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Cornell University
College of Agriculture and Life Sciences

New York Berry News

Cornell University Berry Team

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Berry Growers Cautioned About New Insect Pest

Amanda Garris, Free Lance Writer, Cornell Chronicle

Late last summer, a single fruit fly dropped into a vinegar trap in the Hudson Valley, alerting extension specialists to spotted wing drosophila's (SWD) arrival to New York State. This tiny fruit fly may spark big changes for growers of berries and other soft-skinned fruits in the Northeast this summer.

"Based on what is occurring in places like Michigan and North Carolina, I expect the SWD to be a serious issue for small fruit growers in New York," said Cornell professor of entomology Greg Loeb. "Until now, we have not had to spray a lot of insecticide on our small fruit crops, but SWD could be a game changer for pest management."

An Asian native, *Drosophila suzukii* first appeared in California in 2008 and subsequently became established in the Southeast. Hurricane Irene is credited with helping it expand northward last year to the Hudson Valley, Finger Lakes and Long Island.

Right: The male spotted wing drosophila, *Drosophila suzukii*, can be identified by the dark spots near the tips of its wings. Photo by Martin Hauser.



According to Loeb, summer fruits with soft skins are at risk, including raspberries, blackberries, blueberries, sweet cherries and strawberry varieties, which produce fruit through late summer. Grapes are potentially at risk, but they do not appear as vulnerable as the others.

Although the SWD are small -- about the size of common kitchen fruit flies -- their damage to crops can be massive. Adult females use specialized, serrated ovipositors to stow their eggs beneath the fruit skin. The maggots that subsequently hatch from them destroy the fruit's commercial value.

"Although unappealing, eating fruit that might contain SWD is not harmful or poisonous to consumers," noted Julie Carroll, fruit IPM coordinator with New York State Integrated Pest Management (IPM) Program.

To prevent crop losses, Cornell research and extension specialists hope to reach all potentially affected growers before the growing season starts.

"The punctures from egg-laying are so small that they will be hard for growers to spot with the naked eye," Carroll said. "Growers will likely first notice infested fruit, which will develop darker, soft regions as the SWD develop."

Monitoring is the first line of defense, according to Peter Jentsch, senior extension associate in en-

Upcoming Berry Events

April 27, 2012. *Spotted Wing Drosophila Webinar from your home computer.* Details follow.

March 9, 2012. *Introductory Berry Nutritional and Soil Health Training, 1 to 4 PM.* Brown's Berry Patch, 14264 Roosevelt Highway (Route 18), Waterport, NY 14571. Details follow.

March 10, 2012. *Introductory Berry Nutritional and Soil Health Training, 9AM to noon.* Lagoner Farms, 6895 Lake Avenue, Williamson, NY 14589. Details follow.

May 11, 2012. *Introductory Berry Nutritional and Soil Health Training, 9AM to noon.* Giancarelli's Farm and Winery (formerly SG&S Farms) 10252 Shortcut Road, Weedsport, NY 13166. Details follow.

August 14-15, 2012. *NASGA Summer Tour,* Halifax, Nova Scotia. Details forth-coming.

September 14, 2012. *SAVE THE DATE! Cornell Small Fruit Open House, Cornell Orchard and Maple Avenue High Tunnels, 1-4 PM.*

2012 Cornell Pest Management Guidelines for Berry Crops Now Available

tomology at the Hudson Valley Laboratory in Highland, N.Y.



Above: Peter Jentsch, senior extension associate in entomology, set apple cider vinegar traps in the Hudson Valley Laboratory grape vineyard in March. Such traps are one way for growers to monitor the spotted wing drosophila.

"It's crucial to determine the earliest appearance of SWD adult females to prevent the onset of egg-laying," Jentsch said. "With only 10 to 15 days from egg to egg-laying adulthood, populations can erupt very quickly, making them difficult to control as harvest approaches."

According to Carroll, two insecticides have been granted special approval for use this season, including one for organic production. However, guidelines for spray regimes will likely evolve over the growing season, in part because the newcomer harbors some secrets. For example, although the insects are presumed to be present all summer, they don't show up in traps until late summer or early fall. In addition, sprays must be carefully timed to target the adult stage, because the eggs and worms are shielded by the fruit.

"What's most important is for growers to be tuned in to their Cornell Cooperative Extension specialists and extension entomologists, because there is a lot we will learn as the season progresses," Carroll said.

Researchers plan to use this growing season to learn as much as they can about the SWD. Loeb and collaborators have initiated five local and regional research projects to better define effective control, including trials to test pesticide efficacy, monitoring to determine what crops are most at risk, and alternative approaches to managing SWD populations, such as "attract and kill" traps and repellants.

(Amanda Garris is a freelance writer in Geneva, N.Y. Reprinted from Cornell Chronicle Online, March 27, 2012.)

SMALL FRUIT WEBINAR ANNOUNCEMENT

“Getting Ready for Spotted Wing *Drosophila*: Understanding Risks for Small Fruit Crops and Current Management Options”

Dr. Greg Loeb, Professor, Department of Entomology, Cornell University, Geneva, NY 14456

Friday April 27, 2012
1 PM – 2 PM EST

Join Dr. Greg Loeb, Cornell University grape and small fruit entomologist, as he discusses the new invasive species spotted wing drosophila (*Drosophila suzukii*) that arrived in the Northeast in 2011. Originally from Asia, this fruit pest was first discovered in California in 2008 and has now spread to 20+ states, including the Northeast. Where it has become established it has caused major damage to soft-skinned fruit with blueberries, raspberries, and cherries being particularly vulnerable, although day-neutral strawberries in the late summer are also likely to be seriously impacted. The reason this species of fruit fly is such a threat to berry crops is that the female is able to lay her eggs in ripe or ripening fruit as compared to other fruit fly species that wait until fruit is overripe or decaying, hence of less economic value.

In this webinar, Dr. Loeb will first review the basic biology of spotted wing drosophila (SWD), identification, history of invasion, and crops at greatest risk, and then go on to discuss management strategies including monitoring and possible control options.

What is a Webinar?

A webinar is a type of web conference where each participant sits at his or her own computer and is connected to other participants and the presenter via the internet. The speaker communicates with participants using real time audio communication through the computer via use of headphones and speakers. He or she provides information to participants on the screen (such as a PowerPoint presentation) as they speak.

How Can I Participate in the SWD Webinar?

All you need is a home or office computer and high speed internet access. Participation is free, but registration is necessary to participate. Registration is on a first-come-first-served basis for the first 100 participants. **To register e-mail Cathy Heidenreich, mcm4@cornell.edu.**

Once You're Registered...

Each registrant will receive an e-mail with instructions and a web link prior to the webinar. Simply click on the link to see the presentation given live by the speaker. Type questions into the chat box provided for real time Q and A with the speaker during and/or after the presentation. The webinar will begin promptly at 1 PM EST and last approximately 1 hour and 15 minutes.

Are You Interested to Learn About the Benefits of Good Berry Nutrition on Your Own Farm?

Mario Miranda Sazo, Dan Welch, Cathy Heidenreich and Marvin Pritts

Commercial berry growers in the Northeast have traditionally made standardized fertilizer applications based on crop age. This practice continues today, some 10 years or more after commercial berry crop guidelines for analysis-based fertilization programs became widely available. Adoption of soil health improving practices has also been slow.

Research demonstrates an analysis-based approach to berry crop nutrition provides increased yields along with better fruit quality and plant health. Use of soil health management practices (i.e. cover cropping) has been shown to reduce weed, nematode and soil-borne disease pressure, along with improving soil tilth, organic matter and nutrient content. Rising costs of products and concerns about environmental impacts of fertilizers make a whole farm approach to berry crop nutrient and soil management highly desirable.

Ag educators, frequently called on to cover multiple commodities and/or information areas outside their field of expertise, often

Are You Interested to Learn About the Benefits of Good Berry Nutrition on Your Own Farm? (continued)

struggle to assist commercial berry growers with berry crop soil and nutrient problems. No single comprehensive resource on this topic was currently available for either educators or growers.

A 2-year NE SARE Professional Development Project, led by Dr. Marvin Pritts, began last fall and provided in-depth berry crop nutrition and soil management training and resources for ag educators. Year one of the project focused on helping ag educators build berry crop nutrient and soil management expertise through (1) a series of 12 in depth webinars and case study learning modules and (2) the development of internet resources to be used by educators in grower training.

