New York Berry News

CORNELL UNIVERSITY

Volume 07, Number 10 October 9, 2008

What's Inside

CURRANT EVENTS

October 23, 2008. *Berry Pest Management Workshop*, Civil Defense Center, Route 54, Bath, NY**.** Details follow.

October 28-29, 2008. *Cornell Strategic Marketing Conference.* Wappingers Falls, NY. Updated conference information & registration materials now available at http://marketingpwt.aem.cornell.edu. For more information contact: Todd Schmit, Dept. of Applied Economics and Management, 607-255-3015, tms1@cornell.edu or Les Hulcoop, Cornell Cooperative Extension-Dutchess County, 845-677-8223, lch7@cornell.edu.

Nov. 6-8, 2008. *Southeast Strawberry Expo*, at the Hilton Charlotte University Place, Charlotte, NC. Includes Strawberry Plasticulture Workshop for New Growers, farm tour, educational sessions, and trade show. For more information, email info@ncstrawberry.com

Nov. 18, 2008. *Diagnosis, Visual Assessment and Management of Plant-Parasitic Nematodes of Vegetables and Small Fruit in the Northeast*, Lehigh County Cooperative Extension Office, Allentown, PA. For more information contact Beth Gugino at bkgugino@psu.edu.

Dec. 8-10, 2008. *North American Raspberry & Blackberry Conference*, in Grand Rapids, MI, as part of the Great Lakes Expo. More information follows in news brief below.

Dec. 9-11, 2008. *Great Lakes Fruit, Vegetable and Farm Market Expo***,** DeVos Place Convention Center, Grand Rapids**,** http://www.glexpo.com/.

Feb. 3-5, 2009. *Mid-Atlantic Fruit and Vegetable Convention*, Hershey Lodge and Convention Center, Hershey, PA. For more information contact William Troxell at 717-694-3596 or visit www.mafvc.org.

Feb. 10-12, 2009. *Empire State Fruit and Vegetable EXPO and Becker Forum*, Liverpool Holiday Inn and OnCenter, Syracuse, NY. See news brief below for more details.

June 22-26, 2009: *The 10th International Rubus and Ribes Symposium. Zlatibor, Serbia*. Save the date!

GAPS ONLINE PRODUCE SAFETY COURSE

The next GAPs Online Produce Safety Course will begin October 29, 2008 and will run through November 18, 2008. Each course is limited to 25 people. There will be no fee for taking this course due to grant funding from the USDA National Integrated Food Safety Initiative. This will be the final pilot course.

To register, follow this link to the registration page at www.ecornell.com/gaps, check the **Add to Cart Checkbox** and click the **Add to Cart Button**. Once you register, you will be sent a letter of intent. You must read this letter, sign it, and return it to Betsy Bihn via email or fax. This letter explains the course in detail including course requirements and expectations. Betsy will then validate your reservation and your registration will be complete.

If you have any questions about this course, contact Betsy Bihn at (315) 787-2625 or e-mail her at: eab38@cornell.edu.

GROWING FARM ENERGY ALTERNATIVES

On October 22nd 2008, CCE-Oswego County is holding a workshop on utilizing emerging technologies to generate energy for farmers and landowners that promotes energy independence and ensures agricultural sustainability. The one-day program will be held at the Mexico VFW Post #369 located on State Route 3 North in Mexico, NY from 9am to 3:30pm.

A diverse group of speakers and topics include:

- Harvesting the Sun - presented by Art Weaver, owner of Renovus Energy, a successful solar and wind energy business located in Ithaca.
- Methane Digestion for Small Farm Operations - presented by Curt Gooch, Agricultural Engineer in the Dept. of Biological and Environmental Engineering at Cornell University.
- Introduction to Grass Biofuels - presented by Jerry Cherney, Professor of Agriculture, Cornell University.
- On Farm Biofuel Production - presented by John Williamson, State Line Farm, Shaftsbury, Vermont.
- Wind Energy and Incentives - presented by Mark Mayhew, Project Manager, photovoltaics and wind, New York State Energy Research Development Authority, Albany.

The workshop fee of $20 includes lunch. There is a discount rate for current students/4-H/FFA/College of $10

Pre-registration is required by October 17. To obtain a registration form, contact Karen Meyers at 315-963-7286, ext. 201 or email kmm14@cornell.edu.

For additional information, contact JJ Schell at jjs69@cornell.edu 315-963-7286, ext. 200.

DON'T BE AFRAID OF THIS HALLOWEEN OPPORTUNITY

The New York State Fair is looking for pumpkin farmers and other producers of late fall crops to operate a Halloween-themed market during weekends in October as part of the annual Fright Nights at the Fair event.

Fright Nights operates four haunted houses and a small children's carnival on a parking lot above the New York State fairgrounds that last year attracted more than 17,000 people.

There is a large swath of empty land adjacent to the attraction that would be perfect for a "pumpkin patch", a hay-bale maze or a similar Halloween-themed agricultural attraction. Families with small children would be likely to browse while older kids are in the haunted houses, as would the many young adults who attend the event. In addition, the location offers great visibility from Interstate 690, where passing traffic could see any creative display put up as part of the market.

The Fair is interested in growing and diversifying this holiday event while promoting New York agriculture. If it is successful this year, it will become bigger and better next year.

In light of that, the Fair will charge an introductory fee of $50 to rent space near Fright Nights for the month of October.

Fright Nights at the Fair is open Fridays, Saturdays and Sundays throughout the month. (Oct. 10-12; Oct. 17-19; Oct. 24-26; and Oct. 29-Nov. 1) Market vendors could choose to open on other days in addition to those. There would be no additional cost.

Fright Nights' hours of operation are generally 7-11:30 p.m. on Fridays and Saturdays and 7-11 p.m. on Sundays. Ideally, a Halloween market would be open for most of those evenings. If a vendor felt the business was there, he or she could open much earlier.

In addition to plenty of free parking, the site offers electricity. Portable toilets are also available at the site. The Fair will help market any farmer's involvement in the event with a press release sent to print and electronic news media in the region. That release will also be posted on the Fair Website.

No tents or temporary structures will be supplied by the Fair. Vendors must supply their own.

In addition to the rental fee payment, all vendors must submit proof of at least $1,000,000 in general liability coverage.

The Fair encourages any interested vendors to use their imaginations in putting together displays. Space is unlikely to be a problem.

Prospective vendors should contact Fred Pierce, state fair public relations director, at 487-7711 ext. 1240, as soon as possible.

SCHENECTADY GREENMARKET: A NEW YEAR-ROUND FARMERS MARKET

Producer-only, professionally-managed festival market. Organized and supported by the community. Saturdays and/or Sundays 9 am - 1 pm

We are looking for vendors with one or more of the following products: vegetables, fruits, meats, honey, maple syrup, jams, milk, cheese, eggs, baked goods, bedding plants, flowers, wine, processed food (e.g. salsa, chutney), ready to eat prepared food, high quality crafts. Preference will be given to home-based vendors of crafts, prepared foods and baked goods. Winter Market- indoors in Proctor's Theatre arcade, November 2, 2008- April 26, 2009.

For more information, go to www.SchenectadyGreenmarket.org or contact Barbara Blanchard at 518-374-1956 or bjblanch@nycap.rr.com

GIFT BASKET MARKETING OPPORTUNITY

Senator Clinton's office is currently working on a project with the Governor's office and Pride of NY and are asking for your help. We are looking to identify farmers, processors, and those in the agriculture industry that currently make holiday or special occasion gifts baskets. Our ultimate goal is to create a website that would compile this information that we can then give out to NY businesses in time for the holiday season. We hope to really connect the downstate businesses with the upstate farming for a win-win initiative.

All those who are interested can respond directly to Sue Santamarina at sue.santamarina@agmkt.state.ny.us or 518-457-7229. Membership in Pride of NY is not required (but would always be encouraged!).

Our announcement will hopefully be going out in a few weeks so a quick response would be appreciated, although this soon to be created website will always welcome new people- so if there are those not ready to participate now, they can change their minds down the road.

Please feel free to call Sarah Clark from Senator Clinton's office (585-263-6250) or Sue with any questions.

MORE STRAWBERRIES, MORE ANTIOXIDANT ABSORPTION

Rosalie Marion Bliss, Public Affairs Specialist, Room 1-2226-B, 5601 Sunnyside Ave., Beltsville, MD 20705-5129, Voice 301-504-4318.

Agricultural Research Service (ARS) scientists have assessed the human body's capacity for absorbing certain antioxidant compounds in strawberries, and have found that the absorption of one key beneficial plant chemical was not "maxed out" as volunteers ate more of this popular fruit. Foods high in antioxidants may be excellent sources of healthful compounds, and researchers are striving to learn more about their ability to be absorbed and utilized within the human body.

The study was conducted at the ARS Beltsville Human Nutrition Research Center (BHNRC) in Beltsville, Md., where scientists have pioneered methods for identifying and measuring various plant compounds in fruits and vegetables. Physiologist Janet Novotny, with the BHNRC's Food Components and Health Laboratory, led the study, which was published recently in the Journal of Nutrition.

