Cornell University
College of Agriculture and Life Sciences

New York Berry News

Volume 12, Number 7 **July 18, 2013**

Events Calendar

August 1, 2013 - *2013 Cornell Fruit Field Day*, NYSAES, Geneva, NY. Details follow below.

August 13-14, 2013 – *North American Strawberry Growers Association Annual Summer Tour.* Vermont. Save the dates! Details to follow.

December 4-7, 2013 – *Joint North Carolina Strawberry Growers Association and North American Strawberry Growers Association Conference,* Sheraton Imperial Hotel, Durham, North Carolina. More information: info@ncstrawberry.com or www.ncstrawberry.com.

December 10-12, 2013. *Great Lakes Fruit, Vegetable and Farm Market EXPO and Michigan Greenhouse Growers Expo*. More information: http://www.glexpo.com/.

December 17-19, 2013. *New England Vegetable and Fruit Conference*. More Information: http://www.newenglandvfc.org/**.**

June 18-25, 2015 – 11th International Rubus & Ribes Symposium, in Asheville, NC, June 21-25, with preconference tour to farms and research sites June 18-20. More info to come. If you are interested in being a sponsor of this event, contact gina_fernandez@ncsu.edu.

FROM THE SWD BLOG… *Juliet Carroll, NYS IPM Program*

Raspberries at Risk

July 19, 2013. Greg Loeb's lab, Dept. of Entomology, NY State Agricultural Experiment Station, Cornell University, has reared SWD from raspberry fruit that were collected on July 5 in Ontario County.

Laura McDermott, Eastern NY Horticulture Program, Cornell Cooperative Extension, reports finding larvae in raspberry fruit collected July 15 in Rensselaer and Albany Counties, NY. Fruit were collected randomly and the sample included a small amount of overripe fruit. Although the larvae may be SWD, it is not possible to distinguish SWD larvae from other fruit flies.

Infested red raspberry fruit may leave a red juice stain on the berry receptacle when the fruit is picked. Fruit with small indents or bruises where the berry surface appears to have flattened or deflated may be damaged. A salt floatation method may be used for monitoring SWD infestation levels as the season progresses. Immerse fruit in a solution of 1 Tbsp. (14.8 cc) table salt per 1 cup (236.6 ml) water, wait one hour and examine for larvae that float to the surface.

Upswing in Ontario County

July 19, 2013. Greg Loeb's lab, Entomology, Cornell University, has seen an increase in SWD adult males and females in traps in Ontario County that were collected July 16. In a raspberry planting, 4 traps caught a total of 1 male and 4 female SWD. In woods next to a strawberry planting, 3 traps caught a total of 3 male and 6 female SWD. In a blueberry planting, 3 traps caught a total of 3 female SWD. Overall, this is a likely trend toward our upswing to peak problems in August in western NY. We (Loeb, Agnello, and Carroll) have not caught SWD in traps set in the Lake Ontario region, yet. Stay tuned.

Dutchess County – first report

July 19, 2013. One male SWD was caught on July 1 in Dutchess County, NY by Peter Jentsch' s program, Hudson Valley Lab, Cornell University, as reported by Mike Fargione, E NY Horticulture Program, Cornell Cooperative Extension. The trap was set in a cherry orchard. (Accumulated GDD 990, day length 15:05).

Male spotted wing drosophila characteristics; most notable is the spot on each wing. Each foreleg has two dark combs which appear as tiny spots (inset.)

SWD in PA

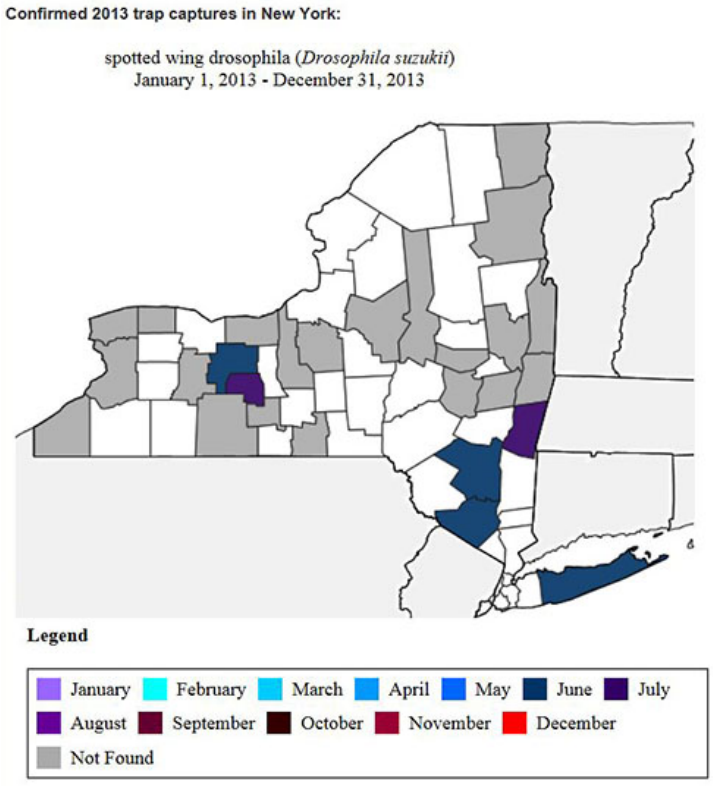
As of July 15, spotted wing drosophila females have been found in summer red raspberry plantations in several locations in PA and a few females were found in traps in blueberries in Adams County. Read the SWD Update from Kathleen Demchak, Senior Extension Associate, and David Biddinger, Tree Fruit Research Entomologist, Pennsylvania State University. SWD Management Alert.

Columbia County – first report

The week of July 8, two female SWD were captured in a trap containing a vinegar drowning solution with yeast-bait located just outside a pome and stone fruit orchard in Columbia County, as reported by Mike Fargione, Extension Educator, Eastern NY Horticulture Program, Cornell Cooperative Extension. Cherry harvest is nearing or at completion. (Accumulated GDD 1193, day length 14:52).

SWD Management Alert

The SWD trap network in Long Island and the Hudson Valley region of New York is in sustained trap catch. Growers of susceptible, soft-skinned fruit, especially raspberry, blackberry, and blueberry should take this threat seriously. A management strategy that includes protection of the crop with insecticides should be considered. SWD females can lay eggs directly into ripening fruit.



SWD distribution map for NY indicates that all counties in Long Island and the Hudson Valley in which traps are being monitored have caught SWD. (Counties colored white do not have SWD traps; those in gray have no SWD trap captures to date = July 12, 2013.)

SWD Alerts

July 9. 2013. Rhode Island, Connecticut, Massachusetts, and lower Hudson Valley of New York are reporting evidence of SWD in fruit and sustained and increased numbers of SWD in traps. In Rhode Island, Heather Faubert reports rearing SWD from raspberries that were collected on June 24 and weekly trap catch on July 8 of 135 SWD in 3 traps set in raspberries and 14 SWD in two traps set in blueberries.

In Connecticut, on July 6 Mary Conklin reports SWD found in raspberries and in traps set in blueberries and brambles. In Massachusetts, Sonia Schloemann reports modest increases in trap captures, from 2 females and 1 male the week of June 24th to 6 females and 1 male the week of July 1st with 20% of trap locations catching SWD. Most traps are in border areas of blueberry or raspberry and one capture was from a trap in sweet cherry.

In the lower Hudson Valley of NY, Peter Jentsch reported observations of fruit fly oviposition in raspberry fruit (2 out of 25, 8%, fruit affected) in a sprayed planting and oviposition in sweet cherry fruit (14 out of 20, 70%, fruit affected) in an unsprayed orchard. Although SWD identity cannot be confirmed from egg morphology, it is probable this is from SWD. Time to consider management options.

Dr. Greg Loeb, Grape and Small Fruit Entomologist at Cornell who is spearheading SWD work in NY, has issued the following statement, "My sense is that HV is a bit ahead of us in the Finger Lakes Region in terms of infestations. However, probably in a week or so we will be in the same position.

It's interesting that we have not had any SWD captures in the Lake Ontario area yet (could change this week). In the Finger Lakes area we have found a total of two females and two males, including a female in a raspberry planting.

I think the conservative approach for raspberry and blueberry growers in the Finger Lakes and Lake Ontario areas would be to initiate a SWD insecticide program if ripe fruit is present.

If I were a less risk averse grower I would wait a bit longer until SWD adults were being detected more regularly in sites near my farm.

Based on our experience last year, we are only talking about a week or two difference between the situation in the Hudson Valley and the Finger Lakes Region."

For the latest information on SWD in NY visit the SWD blog at: http://blogs.cornell.edu/swd1/.

Separating Spotted Wing Drosophila from Fruit Fly "Look-a-likes" in Traps - *Faruque Zaman and Dan Gilrein, Entomology Program, Cornell Cooperative Extension of Suffolk County, 3059 Sound Avenue, Riverhead, NY 11901*

Spotted wing drosophila (SWD, *Drosophila suzukii*) is a type of fruit fly, sometimes called vinegar fly, relatively new to the US. Fruit flies are also commonly referred to by the genus name *Drosophila*, though there are fruit flies classified under other genera.

Since first detected in New York in 2011, SWD has received much attention from researchers, extension educators, and fruit growers around the United States due to the nature and severity of damage it can cause in agricultural crops, and to its extremely rapid spread around the country. Most people associate fruit flies with rotting or fermenting fruits; SWD, however, will feed in ripening and undamaged fruits even prior to harvest. Small fruits including raspberries, blackberries, blueberries, cherries, and strawberries appear to have been the most heavily attacked cultivated crops. Fruit that is damaged may drop or deteriorate early and be unmarketable. Wild fruit such as pokeweed, bittersweet nightshade, and autumn olive berries are also good hosts and help to build or maintain their populations.

Knowing when SWD is in the area and getting an idea of their abundance can help determine whether controls might be needed for susceptible crops. So far, experience around the Northeast US suggests SWD starts appearing in low numbers around early to mid-July, with populations building into August and September. SWD detection and monitoring is done with apple cider vinegar- or yeast+sugar-baited traps. These baits are also attractive to other fruit flies so it is important to separate SWD from these other flies weekly before specimens deteriorate. Distinguishing SWD from these other species is not difficult but depends upon good magnification and recognizing features unique to SWD. The following descriptions and photos will help when trying to separate SWD from other fruit flies found in traps. Specimens that need to be stored can be placed in rubbing or other alcohol (70%).

Male SWD are easiest to recognize, even with a 5X hand lens or possibly without magnification. The wings each have a *single spot before the wingtip*. Some other species have multiple spots and one also has a single spot but it is located right at the tip of the wing. Compare the two photos and note the position of the spot (Figure 1). In newly emerged SWD the spot may not be clear, but it should be apparent after 24 – 48 hrs. and always visible on flies in traps. Another fruit fly species, *Leucophenga varia,* males also have single spot at the tip of the wings but the spot is smaller and lighter in color than the spot on SWD. This species has dots on the side of the abdomen which SWD lacks; SWD also has narrow and unbroken dark bands on the top and sides of the abdomen (more information on http://pubs.cas.psu.edu/freepubs/pdfs/xj0045.pdf). Some species have a break in the band down the center of the back of the abdomen. SWD males also have a 'comb' (patches of 3 – 6 dark spines) nearly parallel to and on the 1st and 2nd segments of the front 'foot'. That feature requires higher magnification (at around 40X) to see clearly, but is not necessary to confirm as the wing spot and position are diagnostic.

Female SWD require higher magnification (40X or more) to separate out from other fruit flies. The wings lack any distinctive markings and the legs do not possess the combs seen on males. Two features to look for are the strong saw-like toothed ovipositor (for egg-laying) at the tip of the abdomen, and unbroken dark banding on the top of the abdomen. Other fruit flies may have a similar ovipositor but it and the teeth are much smaller and appear less 'aggressive' (Figure 2). Many species have banding on the abdomen but the bands are often broken in the center. Some similar species may also have dark pigmentation around a crossvein on the wing which is never seen in SWD. With only a little practice female SWD can be most quickly separated out based upon the appearance of the ovipositor alone. Specimens will often naturally lay on their sides, conveniently providing the best perspective for viewing the feature. If the ovipositor is not visible, pressing lightly on the abdomen will expose it.

