to select for better or, more typically in the early stages, novel characteristics in plants that were brought into cultivation.

Fresh fruit production began to be more common for local sales in the 1900s. The development of the raspberry/blackberry hybrid Logan in the 1880s served as the basis for a substantial canning industry in the Pacific Northwest. This industry expanded with the development of freezing technology.

Growing conditions in the Pacific Northwest and California were ideal for the newly discovered raspberry/blackberry hybrid Boysen, and for the first trailing blackberry cultivars developed by USDA's George Waldo in the 1930s-1950s. While the fresh blackberry industry grew slowly as locally produced product, the processed industry flourished,





# Blackberry Crops Have Expanded Worldwide

- Continued from Page 9 -

thanks to the release of Marion in 1956 and the invention of viable machine harvesters.

The success of the fresh red raspberry industry provided an example of how blackberries could become an important fresh-market crop.

The fresh red raspberry industry grew rapidly from the 1970s to the 1990s with the development of cultivars developed primarily by Driscoll Strawberry Associates in Watsonville, Calif., which could be shipped internationally from California.

Blackberries have similar horticultural characteristics to raspberries, but have lower production costs than raspberries due to their more vigorous nature, greater disease tolerance and longer-lived plantings. California growers looked to blackberries as a profitable way to meet consumer desires for new products. Blackberry consumers in the South and the Pacific states had wild blackberries growing in their back yards and developed a preference for their blackberries.

The Southern species tended to be sweet, with a slightly grassy, and occasionally quite bitter, flavor, along with somewhat crunchy seeds. The main species in the West tended to have an intense, aromatic flavor with a sweet/acid balance that, when right, leads to the intense flavor, but, when too acid, leads to a tart berry. They also had less noticeable seeds.

Cultivars developed for the fresh market tend to blend these characteristics, being well balanced but with a strong sweetness, with seeds that don't predominate the chewing experience. As these cultivars were combined with new horticultural and economic factors, blackberries became much more desirable to consumers. Perceived health benefits of highly colored fruit, due to their anthocyanin or antioxidant content, have helped drive increased customer demand. Thus, blackberries complemented other berries in expanded consumer interest.

The greatest recent expansion in blackberry production has been in North America, especially California and Mexico, for fresh consumption across the United States and Europe.

This expansion has been driven by factors like a stable blackberry supply in most or all months of the year, made up of cultivars that allow shipping to distant markets. While the fresh blackberry industry expanded rapidly in California in the 1990s, it exploded in Mexico in the 2000s. The Pacific Northwest, while primarily a processed industry, had a significant expansion of its fresh market at the same time. The most exciting production area for blackberries that has developed in recent years is central Mexico, in the states of Michoacan and Jalisco.

Most blackberries produce vegetative primocanes the first year, and after these canes go through a dormant period they become floricanes that bear the crop. In the 1980s, cultural manipulations were developed to allow floricanes-fruiting blackberries to be forced into fruiting without a dormancy

period. This production system is cultivar dependent and was first developed on the thorny Brazos, which had an estimated chilling requirement of approximately 300 hours. Production of Brazos was the basis of the development of the Mexican blackberry industry in the 1990s. In 1990, the Brazilian cultivar Tupy was brought to Mexico and was estimated to have a similar chilling requirement as that of Brazos.

Although initial efforts to manage Tupy with the same practices used on Brazos were not fully successful, adjustments were tried to provide for dependable production of Tupy.

The substantially increased quality of Tupy over Brazos led to expanded market development and tremendous expansion in production area. Fruit production in Mexico spans the months of October to June using these specialized management methods. It is estimated that Tupy was produced on roughly 16,000 to 20,000 acres in central Mexico as of 2011. This production has provided for a dependable fruit supply during the off-season in the United States and Europe.

With the expansion of blackberry marketing in winter and spring in the United States and Europe, U.S. fresh-market production was encouraged to increase. Crop area expanded further in the Western states, particularly California, and production for commercial shipping began in the South. Georgia, North Carolina, Arkansas and Texas initiated acres for retail-market sales. Current production in the United States is at an all-time high with the development of these additional areas.

With increases in the United States, particularly from 2005 onward, one can see a strong upward trend in production. That of Mexico dwarfs U.S. production, however. Therefore, although not all production for shipping is included, one can see that blackberries shipped increased from just above 4,500 kilograms in 2000 to approximately 54,000 kilograms in 2010. While the tonnage of Mexican fruit going to processing is much less than the tonnage going fresh, with the tremendous expansion of the industry, there now is a processing industry where there wasn't one in the past. The U.S. Pacific Northwest, with more than 8,500 acres, and Serbia in Europe, with more than 12,000 acres, have remained the leading world producers for the processed market.