Marketed year-round, strawberries are the fifth most consumed fresh fruit in the United States, and consumption more than doubled in the past decade, according to experts. Strawberry's antioxidants come in the form of both long-established vitamins and newly defined plant chemicals.

(*Chandler strawberries, photo by Ken Hammond)*

Berries are particularly well endowed with a series of compounds called anthocyanins--the source of the berries' blue, purple and red pigments.

In the study, 12 volunteers consumed three different serving sizes of strawberries during three separate treatment periods. Each two-day meal treatment included either 3.5 ounces, 7 ounces, or 14 ounces of blended strawberries, along with a full diet of carefully controlled foods. Each treatment period was separated by a one-week break.

The study showed that the human body is capable of assimilating more anthocyanin pigments as intakes increase. The results will help nutrition scientists evaluate the healthful properties of individual anthocyanins and aid plant breeders in developing varieties with optimal anthocyanin content.

ARS is a scientific research agency of the U.S. Department of Agriculture.

COMMUNITY AND MEDIA RELATIONS TRAINING FOR GROWERS - MARK THE DATES

Cornell Cooperative Extension of Ontario County, in cooperation with the NYS AEM Program, is presenting a series of new, in-depth workshops on community and media relations during the upcoming winter months.

This will be an opportunity for you to work more purposefully on telling your story in public forums, with reporters, and elsewhere in the media. These trainings are supported in part by a grant from the New York Farm Viability Institute.

Each of the four workshops will have a distinct focus area. They will be held near Geneva, NY and will feature community relations specialists and local media professionals and dinner:

- *Wednesday, December 3, 2008 4:00 PM - 8:30 PM*
- *Wednesday, January 7, 2009 4:00 PM - 8:30 PM*
- *Wednesday, January 21, 2009 4:00 PM - 8:30 PM*
- *Wednesday, February 4, 2009 4:00 PM - 8:30 PM*

For more information, please contact Jim Ochterski at Cornell Cooperative Extension of Ontario County - (585) 394-3977 x402.

TRAININGS FOR BEGINNING FARMERS OFFERED THROUGHOUT NY STATE

Rebecca Schuelke Staehr, New York Farm Viability Institute (NYFVI) communication specialist, (315) 453-3823 extension 103, or e-mail rschuelke@nyfvi.org

The NY Beginning Farmers Resource Center is an initiative of the Cornell University Small Farms Program to coordinate the resources and educational opportunities available to new and transitioning farmers. Business and marketing planning to start a farm are the topics of several workshops planned this fall in locations around the state.

The NY Beginning Farmers project received grant funds from the New York Farm Viability Institute, an independent, farmer-led nonprofit organization that awards grant funds to projects that help farmers increase profits.

"A business plan helps get new farmers ready to lead your farm to the future or to take to future lenders'' said Beth Claypoole, agricultural issue leader with CCE Wayne County. Details about upcoming programs for new farmers are below.

Starting a Farm or Rural Enterprise
Classes are planned from 9 a.m.-12:30 p.m. Saturdays Oct. 25-Nov. 15 at First Pioneer Farm Credit, 995 State Route 12, Sangerfield. Organizers are agriculture educators Karen Baase of Cornell Cooperative Extension of Madison County**,** and Bonnie Collins and Jim Manning of CCE of Oneida County. For more information, or to register, contact Karen Baase at kab21@cornell.edu or (315) 684-3001.

Business Plans for the Beginning Farm
Classes start from 6-9 p.m. Nov. 5 and run every other Wednesday through Dec. 17 at Cornell Cooperative Extension of Wayne County, 1581 Rte 88N, Newark.

Now that you have gotten started – how do you develop a business plan that brings your farm business to the next level? The aim of this workshop is to give you the planning, financial, marketing and regulation oriented tools to help you survive in the complex world of running a farm business,'' Claypoole said.

The classes will cover items in a business plan, bookkeeping, chart of accounts, balance sheet and income statements, inventory, depreciation, accrual versus cash accounting principles, marketing, planning for planting, harvest schedule and labor needs, and government regulations for business and labor needs. Speakers include Cornell Cooperative Extension specialists and current farm business owners.

This workshop will build on the curriculum "Exploring the Small Farm Dream." Participation in the workshop is limited and by application only. Applications are due Oct. 27. Cost is $75 and includes workbook and supporting materials. For more information, call (315) 331-8415. Applications are also available on the web, http://counties.cce.cornell.edu/wayne/.

New Farmer and Grower Training
The nine-part course runs from 6:30-9:30 p.m. Thursday from Nov. 6 - Jan. 28 at Cornell Cooperative Extension of Sullivan County, 64 Ferndale-Loomis Road, Liberty, NY 12754. Topics to be covered include business planning, marketing, tax implications, production systems, and more. Joe Walsh, executive director of CCE Sullivan, is coordinating. Cost is $60. Register by Oct. 27 by calling (845) 292-6180.

For information about the Cornell NY Beginning farmers project visit: http://beginningfarmers.cce.cornell.edu/.

THE EMPIRE STATE FRUIT AND VEGETABLE EXPO GROWS FOR YOU AND YOUR BUSINESS

The Expo continues to grow and expand as your operations needs change and grow!

The 2009 Empire State Fruit and Vegetable Expo and Becker Forum will be held at the Holiday Inn Liverpool and the Oncenter Convention Center in Syracuse, New York on February 10, 11 and 12, 2009. As the Expo enjoys its fourth year at the Oncenter, growers are able to easily access this central location in order to learn the latest information and research relating to the fruit and vegetable production agriculture. Commodity sessions will feature specialists from all over the country, who will speak and teach about the latest research and innovations regarding growing and production techniques, harvesting and storage options, and more! This information is specifically designed to help growers continue to grow and improve their farm businesses, regardless of the size of operation. The large trade show will feature many businesses specifically devoted to the fruit and vegetable industry, with equipment for all sizes of growing operations. Special trade show demonstrations will be scheduled for growers and their employees throughout the two days as well.

The Expo starts off with the Becker Forum on Tuesday, February 10. For the past two years, this popular in-depth session has been sold out so mark your calendars now to set aside the date. The agricultural labor force and the myriad of issues facing farmers regarding labor continue to be a hot topic in agriculture. This all-day workshop will continue to focus on the challenges facing growers with regards to agricultural labor, and will provide concrete and useful information for the attendees. This session is becoming a premier event focusing on ag labor, and all individuals who are interested in this important issue are invited to register and attend. This forum is a great start to the Expo and does require pre-registration. Detailed information and pre-registration form for this workshop will be available at the beginning of December when the Expo programs become available.

Two full days of educational commodity sessions take place on February 11 and 12, 2009 at the Oncenter Convention Center. Session topics include the latest in research and grower experiences regarding production and marketing of a variety of fruit and vegetable crops, including potatoes, tree fruit, onions, tomatoes and peppers, cabbage, berries, cut flowers, sweet corn, beets and carrots, vine crops, and beans and peas. In addition, this year's Expo will have special sessions focusing on fresh market organic crops, soils and tillage, greenhouses and high tunnels, GAPS for small-sized growing operations, and ecological weed management. Information included in all of the educational sessions benefit growers of all size operations, from the largest commercial fruit and vegetable growing operations in New York State to the smallest. Don't miss the opportunity to attend the Expo and learn how to grow your farm through knowledge, innovation and research!

The Empire State Fruit & Vegetable Expo
Growing for the Health of New York

The Empire State Fruit and Vegetable Expo is sponsored by the New York State Vegetable Growers Association, Empire State Potato Growers, New York State Berry Growers Association, New York State Horticultural Society and Cornell University and Cornell Cooperative Extension. Trade show and exhibitor information is currently available and the Expo program, which includes detailed educational session information and a pre-registration form, will be available in early December. Free shuttle bus service is available from the Holiday Inn Liverpool, right off exit 37 of the New York State thruway. Make plans now and mark your calendar to attend the best Empire State Fruit and Vegetable Expo yet!

For more information, visit http://www.nysaes.cornell.edu/hort/expo/ or contact Jeff and Lindy Kubecka, New York State Vegetable Growers Association, PO Box 70, Kirkville, NY 13082 or email nysvga@twcny.rr.com. For trade show information and exhibiting, please contact Dan Wren, Lee Trade Shows, PO Box 121, Palatine Bridge, NY 13428 or email dwren@leepub.com.

NE SARE FARMER GRANTS AVAILABLE

The Northeast Sustainable Agriculture Research and Education (SARE) program offers grants for projects that explore new ideas in sustainable food and fiber production. Three of these grant programs have application deadlines in December, with awards announced in the early spring.

Farmer grants are for commercial farmers who want to test a new practice or idea, often by conducting an experiment, trial, or on-farm demonstration. Projects can explore a wide range of topics such as pest management, soil health, adding value, cover crops, grazing, marketing, livestock herd health, or new production techniques, and funds can be used to pay for the farmer's time and for materials specific to the project. Awards are capped at $10,000 and the application deadline is December 16.