The SWD Project on Long Island is funded by The Friends of Long Island Horticulture.

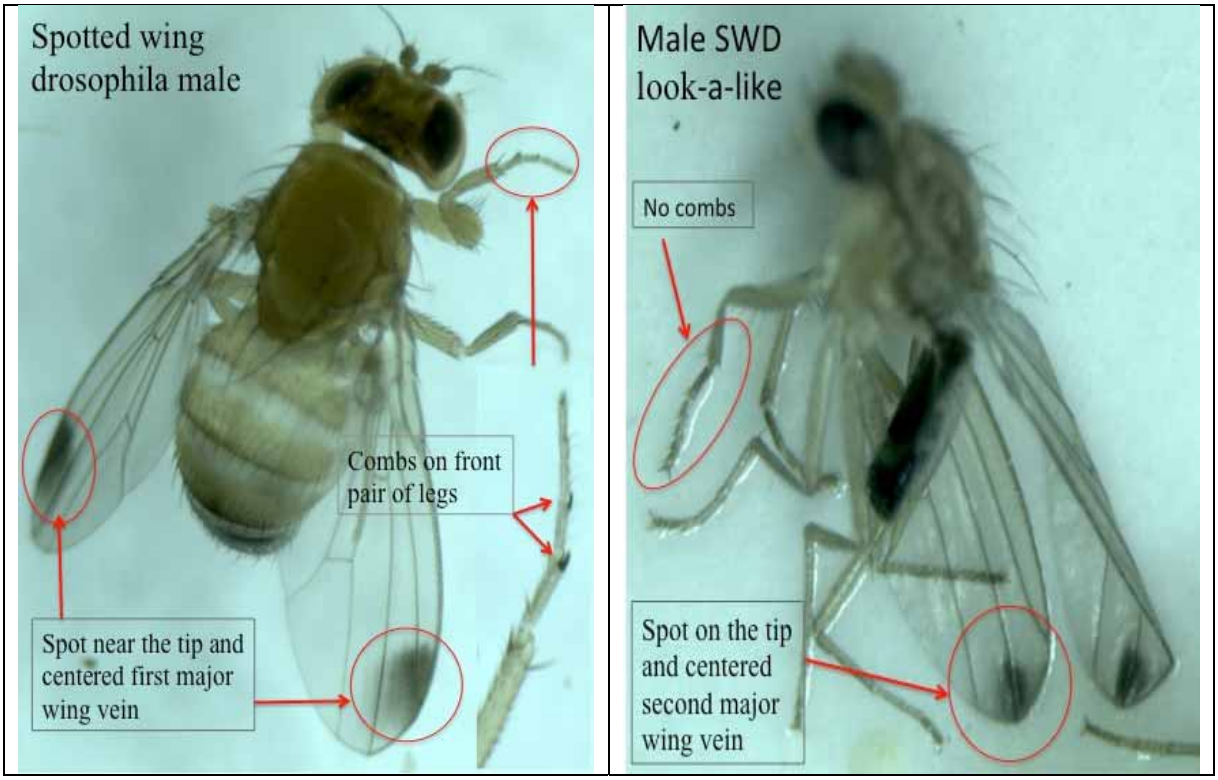


Figure 1. Male spotted wing drosophila (left) and similar species (right) that is a "look-a-like". Photos: Faruque Zaman, CCE-SC.

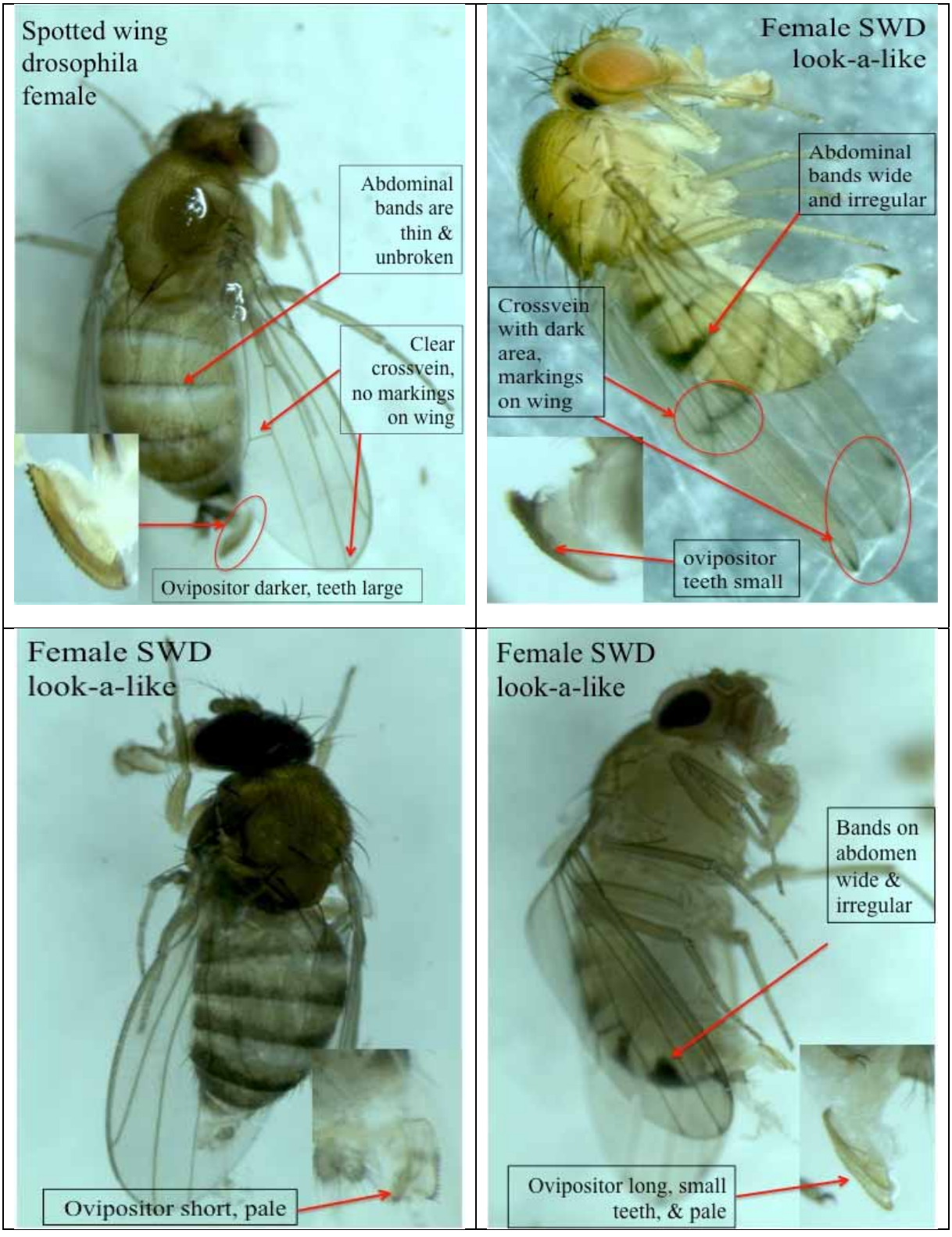


Figure 2. Female spotted wing drosophila (upper left) and females of other fruit flies (upper right and bottom) are similar in appearance. Photos: Faruque Zaman, CCE.SC.

Cornell Fruit Field Day Aug 1, 2013 – Register now!

Cornell University will host the 2013 Fruit Field Day at the New York State Agricultural Experiment Station in Geneva, NY, on Thursday, August 1st, from 8:00 a.m. to 5:00 p.m. The field day will be composed of two concurrent day-long tours, one of tree fruit presentations and another tour of grapes, hops and small fruit presentations.

Fruit growers, consultants, and industry personnel are invited to tour field plots and learn about the latest research and extension efforts being carried out by Cornell researchers in Geneva and Ithaca and on commercial farms around the state. The event will focus on all commodities of key importance to New York's $350 million fruit industry: apples, grapes, cherries, raspberries, strawberries, blueberries and other berry crops.

During lunch, equipment dealers and representatives from various companies will showcase their latest products and technologies to improve fruit crop production and protection.

The list of presentations will include the following topics:

Berries/Grapes/Hops Tour Presentations

- Spotted wing drosophila: A new threat to berry crops in New York (Greg Loeb)
- Enhancing pollination and biological control services in strawberries (Greg Loeb)
- Just below the surface: Understanding soil and roots is key to improving productivity (Marvin Pritts/Cathy Heidenreich)
- Evaluation of exclusion and mass trapping as cultural controls of spotted wing drosophila in organic blueberry production (Laura McDermott)
- Using netting to exclude spotted wing drosophila from blueberries (Greg Loeb)
- Limiting bird damage to fruit crops in New York State: Pilot testing techniques (Heidi Henrichs)
- Spotted wing drosophila trap network in New York (Juliet Carroll)
- Day neutral strawberries and low tunnel production (Courtney Weber/Marvin Pritts/Cathy Heidenreich)
- Training systems and rootstocks for Arandell (Justine Vanden Heuvel)
- NYSAES hops demonstration planting (David Combs)
- New hops variety trial and pest management trials (Steve Miller)
- Biology and control of sour rot of grapes (Wayne Wilcox/Greg Loeb)
- Precision spraying in the vineyard (Andrew Landers)
- High tunnel production of raspberries: Varieties and cultural practices (Courtney Weber)
- Growing blackberries in high tunnels (Marvin Pritts)
- A fixed-spray system for optimized management of spotted wing drosophila in high tunnel raspberries (Art Agnello)

Tree Fruit Tour

- Apple breeding at Cornell and new varieties in the pipeline (Susan Brown)
- Apple mechanization (Terence Robinson)
- Precision apple thinning (Terence Robinson)
- CG Rootstocks (Terence Robinson)
- Precision spraying in the orchard (Andrew Landers)
- Spray volume for tall spindle – Possible stop with Andrew Landers (Terence Robinson)
- Tall spindle management year 1-6 (Terence Robinson)
- Fruit russet control on NY1 (Terence Robinson)
- Nutrient removal by fruit harvest and maintenance application of fertilizers (Lailiang Cheng)
- Evaluation of bactericide programs for the management of fire blight (Kerik Cox)
- Persistent New York nematodes for plum curculio biocontrol (Art Agnello)
- Cherry rain protection (Terence Robinson)
- Cherry systems (Terence Robinson)
- Peach rootstocks (Terence Robinson)
- Pear systems and rootstocks (Terence Robinson)
- Apple scab management in a fungicide-resistant orchard (Kerik Cox)
- Impacts of glyphosate on apple tree health (David Rosenberger)

The cost of registration is $30 per person ($40 for walk-ins) for all day attendance. Lunch will be provided. Preregistration by July 29 is required for the $30 rate, register online at: http://is.gd/ffd2013.

Division Develops First Thornless Primocane Blackberry - *Fred Miller, Agricultural Communication Services, University of Arkansas*

Dr. John R. Clark, fruit breeder, describes Prime-Ark® Freedom, the latest primocane fruiting blackberry released by the University of Arkansas System Division of Agriculture. See the video: http://youtu.be/rgF0hADq_8c

July 1, 2013. FAYETTEVILLE, Ark. — Prime-Ark® Freedom, a new variety developed by the University of Arkansas System Division of Agriculture, is the world's first thornless primocane-fruiting blackberry.

Freedom is the fourth in the division's Prime-Ark® line of primocane-fruiting blackberries, which flower and fruit on each season's new branches, called primocanes, said John R. Clark, Division of Agriculture fruit breeder. Most blackberries only bear fruit on second-season canes, known as floricanes.

"This unique type of blackberry fruits on current-season canes and second-season canes, potentially providing for two cropping seasons," Clark said.

"Prime-Ark® Freedom is an exciting development as it is the first thornless plant of this blackberry type released for commercial introduction in the world," Clark said. "Its potential to produce two crops each year, both being early to very early in ripening, is another unique attribute of this cultivar. Its exceptional fruit size should make it a very noteworthy blackberry for home gardeners or local-market growers."

"It has very large berries with good flavor," Clark said. Freedom follows the release of Prime-Jan and Prime-Jim in 2004 and Prime-Ark® 45 in 2009. All of the prior-released cultivars are thorny.

Although initial evaluations for postharvest storage potential indicate that Prime-Ark® Freedom is not well-suited for storage and shipping, it should be very desirable for use in home gardens and local commercial markets, Clark said.