The Pacific Northwest, primarily Oregon, also has a substantial fresh-market industry, but this is dwarfed by its processing industry. Marion, marketed as Marionberry, is a trailing blackberry that has been the most important cultivar in this region since the 1960s. While renowned for its flavor and processing characteristics, it is thorny – which is a legal liability, especially in a machine-harvested crop – and it is too soft to ship fresh.

New high-quality, thornless trailing cultivars that are suited for machine harvesting and processing have been developed and are being widely planted. In addition, trailing cultivars that have firm fruit and can be shipped have been developed and are being planted in this region for the fresh market. While the fresh blackberry industry has rapidly expanded, the processing industry has remained relatively stagnant, with only a small increase in acreage worldwide.





## 2011-2012

# Oregon Raspberry & Blackberry Commission Commissioner List

**Chair** – Tim Kreder

**Vice-Chair** – Linda Strand

Tim Kreder 1301 NE Hwy 99W #163 McMinnville, OR 97128	503-864-2077 (home) 503-559-8077 (cell) hajji@onlinemac.com
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VACANT (Producer Position)	
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Jerry Stratton 37661 SE Bear Creek Rd Boring, OR 97009	503-668-9674 (work) 503-806-9488 (cell) strattonfarms0108@gmail.com
VACANT (Handler Position)	
Don Sturm Sturm's Berry Farm PO Box 245 Corbett, OR 97019	503-695-2743 (work) 503-706-3672 (cell) thesturms@rconnects.com
Janie Hibler 282 NW Macleay Blvd. Portland, OR 97210	503-228-4740 (home) 503-319-1060 (cell) janiehibler@comcast.net



## 2011-2012 Committee List

### Budget Committee

Tim Kreder, Chair  
Linda Strand  
Larry Duyck  
Ken Van Dyke  
Janie Hibler

### Promotion Committee

Linda Strand, Chair  
Tim Kreder  
Larry Duyck  
Janie Hibler  
Don Sturm

### Legislative/Labor/Education Committee

Larry Duyck, Chair  
Linda Strand  
Ken Van Dyke  
Don Sturm

### Research Committee

Ken Van Dyke, Chair  
Jerry Stratton  
Tim Kreder  
Tom Peerbolt – ex officio

### Communications & Product Safety Committee

Janie Hibler, Chair  
Linda Strand  
Cat McKenzie, ex-officio

### Oregon Blackberry Name Recognition Committee

Janie Hibler, Chair  
Linda Strand  
Larry Duyck



## Notice of Public Hearing

Oregon Strawberry Commission - Proposed Budget

### The Proposed Budget is Published on Page 15

As required by ORS 576.416, the Oregon Strawberry Commission (OSC) will hold a public meeting for the purpose of receiving comments on the Commission's proposed budget for the next fiscal year.

Copies of the proposed budget are available at the commission office, 4845 B SW Dresden Ave., Corvallis, OR 97333, and on-line at [www.oregon-strawberries.org/commission.html](http://www.oregon-strawberries.org/commission.html).

The meeting location is accessible to persons with disabilities. A request for an interpreter for the hearing impaired or for other accommodations for person with disabilities should be made at least 48 hours before the meeting to 541-758-4043.

**DATE:** Thursday, May 3, 2012

**TIME:** 5:30 p.m.

**PLACE:** Langdon Farms Golf Course  
24377 NE Airport Road  
Aurora, Oregon

## Report from International Strawberry Symposium in China

- North Carolina Strawberry Growers' Debby Wechsler attended the International Strawberry Symposium in China -

The International Strawberry Symposium (ISS), like the Olympics, is held ever four years. But the 7th ISS, which opened Feb. 18 in Beijing, truly is the Olympics of strawberries. The world's strawberry community is being treated to the same kind of superb organization, hospitality, and spectacle. The opening ceremonies featured an intricate and impressive combination of lightshow, music, photographic images, and dancers. China is now the world's largest strawberry producer and it is proud to show off its growing strawberry industry to the rest of the world. About a thousand attendees have come from 66 different countries, to hear about advances in strawberry research, learn about new varieties, network with each other, see something of China, and advance the Symposium's goal of "Better Strawberry Happier Life". We'll get a chance to visit a special Strawberry Exposition Garden, built especially for this event, showcasing China's many wild strawberry species and cultivars from all over the world, as well as farms and research institutes.

New Report From Feb. 26: Yesterday, I visited two strawberry farmers, who each has two greenhouses, about 1/6 acre total. They used to raise field corn in the same space, but strawberries definitely provide more income! There are 70 greenhouses operated by

30 families in this small area. They all started raising strawberries six years ago, with the help of the local Beijing Extension service, possibly from the University (it is a bit unclear what government body does what). Their biggest problem is getting high-quality, disease-free plants, which is a complaint many U.S. growers will relate to.