Partnership grants are for Cooperative Extension, NRCS, and other agricultural service providers who work directly with farmers. Partnership Grants support on-farm research and demonstration projects that address a wide range of topics in sustainable agriculture, and funds can be used to pay for personnel, materials, sampling, supplies, testing, and to compensate cooperating farmers for their time. Awards are capped at $10,000 and the application deadline is December 9.

Sustainable Community grants are for projects that connect farming and economic development. Projects can address issues like finance, marketing, land and water use, enterprise development, adding value to farm products, or farm labor. Applicants must be affiliated with an organization such as a community nonprofit, Cooperative Extension, local government, an educational institution, a planning board, a farming cooperative, or an incorporated citizens group. This grant is offered in partnership with the Northeast Center for Rural Development. Awards are capped at $25,000 and the application deadline is December 2.

Applications for all three grant programs are posted on the Northeast SARE web site at www.uvm.edu/~nesare, or you can call 802/656-0471 to request a printed copy. The Northeast SARE region is made up of Connecticut, Delaware, Massachusetts, Maryland, Maine, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, West Virginia, and Washington, D.C.

NORTH AMERICAN RASPBERRY & BLACKBERRY CONFERENCE PROGRAM

The program has now been finalized for our conference in conjunction with the Great Lakes Fruit, Vegetable and Farm Market EXPO in Grand Rapids.

NARBA is offering a full day of workshops and educational sessions on Monday, December 8, the day before the regular EXPO opens. A bramble growers luncheon and dutch treat dinner on Monday provide additional opportunities to meet and talk with other growers. On Tuesday, December 9, both morning and afternoon bramble sessions will be offered as part of the EXPO's education program. The bramble program finishes Tuesday evening with a presentation by noted blackberry breeder John Clark on "Blackberries Around the World," highlighting his travels to the many countries where this American native fruit is now produced.

The program on Monday, December 8 and Dr. Clark's evening talk on Tuesday will be held in the Amway Grand Plaza Hotel. Tuesday sessions take place in the adjoining DeVos Place Convention Center. Tuesday through Thursday also include a huge trade show and educational sessions on many other topics, including direct marketing, tree fruit, blueberries, various vegetables, farm labor, and organic production.

Make your reservations at the **Amway Grand Plaza Hotel** as soon as possible if you are even tentatively planning on coming to the conference. This hotel fills up by October...and maybe sooner!You can change or cancel your reservation without penalty, if you do so before November 12th. So go ahead and make reservations while you are thinking about it, even if your plans are not definite!

Our Monday sessions and several other conference events will be held in this hotel, which is connected with the DeVos Place Convention Center, the site of the trade show and most of the other educational sessions. It really is a "grand hotel" looking down on the Grand River, with several museums and park areas just across the river in walking distance. To make a reservation, call **800-253-3590** or **616-774-2000** and ask for the "Great Lakes Fruit & Vegetable EXPO" special block. Room rates are $101 for single or double, $111 for three persons and $121 for four persons. The Expo website, www.glexpo.com, also lists other hotels nearby if this one is filled up.

Program of the North American Raspberry & Blackberry Conference December 8-9, 2008 in Grand Rapids, Michigan

Monday, December 8

All sessions take place at the Amway Grand Plaza Hotel
Concurrent Workshops 9:00 a.m. – Noon
Registration limited. Preregistration strongly advised.

◆ **High Tunnel Raspberries Workshop.** Features practical information for getting started, and covers topics such as variety selection, techniques that extend the production season, and marketing. Presenters will discuss the big question, "Does this pay?" and offer insights on what worked, what didn't, and why. Led by Kathy Demchak, Penn State University, other presenters TBA.

◆ **Bramble Fundamentals Workshop.** Valuable for novice and prospective growers, as well as more experienced growers who want a refresher on the basics. Topics will include economics, getting started, varieties and sources, production methods, management of water, soil, and pests, post-harvest considerations, and more. The workshop program will be led by highly respected bramble specialists Marvin Pritts of Cornell Univ. and Eric Hanson of Michigan State Univ. Participants will be able to purchase the new NRAES *Raspberry & Blackberry Production Guide* at a deeply discounted price.

Bramble Growers Luncheon (Noon - 1:30 p.m.)
Informal visiting and brief grower presentations. (If you'd like to talk briefly about your farm and show 3-5 pictures, contact NARBA.)

Afternoon Sessions

1:30 **Grower Spotlight:** Diversified Success – Fred & Linda Koenigshof, K&K Farm, Coloma MI
2:15 **Pruning, Trellising, and Training** – Panel Discussion Richard Barnes, Tanglewood Berry Farm & Trellis Growing Systems, IN; Phil Johnson, Walnut Springs Farm, MD; Stanley Scarborough, SunnyRidge Farm, FL/GA/NC
3:30 **Off To a Good Start:** Pre-plant and planting considerations – Marvin Pritts, Cornell Univ.
4:15 **Bramble-Specific GAPs Recommendations** – NARBA Food Safety Task Force
5:00 **NARBA Annual Meeting**

Bramble Growers Dinner (6:30 pm –)
A dutch treat dinner at a nearby restaurant (location to be announced). All are welcome.

Tuesday, December 9

All sessions are part of the Great Lakes EXPO and take place in the Devos Place Convention Center.

9:00 **Grower Spotlight:** Blackberry Production in the Far North – Gary Bardenhagen, Lake Leelanau, MI
9:20 **Breeding Exceptional Blackberries** – John R. Clark, Univ. of Arkansas
9:50 **Research Reports** from the North American Bramble Growers Foundation (several presenters)
10:30 **Midwest Bramble Insects** in the Field and Under Tunnels – Rufus Isaacs, Michigan State Univ.
10:50 **New Developments in Bramble Disease Control** – Mike Ellis, Ohio State Univ.

Lunch on your own, visit trade show

2:00 **Grower Spotlight:** Growing and Marketing Extraordinary Brambles in Southwest Michigan – Chuck & Coco McCallum, Riverside, MI
2:30 **Bramble Herbicides for Today and Tomorrow** – Bernard Zandstra, Horticulture Dept., MSU
2:50 **"Berrying" the Aging Brain** – Jim Joseph, USDA-ARS/Tufts, Boston. Dr. Joseph is one of the leading researchers into health benefits of berries
3:30 **New Information on Where & When to Irrigate Raspberries** – Thomas Walters, Mount Vernon Research Station, Washington State Univ.
8:00 **Blackberries Around the World – Observations and Stories.** *Emerald Room, Amway Grand Plaza Hotel.* Blackberry breeder John R. Clark, Univ. of Arkansas, has traveled to most continents in the world working with blackberries in a range of diverse climates and cultures. The expansion of this American native fruit provides a unique story as production increases in many countries.

Also at the EXPO

When you register for the Expo to come to our Tuesday sessions, all these programs, and more, are also open to you. Visit www.glexpo.com for details.

Trade Show: 8-5 Tuesday & Wednesday, 8-1 Thursday

Tuesday: Asparagus, Farm Marketing, Pickling Cucumbers, Tomatoes and Peppers, Cole Crops, Grapes, Potatoes, Fruit Variety Showcase (includes raspberries)

Wednesday: Sweet Cider, Blueberry, Cherry, Farm Marketing, High Tunnels/Hoop Houses, Onions, Sweet Corn, Carrots, Celery, Farm Marketing, Tree Fruit, Vine Crops

Thursday: Cider Tasting, Organics, Cranberries, and workshops on Bakeries, Web Development, Processing, Health and Safety, and Sweet Corn IPM

How To Register

The Great Lakes Expo is handling all the registration for the Raspberry & Blackberry Conference. You may use the registration form to join NARBA or renew your membership (see back of form). Those joinng NARBA with their registration may take full advantage of member discounts. You may also register on-line at www.glexpo.com.

Note that you need to register separately for the Monday events. Registration for the EXPO itself admits you to the Tuesday bramble sessions, the trade show, and the other educational sessions, except any fee-based workshops.

Our Monday workshops are $26 for members and $50 for non-members. The afternoon program is free to members and $16 for non-members. Spouses attending the same workshop pay half price for the second person. Tickets for the Bramble Luncheon are $15.

If you have questions, call 919-542-4037.

USDA ORGANIC CERTIFICATION COST ASSISTANCE

WASHINGTON, Sept. 18, 2008 - The U.S. Department of Agriculture today announced that $22 million in federal funds are available for organic certification cost assistance. The funds are available for producers and handlers of organic agricultural products in any state of the United States of America, its territories, the District of Columbia and the Commonwealth of Puerto Rico (hereinafter called states).
The National Organic Certification Cost–Share Program, authorized by the Food, Conservation and Energy Act of 2008 (7 U.S.C. 6523), will allocate funds in proportion to the number of organic producers and handlers within each state. The states in turn, will reimburse each eligible producer or handler up to 75 percent of its organic certification costs, not to exceed $750.

These funds will reimburse each eligible producer for up to 75 percent of its organic certification costs, not to exceed $750. To be eligible for reimbursement, an organic production operation must be located within one of the designated states, Connecticut, Delaware, Hawaii, Maine, Maryland, Massachusetts, Nevada, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Utah, Vermont, West Virginia, and Wyoming) comply with the USDA National Organic Program regulation for organic production, and have received certification or update of certification by a USDA-accredited certifying agent during the period of Oct. 1, 2008, through Sept. 30, 2009.