Year 2 of the project is starting this spring. Now the ag educators will (1) develop and implement grower training programs and (2) carry out one-on-one consultations with participating berry growers. Year 2 will also involve educators in monitoring adoption and success of analysis-based berry crop nutrient and soil health management by growers.

A whole farm soil and nutrient management decision tool for commercial berry crops will be developed from existing resources. This tool, along with accompanying ag educator and commercial grower training materials, made available via an internet web site, will provide a "one-stop-shop" resource for ag educators interested in building skills or providing training and/or commercial berry growers interested in improving berry crop soil and nutrient management.

Soil and nutrient management principles and practices gained through this project will have application to other crops currently or in the future.

We invite you to attend to the following introductory nutritional and soil health berry training meetings (each followed by a on-site field activity) and become one of our berry grower collaborators¹.

	Orleans County	Wayne County	Cayuga County
When?	<i>Wednesday May 9, 2012</i>	<i>Thursday May 10, 2012</i>	<i>Friday May 11, 2012</i>
Time?	<i>1-4pm</i>	<i>9am-noon</i>	<i>9am-noon</i>
Where?	<i>Brown's Berry Patch 14264 Roosevelt Highway (Route 18), Waterport, NY 14571</i>	<i>Lagoner Farms 6895 Lake Avenue Williamson, NY 14589</i>	<i>Giancarelli's Farm and Winery (formerly SG&S Farms) 10252 Shortcut Road Weedsport, NY 13166</i>
Instructors?	<i>M. Miranda Sazo C. Heidenreich (on-site berry consultation) M. Pritts (on-site soil health consultation)</i>	<i>M. Miranda Sazo C. Heidenreich (on-site berry consultation) H. vanEs (on-site soil health consultation)</i>	<i>D. Welch, M. Miranda Sazo C. Heidenreich (on-site berry consul- tation) R. Schindelbeck (on-site soil health consultation)</i>

¹ a grower collaborator can be a commercial strawberry, a blueberry, or a raspberry grower. Growers participating in the grower training portion of this project are then eligible to be one of our grower collaborators. Grower collaborators will receive in return for their participation one complementary Cornell soil health test and one Agro-One foliar analysis, along with related resource materials and a one-on-one discussion of test results with their educator trainer. Educator trainers will also be available to advise during the on-farm demonstration trials. Participating growers will receive a copy of the final report detailing project outcomes at the conclusion of the project.

Registration: Please pre-register by Friday May 4. To register you must call Kim Hazel at 585-798-4265 ext. 26. Or email her at krh5@cornell.edu. There is no charge for attending any of these meetings. You can attend as many as you want to learn more about berry nutrition!

First International Elderberry Symposium

We are pleased to announce the organization of the [First International Symposium on Elderberry \(*Sambucus*\)](http://muconf.missouri.edu/elderberrysymposium/), to be held in Columbia, Missouri, USA, June 9–14, 2013. Visit our Symposium website for the latest information: <http://muconf.missouri.edu/elderberrysymposium/>.

This will be the world's first gathering of international scientists from multiple disciplines studying all aspects of the elderberry plant and fruit, and its use as a food and dietary supplement. Horticulturists, Botanists, Biochemists, Food Scientists, Economists, and others will gather in Missouri, USA during peak elderberry flowering season for several days of scientific exchange and fellowship. Together, we will raise elderberry to the scientific level it deserves.

Topics include:

- Elderberry and Horticulture
- Elderberry and Health
- Elderberry and Business / Economics

The Symposium is being organized under the auspices of the International Society for Horticultural Science, and research papers resulting from the Symposium will be published in a peer-reviewed stand-alone volume of *Acta Horticulturae*. More information, including registration and abstract submission are forthcoming, so check the website often as the Symposium unfolds.

For more specific information: Andrew Thomas, University of Missouri (USA) at 417-466-2148 or ThomasAL@missouri.edu.

Get the latest: Follow the 'Berry Blog'

Craig Cramer, Cornell University

If you want to stay up-to-date on the latest berry information – pest and disease alerts, field days and events, new publications and other resources – check out the berry postings on the Cornell fruit news and events blog (blogs.cornell.edu/fruit/).

The simplest way to see just the berry-related posts is to visit the berry news and events page at the Cornell Fruit website: fruit.cornell.edu/news_events/berries.htm. You'll find the title and a short summary of the latest posts. (Click on a post title to read the whole post.) The page also lists events of interest to New York berry growers.

You can also sign up for free email notifications of new posts by visiting the blog and entering your email address in the Subscribe by Email box.

Or if you want to get fancy, you can add this RSS feed to your Google homepage or other feed reader: blogs.cornell.edu/fruit/category/berry-news/feed/

Feel free to comment on posts. But keep in mind that they are moderated, so they won't appear right away.

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Cornell University
Cornell fruit news and events
The latest on www.fruit.cornell.edu

April 16, 2012

Nutritional and soil health berry training meetings
Posted by Craig Cramer under Berry news, News
No Comments

Nutritional and soil health berry training meetings

Orleans County
Wednesday May 9, 2012
1-4pm
Brown's Berry Patch
14264 Roosevelt Highway
(Route 18),
Waterport, NY 14874

Wayne County
Thursday May 10, 2012
9am-noon
Lagoner Farms
6805 Lake Avenue
Williamson, NY 14389

Cayuga County
Friday May 11, 2012
9am-noon
Giancarelli's Farm and Winery
(formerly 50&S Farms)
10250 Shertout Road
Weedport, NY 13166

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A grower collaborator can be a commercial strawberry, a blueberry, or a raspberry grower. Growers participating to the grower training portion of this project are then eligible to be one of our grower collaborators. Grower collaborators will receive in return for their participation one complementary Cornell soil health test and one Agro-One foliar analysis, along with related resource materials and a one-on-one discussion of test results with their educator trainer. Educator trainers will also be available to advise during the on-farm demonstration trials. Participating growers will receive a copy of

Cornell Fruit Website

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MSU Launches Reformatted Blueberry Website

New MSU blueberry facts website is the key to information delivery for Michigan blueberry growers.

Mark Longstroth, Rufus Isaacs and Joy Landis, Michigan State University Extension, Department of Entomology, and MSU IPM Program

March 22, 2012. The MSU Blueberry Team has moved to a new format for information delivery, the [Michigan Blueberry Facts](#) website. The [MSU Blueberry Team](#) faced a dilemma in 2011. Grant funding for the MSU Blueberry Newsletter had expired. This free email and print newsletter was extremely popular with blueberry growers, but there was no funding to create and mail it out to growers. The old MSU blueberry website also needed updating to allow posting of new information. The solution was to reorganize the blueberry website to contain current information and to serve as an information delivery system.

Timely articles and scouting reports will be prepared for online delivery and posted to the [MSU Extension News Fruit Page](#) and on the [Michigan Blueberry Facts](#) webpage at <http://www.blueberries.msu.edu>.

You will no longer receive an email or PDF file each week. Instead, the blueberry information will be posted at the [Michigan Blueberry Facts](#) website. If you want to get an email alert when new articles are posted, go to the bottom of the page and sign up for the RSS feed. Or just check back regularly for new information. Please let us know what you think of this new format.

The [Michigan Blueberry Facts](#) website also contains an archive of all the past Michigan Blueberry Newsletters. These can be found by clicking on Pest Management and then on [Michigan Blueberry Newsletter Archives](#). These will be a useful resource to read detailed discussions for insect and disease control. This season you may want to go back and find articles that were written not on the same date, but by comparing growing degree days or the growth stage of the blueberries when the article was written.

The new website also contains a listing of upcoming blueberry meetings and a way to contact team members directly using the Ask an Expert box. You can type in a question or send a comment and it will be delivered to the blueberry team member most qualified to answer.

We hope this new system will allow us to provide useful information and respond quickly to new issues as they arise. Please let us know what you think of this new format.- *The MSU Blueberry Team*



NY NASS NEWS

New York Strawberry Production Increases for 2011

Blueberry Production Drops 17% Over 2010

Strawberry production in New York was up 3 percent from 2010 to 3.60 million pounds, according to King Whetstone, Director of USDA's National Agricultural Statistics Service, New York Field Office. The value of utilized production is estimated at \$8.46 million, up 23 percent from the \$6.90 million in 2010. New York ranks eighth in strawberry production. Nationally, the strawberry crop for 2011 was placed at 2.89 billion pounds, up slightly from 2010.

Production of blueberries for the Empire State was at 1.90 million pounds, down 17 percent from 2010. The 2011 crop is valued at \$3.96 million, down 12 percent from the \$4.52 million last year. The U.S. estimate for blueberries is 434 million pounds, up 4 percent from 2010.