Much of their fruit is sold pick-your-own, and the sign in the picture within this story advertises PYO for the whole group of greenhouses. I asked if they had to compete against each other, with their greenhouses all right next to each other, but it seems pretty low key — a customer will find a grower with the fruit they like, and come back to the same place again. Going to pick strawberries is a popular activity, and the farms are a destination; people will come from a long ways away and pay higher prices than they do in the store.

Feb. 22: Here at the Seventh International Strawberry Symposium in Beijing, the Chinese have given strawberries true celebrity status. The Symposium's attendees have been welcomed by huge banners and billboards, attended by an army of eager student helpers, treated to an elaborate Olympic-style Welcome Ceremony, and other festivities. The Chinese are proud to be hosting the world here, and China's strawberry industry has been burgeoning the last few years.



# 2011 - 2012 Oregon Strawberry Commissioner List

**Chair** – Matt Unger    **Vice-Chair** – Manuel Silveira    **Secretary/Treasurer** – Paul Snegirev

Robert Ditchen 6688 Juniper St. Salem, OR 97305	503-873-6084 (work) 503-881-7602 (cell)
Paul Snegirev 19602 Boones Ferry Rd NE Hubbard, OR 97032	503-678-5871 CyndiSnegirev@yahoo.com
Matt Unger 6540 SW Iowa Hill Road Cornelius, Or 97113	503-992-0710 (work) 503-819-5715 (cell) matt@ungerfarms.com
Arne Goddik 18265 SE Neck Road Dayton, OR 97114	503-864-3882 (work) 503-560-9274 (cell) goddik@frontier.com
VACANT (New Producer Position)	
Manuel Silveira NorPac Foods, Inc. PO Box 458 930 W Washington St Stayton, OR 97383	503-769-2101 x 1298 (work) silveira@norpac.com
<del>VACANT (Processor Position)</del>	Transition to new Producer
Laura Conroy 232 NE Lincoln, Suite J Hillsboro, OR 97124	503-844-6685 (work) 541-619-5405 (cell) lauraconroy@gmail.com



## 2012-2013 OSC Proposed Research Budget

1. Strawberry Pesticide Registration, Tracking, and New Chemistries
2. Development of New Strawberry Cultivars for the Pacific Northwest
3. Cooperative Breeding Program - Strawberries
4. Evaluation of Processing Quality of Advanced Strawberry Breeding Selections
5. Continuation of a Weekly Email IPM Newsletter for Small Fruit Growers and Related Industry Personnel



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# 2011-2012 OSC Committee List

## Budget Committee

Matt Unger, Chair  
Laura Conroy  
Arne Goddik  
Manuel Silveira

## Legislative Committee

Manuel Silveira, Chair  
Matt Unger  
Bob Ditchen  
Laura Conroy

## Research Committee

Arne Goddik, Chair  
Matt Unger  
Manuel Silveira  
Paul Snegirev  
Randy Pavlinac, Ex-Officio  
Peerbolt Crop Management, Ex-Officio

## Education/Promotion Committee

Laura Conroy, Chair  
Matt Unger  
Bob Ditchen  
Randy Pavlinac, Ex-Officio  
Laura Barton, Ex-Officio  
Cyndi Snegirev, Ex-Officio



## Report from International Strawberry Symposium in China

- Continued from Page 12 -

Most impressive is a brand-new Strawberry Expo Garden, a short ways down the road from the hotel hosting the Symposium. Its 67 hectares include 44,000 square meters of high-tech multi-span greenhouses and smaller Chinese-style solar greenhouses, as well as educational exhibits, and a set of elegant white buildings designed to look like giant white strawberries. During the Symposium, an exhibition featuring more than 300 companies, both Chinese and international, has been open to both symposium attendees and the general public, with the media much in evidence. This all seems good for the stature of strawberries in the mind of the public and the authorities, and the Strawberry Gardens are planned to remain as educational and research center for the future.

One day of the conference was devoted to “technical visits,” starting with the Expo Gardens. The acres of state-of-the-art greenhouses feature labeled rows of commercial varieties (mostly Chinese, Japanese, and American; I did not see European cultivars), under several greenhouse substrate production systems. In several smaller greenhouses we saw different kinds of wild strawberries from all over the world, all small and scraggly, and quite different from each other. Of the 25 recognized *Fragaria* species, thirteen are native to China, more than any other country. Others showed off pink and red flowered ornamental strawberries. “Pink Panda”, the first of these, was bred in England, but the Chinese have taken up breeding ornamental strawber-

ries with enthusiasm. Some of these also had quite respectably sized fruit; according to the signs, flavor varied. An idea for hanging baskets for Mother’s Day sales, perhaps?