Applications by states for federal assistance and cooperative agreements must be requested from and submitted to: Robert Pooler, Agricultural Marketing Specialist, National Organic Program, USDA Stop 0268, Room 4008-S, 1400 Independence Ave. SW, Washington DC 20250-0264; tel. (202) 720-3252; fax (202) 205-7808.

Additional information may be found at the National Organic Program's homepage: www.ams.usda.gov/nop.

NYCAMH OFFERS FREE ON-FARM SAFETY SURVEYS & SAFETY TRAINING

The New York Center for Agricultural Medicine and Health (NYCAMH) was established by the New York State Legislature in 1988. Recognizing the unacceptably high rates of occupational injury and illness in New York's largest industry, the legislature has charged NYCAMH to provide:

- Research into the causes and prevention of agricultural injury and illness
- Education and prevention activities within the farm community
- Education of professionals serving the farm community
- Clinical help for farm-related health problems

In addition to its state mandate, NYCAMH has been designated by the National Institute for Occupational Safety and Health (NIOSH) as one of nine agricultural centers across the country, the **Northeast Center for Agricultural and Occupational Health (NEC)**. Serving a thirteen-state region from Maine through Virginia, NEC promotes farm health and safety research, education, and prevention activities.

In partnership with other NIOSH centers, state and federal agencies, land grant universities, medical centers, and farm groups, NYCAMH/NEC uses injury and illness research findings to develop preventive teaching, educational health screening, demonstrations, and activities.

Onfarm Safety Surveys and Safety Training
One of the free services offered by NYCAMH includes on farm safety survey and safety training. These services are available to any type of agricultural operation: dairy, livestock, crop, equine, vegetable, orchard, greenhouse etc.

Safety surveys look at potential hazards around the farmstead, tractors and machinery and regarding use of personal protective equipment. Safety training topics include:

- Tractor & Machinery including Skidsteer
- Personal Protective Equipment
- Hazard Communication Standard (Chemical Safety)
- Animal Safety
- Safe Lifting & Carrying
- Worker Protection Standard

Other farm safety topics can be presented upon request. All safety-training topics can be conducted in Spanish.

Services are voluntary, confidential, and no cost.
This project is funded by a grant from the New York State Department of Labor Hazard Abatement Board.

Each farm that completes an on-farm safety survey or training receives a certificate of completion and a copy of the training roster.

For more information contact Sharon Scofield – Education & Outreach at 800-343-7527 ext 236 or at sscofield@nycamh.com.

MORE COUNTRIES USING IRRADIATION TO MITIGATE PEST RISKS

The first shipments of irradiated Indian mangoes arrived in the United States in May 2007, marking the first time that fruit irradiated at an overseas facility was approved for importation into the United States. A month later in June 2007, APHIS approved the importation of irradiated shipments of litchi, longan, mango, mangosteen, pineapple and rambutan from Thailand. While these were the first countries to get approval by APHIS to use irradiation, they won't be the last. The use of irradiation is becoming an increasingly popular tool for effectively managing a variety of pests.
APHIS is currently working with Vietnam and Mexico to establish irradiation programs. In September 2008, APHIS' Center for Plant Health Science and Technology (CPHST) certified an irradiation facility in Vietnam to treat dragon fruit for importation to the United States. The first shipment is expected to arrive later this month. Mexico is also interested in exporting several varieties of irradiated fruits to the United States. In late September, CPHST certified an irradiation facility outside Mexico City, but work plans must still be approved before any individual commodities can be shipped to the United States.

Irradiation first became an approved treatment in 2002 on 12 high-risk pests for fruits and vegetables entering the United States. The use of irradiation, however, was made more feasible in January 2006 when APHIS recognized a generic dose for treatment of a wider range of commodities and for all insect pests. Although irradiation can sometimes be an expensive form of treatment, it provides an alternative to other pest control methods, such as fumigation, and cold and heat treatments. In certain cases, irradiation is the only effective treatment option. Irradiation can also help preserve the shelf-life of certain types of commodities with little or no affect on the quality of the treated food.

APHIS is tentatively planning a workshop focusing on irradiation in the United States for U.S. industry and interested parties in spring 2009. More details will be forthcoming but the purpose of the workshop will be to explore policies and possibilities for the implementation of irradiation as a phytosanitary treatment for the import and export of fresh fruits, vegetables, cut flowers and other perishable commodities that meet U.S. standards for entry. For more information on irradiation, go to http://www.aphis.usda.gov/ and click on "Hot Issues".

(Source: APHIS News for States, October 2008.www.aphis.usda.gov/APHIS_News_4States/Oct08/.)

PEERS ENCOURAGE USE OF BIOCONTROLS IN GREENHOUSES

Kara Lynn Dunn, New York Farm Viability Institute (NYFVI) freelance writer.

Are you a New York state greenhouse grower who wants to try biocontrols with the advice of an experienced colleague? The New York Farm Viability Institute is providing grant funding through January 2009 to help the NYS IPM Program at Cornell University develop a network of growers successfully using Integrated Pest Management (IPM) and willing to help others learn how to use the natural predators of such greenhouse plant pests as whiteflies, thrips and spider mites.

Growers interested in learning how IPM could help their businesses can contact project leader and Ornamental IPM Educator Elizabeth Lamb who is organizing tours and workshops to introduce growers to peers already making good use of IPM. The relationships that develop from there will help growers comfortably expand their practical application skills.

Lamb says, “Learning is easier and faster with a mentor instead of jumping off into trial and error, which can be costly. We are encouraging growers to seek out peers who are demonstrating that the many options for biocontrol are doable and worthwhile.”

In fall of 2007 Lamb led NY growers to six large greenhouse wholesale businesses applying biocontrols to ornamentals and vegetables in Ontario. The tour also stopped at Mischler's Florist and Greenhouse in Williamsville, NY, 10 miles northeast of Buffalo, to hear grower Mark Yadon, one of the IPM advocates in the new network.

"When you see the quality of the Canadians' plants, you have to ask why aren't we practicing biocontrol more in New York?" Yadon says. "The new networking project will help, but growers must be patient. Everyone wants to apply biocontrols and see immediate results. You may still see pests, but at manageable levels that allow you to produce a safe, high quality crop." Yadon has been a biocontrol advocate since his college days scouting apple orchards in Washington State. He raises his own, and buys predatory mites and tiny parasitic wasps, including *Encarsia formosa* and *Eretmocerus aremicus*.

Yadon maintains "banker" plants hosting both good and bad bugs to keep beneficials at the ready should unwanted pests increase. The beneficial bugs control the pests that favor the annual and perennial plants in flats, baskets, and patio pots that Mishcler's sells direct to consumers."I just do not want to spray. Spraying is uncomfortable, semi-dangerous, hard work that must be done at inconvenient times so you can open to the public the next day. Biocontrols work and work well –why not use them?" Yadon says.

Yadon tells the growers who visit Mishcler's for workshops arranged by Lamb that releasing biocontrols is not difficult. "With some you open the bottle and they fly out; others you shake out evenly across the crop," he says.

When a grower called to ask if watering her plants after applying the beneficials would wash them away, Yadon replied, "That is a logical concern. You just wait to water until the beneficials have dispersed to the underside of the leaves where they are protected."

Other questions focus on scouting technique, timing of applications, which predators control which pests best, and cost. Yadon says for him "the cost and time required with using biocontrols are equal to spraying. You have to scout your crop either way."

Predatory mites to control western flower thrips are his biggest expense. He was pleasantly surprised when beneficial hunter flies began naturally occurring in his seven greenhouses about three years ago."I take great pains to protect the hunter flies. They are free and eat several greenhouse pests. I no longer do a preventative cleanout of the greenhouse after a crop is sold, because hunter flies live in the soil," Yadon says.

For more information on the greenhouse biocontrol network, contact Elizabeth Lamb, NYS IPM Program, 607-254-8800, eml38@cornell.edu.

SURVEY SHOWS HOW HIGH PRICES, LOCAL FOOD, ENVIRONMENTAL AND FOOD SAFETY CONCERNS SWAY CONSUMER VIEWS

AMES, Iowa -- Rising fuel and food prices, coupled with increased concern about environmental impacts and safety of the food supply, are changing the perceptions of American consumers, according to a recent nationwide survey conducted by the Leopold Center for Sustainable Agriculture.

The survey showed that consumers are re-assessing their shopping and eating habits to cut fuel use, would consider carbon food labels as long as their costs do not increase, worried more about natural habitat loss than greenhouse gas emissions, and were much more likely to view local food as having traveled 100 miles or less from the farm to point of sale than coming from their state or region.