NY NASS NEWS (continued)

New York's berry crop had a combined total value of \$12.4 million. This value is up 8 percent from the \$11.4 million in 2010.

New York Farm Numbers Decrease

Febbruary 27, 2012. The number of farms in New York for 2011 decreased from a year earlier, reports King Whetstone, Director of USDA's National Agricultural Statistics Service, New York Field Office. The number of farms for 2011 is estimated at 36,000. Land in farms was 7.00 million acres. Numbers of farms with sales over \$500,000 increased by 50 to 1,800 while numbers of farms with sales between \$250,000 and \$499,999 fell by 150 to 1,300. The area of land operated by farms in these two groups totaled 2.50 million acres, equal to a year ago. The next smaller sales class, farms with sales between \$100,000 and \$249,999 decreased by 200 to 3,200 while land operated by these farms decreased to 1.10 million acres. There were 10,800 farms with sales between \$10,000 and \$99,999 compared with 10,700 a year earlier. Land they operated totaled 1.80 million acres. There were 100 less small farms with sales between \$1,000 and \$9,999 in 2011, at 18,900. Land in farms for this class remained the same as last year at 1.60 million acres.

**USDA News****USDA News**

**USDA Announces New Farm to School Program to Improve the Health and Nutrition of Kids Receiving School Meals
National Program to Provide New Economic Opportunities for Producers of All Kinds**

HARWOOD, Md., April 17, 2012 – Agriculture Deputy Secretary Kathleen Merrigan announced today that USDA will be investing in farm to school programs nationwide to help eligible schools improve the health and wellbeing of their students and connect with local agricultural producers. Merrigan joined students at Southern High School to announce the new program that will promote opportunities for nutrition and agriculture education while providing new economic opportunities for food producers of all kinds and communities nationwide. Students at the school displayed and highlighted their farm to school efforts with a tour of the school's greenhouse.

"School cafeterias are great places to champion U.S. agriculture and to teach students where their food comes from," said Deputy Secretary Merrigan. "More and more, schools are connecting with their local farmers, ranchers and food businesses each day and these programs are a great way to bring more local offerings into school cafeterias and support U.S. producers as well. As we struggle with obesity and associated diet related diseases, farm to school programs give us one important tool to help our kids make lifelong healthy eating choices."

The Farm to School Grant Program is part of the Healthy, Hunger-Free Kids Act, which authorized and funded USDA to assist eligible entities, through grants and technical assistance, in implementing farm to school programs that improve access to local foods in eligible schools. The new investments will assist schools in procuring food from local producers. Farm to school initiatives can also include agriculture and nutrition education efforts such as school gardens, field trips to local farms, and cooking classes.

These grants, administered by USDA's Food and Nutrition Service (FNS), will help schools respond to the growing demand for locally sourced foods and increase market opportunities for producers and food businesses, including food processors, manufacturers, distributors and other value-added operations.

To fulfill the farm to school mandate in the HHFKA, effective October 1, 2012, \$5 million will be provided to USDA on an annual basis to support grants, technical assistance, and the Federal administrative costs related to USDA's farm to school program. In this first funding cycle, FNS anticipates awarding up to \$3.5 million in grants, while the remaining \$1.5 million will support a combination of training and technical assistance, administrative costs, and/or additional farm to school grants.

Letters of Intent are suggested but not required by May 18, 2012, while proposals are due June 15, 2012. To assist eligible entities in preparing proposals, USDA will host a webinar related to Implementation grants on May 15th at 1:00 pm EST and a webinar related to Planning grants on May 17th at 1:00 pm EST. For more information on webinars, the farm to school grant program, or USDA's farm to school efforts in general, please visit the USDA Farm to School website.

Reducing childhood obesity and improving the nutrition and health of all Americans is a top priority the Obama administration and USDA is committed to promoting healthy eating and active lifestyles and ensuring that all Americans have access to safe, nutritious, and balanced meals. Championed by First Lady Michelle Obama as part of her Let's Move! initiative and signed by President Barack



USDA News (continued)



Obama, the Healthy, Hunger-Free Kids Act of 2010 marked a great win for the nearly 32 million school children that participate in the National School Lunch and the 12 million school children that participate in the School Breakfast Programs each school day. USDA is working to implement historic reforms that will mark the most comprehensive change to food in schools in more than a generation, which include: updated school meals nutrition standards to increase fruits, vegetables, whole grains, and low-fat dairy; science-based standards for all foods and beverages sold on the school campus; performance-based funding increases for schools – the first real increase in 30 years; and training and technical assistance to help schools meet improved standards.

USDA's Food and Nutrition Service administers 15 nutrition assistance programs that, in addition to the Supplemental Nutrition Assistance Program and National School Lunch Program, also include the Special Supplemental Nutrition Program for Women, Infants and Children, and the Summer Food Service Program. Taken together, these programs comprise America's nutrition safety net.

Farmers Market Promotion Program Grants Available

WASHINGTON, April 5, 2012 – Agriculture Deputy Secretary Kathleen Merrigan announced today that the U.S. Department of Agriculture (USDA) is seeking grant applicants for the 2012 Farmers Market Promotion Program.

Approximately \$10 million is available for marketing operations such as farmers markets, community supported agriculture and road-side stands. The grants, which are administered by USDA's Agricultural Marketing Service (AMS), are available through a competitive application process on www.grants.gov. The grants aim to increase the availability of local agricultural products in communities throughout the county. They will also help strengthen farmer-to-consumer marketing efforts.

"These grants will put resources into rural and urban economies, and help strengthen efforts to provide access to nutritious and affordable foods," said Agriculture Deputy Secretary Kathleen Merrigan. "This program not only supports the health and well-being of local communities but also the economic health of their farms and businesses."

Projects that expand healthy food choices in food deserts or low-income areas (where the percentage of the population living in poverty is 20 percent or above) will receive additional consideration. USDA, in coordination with the Departments of the Treasury and Health and Human Services, seeks to increase access to fresh, healthy and affordable food choices for all Americans, while expanding market opportunities for farmers and ranchers.

Information on applying for a Farmers Market Promotion Program grant will be published in the April 6, 2012, Federal Register and available online at www.ams.usda.gov/FMPP. Applications will only be accepted via grants.gov and must be received by May 21, 2012. Applications that are incomplete, hand-delivered, or sent via U.S. mail will not be considered. Applicants should start the grants.gov registration process as soon as possible to meet the deadline. Contact Carmen Humphrey, Program Manager, by phone: (202) 720-8317, or e-mail: <mailto:usdafmppquestions@ams.usda.gov> for more information.

Authorized by the Farmer-to-Consumer Direct Marketing Act of 1976 and amended by the Food, Conservation and Energy Act of 2008 (the Farm Bill), the Farmers Market Promotion Program is in the seventh year of funding direct markets that benefit local and regional economies.

The Farmers Market Promotion Program is part of USDA's commitment to support local and regional communities. These investments are highlighted in USDA's Know Your Farmer, Know Your Food (KYF) Compass. KYF Compass is a digital guide to USDA resources related to local and regional food systems. The Compass consists of an interactive U.S. map showing local and regional food projects and an accompanying narrative documenting the results of this work through case studies, photos and video content.

A large selection of USDA-supported programs and projects is also visible on the KYF Map, which can be displayed by theme, program, or recipient type. Both the KYF Compass and map will be regularly refreshed with new data and case studies.

New York Berry Growers Association News

Exciting Times Are Ahead!

NYSBGA and Cornell Small Fruit Breeding Program to Collaborate

Dale Ila M. Riggs, President, NYS Berry Growers Association, Owner, The Berry Patch, Stephentown, NY

At the March Board of Director's meeting, the Board unanimously voted to formalize a collaboration with the Cornell Small Fruit Breeding Program lead by Dr. Courtney Weber to advance the testing of potential new berry varieties. Grower members of the NYSBGA will have the opportunity to test selections from the Cornell breeding program on a commercial scale before they are available to the for commercial release through a testing agreement with the Cornell Center for Technology Enterprise and Commercialization (CCTEC). Members of the NYSBGA will have priority access to new selections to aid in the release of new varieties and develop commercial production data for members.

We are thrilled to be able to formalize this agreement with Courtney's program and CCTEC. The paperwork is still being finalized but will be signed soon to start this agreement. Members of the NYSBGA will be able to test potential new selections of crops including raspberries and strawberries before they are available elsewhere, and Courtney will receive valuable data from the grower members. The testers will be required to gather general data for the breeding program to provide input to Courtney as he evaluates selections on a commercial scale for possible release. It is a prime example of collaboration that will bring benefits to all parties involved.