Freedom will be available from nurseries licensed in the U.S. and other countries for propagation. A list of these can be attained from Clark via email at jrclark@uark.edu. For more information on Prime-Ark® Freedom: Dr. John R. Clark, University Professor, Department of Horticulture, University of Arkansas, 479-575-2810, jrclark@uark.edu. *Information about all fruit varieties and sources of plants is available from the University of Arkansas System Division of Agriculture and can be found online at http://www.aragriculture.org/horticulture/fruits_nuts/default.htm.*

WSSA Spotlights the Contributions Made by Cooperative Extension Program

May 28, 2013. The U.S. Cooperative Extension Program is approaching its 100-year anniversary – an important milestone for an organization that has helped to transform American agriculture since its founding in May 1914. Through the years, extension agents have taught farmers how to manage crops more efficiently, win the battle against weeds and other pests, and produce significantly more food per acre.

Today the program continues to make a significant impact through nearly 3,000 local extension offices nationwide. Each is staffed by faculty and local educators affiliated with the nation's land-grant university system who take the latest research findings and translate them into practical, actionable information.

The portfolio of services delivered by Cooperative Extension is very broad," says Chris Boerboom, director of the North Dakota State University Extension Service and a member of the Weed Science Society of America (WSSA). "The program undoubtedly has made a major economic contribution by helping to ensure we have an abundant food supply. But extension agents are also involved in a wide variety of activities that benefit farmers, home owners and youth in communities of all sizes."

A few examples of the program's impact: More than 90,000 master gardeners trained by Cooperative Extension contribute free services to local communities that are valued at more than $100 million annually. Cooperative Extension personnel educate more than five million low-income people each year in how to improve their nutrition. They foster science and leadership initiatives for six million young people annually through 4-H, the nation's largest youth development program. And they field countless projects tailored to the needs of local communities, as illustrated by the case studies below:

- GEORGIA: Extension specialists at the University of Georgia used research findings on herbicide rotation to advise cotton farmers on better techniques for battling glyphosate resistant Palmer amaranth (*Amaranthus palmeri*) – a weed that significantly reduces crop yields and clogs harvesting equipment.
- MICHIGAN: Students in a Saginaw County High School 4-H program sponsored by extension specialists at Michigan State University were taught how to convert used cafeteria cooking oil into biodiesel fuel to power school buses. Teens in the program shared what they learned with local farmers, who now are producing biodiesel fuel to power farm equipment.
- TEXAS: Extension agents with Texas A&M University are conducting workshops in Hildago County to help small farms become more successful. Topics range from soil preparation and irrigation strategies to best management practices for weed control. They have also launched a farmers market where small farms and backyard gardeners can sell their produce.
- CALIFORNIA: University of California extension advisors in Sierra County are conducting research to help ranchers, landowners and land managers prevent the spread of houndstongue (*Cynoglossum officinale*), a noxious weed that is poisonous to cattle and horses.
- SOUTH CAROLINA: Extension agents at Clemson University are helping to educate local communities on best practices they can use for battling aquatic weeds in ponds and other bodies of water.
- NEW YORK: Extension nutrition educators at Cornell University are working with a coalition of community partners across a tri-county area on a program to prevent childhood obesity. They are focusing on improved access to fresh produce and greater opportunities for physical activity.

In addition to community-based initiatives, extension agents pool their resources to partner on programs nationwide. For example, they formed an Extension Disaster Education Network to respond rapidly to urgent needs involving hurricanes, floods, fire, drought, crop disease, pest outbreaks and more. They also have teamed to launch eXtension, an interactive website that consolidates a wealth of information – from energy conservation techniques and lawn care tips to profiles on invasive species. Extension scientists and educators answer the more than 4,500 questions submitted to the site each month through the "Ask-an-Expert" feature.

"Cooperative Extension programs are funded by federal, state and local governments nationwide, and it is an investment producing immeasurable returns," says Lee Van Wychen, Ph.D., science policy director for the Weed Science Society of America. "Extension personnel make a major economic contribution by helping farmers nurture and protect crops from disease and damaging weeds, but they also are helping to bring research-based best practices to urban and suburban homeowners and local communities nationwide. All of us are touched by their work in some way."

For more background on our nation's Cooperative Extension Program or to locate your local extension office, visit: www.nifa.usda.gov/qlinks/extension.html.

Farmers Market Federation of NY Joins Empire State Producers Expo

July 11, 2013. The Farmers Market Federation of NY will be joining the Empire State Producers Expo in 2014! The Federation will be offering a full day of greenmarket based seminars as part of the three day Expo.

"We are so excited to have the Farmers Market Federation joining us this year. From small weekly markets in library parking lots, to our beautiful regional markets, to the world renowned markets of NYC, greenmarkets are an important aspect of produce marketing," notes NYSVGA President Mark Henry, of Eden Valley Growers in Eden, New York.

"The growth and importance of greenmarkets has increased as people feel the need to connect with their farmer and know where their food is coming from. The farm markets are the front line in education and promotion for the agriculture industry in New York. We're proud to have them come and offer their experience and expertise to our Expo," adds Expo Director Jeanette Marvin.

The Empire State Producers Expo runs January 21 - 23, 2014 at the On Center in Syracuse, New York. The Expo includes the three-day Trade Show and three days of concurrent educational sessions. Contributing organizations include: the NYSVGA, Cornell Cooperative Extension, Empire State Potato Growers Inc., Farmers Market Federation of NY, NYS Berry Growers Association, NYS Flower Industries, Inc., NYS Horticultural Society, Farmers' Direct Marketing Committee, and Cornell University. The Expo offers both DEC and Certified Crop Adviser credits.

The Expo Trade Show includes over 164 companies representing a variety of products and services from equipment and inputs to software, packaging, bakery supplies and much, much more.

Watch for more Expo updates, registration details and the full schedule on www.nysvga.org.

Empire State Producers Expo

SPONSORSHIP INFORMATION FOR THE EXPO

Sponsorship is a great way to provide support for the Expo as well as a very visible way to show support and commitment to your customers' industry. There are a variety of ways that your company may choose to sponsor all or part of the Expo. The sponsorship request form has all of the information your company needs to be an integral part of the Expo through sponsorship. To take full advantage of sponsorship benefits, you must fill out the sponsorship request form and Industry speaking spots form and return them to the NYSVGA office before stated deadline.

What's Your Level?

Coffee Break- $150
Coffee Break sponsors will have their company name displayed on signage by the coffee break in the Trade Show.

Gardner Level- $250
Sponsor will receive: Company name recognition in the registration area, Company name recognition at door of chosen Session, and Company name recognition in the NYSVGA-Newsletter Expo Edition.

Grower Level- $500
Sponsor will receive: Company name recognition in the registration area, Company name recognition at door of chosen Session, Company name recognition in the NYSVGA-Newsletter Expo Edition, and *one complimentary Expo Registration.* Deadline for newsletter and signage inclusion is Dec. 1, 2013.

Producer Level- $1000
Sponsor will receive: Company name recognition in the registration area, Company name recognition at door of chosen Session, Company name recognition in the NYSVGA-Newsletter Expo Edition, *Two complimentary Expo Registrations, and the opportunity to speak for 5 minutes in classroom to present new products in the "What's New From Industry" session. You must fill out form in this packet to take advantage of this opportunity.* Deadline for newsletter and signage inclusion is Dec. 1, 2013.

Master Farmer Level- $2000
Sponsor will receive: Company name recognition in the registration area, Company name recognition at door of chosen Session, Company name recognition in the NYSVGA-Newsletter Expo Edition, *Four* complimentary Expo Registrations, the opportunity to speak for 5 minutes in classroom to present new products in the "What's New From Industry" session. *You must fill out form in this packet to take advantage of this opportunity. Your company PowerPoint running during session breaks in the classroom of choice, and a Free Ad in the NYSVGA-Newsletter Expo Edition.* Deadline for newsletter and signage inclusion is Dec. 1, 2013. PowerPoint must be received before Jan. 20, 2014.

Additional sponsor opportunities are available for your company. Please see the sponsorship form for details!

Deadline for your company's sponsorship information to be listed in the *2013 New York State Vegetable Growers News-Expo Edition is* Dec. 1, 2013. All forms (the Sponsorship Request form and the Speaking Spots form) must be returned to the NYSVGA office by Dec. 1, 2013. See forms for address and contact information.

SPONSORSHIP REQUEST FORM

Please accept this donation: Circle One

Coffee Break- $150 **Gardner Level- $250** **Grower Level- $500**

Producer Level- $1000 **Master Farmer Level- $2000** **Items for Drawing- (Seed, Product, ect) _____**

Donation of Company Items for Registration- Lanyards, Bags

Please direct our donation to: *(You may circle more than one.)*

General Conference Fund	**Becker Forum**	**Berries**
Cabbage	**Cultural Control and Climate Extremes**	**Direct Marketing**
Food Safety/GAPS	**General Conference Fund**	**General Session**
Greenhouse/Tunnels	**Ice Cream Social**	**Labor**
Leafy Greens	**Onions**	**Potatoes**
Snap Beans/Peas	**Soil Health**	**Sweet Corn**
Tomatoes/peppers	**Tree Fruit**	**Vine Crops**

TOTAL DONATION: $_____

Paying by Check? Make checks payable to **"NYSVGA"** with Empire Expo Sponsor in the memo line and mail to: NYS Vegetable Growers Association, Inc., PO Box 267, Macedon, NY 14502

Paying by Credit Card?
Credit Card Type: Visa, Am Ex, Discover, Other
Credit Card Number: _____ CID Code: _____
Expiration Date: _____

Sponsor Name & Title: _____
Company:_____
Phone: _____Email: _____
Address: _____

*Sponsorships totaling $500 or more may receive complimentary Expo Tickets, to claim your tickets consult the information form and fill out the below request appropriately.

Producer Sponsor Extra Ticket

Name & Title: _____ _____

Master Sponsor Three Extra Tickets

Name & Title: _____

Name & Title: _____

Name & Title: _____

Empire State Producers Expo Industry Speaking Spots

What's New In Industry?

Dear Exhibitor/ Sponsor,

We've set aside time each day for you to talk briefly to attendees about what is NEW from your company for the coming season. These speaking opportunities are scheduled at different times in many of the educational sessions. This is a great opportunity for you to highlight new products/services for your company!

You have a maximum of five minutes at one session. Only information on new products or services should be presented. Direct people to your booth for more information. No A-V equipment can be used during your presentation. You must fill out and return this form before December 1, 2013 to take advantage of this offer.

Questions? Contact Jeanette Marvin, NYS Vegetable Growers Association, 315-986-9320 or nysvga@twcny.rr.com

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I would like to speak during sessions focusing on:

Berries	Business and Labor Management	Cabbage
Cover Crops and Soil Health	Direct Marketing	Greenhouse and High Tunnels
Irrigation	Floriculture	Onions
Phytophthora	Potatoes	Processing Vegetables
Spanish Session	Specialty Vegetables	Stink Bug
Sweet Corn	Tree Fruit	Tomato, Peppers, Eggplant
Vine Crops	Winter Greens	Winter Storage Crops

Name & Title: _____

Company: _____

Phone: _____ Email: _____

* Reminder! The Expo Exhibitors Complimentary Breakfast is scheduled for Thursday, January 23, 2014 at 7:30 am in the exhibit hall. Please indicate whether a representative from your company is planning to attend. Thank you! ☐ Yes, we will have _____ people at breakfast.

* Please return Sponsorship and Industry Speaking Spots forms to Jeanette Marvin before Dec. 1, 2013:

Fax- 315-986-8534 PO Box 237, Macedon, NY 14502 Jmarvin@rochester.rr.com

AG NEWS

NY FSA Urges Producers to Report Agricultural Losses

NY State Executive Director James Barber for USDA's Farm Service Agency, urges farmers affected by excessive rains to keep thorough records of all agricultural losses and report losses to their local FSA office. FSA will use damage reports to effectively estimate the overall financial loss caused by recent rain events. FSA will continue working with state and local officials, as well as our federal partners, in an effort to ensure people have the necessary resources to recover from this challenge.