These are the views of a representative, nationwide sample of more than 750 consumers who participated in a web-based survey conducted by the Leopold Center for Sustainable Agriculture in August 2008. Their responses are summarized in a new Leopold Center report, "Food, Fuel and the Future: Consumer perceptions of local food, food safety and climate change in the context of rising prices." The paper was written by Rich Pirog, who leads the Center's Marketing and Food Systems Initiative, and Iowa State University graduate student Becky Rasmussen.
Objectives of the study were to gauge consumer perceptions about:

- Food purchases and transportation use in response to higher food and fuel prices,
- Food safety, within the context of where their food comes from and how it is grown,
- Impact that various scales and production methods of the food system have on greenhouse gas emissions,
- Willingness to pay for a food system that achieves a net reduction in greenhouse gas emissions and

- Meaning of local food in terms of distance and location.

Survey respondents were more likely to respond to rising food and fuel prices by taking fewer vacations, buying more food items on sale, eating out less, and purchasing fewer desserts (compared to other food categories).A minority of respondents (17 percent) were very likely to cope with rising prices by increasing their purchases at farmers markets or by canning or freezing more fruits and vegetables.

Pirog said that while 55 percent of the respondents perceived the U.S. food system to be safe, that number had dropped from 70 percent in a similar Leopold Center survey conducted in July 2007. There was clear concern with a global food supply chain system – only 15 percent of respondents viewed such a system as safe, compared to 74 percent for a local system and 73 percent for a regional system.

"The respondents believed that a food safety seal or inspection certification, along with more information about who has handled and produced the food, along with country of origin, would increase their confidence in the food supply," Pirog said.

Respondents also were asked a series of questions about their perceptions of greenhouse gases in food supply chains, including labels that showed a food's carbon footprint (amount of greenhouse gas emissions), and how greenhouse gas emissions and climate change compared with other environmental problems. More than 50 percent of respondents saw value in retailers putting carbon labels on their food products, with the vast majority only willing to encourage the labels if their costs did not increase. Fifty percent of respondents perceived the loss of natural habitat as more important an environmental issue than climate change, with more than 40 percent viewing water pollution as more important.
How far can food travel and still be considered "local"? The survey offered respondents a menu of options from which to select their definition of locally grown. More than two-thirds said that local food traveled 100 miles or less from the farm to point of purchase, while only a third viewed the definition as grown in their state or region. Respondents from larger western states were less likely to choose the option "25 miles or less" and more likely to choose "grown within their state" as their definition of local than their counterparts across the rest of the country.

Pirog noted that "as the demand for local food products increases, it is critical that retailers, distributors, and farmers develop clear and authentic messages about these products to maintain consumer confidence and trust."

In 2001, he led some of the first research in the United States on the concept of "food miles," the distance that food travels from where it is grown to where it is purchased for consumption. He also has investigated consumer perceptions of local, place-based and organic foods.

The 47-page report is available on the Leopold Center web site at: www.leopold.iastate.edu/pubs/staff/consumer2/report.html.

For more information, contact: Rich Pirog, Marketing and Food Systems Initiative, (515) 294-1854, rspirog@iastate.edu, or Laura Miller, Leopold Center Communications, (515) 294-5272, lwmiller@iastate.edu.

EFFECTIVE STRAWBERRY SPRAYS REQUIRE A 3-D MINDSET

Kevin Iungerman, NE New York Fruit Program, Saratoga Co. Coop. Ext. , 50 West High St. , Ballston Spa, NY 12020-1992

Effective applications of strawberry fungicides and pesticides calls for a paradigm shift, one that moves away from the flat canopy mindset to a more realistic 3-D mindset. Such a perspective recognizes that a strawberry planting's canopy, despite its diminutive height, does indeed have height, width, and depth just as any blueberry bush or apple tree, and so, the same dynamics governing air movement, spray penetration, and droplet deposition, still apply. So why do we continue to spray strawberries with flat boom sprays as if we are attempting to coat a driveway?

Dr. Andrew Landers of Cornell's Department of Entomology at the NYS Ag Experiment Station, Geneva got to thinking about this contradictory approach not as a horticulturalist, but as one with a keen sense of interest in the machine end of the quandary, appropriately so, and what one would expect of an agricultural engineer, which he is. Lander also has worked extensively with orchard and vineyard crops, whose elements of canopy volume do not go as unrecognized as the more visually challenging nature of lower profile strawberries. (Note I said "as unrecognized" because there are always some folks who don't fully appreciate the volume concepts attending crops of higher - and even lower - stature, whether they be fruit, field, or ornamental.)

Optimally directing a proper level of spray volume to crop surfaces is a key factor in achieving adequate penetration and deposition in pesticide applications. Compromised applications lead to poor and uneven coverage, and in turn, poor, and even failed disease control. Speaking at John Hands farm in Cambridge, Washington County, at field meeting co-

organized by NYFVI, Landers, and this Fruit Program, Landers noted that very little published research addresses spray technology specific to strawberries. Scandinavian researchers Bjugstad and Sonsteby are exceptions. They have determined that the major presenting problem is to obtain approximately the same spray and pesticide coverage and amount on the leaf surfaces, meaning on the outer and inner leaves as well as on the upper and underside of leaves - absolutely necessary for gray mold control in Norway!

All fruit crop canopies represent a moving-target (so to speak), occupying little volume at season outset, but a radically expanded surface area (relatively) by late season. Bjugstad and Sonsteby realized it was imperative to be able to adapt the volume rate according to this marked shift in mass over time. Landers described how the two researchers recommended using three nozzles at season start (two from each side, one from the top), and with time and larger plants, shifting to five nozzles (two on each side, and single top). This configuration allows volume rate shift over a single strawberry row over time: from 6 liters (12.5 pints), to 9 liters (19 pints), and 12 liters (25 pints) per 100m (109 yards)

Cambridge NY Farmer John Hands' Boom Sprayer fitted with Dr. Andrew Landers' 5-nozzle hoop spray apparatus.

Photos: Kevin Iungerman, CCE NE NY Fruit Program

Landers conducted a small trial in 2007 that built upon the work of Bjugstad and Sonsteby. The research project was carried out at the Cornell NYSAES in Geneva on the strawberry cultivar L'Amour. Three treatments were selected: a typical NY grower's rate applied via a horizontal boom sprayer and two others as recommended by Bjugstad and Sonsteby, using a hoop system with 3 or 5 nozzle configuration. The comparison sought to see if there was a better way to penetrate the strawberry planting's canopy than the typical boom sprayer with its array of flat nozzles. Early results in 2007 suggest this is so (read on), and data collected at a field research plot at Hands, and also one at Dale Riggs farm in Columbia County this summer, may substantiate this when fully evaluated. (Look to winter meetings or Extension and industry publications for final findings.) Landers research on this technology assessment is being funded by the New York Farm Viability Institute, as is Laura McDermott's position as Berry Extension Support Specialist for Eastern NY with Cornell's Department of Horticulture. McDermott is assisting Landers in the execution of the research at Hands' and Riggs' farms.

On the face of it, it would seem that the hoop arrangement with three, and then five nozzles, strategically placed, would provide a complement of spray angles likely to create more of a vortex within the canopy and allow a more uniform deposition of spray droplets on all plant surfaces, while a straight boom configuration appears to favor deposition upon the presenting outer canopy face. But would they? As with all such ideas, the path to change lies through experimentation, demonstration, and verification. The accompanying tables summarize the results of the Geneva trial. Use of a Pryanine tracer material in the application solutions, and subsequent 3-tier leaf sampling and spectral analysis permitted the determination of deposition per square centimeter at the several layers of the plant canopy.

Table 1. Application Volumes.

Trt. #	L / Hectare (G / Acre)	L / 100 m (Pt / 109 yd)
1	374 (40)	-
2	738 (79)	9 (19)
3	984 (105.2)	12 (25.4)

Table 2. Application Methods.

Trt. #	Nozzle type	Nozzle Number	Flow rate per nozzle	Pressure	Speed
1	Flat fan Yellow 80 02	Horizontal boom	0.98 L/m (0.26 gpm)	5 bar (75 psi)	3.2 km/h (2 mph)
2	Flat fan Blue 80 03	3-nozzle hoop	1.52 L/m (0.4 gpm)	5 bar (75 psi)	3.2 km/h (2 mph)
3	Flat fan Blue 80 03	5-nozzle hoop	1.52 L/m (0.4 gpm)	5 bar (75 psi)	4.0 km/h (2.5 mph)

The results indicated that increasing the volume rate increases deposition throughout the plant canopy. Increasing the volume rate and using directed deposition via a hoop system markedly improves deposition in the lower leaves of the plant canopy.

Our meeting at John Hand's farm with Dr. Landers afforded the dozen or so small fruit farmers in attendance, an opportunity to see this research process in the works, and to assess the effects directly. We watched as a conventional boom sprayer moved over an area of matted-row strawberries applying a spray solution (water only, in due consideration of guests and REI's) and then on another portion of the same planting, the adapted boom with the changed nozzle configuration. (See accompanying photos of both above.) It was the unanimous assessment of all on hand, that the changed approach did in fact effect a greater wetting of interior plant surfaces based upon "hand-feel" appraisals.

Table 3. Deposition throughout the plant: Pyranine tracer per square cm.