The Board of the NYSBGA thanks Dr. Weber for his offer to work together with us in this way. Speaking on behalf of our industry, we look forward to a long and productive collaboration!



*"New York State
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goodberries@roadrunner.com

<http://www.hort.cornell.edu/grower/nybga/>



Focus on Food Safety

Produce Safety Alliance April Update - Gretchen Wall, Produce Safety Alliance Program Coordinator, glw53@cornell.edu

Spring seems to be in full swing here in the Northeast (arriving almost a month early here in NY!) and I am sure there are plenty of others already out in the field. Fear not the constant frost threats and allow me to share some PSA progress!

Working Committee Updates

This month we continue to make significant progress within the working committees wrapping up final discussions and written summaries. We are happy to share three additional working committees' final summary documents as WC 1, WC 8, and WC 6 have all completed their conversations this month. When the draft Produce Safety Regulations in FSMA are released, some WCs may revisit their final document to make sure it is still relevant and includes issues critical to the new regulation. All working committee summaries are available online at <http://producesafetyalliance.cornell.edu/summary.html>.

PSA Focus Groups

The last set of focus groups with fruit and vegetable growers will be conducted this month in California. We have been discussing challenges to implementing Good Agricultural Practices, preferred methods of learning, and attributes of effective training programs to minimize food safety risks at the farm. Upon completion, a summary of these listening sessions will be made available on the PSA website.

Current Events in Produce Safety

The FDA continues to make progress on the Food Safety Modernization Act (FSMA). Check out their [three month progress report](#) online.

Spotlight Series

With growing participation of Hmong farmers in American agriculture, the Bioproducts & Biosystems Engineering Department at the University of Minnesota has been uniquely focused on creating sustainable training programs for GAPs and safe food handling for Hmong American farmers. To learn more about the educational materials and training available from this program, please visit the "[Harvesting Healthier Food: A Program of Safe Food Handling Practices for Immigrant Farmers](#)".

Keep Up-To-Date

Get the latest updates on the PSA's activities and future produce safety regulations through our listserv. To sign up, please visit our website at <http://producesafetyalliance.cornell.edu/psa.html>.

Interested in a handout to use at meetings? Download the [PSA Flyer](#) to share with others.

Other Resources

The [calendar](#) is continually updated online with committee meeting dates.

Miss a meeting? All [WC meeting notes](#) and [summaries](#) are available for download as they are received.

As always, please do not hesitate to contact myself or Betsy Bihn (eab38@cornell.edu) if you have any questions.

Tunnel Talk

Rainwater Catchment from a High Tunnel For irrigation Use - Shawn Shouse and Linda Naeve, Iowa State University.

New Fact Sheet Available from Iowa State University Outreach and Extension

A new 2012 publication describes how to catch, store, and reuse the rainwater for irrigation in the high tunnel. The amount of water collected from periodic rain events often can be enough to irrigate and sustain a high tunnel for a few days to weeks. While, the water supply is not consistent and should not be the only water source for high tunnel crops rainwater catchment and reuse does result in savings on water supply costs.

The ideal time to install a gutter system is at the time of construction because excess plastic from the cover can be utilized and support boards can be installed efficiently. However, gutters can be retrofitted on existing high tunnels.

The 7-page pdf publication is available free on line at: <http://www.leopold.iastate.edu/sites/default/files/pubs-and-papers/2012-01-rainwater-catchment-high-tunnel-irrigation-use.pdf>.



Focus on Pest Management

Important Notice Regarding CleanSweepNY 2012 Collections

The process for contracting a CleanSweepNY waste hauler is underway and due to time requirements there will be no spring 2012 collection program. Once a Request for Proposal (RFP) is finalized by NYSDEC, it will be posted on the NYS Contract Reporter.

We are hopeful that a contract will be in place for a fall 2012 collection which will target the following NYSDEC Region 8 counties: Chemung, Genesee, Livingston, Monroe, Ontario, Orleans, Schuyler, Seneca, Steuben, Wayne and Yates.



To date, over 1,059,344 pounds of pesticides and other chemical wastes from schools and other entities have been collected and removed from New York State for disposal.

This total includes the collection of over 715 pounds of elemental mercury collected from 379 participating schools. We look forward to providing pesticide disposal services and school chemical disposal services to farmers, nurseries, greenhouses, certified pesticide applicators, landscapers, and schools in New York State to promote a Toxic Free Future for all New Yorkers.

For more information: info@cleansweepny.org or 1-877-SWEEPNY (1-877-793-3769). Messages can be left anytime. Returned phone calls and replies to emails will be made as soon as possible.



Blueberry Scale - Laura McDermott, Capital District Vegetable and Small Fruit Program

There are several different species of scale that can infest a blueberry planting. Putnam scale (*Diaspidiotus ancyclus*) may be the most common in New York State while Terrapin scale is often associated with southern plantings. Other scale insects that can be problematic include Lecanium, oystershell and cottony maple scale among a few others.

Scale, if left unchecked, can cause defoliation, loss of vigor and eventual death of the plant. Scale is frequently associated with plantings that have not been vigorously pruned, although I have seen scale in very well managed plantings. Scale can infest new and old wood and can also cause damage to fruit. Any planting over the age of 6 years is vulnerable.

The scale insect carries an armored shell called a derm. This shell provides protection as the insect underneath it is soft bodied and

Focus on Pest Management (continued)

easy to kill. Under the shell or 'derm', the adult female scale lives and grows. She mates and lays a mass of eggs under the derm. The adult male is winged. He emerges from his derm and mates with a female but does not feed. Photo right from WSU Whatcom County Extension, <http://whatcom.wsu.edu/ipm/manual/blue/scale.html>.



In mid-to late May (in an ordinary spring!) the eggs hatch and the 'crawlers' emerge from the derm. This stage is very mobile and will move around the plant and to neighboring plants. The crawlers look like 6 legged mites with two flattened antennae. As scales mature they become less energetic and start feeding. The scale will then molt and flatten out and start to form the waxy scale covering. Scales secrete honeydew which supports black sooty mod which is often the first sign that there is a problem with the plants.

Dormant oil should applied to blueberry bushes on warm days (>50°F) in late winter before flower buds begin to open. The oil is an effective way to kill overwintering scale. It is important to get a good covering of oil to insure control. Mix 2-3 gallons of oil in 100 gallons of water and apply 50 to 100 gallons of water per acre (depending on bush size).

Because scale is often found on lightly or poorly pruned plants, you need to insure that the plants are pruned on an annual basis. Follow the pruning with a dormant oil application right when young crawlers are emerging from the scale covering. Treat from early March to first bloom with three gallons of Superior oil mixed into 250-300 gallons of water applied at 300-400 psi. This amount of spray should allow thorough coverage of an acre of blueberries. Do not apply oil sprays at 32° F or below and do not apply oil when temperatures rise into the upper 70's. A quiet, cloudy, 50-60 degree day is best. Oil should NOT be applied with lime sulfur, which is often used to control Phomopsis cane blight in blueberries as sulfur is incompatible with oil.

Other materials that could be used to control scale include Molt-X or AzaSol both of which contain the active ingredient azadirachtin. Molt-X requires crop oil adjuvant. Brigade is a restricted use chemical that can be used but you are limited to 0.5 lb/acre per season. Esteem is also labeled and can be applied at delayed dormant.

There are reports that parasites and predators may help control the terrapin scale including chalcid wasps and ladybeetle, *Hyperaspis binotata*. These same predators may work on Putnam scale and other scale insects.

Disease Snapshot: Orange Rust - Zachary Frederick, Graduate Student and R. Kerik D. Cox, Assistant Professor Plant-Pathology & Plant-Microbe Biology, Cornell University

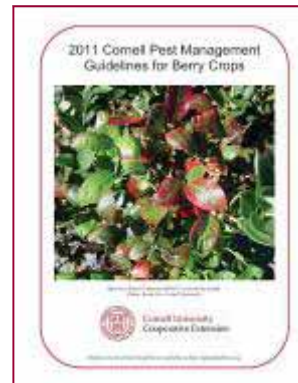
Causes: *Arthuriomyces peckianus* and *Gymnoconia nitens*

When to watch for it: Spring through late summer

First line of defense: Removal of all infected raspberry canes and roots

Summary: Orange rust is a disease of considerable economic importance in the Northeastern United States, but has been a reported problem elsewhere. Red raspberries are the only *Rubus* species considered to be immune to this pathogen. Blackberry infections are often the most severe, but the disease has been observed in purple and black raspberries.