NAP covers non FCIC insurable crop losses caused by natural disasters. For those producers who purchased 2013 NAP coverage and have experienced crop losses, you should immediately file a notice of loss and 2013 FSA-578 Acreage Report with the office. The deadline to file a notice of loss is 15 days from the date of the disaster or when the loss becomes apparent. DO NOT destroy any crop acreage until you have notified FSA and have requested an appraisal on your 2013 un-harvested crop acres. To complete your loss claim you will need to provide FSA with records of your 2013 harvested production. After the appraisal and harvest ends, producers will apply for payment.

If you have crop insurance, please be sure to contact your local crop insurance agent as soon as possible to notify them of possible claims.

FSA administers the Emergency Conservation Program which can provide cost sharing to help restore cropland if funding is available. Producers who sustained debris damage and erosion damage to their cropland due to flooding should report the damage along with estimated dollar amounts to their local FSA Office. Land owners will need to work with their county FSA office to determine eligibility and cost share if funding is available for this program.

Also, please report to the local FSA office any crop, agriculture building damage, livestock loss or forested land damage, due to flooding. FSA will provide information if assistance for these losses becomes available.

Questions? Please contact your local FSA Office. To find the USDA Service Center nearest you, please visit http://offices.sc.egov.usda.gov/locator/app?state=us&agency=fsa.

USDA EXTENDS ACREAGE REPORTING DEADLINE FOR FSA TO AUG. 2, 2013

Risk Management Deadline Remains Unchanged

WASHINGTON, July 11, 2013 – USDA Farm Service Agency (FSA) Administrator Juan M. Garcia today announced an extension of the FSA acreage reporting deadline. Farmers and landowners have an additional 18 calendar days to submit their annual report of acreage to their local FSA county office with the deadline extended from Monday, July 15, 2013, to Friday, Aug. 2, 2013. Only the FSA reporting deadline has been extended. The acreage reporting requirement for crop insurance has not changed and remains July 15.

"We want to ensure our producers maintain their program benefits by filing their reports accurately and in a timely manner for all crops and land uses, including prevented and failed acreage," said Administrator Garcia.

Accurate acreage reports are necessary to determine and maintain eligibility for various programs, such as the Direct and Counter-cyclical Program (DCP); the Average Crop Revenue Election Program (ACRE); the Conservation Reserve Program (CRP); and the Non-insured Crop Disaster Assistant Program (NAP).

Acreage reports for FSA are considered timely this year when filed at the county office by the new applicable final crop reporting deadline of Aug. 2, 2013. Producers should contact their county FSA office if they are uncertain about reporting deadlines.

While FSA is able to extend its deadline, Risk Management Agency (RMA) Administrator Brandon Willis emphasized today that RMA's acreage reporting date remains July 15, 2013, for most spring planted crops in the country. Farmers are reminded to report any loss within 72 hours of discovery to their insurance company. Farmers must report prevented planting acreage to their insurance company, in writing, within 15 calendar days after the final planting date. Losses must be reported and an insurance adjuster must view and release the crop before the crop is destroyed. Farmers are also reminded to contact their insurance agent if they have any questions about coverage, prevented planting, or for reporting and processing a claim.

Crop insurance is sold and delivered solely through private crop insurance agents. Contact a local crop insurance agent for more information about the program. A list of crop insurance agents is available at all USDA Service Centers or on the RMA web site at www.rma.usda.gov/tools/agents/.

Producers also should visit their USDA Service Center to complete acreage reporting for FSA. For questions on this or any FSA program, producers should contact their FSA county office or seek information online at www.fsa.usda.gov.

FOCUS ON FOOD SAFETY

FDA Steps Up Outreach on the Proposed Produce Safety Rule

July 15, 2013. FDA is expanding its outreach to small- and medium-size growers to address questions that have arisen since the proposed rule was issued in January 2013. According to Michael Taylor, Deputy Commissioner for Foods and Veterinary Medicine, FDA expects and welcomes questions that arise during the rulemaking process. In a new interview, he emphasizes that FDA is committed to developing, with input, a final rule that prevents illnesses but that also is practical and adaptable to a wide diversity of growing conditions and practices.

As part of the expanded outreach, FDA is issuing several new publications focusing on key issues such as agricultural water and alternatives and variances to certain provisions in the proposed rule. FDA will work through a network of key stakeholder organizations to publicize the materials. The materials will appear on a new "Resources for Farmers" section on the FSMA Proposed Rule for Produce Safety page.

Engagement with stakeholders has been, and will continue to be, a priority for FDA, and the Agency is planning additional outreach, including targeted outreach on specific areas such as agricultural water that continue to generate questions.

Comments on the proposed rule are due by September 16 and can be submitted on regulations.gov.

Following are the new materials available:

- Interview with Michael Taylor, Deputy Commissioner for Foods and Veterinary Medicine
- Fact sheet on Agricultural Water and Diagram: Subpart E
- Fact sheet on Alternatives and Variances
- Commodities Related to Outbreaks Change Frequently

Additional materials are being developed, including materials regarding mixed-type facilities, and will be posted to the new "Resources for Farmers" section referenced above.

Produce Safety Alliance Update July 10, 2013 - *Gretchen Wall, Produce Safety Alliance Coordinator*

It was great seeing many of you at the Center for Produce Safety Symposium in Rochester, NY earlier this month! Special thanks to all of you who were able to attend the PSA Discussion Session on Monday night to provide feedback on our Train-the-Trainer Prerequisite Knowledge document. We are in the process of revising it and will be sending it around for comments again soon. As we continue to work on refining the PSA curriculum modules, we greatly appreciate your continued involvement with the PSA. We will keep this newsletter short, but look for some more information from us next month as well as a few new website resources!

Only 68 days left to comment on the proposed Produce Rule!

We know summer can be a very busy time for those working out in the field, but we would like to remind everyone that the comment period will only be open until **September 16, 2013** for the Standards for the Growing, Harvesting, Packing, and Holding of Produce for Human Consumption(the proposed Produce Safety Rule). We cannot stress enough how important it is for comments to be submitted to the docket. The FDA recognizes that there are many situations and practices that they may be unaware of and may affect how the regulation should be revised. Comments that are thoughtful and substantive, containing real examples and data that support your position are encouraged and will have the most impact.

How to submit your comment:

1. Comment electronically at http://www.regulations.gov/#!docketDetail;D=FDA-2011-N-0921

2. Written comments may be faxed to the FDA at 301-827-6870 or you may mail them to:
   Division of Dockets Management (HFA-305)
   Food and Drug Administration
   5630 Fishers Lane, Room 1061
   Rockville, MD 20852

Program Highlight of the Month

In the wake of the Hepatitis A outbreak associated with pomegranate seeds last month, we thought a timely program to highlight would be the NoroCORE collaborative based at NC State University. The USDA-NIFA Food Virology Collaborative, or NoroCORE, is a food safety collaborative that focuses on outreach, research, and education in the field of food virology. NoroCORE's ultimate goal is to reduce the burden of foodborne disease associated with viruses, particularly human noroviruses. NoroCORE is comprised of a large, multi-disciplinary team of researchers, with numerous stakeholders from industry, academia, and the government. NoroCORE collaborators work in an integrated manner to develop improved tools, skills, and capacity for understanding and controlling foodborne virus risks. NoroCORE works to translate the latest research findings into messages that can be used through its extensive outreach and educational efforts.

Harvesters: keeping your hands clean

Dirty hands can contaminate produce with viruses that cause human illnesses, like hepatitis A and norovirus.

Prevention is the best control and good hand hygiene is critical to making berries safer.

- Wash your hands thoroughly with soap and clean water, especially after using the bathroom.
- Do **not** rely on alcohol-based hand sanitizers, they are not completely effective against foodborne viruses like norovirus and hepatitis A.

Berries are at-risk foods for viral contamination.

- They are hand-picked and these viruses spread easily with hand contact via the fecal-oral route (poop to mouth).
- Berries are generally not heated or cooked before being eaten so virus is not destroyed.
- The use of sanitizers, washing, and/or freezing berries is not effective for removing or destroying the virus.

Foodborne viruses

Noroviruses are the leading cause of foodborne illness.

- Norovirus (the "stomach flu") causes nausea, vomiting, & diarrhea. There are over 5 million foodborne cases per year in the U.S. alone. Hepatitis A illness starts with flu-like symptoms and then progresses to jaundice (yellowing of the skin & eyes) and sometimes other complications.
- For both viruses, it is possible to be infected and not show symptoms; the sick person is also infectious for days to weeks before, during, and after illness, so keeping your hands clean is especially important. This is also important if you are taking care of someone who is ill.
- Norovirus infection is miserable but usually lasts a short time. Sometimes it is necessary to see a doctor because of dehydration. Hepatitis A infection is much more severe.

Outbreak Snapshots

Hepatitis A	Norovirus
In 2013, over 100 people in the Western U.S. became ill with hepatitis A infections after eating contaminated frozen berries.	In 2012, over 11,000 children and teens in Germany were sickened by norovirus from contaminated frozen strawberries distributed to schools.
In early 2013, dozens were sickened in Europe over several months from frozen berries served in smoothies.	In a 2009 norovirus outbreak in Europe caused by raspberries, over half of those affected were children younger than 7 years of age.
A 2012 outbreak of hepatitis A in Canada was also linked to a frozen mixed berry blend.	In 2005, contaminated raspberries sickened more than 1000 people in Denmark, including people in hospitals and nursing homes.

NoroCORE Food Virology
Collaborative for Outreach, Research & Education

Produced by the USDA-NIFA Food Virology Collaborative (NoroCORE). For more info, visit **norocore.ncsu.edu** or email **norocore-admin@ncsu.edu.**
NoroCORE is supported by a grant from the United States Department of Agriculture, National Institute of Food and Agriculture. NCSU NC #002

Hand Hygiene *for* Farm Management

Dirty hands can contaminate produce with viruses that cause human illnesses, like hepatitis A and norovirus. Farms need adequate toilet facilities and hygiene tools.

Prevention is Key

- **Training** Educate workers about good hand hygiene practices and proper glove use. Teach control measures, why they are important, and what the consequences are if they are not used. Do **not** rely on alcohol-based hand sanitizers, they are not completely effective against foodborne viruses.

  Norovirus (the "stomach flu") causes nausea, vomiting, & diarrhea. Hepatitis A illness starts with flu-like symptoms but progresses to disease of the liver, leading to jaundice (yellowing of the skin & eyes) and sometimes additional complications.

  For both viruses, it is possible to be infected and not show symptoms; the sick person sheds virus for a long time, and these viruses remain stable in the environment.

- **On the Farm** Provide the facilities. Adequate toilet and handwashing facilities include soap, clean water, and paper towels. Trash bins should not be allowed to overflow (soiled paper or tissue can contaminate shoes).

- **Opportunity** Create a working environment and schedule that promotes appropriate hand washing practices.

…they are hand-picked and generally not heated or cooked prior to consumption. Use of sanitizers, washing, and freezing is not effective for removing or destroying either virus.

…for proper handwashing, provide soap, clean water, and paper towels.

…these viruses can be transferred from hands to produce.

NoroCORE Food Virology Collaborative for Outreach, Research & Education

Produced by the USDA-NIFA Food Virology Collaborative (NoroCORE). For more info, visit **norocore.ncsu.edu** or email **norocore-admin@ncsu.edu.**
NoroCORE is supported by a grant from the United States Department of Agriculture, National Institute of Food and Agriculture. NCSU NC #001.

NoroCORE activities belong to one of six principal functions, which they call Cores: Molecular Virology; Detection; Epidemiology and Risk Analysis; Prevention and Control; Extension and Outreach; and Capacity Building.

Currently, NoroCORE is working with its stakeholders to identify and meet their needs related to foodborne viral contamination. The fresh produce industry is a key, high priority stakeholder group for the NoroCORE initiative, given that fresh produce items have historically been identified as high-risk foods for viral contamination. A significant portion of NoroCORE's extension and outreach effort is dedicated to addressing the needs of the fresh produce industry. Additional information and resources related to the NoroCORE collaborative, including infosheets specifically designed for the fresh produce industry, can be found at their website: http://norocore.ncsu.edu/.

Please visit the NoroCORE website above to review their work and for additional contact information. They are very interested in stakeholder feedback and look forward to working with industry partners to reach their goal of reducing the burden of foodborne illness associated with viruses.