Leaf location within canopy	Trt. #1	Trt. #2	Trt. #3
Top	0.5	0.58	0.80
Middle	0.25	0.45	0.49
Bottom	0.22	0.36	0.67

Good verification, but not good enough. Replication and assessment of costs and crop quality remains to be reviewed. These two steps will, it is hoped, solidify and substantiate the superiority of the hoop innovations over the boom. Both will involve proxy physical measures of outcomes, which may or may not validate our hand-feel assessment.

The first proxy is the use of a flouracine tracer. A comparison will be made of the actual deposition of droplets at the top, the middle, and the base of the strawberry canopy, which will assess the residual deposition of the tracer on whole trifoliate leaves of the plant, when added to the spray solutions of the differing spray technologies.

The second proxy will be a sampling and evaluation of the berries themselves. This is the end-result that matters the most: It will assess the percentage of highly marketable berries, from each treatment, which have no disease or insect predation evident. Berry rating is done on a 1 - 5 scale, where 1 represents no problem and a 5 is a very poor product. Separate100-berry sampling expeditions were carried out at three maturity points: early, mid, and late, and done for each of the three treatment regimens: the conventional boom spraying, the adapted hoop sprayer, and a control. As mentioned, results are to be tabulated and reported on at a later date. Comparable application costs can then be assessed in view of returns.

By the way, as you see, a control is always needed in these field trials, because hey, what if nothing had been sprayed and the berries looked great anyway? Our contrasted methods would neither have been tested alone, or more importantly, against one another! Keep this practice in mind when looking to change any practice on your farm, as you will always need to know what may happen if nothing was done at all. It is the difference between anecdotal account and hard evidence, and it is always the crucial piece of information needed for assessing cost differences and potential savings.

(Reprinted with permission from Northeast Fruitlet, Vol. 12 No. 8, September 2008, CCE Northeast Commercial Fruit Program. Tables adapted from handout provided by Dr. Landers at the July field meeting at Hands Melon Farm, Cambridge. Photos: Kevin Iungerman, CCE NE NY Fruit Program.)

THE BIOLOGY AND MANAGEMENT OF RASPBERRY CROWN BORER

By Jackie A. McKern, D.T. Johnson and B. Lewis (excerpts from: McKern et al. 2007) University of Arkansas, Department of Entomology

The raspberry crown borer, Pennisetia marginata (Harris) (Family: Sesiidae; clearwing moths), is a pest of blackberries and other cane fruits.

Distribution

This pest is native to North America. The distribution has been recorded as: New England west to Nebraska and south to Georgia and an additional distribution in Washington, Oregon, California, New Mexico, and British Columbia, Canada.

Damage

If preventative control is not maintained, within a few years the accumulated damage by larval feeding within the crowns can result in a significant reduction in yield and plant death. During the mid- to late summer, some larvae will feed in the lower couple inches of a cane, weakening the cane, reducing nutrient flow. Trellised plants may exhibit reduced cane vigor whereas wind may break the weakened base of free-standing canes. They can become girdled; causing the whole cane to dry up and the terminal form a dead shepherd’s crook. Larval tunneling also provides entry for pathogens and moisture that cause the crown to decay and die.

Life Stages and Life Cycle

Eggs are reddish brown, oval in shape, 1/16″ long and appear slightly rough under magnification. In October and early November in Arkansas, single eggs can be found on the underside of the new lighter green terminal leaves that developed in September.

Larvae, after hatching in October, are 1/10″ long with a brown head and a white body covered with a few colorless hairs. A full-grown larva found in August may be 1.1″ long with a smooth reddish brown head and a dull white body. Along the ventral surface, the body is constricted and has three pairs of short prolegs. A distinguishing characteristic is the crochets on the prolegs that resemble small setose spines rather than hooks. Before May, the larvae are very difficult to find under the bark on the lower canes. Larvae can be found inside crowns and in the lower four inches of canes from early May until pupation in August or early September.

Pupae are reddish brown, varying in length from ¾″ to 1″. Legs are held closely to the body and are unable to move. They have a circlet of spines located dorsally on each abdominal segment facing downward used to aid pupa to exit tunnel in cane or crown when molting to a moth. The male pupa is smaller than the female and has two rows of spines on the sixth abdominal segment, whereas the female has one row. The head of the pupa terminates in a four-angled, sharply pointed process.

Moths mimic yellow jacket wasps. They vary in both size and color between sexes. Males have wingspans of from ¾″ to 1″, the females from 1″ to 1.5″. The head is black with yellow rings around each eye and black antennae; the thorax is brownish black with three yellow spots on each side between the eye and the forewing; each segment of the abdomen, except the last, is encircled by two contrasting bands, the anterior black and the posterior yellow. The forewings are transparent with a brown discal cell and bordered by brown. The bands of yellow on the female are usually more pronounced and wider when compared to the male. The female has smooth antennae, an enlarged abdomen and the last abdominal segment is solid yellow with a very slight anal tuft. The male has comb-like (pectinate) antennae and the last abdominal segment is black mixed with yellow with a large anal tuft.

Biology

Knowing the biology of a pest is important for the implementation of efficient control tactics. Recent evidence indicates the raspberry crown borer in Arkansas completes its life cycle in one year, instead of the two years required in cooler, more northern latitudes. In the more northern states (OH, IN, IL, and further north) the adults emerge earlier (August to early September) than in Arkansas (mid-Sept and October) and require 2 summers to complete the RCB life cycle. In AR and further south the life cycle of the RCB is completed in 1 year.

Adult flight and egg laying can occur from mid-September through mid-October. Flight varies from year to year, for example in Conway, AR the flight began on September 16 in 2004 and was delayed until October 5 in 2005. Mating occurs in the late morning on the upper side of a shaded blackberry leaf. A virgin female raises her abdomen and begins calling males by everting her ovipositor, beating her wings and releasing a sex pheromone. Males in range follow the pheromone odor (plume) upwind toward the “calling” female. As the male lands near the female, she stops wing fanning and the male begins wing fanning. The couple circles each other for about 20 minutes then mate for about 90 minutes. During the day, mated females fly from plant to plant within a row depositing single eggs on the underside of newer blackberry leaves, usually one of the new fall flush of lighter green terminal leaves. A single moth may lay up to 150 eggs. Egg development requires from 40 to 60 days with hatch occurring from early October to early November. The young larva chews a small exit hole in the egg. Upon hatching, larvae follow the leaf veins to the petiole and began crawling down the cane on the shaded side toward the ground. The descent of the larva averages 15 cm within 5 min. Within 30 minutes it reaches the bottom of the cane, wedges itself in a small bark crevice, and bores into the bark leaving only a small pinpoint of frass and silk at the entry point. It forms a round cavity in the bark (hibernaculum) where it curls up and is inactive over the winter. The following spring the larva tunnels into the cambium. By early May, the larva begins to tunnel into the crown of the plant and feed. From late April to early August, larvae occur in the crown beneath the soil making it difficult for insecticide

to contact larvae and control them. By the end of July or early August the larva is fully developed. The mature larva bores from the crown upwards into a cane to a few inches above soil level. The larva bores a small escape tunnel through the side of the cane leaving a thin intact covering of bark for protection against weather and predators. Pupation occurs from mid August through mid- to late September. In mid-September to early October, the chisel-like head of the pupa breaks through the thin layer of bark covering the escape tunnel. The pupa wriggles part way out of the cane by flexing its spined abdominal segments. The pupal case splits lengthwise and the adult crawls out, leaving the pupal case protruding from the cane. At this point, males fly off in search of females. Virgin female moths walk up the cane to a leaf in the upper canopy and begin calling males for mating.

Control

Better raspberry crown borer management could result in more sustained, healthy caneberry plantings that could yield fruit for a longer period of time. Currently, blackberry plantings are removed every 6-8 years. Timing of applications could make a significant difference in the efficacy of treatments due to the different locations of the larvae within the plant throughout the season. The insecticide bifenthrin, applied as a soil drench directed at the base of blackberry plants using 50 to100 gal of spray solution per acre in the last week of October and early November, resulted in excellent control (99 to 100% mortality) of the overwintering larvae on the lower canes, slightly less control when applied in early April (83 to 90% mortality), and poor control when applied in May (33% mortality) (McKern et al. 2007).

In October 2005 and 2007, two formulations of bifenthrin (Capture 2EC, Brigade 2EC Brigade WSB) received EPA registration for caneberries against raspberry crown borer at a rate of 6.4 oz product/acre (0.1 lbs a.i./acre). Directions for use are: apply 6.4 oz product/acre, post-harvest (fall) or pre-bloom (spring), as a drench application directed at the crown of plants in a minimum of 200 gallons water/acre. Research in Arkansas has noted sprays diluted in 50 gallons water/acre to be effective against raspberry crown borer (McKern et al. 2007). Greater efficacy is observed in an application prior to a significant rainfall event. Do not make pre-bloom foliar and pre-bloom drench applications. Restrictions: do not apply more than 0.20 lbs. a.i. per acre per season and do not apply within 3 days of harvest.