Orange rust can be seen as new growth appears in the spring. New shoots are often deformed and



PIMS

Product, Ingredient, and Manufacturer System:

<http://pims.psur.cornell.edu/>



<http://www.omri.org/omri-lists>



Berry Diagnostic Tool

<http://www.fruit.cornell.edu/berrytool/>

Focus on Pest Management (continued)

spindly. Infected plants will produce many shoots, but none of them will be very strong or well formed. The first visible signs of infection are on the upper surface of newly emerging leaves. A few weeks later, the next stage (Aecia) will erupt from the undersides of leaves and sporulate profusely. Infected leaves will typically abscise in the early summer, and infected floricanes will never produce blossoms. New infections result from the colonization of leaves by aeciospores, which are wind disseminated. During cooler weather the pathogen grows in the intercellular spaces within leaves and canes, and the pathogen will eventually colonize the roots.

Right: Orange rust on a blackberry leaf. The erupting aecia are visible and powdery orange aecial spores can be released into the wind.



Once the roots are colonized every cane produced will be infected, making chemical control entirely impractical. In late summer, infected plants will develop telia that will appear like many small black pustules on the undersides of leaves. The teliospores produced by *G. nitens* can overwinter, but the pathogen primarily overwinters as mycelia in the intercellular spaces in the roots.

Optimizing Strawberry Production with a Reduced Tillage System

Laura McDermott, Capital District Vegetable and Small Fruit Program

This project, supported by a NESARE Partnership grant, sought to improve weed control during the establishment year of a perennial matted row strawberry system while also reducing cultivation and herbicide inputs and improving soil health.

A recently completed (Nov. 2009), Cornell University project that focused on controlling weeds in strawberries during the establishment year by transplanting dormant berry plants into a killed cover crop showed great promise, but revealed a barrier. Most growers had difficulty planting through the cover crop. This resulted in slower establishment during the first month and possibly caused skips. Additionally, research has shown that control of weeds during the first weeks of the growing season makes the most difference to yield in a matted row system. There have also been studies that support the use of cover crops as a way to decrease incidence of plant disease.

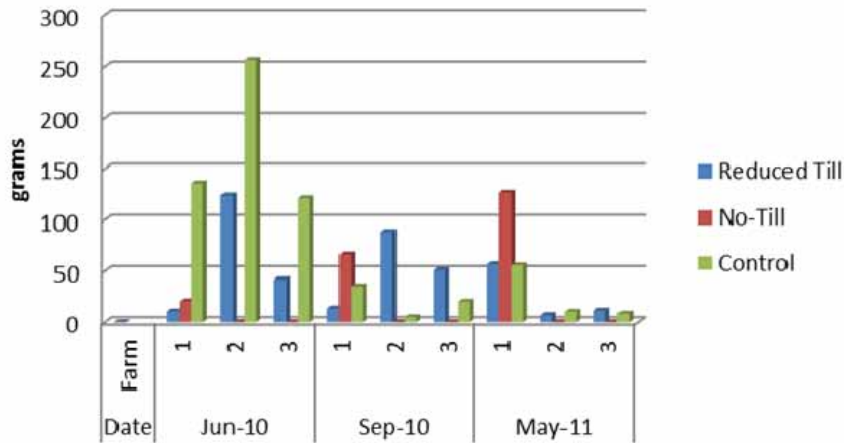
The reduced-till system uses a sub-soiler to loosen soil deeply followed by coulters and a rolling basket that prepare a 6-10" wide seedbed. This technique allows the longer rooted strawberry plant to be correctly planted while still having minimum soil disturbance between the rows. By only tilling this narrow area, the chance of new weed seeds being brought to the surface for germination is reduced. Because the strawberry plants will get off to a good start, they should out-compete weed competitors in the tilled zone. The addition of the shank allows for improved water drainage therefore reducing disease pressure from soil borne diseases like Phytophthora fruit rot. The use of reduced tillage tools usually requires a single trip across a field for it to be fitted for planting – an important advantage that translates into less labor, reduced fuel consumption and a decreased risk of soil compaction.

The results from the study were variable. In Table 1, the dried weed weight from all sampling dates on all farms is reflected. All 3 farms saw significantly larger weeds during the first month after planting in the conventionally prepared trials than for the reduced till or no-till trials. However, this does not mean that there were more weeds, rather the data in Table 2 suggests that specifically for Farm 1 and 3 that the weeds were more numerous but much smaller in the reduced till treatment than in the conventional treatment. This may be explained because it took longer for the weeds to emerge through the killed cover crop.



Optimizing Strawberry Production with a Reduced Tillage System

Table 1. Dried Weed Weight



Data in Table 2 suggests that numbers and types of weeds varied dramatically from farm to farm.

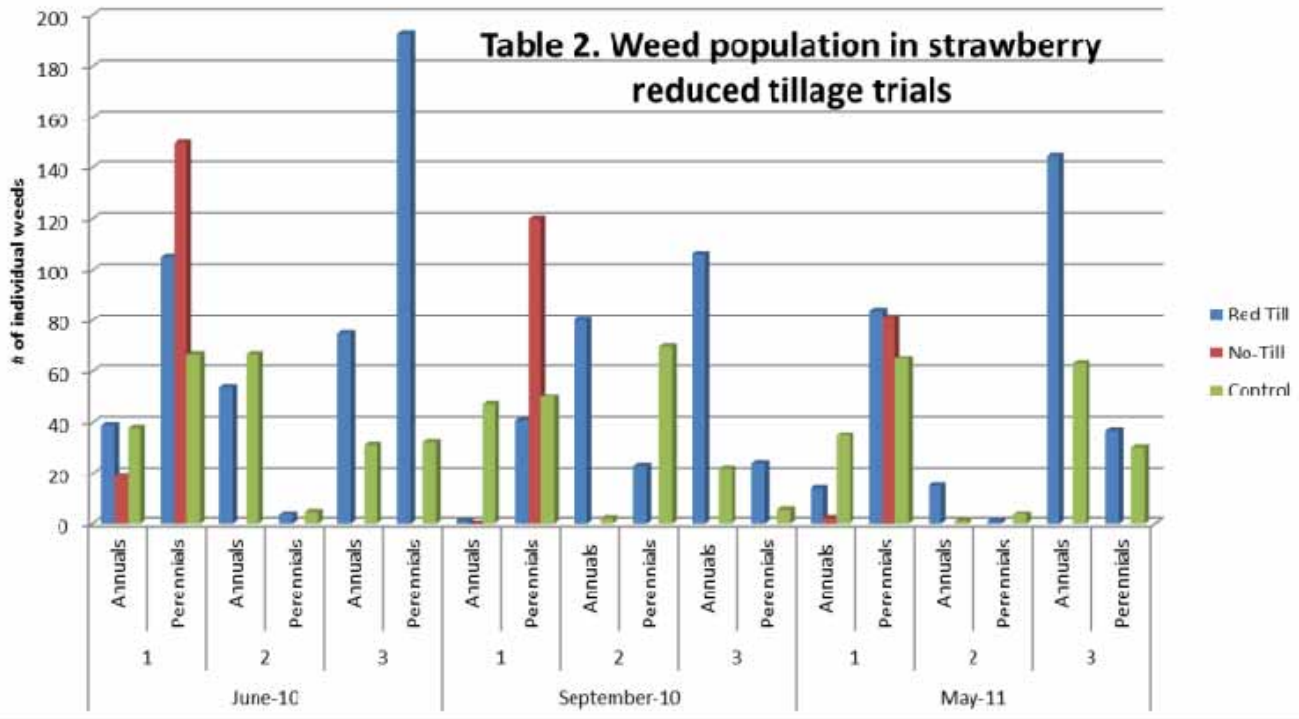
Farm 1 showed a higher number of perennial weeds than both other farms, due to the fact that this trial was installed into a killed sod on Farm 1. That high ratio of perennial weeds to annual weeds continued through the next 2 sampling periods. This tendency does not bode well for the productive life of the planting, as perennial weeds are difficult to eradicate once established in a matted row strawberry system.

Farm 2, whose data in Table 1 indicate that the weeds in the control treatment were larger one month after planting, still had higher numbers of weeds as illustrated in Table 2. This same trend was seen in the

data from Farm 3 – larger weeds in the control treatment, but higher numbers of weeds in the reduced till treatment.