Join Us!
Our listserve provides a great way to stay in touch with the PSA! To sign up, please visit our website at http://producesafetyalliance.cornell.edu/psa.html. Already signed up? Please share this newsletter with friends and colleagues who might also be interested in produce safety. As always, please do not hesitate to contact us if you have any questions, comments, or ideas.

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MONEY TALK

Referral Tool for H-2A Employers

Agricultural employers who participate in the H-2A guest worker program are federally required to document their efforts in recruiting domestic workers for their H-2A job orders. Employers are required to submit a recruitment report to the U.S. Department of Labor's Chicago National Processing Center (CNPC), and must also retain all recruitment records and documents for at least three years, per federal H-2A regulations. Several H-2A employers contacted the NYS Department of Labor's Agriculture Labor Program earlier this year to inquire about a template for the recruitment report. Since CNPC does not currently have a template, the NYS Department of Labor responded to the needs of H-2A employers by creating a referral tool to assist employers in complying with this federal requirement. The tool was created as a service to agricultural employers, but they are not required to use it if they prefer to use their own methods for documenting their recruitment efforts.

The referral tool is intended to help employers accurately document their contact with domestic referrals and applicants, as well as with any U.S. workers they may have employed during the previous season. In addition, it is designed to assist employers in determining whether a domestic referral or applicant to their H-2A job order meets the minimum job requirements and should be hired for the position. During the interview process it is important for employers to keep in mind that It is unlawful to discriminate against employees and applicants for employment on the bases of age, race, color, religion, national origin, gender, sexual orientation, disability, marital status, military status, domestic violence victim status, arrest record, conviction record, predisposing genetic characteristics, and, in housing only, familial status.

The tool is user-friendly and consists of an instruction sheet and three forms - *Interview Form*, *Agricultural Employment Verification Form*, and *Contacting Former U.S. Workers*. Employers can read directly off both the interview and agricultural employment verification forms when conducting an interview of a domestic referral or applicant, or when contacting an applicant's previous employer. Employers who choose to use any or all of the forms should provide as much detail as possible when completing them, and should keep them with their recruitment records and documents for at least three years.

NYS Department of Labor Agriculture Labor Specialists are required to conduct unannounced field checks at H-2A farms where referrals of domestic workers were made prior to the 50% contract expiration date. During each field check, the Agriculture Labor Specialist must ask the employer if NYS DOL-referred individuals contacted him/her about the job opportunity and whether the individuals were interviewed and/or hired. The forms included in the referral tool may be handy to the employer in this instance.

For questions or comments regarding the referral tool, please contact the Agriculture Labor Specialist serving your county, or the Foreign Labor Certification Unit at ForeignLaborCert@labor.ny.gov. The referral tool, along with contact information for the Agriculture Labor Specialists and additional information on services for agricultural employers, can be found on the Agriculture Labor Program's website at http://www.labor.ny.gov/immigrants/agriculture-labor-program.shtm.

This article was provided by the NYS Department of Labor's Agriculture Labor Program.

FOCUS ON PEST MANAGEMENT

Four –part Spotted Wing Drosophila Fact sheet Series Updated – *Kathleen Demchak and David Biddinger, The Pennsylvania State University*

The PSU 4-part series of fact sheets on SWD has been updated, including information on pesticides that can currently be used, and the series is now available online as pdf files in the links listed below.

The fact sheets will be available in print through PA county extension offices shortly (call ahead). A single printed copy of free college publications, including these fact sheets, is available as requested. To order single printed copies of free publications, PA residents may call toll-free 877-345-0691 or e-mail AgPubsDist@psu.edu.

Free pdf versions of the fact sheets may be downloaded directly at the web addresses below:

Spotted Wing Drosophila, Part 1: Overview and Identification [Pub. No. EE0042]:

Spotted Wing Drosophila, Part 2: Natural History [Pub. No. EE0043]:

Spotted Wing Drosophila, Part 3: Monitoring [Pub. No. EE0044]:

Spotted Wing Drosophila, Part 4: Management [Pub. No. EE0045]:

Please note that if the higher rate of malathion is being used on blueberries as is allowed under PA's Special Local Needs label, the PHI is increased to 2 days. At lower rates on the full label for blueberries, the PHI is still 1 day, but residual control for SWD will be shorter. Growers in nearby states should check for local labels.

Scientists Publish on Stink Bug's Favorite Plants, Damage - *Chris Gonzales, Communication Specialist, Northeastern IPM Center*

July 16, 2013. Researchers have published a list of 170 plants that the brown marmorated stink bug (BMSB) uses for food and reproduction, called *Host Plants of the Brown Marmorated Stink Bug in the U.S.* "This publication will be a living document, updated regularly on the web," said North Carolina State University researcher Jim Walgenbach, one of the scientists who contributed to the project.

The list is a companion to five short web videos about BMSB host plants that show growers how to monitor for damage and infestations. Topics span orchard crops, small fruit, vegetables, ornamental crops, and Pacific Northwest host plants and damage. The segments, which can also be watched as one 20-minute video, are the latest installment in the "Tracking the Brown Marmorated Stink Bug" series produced by the Northeastern Integrated Pest Management Center at Cornell University. Earlier videos explain history and identification, overwintering and spread, and monitoring and mapping.

BMSB has been detected in 40 states, posing severe agricultural problems in six states and nuisance problems in thirteen others. The insect threatens an estimated $21 billion worth of crops in the United States alone.

To view the list and videos: http://www.stopbmsb.org/stink-bug-bulletin/host-plants/

CleanSweepNY - Fall 2013 Program

Promoting a Toxic Free Future in New York State

Plans are currently underway for a CleanSweepNY collection which will take place in the fall of 2013. The targeted area will be within NYSDEC's Region 8. This region is made up of Chemung, Genesee, Livingston, Monroe, Ontario, Orleans, Schuyler, Seneca, Steuben, Wayne and Yates Counties.

Details regarding the collection dates and locations will be posted on the CleanSweepNY website at: http://www.cleansweepny.org/ once the information becomes finalized.

CleanSweepNY is an Environmental Benefit Project which was initiated by the New York State Department of Environmental Conservation's Bureau of Pesticide Management and it describes in one

word an effort to safely and economically dispose of canceled, unwanted, unusable, or otherwise obsolete pesticides and other chemicals from agricultural or non-agricultural business activities. CleanSweepNY also provides for the disposal of elemental mercury, mercury containing devices such as thermometers, manometers, etc... from schools and other entities.

CleanSweepNY collection events do not target the general public since home and garden pesticides are accepted in Household Hazardous Waste (HHW) collections. Commercially applied or larger quantities of pesticides are usually excluded from local HHW collections. In New York State this fact has created a backlog of demand for safe, legal, and affordable disposal of obsolete pesticide products and other chemicals.

Preregistration is necessary and registration packets will be mailed upon request to those wishing to participate. Registration forms can be requested by calling toll free at 877-793-3769 or by email at info@cleansweepny.org

Due to the low number of metal pesticide containers being turned in and due to the added cost for providing this service, CleanSweepNY will no longer collect for recycling any metal pesticide containers or drums. We apologize for any inconvenience this may bring. This fall collection will be the 15th CleanSweepNY collection event since the program's inception and we look forward to providing these valuable chemical waste disposal services to those such as New York State farmers, certified pesticide applicators, landscapers, school laboratories and others.

WSSA Pesticide Stewardship Series 11- Proper Disposal of Pesticides Extends Far Beyond the Container

This is the final segment in a series on pesticide stewardship sponsored by the Weed Science Society of America.

July 1, 2013. A farmer, a local lawn and garden supply store, and a department store chain were fined recently for pesticide disposal violations. In each of these cases, the pesticide product itself was disposed of improperly.

"Regulations on proper pesticide disposal govern the product and much more," explains Fred Fishel, Ph.D., Professor of Agronomy and Director, University of Florida/Institute of Food and Agricultural Sciences Pesticide Information Office. "They address excess or damaged product, unused spray mixture, rinsate from containers and application equipment, empty containers, leftover treated seed, contaminated clothing and personal protective equipment, material from cleanup of spills and leaks, and other pesticide residues. If anything contains or is contaminated with a pesticide, appropriate disposal is a must."

It is important to note that state and local laws regarding pesticide disposal may be stricter and more detailed than federal requirements on the pesticide label. Also, many disposal facilities can accept only certain types of waste.

Here are a few important tips about pesticide disposal:

Excess Product. Avoid having to dispose of excess product by purchasing only the amount needed. Excess pesticides can be given to another qualified user (if the product registration has not expired), taken to a qualified disposal site or collection location, or disposed of through a waste transporter. Special disposal programs may exist for products missing identifying labels.

Unused Spray or Dip Mixture. Whenever possible, eliminate or minimize excess spray or dip mixture by practicing careful measurement, calibration and application. Apply excess mixture to another labeled site or follow all disposal regulations.

Rinsate. Rinse the pesticide container or spray equipment over an impermeable surface and in a way that allows recovery of the rinsate. If the rinsate contains no debris, it can be used the same day as part (up to 5%) of the water (or other liquid) portion of the next spray mixture of that chemical. Rinsate can also be applied to the original site, provided registered rates are not exceeded and the application is consistent with label directions. If practical, take clean water to the treatment site to rinse equipment immediately after the application.

Never pour excess product, unused spray/dip mixture or rinsate onto a roadway or into a sink, toilet, sewer, street drain, ditch, or water body. Do not mix pesticides or load or rinse equipment near a wellhead. Pesticides may interfere with the operation of wastewater treatment systems, pollute waterways or harm non-target organisms. Many municipal systems are not equipped to remove all pesticide residues.

Empty Containers. Rinse containers of liquid products thoroughly at the mixing site as soon as they are emptied using the triple rinse method or a pressure rinser. Puncture the top and bottom of disposable containers to prevent reuse. When disposable containers holding dry formulations are empty, open both ends to help remove any remaining pesticide.

If containers are non-refillable, high-density polyethylene, there are collection/recycling programs for agricultural and commercial applicators in most states. Contact the Ag Container Recycling Council for more information. Where there is no recycling program, deposit all empty containers in a licensed sanitary landfill. Do not reuse or stockpile empty disposable containers.

If containers are refillable/returnable, follow all rinsing and collection instructions provided by the manufacturer, distributor or retailer.

Leftover Treated Seed. The best way to dispose of a small quantity of leftover seed that has been treated with a pesticide is to plant it in an uncropped area of the farm or garden. Use the normal seeding rate and depth and plant at the proper time of year. Do not put treated seed in your compost pile or leave it on the soil surface. Additional options exist for large quantities, but consult first with state and local authorities to make sure you are in compliance with appropriate regulations.

Contaminated Clothing. Discard clothing that has been drenched or heavily contaminated with concentrated product. Most of this clothing can be discarded as normal solid waste. However, if the pesticide is regulated as hazardous waste, the contaminated clothing may have to be disposed of as hazardous waste.

Personal Protective Equipment (PPE). Discard PPE (or a PPE component) that has been damaged or designated as one-time use, or has expired or reached its use limit. Follow the most strict disposal directions, which may be state or local laws, the pesticide label or the PPE manufacturer's instructions.

Material from Clean-up of Spills or Leaks. Absorbent material such as pet litter, sawdust, or soil should be used to absorb small liquid pesticide spills or leaks and any water/detergent mixture used to clean the spill area. The absorbent material and any soil contaminated in a spill must be placed in a suitable container for proper disposal and treated as pesticide waste. Sweep up dry spills and return the product to the container only if any contamination with soil, etc. will not impact use. Contact your state to determine notification and cleanup requirements that may be applicable to a larger spill or leak.

Containment Pad/Sump Residue. A containment pad/sump is a safety system designed to contain and recover rinsate, spills, leaks, etc. Any solids left in the containment pad/sump should be dried and spread evenly over a large part of the field in accordance with label directions. If this is not possible, the solids should be taken to an approved waste disposal site.

"Proper pesticide disposal depends upon state and local regulations, the pesticide(s) involved, the waste classification, the quantity of waste and the disposal facility," says Fishel. "Ultimately, the only acceptable approach is to be diligent with pesticides from start to finish. Purchase and prepare only what you need, avoid contamination and spills, and discard the container and other pesticide wastes according to the instructions on the pesticide label and all other laws."