Natural Enemies

There are a few natural enemies of the raspberry crown borer but all produce less than 67% reduction in the local borer population, while several insecticides (including Capture) cause nearly 100% mortality. The nematode *Steinernema feltiae* caused 33 to 67% raspberry crown borer larval mortality when applied to soil in Colorado in June and July (Capinera et al. 1986). Two entomopathogenic nematodes, *S. carpocapsae* and *Heterorhabditis bacteriophora*, applied as a soil drench to the base of blackberry plants in early April caused 53 and 33% raspberry crown borer larval mortality, whereas *S. feltiae* applied in October after egg hatch killed 46% of raspberry crown borer larvae (McKern et al. 2007). On October 11 and 14, several raspberry crown borer egg parasitoids in the family Eulophidae emerged from several hundred eggs collected from a blackberry planting in Conway, Arkansas. In Ohio, two parasitoids emerged in the fall from raspberry crown borer pupae, e.g., *Pterocormus chasmodops* and *Bracon bembeciae*, but none have been collected in Arkansas. t

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(Pictures courtesy Dr. Marvin Pritts, Cornell University. Article reprinted with permission from 'The Bramble" The North American Raspberry and Blackberry Growers Association newsletter, Vol. 23 No. 3, Autumn 2008)

WINTER ANNUAL WEEDS IN STRAWBERRIES

Kathy Demchak, Penn State Horticulture

Winter annuals can be a problem in strawberries. Typically strawberry fields are left undisturbed during the fall, so it's easy for winter annuals to become established, overwinter, and then surprise you with the amount of competition they can provide during harvest season when they flower and produce seeds.

Which ones are our biggest problems? Chickweed by far is the one on which I get the most complaints, and we covered the biology of that weed in two earlier articles (see April 2006 and Dec 2003 issues of the Vegetable and Small Fruit Gazette, available on-line). Other common problem winter annual weeds are shepherd's-purse, field pansy, yellow rocket, and annual bluegrass. We'll cover those here.

First, a word on these weeds' life cycles. Sometime you'll see the same weed classified as a winter annual, a summer annual, a biennial, or even a perennial, which can be confusing. Winter annuals are those that germinate primarily in the fall and then flower and produce seed in the spring, typically dying out during hot weather. However, weed seeds of most winter annuals can germinate at times of the year other than the fall, so their timing sometimes seems to be off. Also, in different sections of the country and climates, weeds may behave somewhat differently depending on local conditions. For example, winter annuals that may die here during a hot dry summer might continue to live in a cooler wetter climate.

Here are some specifics on biology of our problem winter annuals. When you look at how many seeds one plant can produce under optimal conditions, it's easy to see why these weeds can take you by surprise.

Shepherd's-purse: In this region of the country, seeds germinate in late summer, early autumn, or early spring. Plants flower and produce seeds in late spring and early summer. Seeds are produced in heart-shaped pods, shaped like purses shepherd's used long ago. Each plant can produce up to 38,500 seeds. Seeds can live in the soil for 35 years. *(Image Purdue Extension, extension.entm.purdue.edu/.../issue25/index.html).*

Yellow rocket: This weed is in the same family as shepherd's-purse. I've seen it germinate in large numbers in fields in the fall and flower like crazy the next spring. I've also seen it classified as a biennial or perennial, though from what I can tell in strawberry fields, it seems that the problem is more easily controlled after the first season. This one is also a prolific seed producer, at up to 24,000 seeds per plant. Not a problem everywhere, but when it is, you know it.
(*Image: MSU Extension, www.ipm.msu.edu/weeds-nursery/YellowRocket.htm*).

Field pansy: This one looks a lot like Johnny jump-ups, though the flowers are less showy. Seeds germinate in late summer and early fall, and the plant flowers in spring. A really healthy one can produce 46,000 seeds per plant. Yikes.
(Image University of Vermont, www.ppws.vt.edu/scott/weed_id/vioar.htm.)

Annual bluegrass: Seeds germinate in late summer, early fall, and spring. I've seen figures stating that it can produce 20,000 seeds per plant, though I've also seen numbers much lower. This plant doesn't always die out during the summer.
(Image University of Missouri, extension.missouri.edu/.../ipm1007bluegrass.htm).

So, what's the best thing to do if you have these weeds on your farm? If you have only a few, be sure to pull them out before they have a chance to produce seed (re-read the seed numbers above if you need extra impetus).

Certain pre-emergent herbicides work well (see the table below), and can be applied around Labor Day where the label allows this timing (Sinbar in the establishment year, and Devrinol and Dacthal in any year) to keep weeds from establishing. If you missed applying an herbicide before the weeds emerged, Sinbar and Chateau (Chateau can't be used until the plants are dormant) both have some kickback activity, so they can burn down weeds while still in the cotyledon stage. Tillage when the weeds are young can disturb them enough to keep them from establishing between the rows, which then gives you a second chance to apply herbicides at a later time than Labor Day. Finally, pre-emergent herbicides can be applied in late fall, just before straw is applied over matted rows, which will prevent additional weeds from germinating during late fall, mild spells in winter, and early spring.

A word on rates on these materials – split applications work well with Devrinol and Sinbar. The maximum yearly rate for Devrinol 50DF is 8 lb/a and for Sinbar 80WP is 8 oz/a. With Devrinol, you can split the total, applying 4 lb/a around Labor Day and the balance before you put the straw down. With Sinbar, assuming that you may have applied 2 oz/a earlier in the establishment year (the labeled rates and timing are more restricted in later years), you can apply an additional 2 oz/a around Labor Day, and 4 oz/a or whatever amount you haven't used for the year before putting the mulch on. Also, with Sinbar, see the label for different rates allowed depending on the amount of organic matter you have in your soil.

Stinger, Poast, and Select are post-emergent materials. Stinger has little or no activity on these weeds, while Poast and Select are post-emergent grass herbicides that don't work all that well against annual bluegrass once established – so you may want to concentrate on preventing that one from establishing in the first place through pre-emergent materials and shallow tillage.

As always, follow the label. It's the final word on allowable use.

***Editor's note**: Especially true for us as New York labels often vary from those in other States. All of these products are labeled for use on strawberry in NY but be sure to check labels for rates and details.*

Table 1. Herbicide efficacy on certain winter annual weeds for pre-emergent (Chateau, Dacthal, Devrinol, and Sinbar) or post-emergent activity (Stinger, Poast and Select)

	Chateau	Dacthal	Devrinol	Sinbar	Stinger	Poast	Select
Chickweed	Good	Good	Good	Good	None	None	None
Field pansy	No data	Good	None	Good	None	None	None
Shepherd's-purse	Good	Poor	Fair	Good	None	None	None
Yellow rocket	No data	None	None	None	Poor	None	None
Annual bluegrass	Poor	Fair	Good	Fair	None	Poor	Fair*

*label indicates improved control at up to the 4-leaf stage

(Reprinted with permission from: The Penn State Vegetable & Small Fruit Gazette, Volume 12, No. 10, October 2008.)

WEATHER NOTES

NEW YORK CROP WEATHER SERVICE NOTES

Week ending September 7th: A large area of high pressure dominated the weather across all of New York State for much of the week. This provided dry weather with a good deal of sunshine. A cold front approached western portions of the state by Friday, bringing a few showers to portions of the Niagara Frontier. On Saturday, much of the eastern and southern portions of the state received heavy rainfall and gusty winds, as the remains of Tropical Storm Hanna moved up the eastern seaboard. Daytime temperatures during much of the week were above normal as flow around the high pressure pumped unseasonably warm air into the region. Many locations outside the Adirondacks, especially by Thursday, saw temperatures at or above the 90 degree mark. High temperatures took a tumble in most places by Saturday, as the clouds and rainfall from Hanna kept temperatures limited to the 70's during the day, although minimum temperatures remained mild in the 60's.

Week ending September 14th: The week began with the remains of Tropical Storm Hanna exiting the region. This allowed a weak area of high pressure to build across much of New York State for Sunday and Monday. By Monday night into Tuesday, a cold front pushed swiftly across the state from west to east. This brought a line of heavy showers and thunderstorms to many areas with some localized heavy downpours and frequent cloud to ground lightning strikes. Behind this cold front, a large area of Canadian high pressure built back into the area, keeping mostly sunny skies for the entire state for much of the remainder of the work week. A warm front moved into the region from the west for late Friday into Saturday, bringing a few rounds of showers to all of New York State. Temperatures began the week a tad on the mild side in the wake of Hanna, with highs reaching the upper 70's upstate and lows 80's in southeastern parts of the state. Behind Tuesday's strong cold front, temperatures took a tumble for the middle to later parts of the work week. Many portions of the Adirondacks saw the first freeze of the season on Thursday morning with patchy frost across parts of the St. Lawrence Valley as well. Temperatures returned to a bit above by Saturday, as a strong southerly flow pumped warm and moist air back into the region.

Week ending September 21st: Temperatures averaged slightly above seasonal levels for the week with below normal precipitation across much of the state. The warmest temperatures occurred early in the period through Monday before a cold front tracked east accompanied by scattered showers. In the wake of this front, high pressure dominated the state for the rest of the week along with cooler temperatures which averaged near or slightly below seasonal levels. Widespread frost occurred across portions of the southern and western Adirondacks and northeast Catskills ending the growing season. Patchy frost also occurred across portions of the Lake George and Saratoga region.