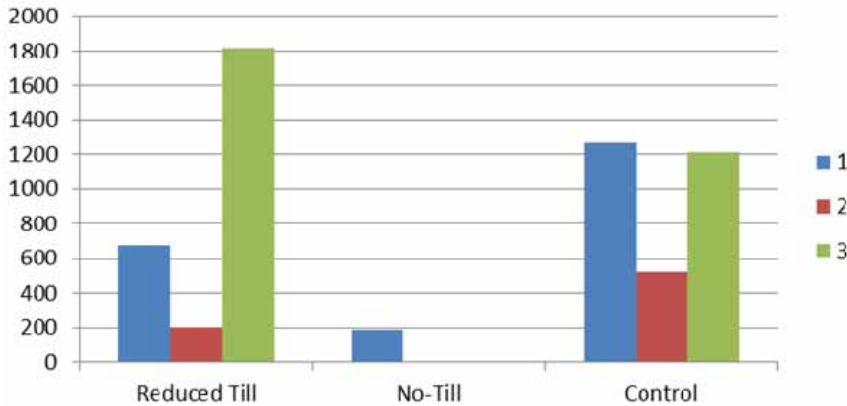
For all 3 farms, the differences in sizes of weeds in the three treatments diminished as time progressed and the farmer had more tools available to control weeds. The number of weeds however did not develop a clear pattern throughout the year of monitoring. This may be due to the individual farm weed pressure and the type of weeds existing on each farm.

Table 2. Weed population in strawberry reduced tillage trials



Optimizing Strawberry Production with a Reduced Tillage System

Table 3. Total # of strawberries for first year of reduced tillage study



Yield was measured by harvesting all the trusses from randomly selected areas within each treatment. The berries were counted, put in primary, secondary and tertiary categories and then weighed. For Farm 1 and 2 the control treatment yielded significantly more berries than did the reduced till or no-till treatments. Farm 3 however, which had the largest volume of berries of all 3 farms, yielded almost 1/3 more in the reduced till treatment than the control. This farmer will be installing 1 acre of reduced till June bearing strawberries this season.

Results of this study are inconclusive, but there appears to be promise in using reduced tillage in a matted row strawberry system. This system may be useful for organic growers or to growers that need to better utilize their equipment.

From a farm profitability perspective, labor savings just for tillage averaged 37% and fuel savings 40% for the reduced tillage system compared to primary tillage for field preparation. The range reported by growers for savings in fuel ranged from 27 to 60% and savings in labor costs ranged from 25 to 60% (Dr. Anu Rangarajan, Cornell University). These figures are estimates from agronomic crops and some larger scale vegetable crops, but similar savings could be found on strawberries.

The reduced tillage approach would be more attractive if we could prove that yield of this high value crop would not suffer. The results from this study imply that farmers should experiment with reduced till in their matted row strawberries in order to maximize production and minimize costs.

This work is sponsored by NE SARE: <http://nesare.org/>. Many thanks to the cooperating farms including Stanton's Feura Farm, Lansing Farm and Gray's Farm and Greenhouse.

For more information about this project or other reduced till work, please contact: Laura McDermott, CCE Capital District Vegetable and Small Fruit Program, 415 Lower Main Street, Hudson Falls, NY 12839, 518-746-2562, lgm4@cornell.edu



Currant and Gooseberry Production

Steven A. McKay, Hudson Valley Fruit Program

Introduction: *Ribes* is the genus name of currants, gooseberries, and crosses of the two. Currants and gooseberries were once grown extensively on a commercial basis in the US. At the beginning of the century, the largest collection of currants and gooseberries in the country was in Geneva, NY, and the state ranked number one in red currant production in the 1930's. There are over 150 species of gooseberries in the world, and hundreds of currants and selected and hybridized cultivars. One British nurseryman told me in 1999 that he refers to a variety publication from earlier this century that lists over 1,500 varieties of gooseberries alone, and some researchers report that about 4,000 have been reported over the years (possibly a number are duplicates). Many cultivars have been lost, or are very rare, and there is an international effort to save as many of these as possible.

Even though currants and gooseberries are in the same family, they appear quite different. The crosses may look like either parent; some like currants and others like gooseberries. The variety in shapes, colors, texture, and flavor make *Ribes* a good candidate for development in gourmet and specialty markets.

Fresh fruit can decorate plates, salads, and desserts. Cooked or processed fruit makes delicious sauces, pastry, wine, vinegar, and preserves. The juices have great flavor and health benefits that make them appropriate for popularizing as common breakfast or snack drinks. A comprehensive cookbook is currently available for *Ribes*, and recipes can be found in old cookbooks, cooking magazines.



Description: Gooseberries grow on a bush approximately 3 to 6 feet tall and about 3 to 4 feet wide. Most gooseberries have spines or thorns at each of the leaf nodes. The spines may be single, double, or triple, and they may be large, (10 to 15 mm) to small (1 to 5 mm). The habit of the plant may vary from low spreading to upright and tall. Berry color may vary from green to yellow/green, to yellow; or white, to pink, to red, to dark red or purple. The size of the berries varies from about 1.5 grams to more than 12 grams. The average is about 3 to 6 grams. The berries are usually borne in ones, twos, or threes, and hang under the branches. The taste ranges from very tart to very sweet. In the US, gooseberries ripen starting about mid-June and the latest are ripe about mid-August. The seasons may vary a week or more either way, depending on the weather and your location.

Gooseberries are generally classified as dessert berries, those that are used raw, and culinary, or 'cookers' that are used primarily for processing or cooking. There are some that fall into both categories depending on the stage of ripeness when picked. Generally the dessert berries are larger and used when completely ripe.

The culinary berries are generally smaller, very tart and used before they are fully ripe. Some growers use some of the dessert type berries while still unripe as cookers and as a means of thinning and using the crop. The remaining berries become larger and are used as they ripen.

Some of the cultivars used as dessert berries in North America are: 'Achilles', 'Captivator', 'Early Sulphur', 'Hoening's Earliest', 'Invicta', 'Hinnomaki Red', 'Hinnomaki Yellow', and 'Whinham's Industry'.

Some of the culinary cultivars are: 'Careless' (dual use), 'Oregon Champion', 'Poorman', and 'Red Jacket', ('Pixwell' less recommended). There are many other cultivars available in varying supplies that could be used in plantings for berries for sale at farmer's markets or roadside markets.

Currants grow on a bush that is generally larger than a gooseberry bush with thicker wood. There are no thorns or spines, and bushes can be spreading or upright. There are two major different types of currants, black currants (*R. nigrum*) and red currants (*R. rubrum*). The red currants also include the pink, white, and yellow currants, which are color phases of the red.

Currant and Gooseberry Production (continued)

Almost all **black currants** are processed into juice or other products such as syrup, jam, jelly, tea, yogurt, pie fillings, candy, nutraceuticals, and wine. There has been an increase in consumption of black currant flavored beverages, and fresh consumption is growing, although demand remains relatively low because berries have a strong pungent flavor. The flavor is great for those who are accustomed to it, either fresh, or for cooking.



Some available black currant cultivars that may be used: 'Ben Sarek', 'Ben Lomond', 'Ben Alder', 'Titania', ('Ben Nevis', 'Consort'....less recommended).

Red currants are used both fresh and processed. They grow in bunches similar to grapes called strigs and may have from 10 to 35 berries. Fruits are often made into juice which can be consumed as a beverage, or used for preserves or other products. Currant jelly is an ingredient in many recipes to produce a tart flavor or to glaze. Red currants are used in sauces for meats, poultry or fish as well as a dessert topping on ice cream, cake, puddings, and creams.

Some currant cultivars that may be used:

Red Currants: 'Red Lake', 'Jonkheer Van Tets', 'Redstart', 'Rovada', and 'Tatran'.

White Currants: 'Primus', 'Blanka', 'White Imperial', 'Pink Champagne', and 'White Versailles'.

There are **other hybrids** and species of *Ribes* that don't fit into the above classifications. One of these is 'Crandall'. It is often grouped with black currants, but is actually another species, *R. odoratum*, and looks like a black currant, but has a milder flavor and is often eaten as fresh, raw fruit. It is quite large, and late for a black currant. Jostaberries and selections called ORUS are actually hybrids of gooseberry and black currant.

Deciding Whether to Grow Ribes: *Ribes* crops definitely have a place in a grower's diversification formula. Local consumption by gourmet enthusiasts, small scale processors, and ethnic markets should be one's first target. Know what your market is before planting. Remember that larger scale production is more risky. As an example, the production of red currants as of 2009 has grown so much that it is a challenge to sell them all during the season. However, CA storage could be considered as a way to extend season and increase prices.