The day also included visits to two local farms or breeding research facility — I chose the farms. Strawberries in the Beijing area are all grown in solar greenhouses, and this Chongqing area has seen a booming growth in strawberry production, with considerable government support. These farms are close to Beijing, producing large, very sweet, soft fruit with minimal shelf life. The berries are expensive and often sold PYO. These farms were both large enterprises, but most farmers have only a few greenhouses. Tianyi Strawberry Ecological Farm, with 1,800 solar greenhouses on 200 hectares, is the largest solar greenhouse strawberry producer in China. It’s an integrated company that has its own plant production, elegant branded packaging, marketing, and IQF processing as well.

Tianrunyuan Strawberry Cooperative has 152 member households and about 300 greenhouses. It provides plants, supplies, training, unified packaging, and help with marketing to its members. Here the most interesting part of the visit were demonstrations of different management systems, and especially of fumigation methods. Two of the more intriguing were ozone treatment (in water) and “capsule fumigation” — capsules of fumigant, looking very much like large pills, are buried in the soil at regular intervals, then the greenhouse is tarped. Irrigation breaks down the capsules and lets out the fumigant. 



# OREGON STRAWBERRY COMMISSION

	ACTUAL BUDGET 2010-2011	APPROVED BUDGET 2011-2012	ESTIMATED BUDGET 2011-2012	PROPOSED BUDGET 2012-2013
<b><u>SUMMARY OF REVENUES</u></b>				
Assessments	\$108,078.08	\$100,000	\$117,000	\$110,000
Interest income	67.18	500	200	200
Other Income	0.00	0	0	0
Grant Income	0.00	0	0	0
TOTAL REVENUE	108,145.26	100,500	117,200	110,200
Carryover/Begin. Cash Balance	40,869.09	60,000	55,818	70,000
Available for Expenditure	149,014.35	160,500	173,018	180,200
Expenditures	149,014.35	160,500	173,018	180,200
Balance Carried Forward	\$0.00	\$0	\$0	\$0
<b><u>SUMMARY OF EXPENDITURES</u></b>				
Materials & Services	\$49,409.68	\$49,050	\$47,493	\$45,550
Special Payments	\$41,013.55	\$52,000	\$47,288	\$65,000
Capital Outlay	\$0.00	\$0	\$0	\$0
Emergency Fund	\$55,818.16	\$56,350	\$75,300	\$66,150
ODA Oversight	\$2,772.96	\$3,100	\$2,937	\$3,500
Total Budget	\$149,014.35	\$160,500	\$173,018	\$180,200
<b><u>MATERIALS &amp; SERVICES</u></b>				
Materials & Supplies	\$2,864.05	\$3,000	\$2,500	\$3,000
Communications	2,500.33	2,500	2,500	2,500
Travel (in state)	348.00	1,000	750	1,000
Travel (out of state)	3,325.65	3,500	3,500	3,500
Meals & lodging	3,097.75	2,500	2,000	2,500
Freight & postage	900.00	900	900	900
Insurance & Bonds	148.00	150	143	150
Auditing fees	0.00	3,500	3,500	0
Legal fees	4,725.90	500	200	500
Other Purchased Services	0.00	0	0	0
Administrative Services	31,500.00	31,500	31,500	31,500
Total Materials & Services	\$49,409.68	\$49,050	\$47,493	\$45,550
<b><u>SPECIAL PAYMENTS</u></b>				
Promotion	\$7,500.00	\$15,000	\$11,328	\$15,000
Research	31,513.55	35,000	33,960	45,000
Legislative/Education	2,000.00	2,000	2,000	5,000
Assessment Refund	0.00	0	0	0
Total Special Payments	\$41,013.55	\$52,000	\$47,288	\$65,000
<b>CAPITAL OUTLAY</b>				
	\$0.00	\$0	\$0	\$0
<b>ODA MGMT. FEE</b>				
	\$2,772.96	\$3,100	\$2,937	\$3,500
<b>EMERGENCY FUND</b>				
	\$55,818.16	\$56,350	\$75,300	\$66,150
<b>GRAND TOTAL BUDGETED</b>	<b>\$149,014.35</b>	<b>\$160,500</b>	<b>\$173,018</b>	<b>\$180,200</b>



**SPRING 2012**

*Berry Commissions News*  
Pacific Northwest Administration  
4845 B SW Dresden Avenue  
Corvallis, OR 97333