The Association of American Pesticide Control Officials (AAPCO) provides contact information for state offices that regulate pesticides.

Check with your local solid waste management authority, environmental agency or health department to find out whether your community has a household hazardous waste collection program.

Some Resources on Pesticide Disposal:

- http://www.epa.gov/pesticides/regulating/disposal.htm Environmental Protection Agency (EPA)
- http://www.pesticidestewardship.org/disposal/Pages/default.aspx Pesticide Environmental Stewardship (PES)
- http://edis.ifas.ufl.edu/pi010 University of Florida

About the Weed Science Society of America: *The Weed Science Society of America, a nonprofit scientific society, was founded in 1956 to encourage and promote the development of knowledge concerning weeds and their impact on the environment. The Weed Science Society of America promotes research, education and extension outreach activities related to weeds, provides science-based information to the public and policy makers, fosters awareness of weeds and their impact on managed and natural ecosystems, and promotes cooperation among weed science organizations across the nation and around the world. For more information, visit www.wssa.net.*

Day Neutral Strawberry Fertility Management - *Cathy Heidenreich, Cornell University and Laura McDermott, CCE ENYCHP*

This article is written from a discussion with Kevin Schooley. Mr. Schooley is the Executive Director of the North American Strawberry Growers Association, the Ontario Berry Growers Association and is also a berry crop consultant in the Ontario and Quebec provinces. Kevin deals with mainly smaller growers that average between 1 and 2 acres with his largest grower having 7-8 acres planted to day neutral (DN) strawberries.

There are two opportunities for planting DN strawberries – spring planting of fall-dug dormant plants, or late summer planting of plugs. Spring planting remains a priority for many Canadian growers as it allows them to take advantage of spring soil moisture. Canadian growers prioritize DN plants over June bearing (JB) varieties so that they get early production out of them – this helps close the gap between when JB strawberries end and DN begin.

Pre-plant soil test and amendments focus on Phosphorus levels. Additionally, growers apply 50 lb actual N/acre pre-plant during bed formation usually as a granular blend along with the required P and K. Some growers are prepping fields in the fall to help them get access to fields as soon as possible in the spring. This would mean that some compensation for pre-plant N might be needed. Deer and other critters can also do a number on the plastic mulch, but in many areas it might be worth doing this early especially as they predominately plant the berries by hand. All DN strawberries are planted on plastic mulch covered raised beds.

In the spring, flower trusses are removed until the plant reaches a reasonable plant size - 6-8 healthy leaves per crown – which usually translates into sending a crew through twice.

Beginning at heavy bloom to green fruit, soluble fertilizers are fed through the drip irrigation system at a rate of 3 -5 lb actual N/acre/week. Initially the rate starts at 3#, and then it gradually increases until harvest begins. When harvest kicks in, the weekly N rate may actually go up to 7# N/acre/week, or 1# each day.

Growers are alternating weekly between calcium nitrate ($CaNO_3$) and a greenhouse grade potassium nitrate (KNO_3, 13-0-44) to provide necessary calcium and potassium along with nitrogen. Recommended K rate is 15 lb/week. $CaNO_3$ a safe Ca source from a root perspective. Urea can also be used as an N source and later in the season it might be more important as it is less expensive.

Boron is not specifically used, despite the fact that the literature indicates it is very important and most soils in the east are deficient. Many growers are very interested in using foliar nutrients, but the return on investment remains unclear.

DN plantings are mostly annual crops but some growers are holding over the planting for a second season with mixed results. Seascape overwinters well but Albion is quite tricky under SW Ontario conditions. The typical overwintering method is one layer of heavy weight row cover (40 to 50 ml vs. standard 19 ml) with no straw. The heavy cover is more durable, and it lasts at least two years.

Many Canadian growers sell DN strawberries at farm stands so yield is important but not as critical as it is for the remaining growers that serve the local wholesale market. Retail growers usually receive a premium price, but wholesale growers depend not just on quality but also on predictably strong yield. The most popular variety is Albion, with some Seascape as well. Some growers have planted San Andreas which may overwinter better than Albion and is reported to have good fruit size, but the first picking may be later than Albion.

Concerned About Soil Compaction? Stick a Shovel in It! - *Marilyn Thelen, MSU Extension*

The recent wet spring has growers concerned about soil compaction. Here's an easy method to tell if your soil is compacted and how to correct it.

June 19, 2013. For Mid-Michigan, the spring of 2013 was long and wet. Precipitation in a band stretching from Lake Michigan through the Thumb, saturated soils across central Michigan for much of the planting season and this trend has continued well into June. As a result, fields may have had work done before soil conditions were right. This has many farmers concerned about soil compaction in those fields.

Soil compaction occurs when equipment is driven on soils that are too wet. While it is more common in fine-textured soils, it can also occur in coarse-textured soils. Soil compaction will decrease root penetration of that soil, reduce the air and water holding capacity and decrease the ability for water to move through the compacted layer. All of these factors can impact a plant's ability to thrive. The impact of soil compaction can be felt for years and can rob as much as 10 to 20 percent of yield if not corrected.

An easy way to see if a soil is compacted is to stick a shovel in it, or a soil probe, a tile rod or even a penetrometer. With moist soil conditions, the instrument will move through the soil profile until it reaches the compaction layer. This layer may be at 3 inches, 7 inches or deeper. It may correlate with depth of a tillage operation or tire traffic.

Soil compaction can impact the entire field, or it may be present only in a localized area. The important point is to locate the areas where compaction has occurred and determine the depth of the compaction layer.

The good news is soil compaction can be corrected. Producers can chisel plow or subsoil affected areas to break up the compacted layer. Studies have shown that tilling 2 inches below the compacted layer is affective in breaking up the hard-pan. Going deeper does not provide additional benefit.

Carry a shovel and observe crop growth, and when there is concern, stick a shovel in it. This is an easy way to diagnose a problem that could linger for years if not corrected.

*This article was published by **Michigan State University Extension**. Reprinted with the author's permission.*

New Strawberry Species Found in Oregon - **Sharon Durham,** USDA-ARS Information Staff

The Cascade strawberry *(Fragaria cascadensis)*. The length of the flower stalk for this species is variable. These stalks were collected near Waldo Lake, Oregon. **(D2878-1)**

A recently discovered wild strawberry species provides new genetic material for plant research and, in the future, might also provide a new class of commercial strawberries.

Agricultural Research Service scientist Kim Hummer, with the USDA-ARS National Clonal Germplasm Repository at Corvallis, Oregon, found the new species during several plant collection expeditions in the high peaks of Oregon's Cascade Mountains. She named it *Fragaria cascadensis.*

The find was reported in the *Journal of the Botanical Research Institute of Texas*.

The new strawberry is endemic to the Oregon Cascades, hence its specific name, *F. cascadensis.* It is perennial, with white flowers and green leaves, and it differs from other strawberry species of the region by having hairs on the upper side of its leaves; a different-shaped middle leaflet; comma-shaped, small brown fruits (called "achenes") on the strawberry surface; and 10 sets of chromosomes, unlike the 8 sets of chromosomes of the commercial strawberry, according to Hummer.

"The new strawberry species begins growing after snowmelt in late May or early June and flowers in early July. Runner production begins after flowering, and fruit ripens during August for about 2 weeks," says Hummer. "The fruits of plants at about 5,000 feet elevation ripen 1 to 2 weeks later than those at 3,280 feet."

The strawberry's distribution in the Oregon Cascades stretches from the Columbia River in the north to the vicinity of Crater Lake in the south, at elevations of about 3,000 feet up to tree line. It grows in sandy-clay loam soil of volcanic origin located in forest clearings and open alpine meadows. The northern distribution range of *F. cascadensis* has an average annual precipitation of 12-15 inches, but the southern range receives only about 6 inches of precipitation annually.

This new strawberry is now included in the living collections of the Corvallis repository, which is a genebank that preserves invaluable plant genetic resources of temperate fruit, nut, and agronomic crops. This genebank maintains collections representing global diversity of blackberries, blueberries, cranberries, currants, gooseberries, hazelnuts, hops, pears, raspberries, and strawberries.

Wild fruiting plants of *Fragaria cascadensis* near Hoodoo Mountain, located in Oregon's Cascade Mountains. **(D2877-1)**

"Fragaria cascadensis presents the possibility for developing and breeding a new class of cultivated strawberries. This wild Oregon strawberry, if crossed with the commercial strawberry, would likely result in hybrid offspring with lower fertility," says Hummer. "However, crossing this new species with other strawberries having the same number of chromosomes, such as the cultivated *F. vescana* or the wild Russian species *F. iturupensis,* should produce fertile offspring, which may reveal new flavors or genetic disease resistance. In the future, consumers could benefit from the knowledge gained and genes provided by this new wild strawberry."

This research is part of Plant Genetic Resources, Genomics, and Genetic Improvement, an ARS national program (#301) described at www.nps.ars.usda.gov. Kim Hummer is with the USDA-ARS National Clonal Germplasm Repository, 33447 Peoria Rd., Corvallis, OR 97333; (541) 738-4200."**New Strawberry Species Found in Oregon"** was published in the **July 2013** issue of *Agricultural Research* magazine.

Rolling Out Cover Crops for Higher Yields and Improved Soil Quality - *Dennis O'Brien, USDA Agricultural Research Service Information Staff*

In an experiment at Randle Farms near Auburn, Alabama, technician Corey Kichler operates a two-stage roller/crimper that has a primary drum and a spring-loaded secondary drum with attached equally spaced crimping bars.**(D2778-1)**

Growers who use cover crops are increasingly turning to a tool that can flatten out their actively growing fields, usually in a single pass. Known as a "roller/crimper," the technology can help reduce and sometimes eliminate the need for herbicides and is ideal for organic farmers and growers interested in reducing herbicide use.

Cover crops can improve soil quality; and in organic operations, they play a major role in keeping weeds in check. Crimpers boost those benefits. They have been used for years in South America and are beginning to catch on in the United States, says Ted Kornecki, an agricultural engineer at the Agricultural Research Service's National Soil Dynamics Laboratory in Auburn, Alabama. He has conducted a study evaluating several crimpers to give guidance to growers and has patented three crimper designs.

There are several types of crimpers. Most involve some type of rolling, paddle-wheel-like cylinder that attaches to a tractor and barrels over a field, tamping down and crimping the cover crop into a smooth mat to kill it. About 3 weeks later, a planter, running parallel to the roller's path, can plant seeds directly into the ground without significantly disturbing the biomass mat. The technology has shown promise in early trials and demonstrations.

"It definitely works," says Frank Randle, who helped evaluate a crimper similar to one designed by Kornecki as part of a 4-year demonstration project on his farm near Auburn. Randle used cereal rye and crimson clover as cover crops before planting organic watermelon, squash, okra, and tomatoes. The clover was difficult to kill with the crimper, but the device terminated the rye effectively.

After the 4th year, Randle did have to till the plots to control some perennial weeds, but the crimper could be used again continuously for years after that.

"Yields actually increased a bit over time with the rye because we were adding carbon to the soil, and these are sandy soils that really need some help," Randle said.

The project was a cooperative effort between ARS and USDA's Natural Resources Conservation Service (NRCS). Funding was provided by an NRCS Conservation Innovation Grant.

Agricultural engineer Ted Kornecki adjusts the crimping force of his patented smooth roller with oscillating crimping bar.**(D2758-1)**

"Termination Rates" Are Key

Cereal rye is a fairly common choice of cover crop among growers, Kornecki says. Rye is typically planted in the fall, killed in the spring, and left to decompose before a cash crop, such as corn, is seeded through it. The effectiveness of crimping a cover crop largely depends on its "termination rate," or the percentage of it that dies after crimping. Studies show that termination rates of about 90 percent are optimal to ensure that enough residue remains on the soil surface to form a dry, brittle mat that will be easy to penetrate with seeding equipment.

"The more plant biomass you have on the soil surface, the more benefits you see," Kornecki says.

The problem is that vegetable growers need to plant their vegetables at recommended times in the spring for sufficient yields. It can be difficult to hit that "sweet spot" when the time is right for spring planting and the cover crop has reached the optimal stage for termination. With rye, the time is just after flowering.

"If you roll it too early, it's very difficult to kill. The root system is strong and it will compete with the cash crop for moisture and nutrients, and that can reduce the yield," Kornecki says.