One should be conscious of any regulations that restrict *Ribes* production in the local area. Consider proximity to white pines, and the information about white pine blister rust. Labor or proximity to a harvester is also a critical factor.

Considerations in Choosing a Variety: As with other crops, no ideal varieties of *Ribes* crops have been developed. Certain varieties are better suited to certain geographical locations. Fruit quality on a given variety might be excellent, while lack of disease resistance or poor plant growth habit could be a flaw. When you consider varieties for commercial production, consider the following factors: availability of plant material, ease of propagation, plant patents, local laws, market audience final use of fruit, yield, ease of picking (length of strig), fruit color, size and quality, plant: thorns, growth habit/size, disease resistance.



Culture: Spacing - Planting rates for gooseberries and currants that are being used in pick-your-own operations should be about 3-4 feet in the row and in rows about 6-8 feet apart, depending on your training system and equipment. It is very important to know about the growth habit of your selected varieties and the space requirements of equipment, especially if you plan to mechanically harvest. Field spacing can be planned according to the defined parameters. For example, the black currant 'Ben Lomond' would be planted a little closer in row, while 'Titania' could be spaced wider, due to size differences of plants. Mechanically harvested plants are spaced closer in the row, at about 18", with alleys spaced wider so that equipment can pass. One grower in England advocates planting at 12" in-row spacing, insisting that a tight hedgerow is critical for success in mechanical harvesting.

Currant and Gooseberry Production (continued)

Mechanical harvesting is also possible for gooseberries (and red currants). Gooseberries that are planted for processing are planted closer in row, and are 'stripped' of berries while still fairly green (un-ripe) and hard. Gooseberries picked for fresh market are often planted about 3.5 feet in the row unless trained to vertical cordons. Fresh market berries are generally hand-picked.

Both red currants and gooseberries are most efficiently trained to cordons if they are to be used for fresh fruit production. Please contact my office for a detailed article on this training system.

Soil and Water - *Ribes* are best grown in good soil with at least 3-5% organic matter content and a pH of about 6.5, (however they can tolerate lower readings). High nitrogen should be avoided as this produces too much vegetative growth and may predispose plants to more mildew problems. A British rule of thumb is to add 50 kg per hectare each of N and K (actual) for crops producing 10 metric tons per hectare. (A 10 m t/ h crop will extract the following kg of actual nutrient per hectare: N 20, P 5, K 44, Ca 8, Mg 3, S 4.) *Ribes* need about 0.6-1 inch of water per week during the fruiting season. Drip irrigation and mulching with straw, chips, or plastic is beneficial.

Pruning and Training - The best fruit is borne on 2 and 3 year old wood; wood should be pruned out after 4 years. Many training systems have been developed over the years, and continue to be developed. One alternative for black currant is to prune plants to the ground every other year, and to harvest alternate years. The crop is essentially grown as a "field crop" with as little as 15 hours of labor per year per acre. The Dutch have developed a mechanical pruning system that removes 1/3 of the bush per year on rotation. Systems will vary by use of fruit, harvest method, and other factors.

Pest Control - The lack of registered chemicals has been a problem from time to time for *Ribes* producers. (Check with your local extension office for the latest recommendations.)

1. Mildew tends to be the major disease problem, but trials are showing that it can be controlled by Stylet oil. Gooseberry fruits are blemished and deformed by the disease. Shoot tips are deformed. The disease was once the limiting factor preventing success with European cultivars in North America.
2. Leaf spot has been a serious a problem on all *Ribes* crops. Leaf yellowing and premature defoliation weakens the plant and affects yield. Copper sprays and weed control help to control the disease.
3. White pine blister rust has been the cause of *Ribes* restrictions in the Northeast which are being reconsidered for modification. Immune cultivars are advisable especially near white pine stands. Gooseberry and red currant are resistant to the disease.
4. The British are controlling cane borers with pheromone mating disruption. They are sometimes a problem in the Northeast.
5. Aphids sometimes cause a red deformation on red currant leaves.
6. Reversion virus is common in black currant in Europe, but not found in the US. It can reduce the useful life of a black currant planting to as few as eight years. Quarantine has kept the disease out so far. The disease is spread by big bud mites.
7. Currant Cane Blight, a fungus disease that was a problem in the past (when ribes were previously cultivated in large acreage), has become a problem again. It is caused by *Botryosphaeria ribis*, and causes branches to yellow, wilt and die.
8. Imported currant worm, is a green larva that can defoliate a plant in a matter of days. They are easily controlled with insecticide, but control measures must be taken quickly, because they can defoliate a plant in a couple of days.

Recommendations for pest control can be found in the *Cornell Small Fruit Crop Pest Management Recommendations* or other local extension publications.

Harvest/Postharvest: As with all berries, harvest and postharvest care of fruit can extend the shelf life of fruit. Some varieties hang longer on the plant than others. Generally speaking, red and black currants will sweeten as they hang, and fresh eating quality improves. Most people have a tendency to pick these fruits on the green side. Gooseberries will ripen off the plant. They ripen slowly in cold storage. Gooseberries lose their distinct venation as they ripen and become overripe. They develop a stronger, mustier flavor, lose acid, and can become mealy. Gooseberries and red currants can be kept a number of months (up to seven) with palletized CA storage.

Hand Harvesting: At harvest, one should avoid pricking gooseberries on thorns, and leave the blossom and stem end of the berry intact. Avoid bruising fruit. Red currants are left on strigs, and should be picked carefully to avoid smashing berries closest to the plant. Cultivars with long strigs, not heavily clustered are easier to handpick. Black currants would follow the same generalizations as the red currants. Often harvest of black currants is best started as the first ripe berries in the top of the plant are beginning to fall off. In all *Ribes*, free moisture should be avoided, and berries should be shaded in the field and chilled as rapidly as possible. Fruit of all three

Currant and Gooseberry Production (continued)

types can be held at 36-40 F for two to three weeks. I have held fruit at 33F for as long as six weeks. CA storage methods are being developed for these fruits.

Machine Harvest: Proper adjustment of shakers is critical so that a thorough job of harvesting is done and the bushes are not badly beaten. Some machines are gentle enough to harvest gooseberry and black currant fruit suitable for fresh market. Red currants are more desirable intact on strigs for fresh market, and this is not possible with machine.

Useful Resource:

Currants, Gooseberries, and Jostaberries: A Guide For Growers, Marketers, And Researchers In North America by Danny L., Ph.D. Barney and Kim E. Hummer

For more information: Steven A. McKay, Extension Educator, Cornell Cooperative Extension, 479 Route 66, Hudson, NY 12534, (518) 828-3346, sam44@cornell.edu (Reprinted with permission from: *Proceedings of the New England Vegetable and Fruit Conference, December 13-15, 2011.*)



Leaf spot



Powdery Mildew



White Pine Blister Rust



Currant Aphid Damage

APRIL BERRY BAROMETER

Cathy Heidenreich, Cornell University

ALL BERRY CROPS:

Frost protection – We are more at risk now than before with blueberries and strawberries. Have overhead irrigation/floating row cover ready and monitor conditions in your location closely. For more information on this topic visit our new frost protection web page here: www.fruit.cornell.edu/berry/production/frostprotect.html.

REMINDER: Growers with NAP insurance should call in/report even *possible* cold/frost damage losses to FSA within 7 – 10 days of occurrence to qualify.

Fertilization – Now is the time for the first of 2 split applications on blueberries, raspberries and ribes.

Water management – Irrigate as needed to maintain 1-2” water per week.

Weed management – This may be a difficult season weed wise if you had lingering issues last fall. Unfortunately many crops progressed so far during the late March warm-up that many growers were caught off guard and hadn’t made pre-emergent applications. Complete early season applications as weather and crop phenology permits. Record efficacy of any pre-emergent applications. Scout for newly emerging weeds.

Pest management

Review last year’s pest management notes to know what pests you may expect and when to watch for them. When to watch for specific pests may also be a challenge this season as we are probably 2 - 3 weeks ahead of schedule due to the warm up. Set up monitoring systems as needed: sticky cards, traps, etc.

Scout! Record pest frequency and locations.

See [Cornell Pest Management Guidelines for Berry Crops](#) for management options for various pests.

A pest to keep an eye out for is new to our region. Spotted Wing Drosophila was been reported and confirmed in several areas of the state late last season. Significant damage late season berries (day neutral strawberries, fall raspberries, late season blueberries) have been reported in surrounding states, as well 1 or 2 last season here in NY. For more on this new pest and others check out our new pest alert page here: <http://www.fruit.cornell.edu/berry/pestaalerts/index.html>.

Wondering what’s new or what’s changed in terms of pest management products? Check out our newly updated label alert page here: <http://www.fruit.cornell.edu/berry/labelalerts/index.html>.

STRAWBERRIES:

Established plantings:

Frost protection –For an excellent overview of frost protection in strawberries see: http://www.omafr.gov.on.ca/english/crops/facts/frosprot_straw.htm. For general information on frost and freeze related issues visit: www.fruit.cornell.edu/berry/production/frostprotect.html.

Weed management – Poast or Select for perennial grasses; Stinger for dandelions and thistles; Prowl H2o for banded applications between rows. Hooded or shielded applications of Gramoxone Intenon or Chateau to row middles; do not apply after fruit set. Follow any special instructions when making applications (gal/acre, psi, shielded application only, etc.). Remember to include any adjuvant(s) listed on the label.

Disease management

Gray mold (Botrytis) - **NOTE:** Frost injury on blossoms and rain(s) are a set up for Botrytis fruit rot (gray mold) in strawberries.

Growers should be take every precaution to protect open blossoms and fruit from infection While excellent gray mold protection is generally obtained with 2 fungicide sprays eat early bloom (10-20%) and 10 days later, any occurrences of early season frost and/or rain events may make continued fruit protection prior to harvest highly desirable.

Anthracnose – Dr. Mike Ellis, Ohio State University has shared his concern this may be a serious anthracnose year. Inoculum of this warm weather pathogen often builds up in plantings under conditions like those we experienced this spring – setting the stage for fruit infections. This disease may occur on both green and ripe fruit, but is most common on ripe fruit following periods of warm, wet weather. Monitor fields for the presence of anthracnose, particularly if favorable weather conditions exist. **Note:** Fungicides will not stop an infection once it has begun. In fields with a previous history of the disease a pro-



APRIL BERRY BAROMETER (continued)

tective fungicide schedule is recommended.

Arthropod pest management (insects and mites)

Bud weevil (clipper) – Adults puncture blossom buds while feeding and deposit eggs in the nearly mature buds. Buds are then girdled so they hang by a mere thread or fall to the ground. Injury is most likely along field edges or when fields border woodlots or other suitable sites for adult overwintering. Suggestion action threshold is more than one primary or secondary flower bud or more than 2 tertiary flower buds clipped per truss, or more than one injured truss per foot or row.

Tarnished plant bug – Adults TPB have already been observed in plantings; recent cooler weather may have slowed development slightly. Scout for these any time from just before blossoms open to harvest. Strike flower clusters over a white paper plate. Suggested action threshold is 0.5 nymphs per cluster or 4 out of 15 clusters with 1 or more nymphs.

Spittle bug - This insect also appears around bloom, leaving frothy white masses on stems and leaves. These masses harbor nymphs which pierce stems and suck plant juices. Extensive feeding may lead to plant stunting and reduced berry size. Damaged leaves appear crinkled and darker green than healthy leaves. Spittle masses are a great nuisance to pickers. Suggestion action threshold is one spittle mass per sq. ft. of row.

New plantings:**Plant establishment**

Wherever possible, irrigate after planting to settle soil around roots.

Runners need good soil contact to root. Keep the 18" planting strip weed free by hand weeding or using cultivation equipment for good runner establishment. Direct runner plants from aisles back into planting row area. Remove blossoms as they open to encourage good plant establishment and growth.

Remove flower clusters and blooms as they emerge to promote good plant establishment.

Disease management

Monitor new plantings for leaf spot, especially if overhead irrigation is in use. If disease is detected protectant sprays should be considered if conditions are favorable for subsequent disease development.

Arthropod pest management (insects and mites)

New plantings should also be monitored for white flies and two-spotted spider mites.

BLUEBERRIES:Established plantings:

Frost protection – For a review of critical temperatures and a discussion of overhead irrigation for blueberry frost protection visit www.fruit.cornell.edu/berry/production/frostprotect.html.

Weed management – Gramoxone Inteon or Scythe before new cane emergence. Follow any special instructions when making applications (gal/acre, psi, shielded application only, etc.). Remember to include any adjuvant(s) listed on the label. Hand-weed in row, mow row middles and borders.

Disease management

Mummyberry – Given the early warm up and dry conditions this may not be as serious a year for mummyberry disease problems as last year. None-the-less plantings with a history of this disease should implement a protective spray program for blossoms. Plantings without previous history of disease should be monitored for signs of primary infection (shoot blight phase). Infected leaves and shoots wilt, turn violet brown, and die. Grayish masses of spores may be evident along midribs of blighted leaves. If shoot blight is detected in your planting, protection of blossoms is essential.



APRIL BERRY BAROMETER (continued)

Arthropod pest management (insects and mites)

Cranberry and cherry fruitworms –Adult moths typically appear during late May to early June but have already been trapped in Michigan. Use pheromone traps to monitor adult flight activity and aid in timing of applications. For more information on fruitworms see: <http://www.fruit.cornell.edu/Berries/bbpdf/bbfruitworm.pdf>.

New plantings:

Plant establishment

Wherever possible, irrigate after planting to settle soil around roots; apply mulch as soon as possible to conserve moisture and reduce weeds.

Gently rub off emerging flower buds between the palms of the hands to promote good plant growth and establishment.

Weed management

Hand weeding and mulch within row for weed management.

RASPBERRIES AND BLACKBERRIES:

Established plantings:

Weed management –Many products need to be used before new cane emergence. Check labels carefully and if you are already past that stage err on the side of caution! Hand-weed in row, mow row middles and borders.

Arthropod pest management (insects and mites)

Raspberry fruit worm – We generally watch for raspberry fruit worm adults (small light brown beetles) in early May when they begin feeding on young leaves and buds. Again, these may appear earlier in 2012 so be on the lookout. Adults skeletonize leaves and hinder fruit development. Small larvae feed inside flower buds and then bore into young fruit, causing them to dry up or decay and fall off. These pests are especially a problem in weedy fields. Protectant applications should be made as soon as damage is detected in early spring (just before blossoms open).

Raspberry sawfly –Sawfly larvae are ¼” pale green worms that feed on the outer edges of leaves, chewing out irregular holes and sometimes skeletonizing leaves. These insects are also active in early May in typical years; products are often effective against both insects; see labels for details.



New plantings:

Weed management – Apply Devrinol after planting before seedling weeds emerge. Till or water in within 24 hours. Follow any special instructions when making applications (gal/acre, psi, shielded application only, etc.). Remember to include any adjuvant(s) listed on the label. Use mulch in-row for 1st year on lighter soils. Hand weed in-row on heavier soils.

CURRENTS AND GOOSEBERRIES:

Established plantings:

Pollination – Wild bees and other insects are efficient pollinators but cannot always be depended upon due to fluctuating population numbers. Where bee activity is less than desired, honeybees can be moved in quickly and in large numbers. Hives should be set at about 25% bloom at a density of 1-2 hives per acre. Locate hives in the centers of fields. Mow weed and ground cover flowers before introducing bees.

Weed management – Aim EC, Rage, Gramoxone Inteon and Firestorm need to be applied either dormant or before canes emerge. Devrinol, Rely 200, or Surflan may still be options if you are past those stages. Check labels carefully; err on the side of caution.

Arthropod pest management (insects and mites)

Currant aphid – This aphid is most commonly seen on red and white currant, and sometimes gooseberry. Infested leaves are cupped, galled, distorted and discolored. Honeydew secreted by aphids covers foliage and fruit with a sticky



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New York Berry News is a monthly commercial berry production newsletter provided by Cornell Berry Team members.

Questions or comments about the New York Berry News?

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APRIL BERRY BAROMETER (continued)

coating.

Gooseberry fruit worm – adults lay eggs in flowers of gooseberries, currants and Jostaberries. Larvae burrow into berries, weaving portions of stems together with silken webbing.

Imported currant worm – Worms of this pest feed first in colonies then singly, voraciously stripping plants of foliage. Up to 3 generations a season may occur if weather conditions are favorable. Sprays should be applied as soon as worms appear. Although these larvae resemble other lepidopteran worms they are not related and **cannot** be controlled with BT.

New plantings:

Plant establishment

Wherever possible, irrigate after planting to settle soil around roots; apply mulch as soon as possible to conserve moisture and reduce weeds.

Weed management - Hand-weeding or spot applications to control weeds.