Conventional growers can use herbicides to kill their cover crops, but organic growers don't have that option. They are at the mercy of their planting schedules and must sometimes roll cover crops before they are at the right stage for termination.

Assessing Impacts on Sweet Corn

Several different crimpers have been developed, but none has been evaluated for no-till conventional and organic vegetable operations. To get some answers, Kornecki and his colleagues assessed the effects of three experimental roller-crimper systems on soil moisture, yield, and rye termination rates over three growing seasons in a northern Alabama sweet corn field. Each year, they planted the rye in October and crimped it the following April. They planted sweet corn 3 weeks after crimping the rye—seeding it directly into the rye residue with a no-till planter—and harvested it in August. They passed the crimpers over the rye at two different speeds (3.2 and 6.4 kilometers per hour) to assess the effects of speed on rye termination rates and soil moisture.

The rollers evaluated were an original straight bar, similar to technology developed in South America; a smooth roller with a crimping bar; and a two-stage roller that has both a smooth drum and a spring-loaded crimping bar. The latter two rollers were designed and patented by Kornecki. They compared the rollers to a control treatment where glyphosate was applied to kill the rye and a smooth drum roller was used to flatten it.

They found that roller type and operating speed did not affect soil moisture. At either speed, the rollers produced higher yields than the control treatment in the first year of the study, when rainfall was plentiful, and in the second year, when drought occurred. None of the roller designs was as effective at killing the rye as the glyphosate control treatment, however, with overall termination rates of about 50 percent, well below the recommended 90 percent. But that was because the researchers did what most growers do: They planted the cash crop at the recommended planting dates, which meant rolling the rye earlier in its growth cycle than when it ideally should have been rolled. The researchers believe that with improved timing, the rollers could produce optimal termination rates.

The results, published in 2012 in *HortScience,* give guidance to organic vegetable growers who cannot use herbicides. The researchers recommend that growers in Alabama minimize the risk of low termination rates by planting rye by late September instead of mid-October so that it can be rolled 2 weeks earlier in the spring. They also recommend making multiple passes with the roller to increase termination rates.

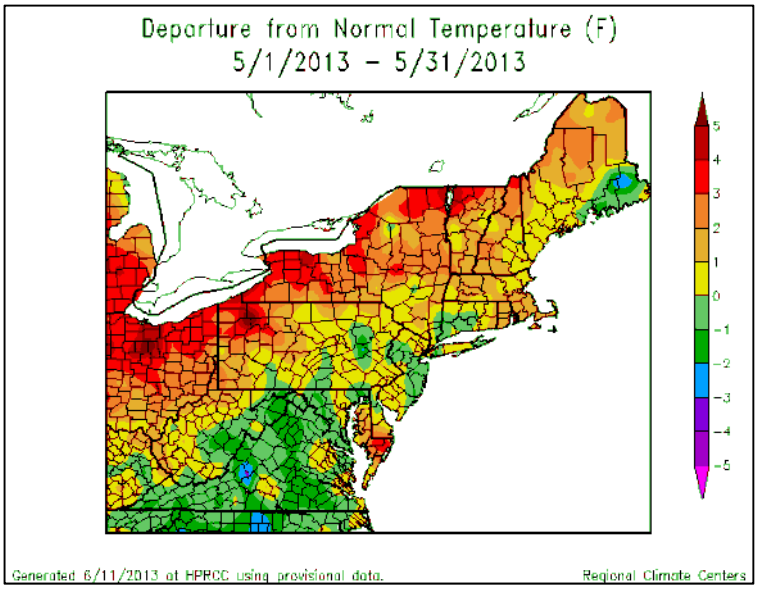
Kornecki is seeking commercial partners to develop the two larger, patented rollers evaluated in the study as well as a new one he has developed and patented. Intended for smaller operations, it can be guided like a lawn mower and uses a 2-wheel walk-behind small tractor as a power source.—By **Dennis O'Brien,** Agricultural Research Service Information Staff.

This research is part of Agricultural System Competitiveness and Sustainability, an ARS national program (#216) described at www.nps.ars.usda.gov. Ted Kornecki is with the USDA-ARS National Soil Dynamics Laboratory, 411 South Donahue Dr., Auburn, AL 36832; (344) 844-0908. "Rolling Out Cover Crops for Higher Yields and Improved Soil Quality" was published in the February 2013 issue of Agricultural Research magazine.

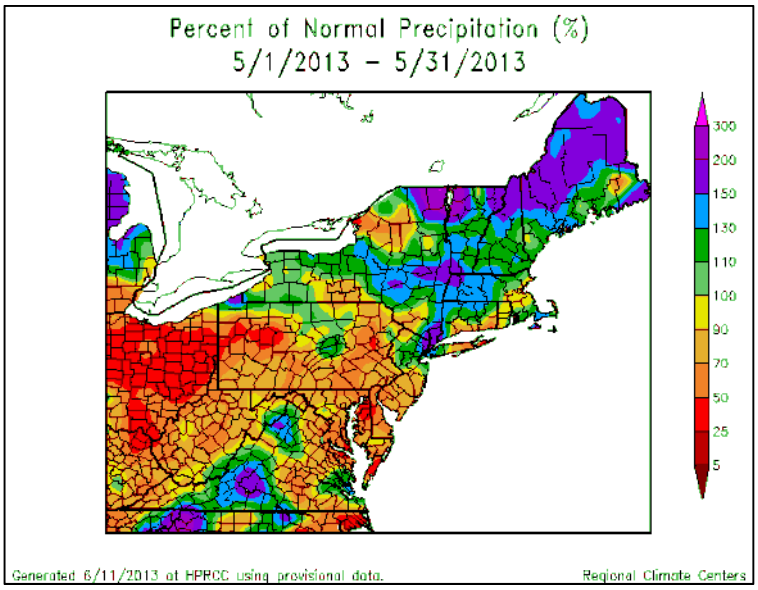
WEATHER NOTES

Northeast Regional Climate Center (NRCC) Summary for May 2013

With an average temperature of 57.7 degrees F (14.3 degrees C), the Northeast was 1.3 degrees F (0.7 degrees C) above normal for May. New Jersey was the lone cool state at -0.1 degrees F (-0.1 degrees C). Departures for the rest of the states ranged from +0.1 degrees F (+0.1 degrees C) in Maryland to +2.4 degrees F (+1.3 degrees C) in Vermont. As for spring, the Northeast was slightly above normal. The average temperature of 45.8 degrees F (7.7 degrees C) was 0.1 degrees F (0.1 degrees C) above average. Seven states ended the season cooler than normal. Departures for those states ranged from -1.3 degrees F (-0.7 degrees C) in West Virginia and Maryland to -0.1 degrees F (-0.1 degrees C) in New York. For the five warm states, departures ranged from +0.1 degrees F (+0.1 degrees C) in Rhode Island to +1.6 degrees F (+0.9 degrees C) in Maine.



After four dry months in a row, the Northeast was slightly wetter than normal in May. The region received 4.09 inches (103.89 mm) of precipitation, 102 percent of normal. The states were split with six wetter than normal and six drier. Both Maine (149 percent of normal) and Vermont (140 percent of normal) ranked this May as their 12th wettest since 1895. New Hampshire, with 123 percent of normal, ranked the month as their 17th wettest May while Massachusetts, with 119 percent of normal, ranked it as their 20th wettest. New York's departure was 108 percent of normal and Connecticut's was 102 percent of normal. For the dry states departures ranged from 64 percent of normal in Delaware to 94 percent of normal in Rhode Island and New Jersey. Receiving 9.24 inches (234.70 mm), 83 percent of normal, the Northeast was below normal for spring precipitation. Despite a wet May in some states, all states ended spring drier than normal. Rhode Island was the driest state at 59 percent of normal, making it their 17th driest spring in 119 years. Connecticut, with 62 percent of normal precipitation, had their 20th driest spring on record. Departures for the rest of the states ranged from 74 percent of normal in Pennsylvania to 99 percent of normal in Vermont.

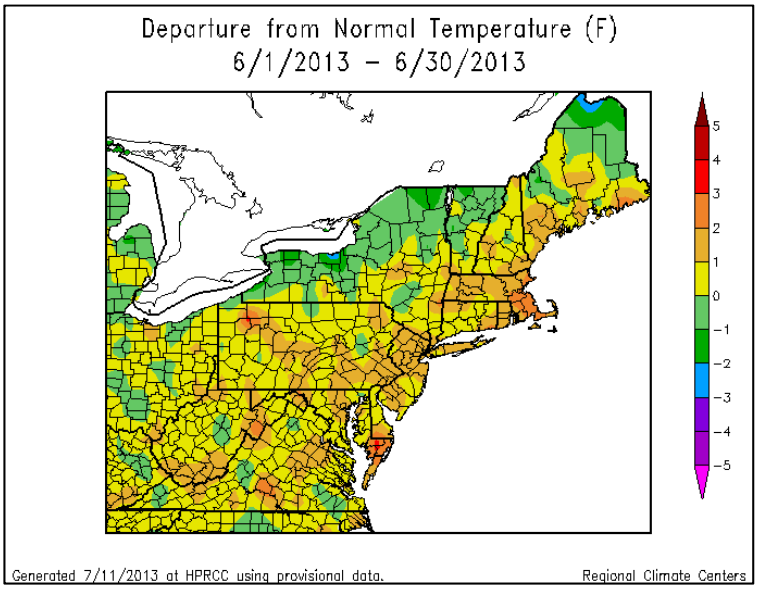


At the beginning of May a continuing lack of precipitation caused most of New England to be under abnormally dry (D0) or moderate drought (D1) conditions according to the U.S. Drought Monitor. Rains during the second half of the month helped ease dryness, but areas of D0 and D1 remained. Though D1 conditions eased, abnormal dryness lingered in parts of New York. At the start of the month around two-thirds of Pennsylvania was abnormally dry, but improving conditions lowered that to one-fourth by month's end. Despite improvement in other parts of Pennsylvania, conditions deteriorated to D1 in the southwest corner. Much of West Virginia was under abnormally dry or moderate drought conditions at the start of the month and although conditions improved slightly, areas of D0 and D1 remained. In New Jersey and western Maryland, dry conditions were eased.

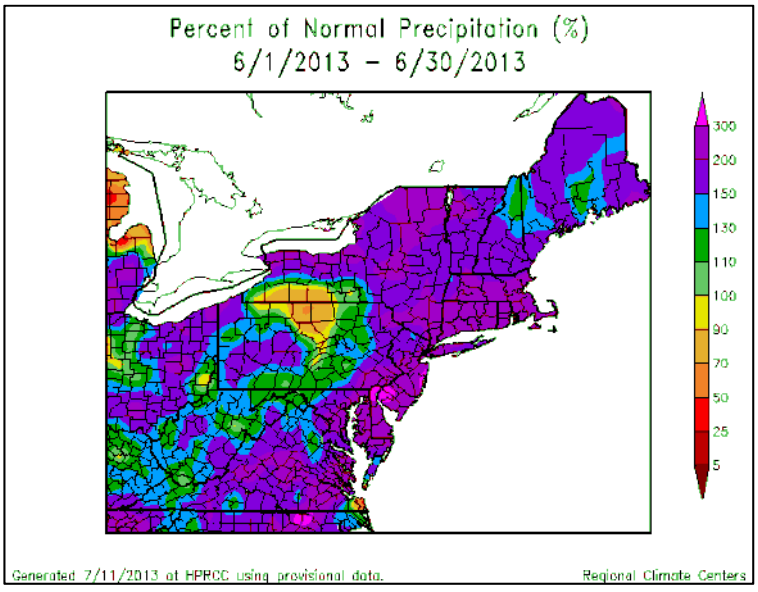
Severe storms throughout May produced eight tornadoes in the Northeast: an EF-0 in Massachusetts on the 9th; three EF-1s and an EF-0 in Pennsylvania on the 28th; and two EF-1s and a mile-wide (1.6 km) EF-2 in New York on the 29th. The Pennsylvania tornadoes downed hundreds of trees while the EF-2 tornado in New York tore roofs off buildings and toppled high-tension power line towers. Several funnel clouds were also spotted throughout the month. Additionally, severe storms produced damaging straight-line winds, hail up to 2.5 inches (6.4 cm) in diameter, and flash flooding. One of the hardest hit areas for flash flooding was Chittenden County, Vermont, which received up to 7 inches (177.8 mm) of rain during the week of the 19th through the 24th. Flash flooding washed out roads and culverts, damaged bridges, and caused road closures. Located on the border of the county, Mount Mansfield set a record (and tied the New England record) for most consecutive days with an inch (2.5 cm) of precipitation with five such days from the 22nd through the 26th. Also located in Chittenden County, Burlington set a new precipitation record for May with 8.74 inches (222 mm). The old record was 8.67 inches (220.22 mm) set in 2011. Cold air behind the flood-inducing system allowed some higher elevations of New York, Vermont, and New Hampshire to see snow the weekend before Memorial Day. Mount Mansfield accrued 13.2 inches (33.5 cm) from the 25th to the 26th, making it the latest in the season that the peak has received a foot (30.5 cm) of snow, while Whiteface Mountain in upstate New York accumulated 36 inches (91.4 cm) at its peak.

Northeast Regional Climate Center (NRCC) Report for June 2013

June was another warmer-than-average month in the Northeast. With an average temperature of 66.1 degrees F (18.9 degrees C), it was 0.7 degrees F (0.4 degrees C) above average. The lone cool state was New York with a departure of -0.1 degrees (-0.1 degrees C). Four states ranked this June among their top twenty warmest: Delaware, 12th warmest; Rhode Island, 17th warmest; Maryland, 18th warmest; and Massachusetts, 19th warmest. Massachusetts had the greatest departure, +1.7 degrees F (0.9 degrees C), followed closely by Delaware with a departure of +1.6 degrees F (0.9 degrees C). Departures for the other states ranged from +1.1 degrees F (0.6 degrees C) in Rhode Island and Connecticut to +0.5 degrees F (0.3 degrees C) in Vermont and Maine.



The month of June was very wet in the Northeast. Receiving 7.19 inches (182.63 mm) of precipitation, 172 percent of normal, it was the third wettest June since 1895 for the region. All twelve states were wetter than normal with 11 states ranking this June among their top ten wettest. Delaware and New Jersey reported their wettest June on record receiving 283 percent of normal precipitation and 238 percent of normal respectively. Receiving 188 percent of normal, New York had its second wettest June in 119 years. June 2013 was the third wettest on record in Connecticut (233 percent of normal) and Maryland (198 percent of normal) and the fourth wettest in Massachusetts (224 percent of normal), Rhode Island (274 percent of normal), and Vermont (181 percent of normal). Pennsylvania (138 percent of normal) and Maine (169 percent of normal) had their seventh wettest June since recordkeeping began, New Hampshire (156 percent of normal) had its ninth wettest, and West Virginia (140 percent of normal) reported its 12th wettest.



At the beginning of June, parts of New England were experiencing abnormal dryness (D0) and moderate drought (D1) conditions and New York and New Jersey had areas of D0. Copious amounts of rain fell throughout the month erasing dry conditions in those areas. Parts of Pennsylvania and West Virginia also started the month with D0 and D1 conditions. Plentiful rainfall eased dryness in those states with the exception of a small area of D0 in northern West Virginia and southwestern Pennsylvania.

June featured a slow-moving low, the remnants of Tropical Storm Andrea, a low-end derecho*, frequent thunderstorms (that produced 11 tornadoes), and a wet, unsettled weather pattern that caused flash flooding.

Severe thunderstorms on the 2nd produced two EF-0 tornadoes and straight-line winds of 80 mph (35.8 m/s) in Maine. The storms knocked down several hundred trees, some of which fell on buildings and vehicles. A slow-moving low and the remnants

of Tropical Storm Andrea dumped heavy rain on the region from June 6-8. Fourteen of the Northeast's thirty-five first-order climate sites broke daily precipitation records and flooding was reported from northern New Jersey to coastal Massachusetts. Severe thunderstorms on the 10th spawned four EF-0 tornadoes in Maryland and an EF-0 tornado in Delaware. The tornadoes, along with straight-line winds, downed trees and damaged homes and various structures. Another round of severe storms generated three EF-0 tornadoes in Maryland and straight-line winds of 75-80 mph (33.5-35.8 m/s) in West Virginia on the 13th. The winds caused tree and structural damage while heavy rain triggered flash flooding in Roane County, West Virginia. At least 100 homes were flooded and sections of roads were washed away. On the 24th, straight-line winds of 90-100 mph (40.2-44.7 m/s) downed trees in New York and a lightning strike near a scout camp in New Hampshire sent 23 scouts to the hospital. From June 27-30, a wet, unsettled weather pattern over the Northeast caused daily torrential downpours. For instance, on the 30th, two inches (50.8 mm) of rain was reported to have fallen in 30 minutes in Wayne County, Pennsylvania. Flash flooding was reported in almost every state with northern Pennsylvania and eastern New York hit particularly hard. Record flooding occurred on the Oneida Creek in Oneida and Madison Counties in New York. The highest (preliminary) observed value was 17.23 feet (5.25 m) on the 28th. The previous record was 15.55 feet (4.74 m). Across the region, floodwaters washed out roads and bridges and damaged homes and other buildings. Numerous water rescues were performed throughout the four days, as people became stuck in rising waters in their cars and homes. For example, on the 27th, all roads in and out of DuBois, Pennsylvania, were impassable due to up to four feet (1.22 m) of water covering them and on the 28th; up to 100 people were trapped in their homes in Fort Plain, New York, as the town was inundated with water. In addition to flooding, the storms packed golf ball-size hail and damaging winds, spawned two EF-1 tornadoes on the 27th in central Pennsylvania, and produced a funnel cloud and water spout in Maryland on the 30th.

By the end of June, many parts of the Northeast were waterlogged. Of the 35 first-order climate sites, 34 received above average precipitation, with 26 of those sites ranking this June among their top 10 wettest. Wilmington, DE, at 352 percent of normal, set a new monthly precipitation record for June. In fact, it was the 4th wettest month in Wilmington since recordkeeping began. Philadelphia, PA, at 308 percent of normal, also set a new June precipitation record. It was the 6th wettest month since recordkeeping began in Philadelphia.

*__derecho__ (Spanish: derecho, "straight") is a widespread, long-lived, straight-line wind storm that is associated with a land-based, fast-moving band of severe thunderstorms. Derechos can carry hurricanic or tornadic force and can deliver torrential rains and perhaps flash floods as well as strong winds. Winds convection-induced take on a bow echo (backward "C") form of squall line, forming in an area of wind divergence in upper levels of the troposphere, within a region of low-level warm air advection and rich low-level moisture. They travel quickly in the direction of movement of their associated storms, similar to an outflow boundary (gust front), except that the wind is sustained and increases in strength behind the front, generally exceeding hurricane-force. A warm-weather phenomenon, derechos occur mostly in summer, especially during June and July in the Northern Hemisphere, within areas of moderately strong instability and moderately strong vertical wind shear. They may occur at any time of the year and occur as frequently at night as during the daylight hours. *(Source: Wikipedia: http://en.wikipedia.org/wiki/Derecho)*

Established in 1983, the Northeast Regional Climate Center (NRCC) is located in the Department of Earth and Atmospheric Sciences at Cornell University. It serves the 12-state region that includes: Connecticut, Delaware, Massachusetts, Maryland, Maine, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, and West Virginia. Major funding is provided through a contract with the National Oceanic and Atmospheric Administration. The Center's staff works cooperatively with the National Climatic Data Center, the National Weather Service, state climate offices, and other interested scientists in the Northeast to acquire and disseminate accurate, up-to-date climate data and information.

Extreme Precipitation in New York and New England

An Interactive Web Tool for Extreme Precipitation Analysis

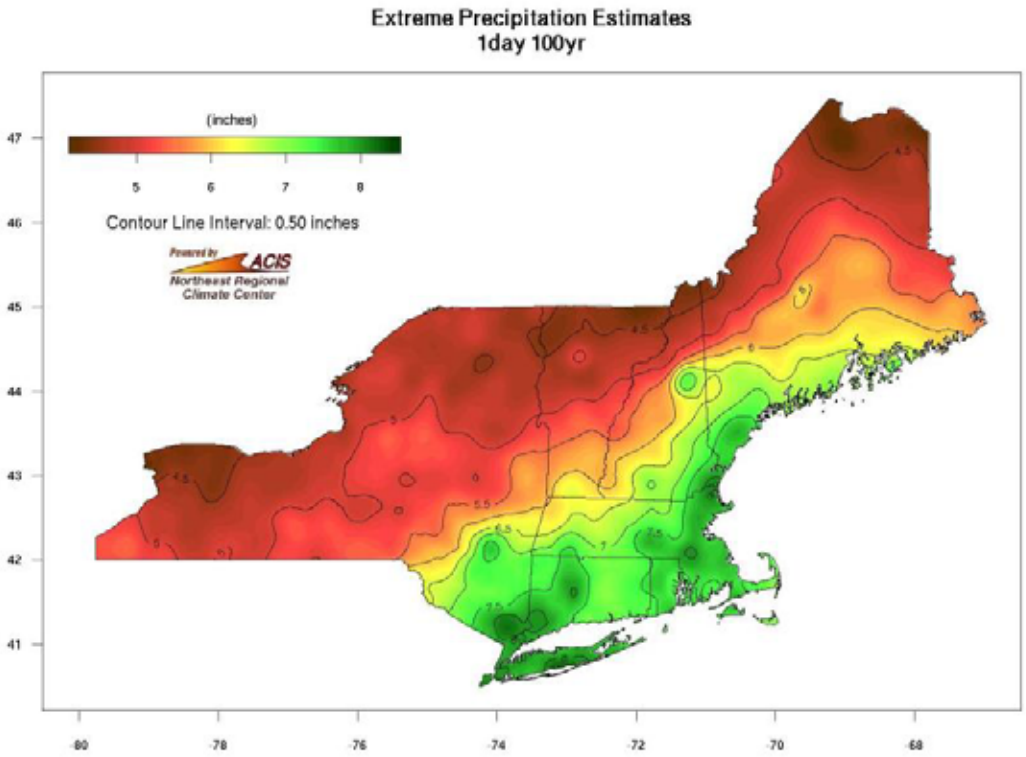
The climatology of very large precipitation events is a critical component of engineering design and regulations for structures and facilities that must withstand or protect against such events. These events can produce localized urban and widespread flooding with damage to property, degradation of water quality, and potential loss of life. On a national level, a comprehensive climatology of rainfall events has not been updated since the early 1960s

Past Extreme Rainfall Analyses

In New York and New England this is a concern as the current climatology excludes almost 50 additional years of data. The National Weather Service is using a regional approach to update the 1960s analysis with two climatologies completed for the southwestern and middle Atlantic regions of the U.S. The Mid-Atlantic analysis extends as far north as Pennsylvania and thus excludes New York and New England. In these states, several regional and state-specific extreme rainfall analyses were conducted in the 1990 and early 2000s, but even these analyses are over a decade old and differences in the data records used do not provide a consistent regional analysis of rainfall extremes.

Extreme Rainfall Since the 1960s

The previous climatologies have been based on the premise that the extreme rainfall series do not change through time. Therefore it is assumed that older analyses reflect current conditions. Recent analyses show that this is not the case, particularly in New York and New England where the frequency of 2 inch rainfall events has increased since the 1950s and storms once considered a 1 in 100 year event have become more frequent. Such storms are now likely to occur almost twice as often.



Web Site Features

A number of features are included in this website to make it compatible with the NWS analysis for the Middle Atlantic region and to enhance its usability. The design of the site and its products has been reviewed by stakeholders with the U.S. Natural Resource Conservation Service (NRCS), various state agencies, and private engineering consulting firms. The site includes estimates of extreme rainfall for various durations (from 5 minutes to 10 days) and recurrence intervals (1 year to 500 years). These data are interpolated to a 30-second grid. Confidence intervals for these values are also included as are the partial duration rainfall series used in their computation. Regional extreme rainfall maps and graphic products are also available. Precipitation distribution curves can be generated for each grid either directly or from the USDA NRCS Win TR-20 software, eliminating the need to use a static Type II or Type III curve.

To visit the website or subscribe to the project mailing list go to: http://precip.eas.cornell.edu/.

Questions or comments about the New York Berry News?
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