Week ending September 28th: Temperatures averaged above seasonal levels for the week. Precipitation averaged well below normal across western and northern New York, but well above across southern New York, particularly Long Island. The warmest temperatures occurred from the middle of the week until the end, especially across western and eastern New York. Cooler temperatures were observed across Long Island. High pressure dominated the early and mid period with a cold front tracking across the region on Sunday. Late in the period, upper level disturbances and the effects of Hurricane Kyle brought rain to the state. Patchy frost also occurred across portions of the Lake George and Saratoga region and the deeper valleys of central New York.

Week ending October 5th: Temperatures averaged near normal for the week starting out above normal early in the week than cooling of below normal by late. In fact, temperatures dropped to freezing levels in areas of Dutchess County on the morning of the 4th. Precipitation averaged above normal, especially away from the Hudson Valley. The combination of a cold front and peripheral moisture from Hurricane Kyle brought half to an inch of rainfall on Sunday September 28th with the heaviest amounts in Connecticut. A series of cold fronts brought more showers on Thursday and Friday.

Questions or Comments about the New York Berry News?

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Editor's Note: We are happy to have you reprint from the NYBN. Please cite the source when reprinting. In addition, we request you send a courtesy E-mail indicating NYBN volume, issue, and title, and reference citation for the reprint. Thank you.

Check out the NYSAES Tree Fruit and Berry Pathology web site at:
www.nysaes.cornell.edu/pp/extension/tfabp

WEATHER REPORTS OF TEMPERATURES AND PRECIPITATION THROUGHOUT NEW YORK STATE FOR WEEK ENDING SUNDAY 8:00am, September 7th, 2008

	Temperature				Growing Degree Days (*Base 50*)			Precipitation (*inches*)			
	High	***Low***	***Avg***	***DFN[1]***	***Week***	***YTD[2]***	***DFN***	***Week***	***DFN***	***YTD***	***DFN***
Hudson Valley											
Albany	89	51	73	9	164	2495	307	1.25	0.51	20.80	3.37
Glens Falls	86	48	69	8	137	2005	93	0.97	0.20	20.27	3.12
Poughkeepsie	90	52	73	8	163	2571	276	2.25	1.41	23.00	2.98
Mohawk Valley											
Utica	84	50	66	7	116	1590	86	0.12	-1.18	24.99	1.10
Champlain Valley											
Plattsburgh	86	53	70	9	143	1926	-12	0.00	-0.82	18.02	1.24
St. Lawrence Valley											
Canton	87	48	68	8	130	1953	212	0.44	-0.53	18.40	0.71
Massena	91	53	70	9	142	1930	102	0.15	-0.71	16.24	0.10
Great Lakes											
Buffalo	87	53	71	7	150	2296	196	0.27	-0.63	17.93	0.18
Colden	84	48	66	4	113	1775	65	0.08	-1.04	20.56	0.20
Niagara Falls	85	50	70	5	138	2200	94	0.56	-0.35	16.19	-0.98
Rochester	91	54	71	7	148	2407	377	0.06	-0.71	12.88	-2.36
Watertown	88	49	69	7	133	1969	196	0.05	-0.78	17.14	3.16
Central Lakes											
Dansville	89	51	69	5	132	2155	111	0.23	-0.59	18.44	1.81
Geneva	89	52	68	5	131	2136	109	0.20	-0.57	16.70	0.23
Honeoye	89	47	68	2	125	2065	-53	0.19	-0.58	18.00	1.68
Ithaca	88	46	68	6	129	1974	139	0.14	-0.70	16.72	-1.03
Penn Yan	90	55	70	6	142	2464	437	0.50	-0.27	16.76	0.29
Syracuse	91	52	70	7	145	2317	259	0.05	-0.85	16.88	-1.75
Warsaw	83	51	66	6	115	1759	178	0.05	-0.93	24.26	4.81
Western Plateau											
Alfred	85	45	65	5	104	1558	-2	0.25	-0.59	17.35	-1.15
Elmira	91	47	69	6	135	2121	181	0.25	-0.46	15.10	-1.70
Franklinville	85	46	65	6	106	1630	199	0.03	-0.95	19.06	-0.60
Sinclairville	87	49	68	7	125	1856	246	0.00	-1.12	18.10	-3.87
Eastern Plateau											
Binghamton	88	51	70	8	141	2089	207	0.74	-0.05	17.11	-0.64
Cobleskill	86	52	69	7	134	1933	181	1.10	0.21	23.09	4.04
Morrisville	84	49	68	7	130	1806	138	0.30	-0.61	18.80	-0.16
Norwich	87	46	68	6	125	1870	116	0.37	-0.51	16.59	-2.29
Oneonta	92	49	71	11	150	2184	569	1.03	0.19	16.36	-4.12
Coastal											
Bridgehampton	82	54	72	5	156	2393	246	3.06	2.22	20.29	1.63
New York	90	68	78	7	199	3239	380	3.29	2.45	21.23	1.39

1. *D*eparture *from N*ormal
2. *Y*ear *to D*ate: Season accumulations are for April 1st to date

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WEATHER REPORTS OF TEMPERATURES AND PRECIPITATION THROUGHOUT NEW YORK STATE FOR WEEK ENDING SUNDAY 8:00am, September 14th, 2008

	Temperature				Growing Degree Days (*Base 50*)			Precipitation (*inches*)			
	High	***Low***	***Avg***	***DFN[1]***	***Week***	***YTD[2]***	***DFN***	***Week***	***DFN***	***YTD***	***DFN***
Hudson Valley											
Albany	78	47	65	3	109	2604	330	1.46	0.76	22.26	4.13
Glens Falls	76	37	62	2	83	2088	105	0.85	0.12	21.12	3.24
Poughkeepsie	80	50	66	3	112	2683	292	2.28	1.46	25.28	4.44
Mohawk Valley											
Utica	73	40	58	2	59	1649	93	2.14	0.81	27.13	1.91
Champlain Valley											
Plattsburgh	79	37	61	0	77	2003	-6	1.11	0.36	19.13	1.60
St. Lawrence Valley											
Canton	74	36	59	-1	64	2019	213	1.34	0.43	19.68	1.08
Massena	74	39	60	2	75	2005	113	1.22	0.38	17.46	0.48
Great Lakes											
Buffalo	78	48	65	2	106	2402	212	2.97	2.13	20.90	2.31
Colden	75	41	60	-1	70	1845	66	2.31	1.19	22.87	1.39
Niagara Falls	77	44	64	1	95	2295	100	2.08	1.17	18.27	0.19
Rochester	77	44	65	3	105	2512	393	1.30	0.60	14.18	-1.76
Watertown	76	37	62	3	88	2057	213	2.11	1.34	19.25	4.50
Central Lakes											
Dansville	75	45	62	-1	87	2242	111	1.62	0.79	20.06	2.60
Geneva	75	45	62	0	88	2224	111	1.53	0.76	18.23	0.99
Honeoye	75	40	62	-2	86	2151	-62	0.38	-0.39	18.38	1.29
Ithaca	77	39	61	0	81	2056	144	0.95	0.11	17.67	-0.92
Penn Yan	76	44	64	2	100	2564	451	0.70	-0.07	17.46	0.22
Syracuse	78	42	65	3	104	2421	276	1.40	0.49	18.28	-1.26
Warsaw	73	43	60	1	68	1827	186	1.55	0.57	25.81	5.38
Western Plateau											
Alfred	73	38	58	-2	56	1614	-5	2.59	1.75	19.94	0.60
Elmira	79	40	63	2	95	2216	196	0.53	-0.24	15.63	-1.94
Franklinville	74	39	59	2	64	1694	208	3.18	2.21	22.24	1.61
Sinclairville	75	44	61	2	77	1931	255	1.78	0.66	19.88	-3.21
Eastern Plateau											
Binghamton	76	45	64	4	99	2188	231	1.39	0.59	18.50	-0.05
Cobleskill	77	41	61	2	81	2014	193	1.17	0.26	24.26	4.30
Morrisville	74	44	60	1	70	1876	142	1.18	0.21	19.98	0.05
Norwich	76	40	61	2	78	1947	125	0.68	-0.23	17.27	-2.52
Oneonta	80	44	63	5	89	2273	598	0.96	0.12	17.32	-4.00
Coastal											
Bridgehampton	88	50	67	2	119	2512	259	1.16	0.32	21.45	1.95
New York	83	62	72	3	157	3396	401	0.88	0.06	22.11	1.45

1. *D*eparture *from N*ormal
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WEATHER REPORTS OF TEMPERATURES AND PRECIPITATION THROUGHOUT NEW YORK STATE FOR WEEK ENDING SUNDAY 8:00am, September 21st, 2008

	Temperature				Growing Degree Days (*Base 50*)			Precipitation (*inches*)			
	High	***Low***	***Avg***	***DFN[1]***	***Week***	***YTD[2]***	***DFN***	***Week***	***DFN***	***YTD***	***DFN***
Hudson Valley											
Albany	85	40	62	2	82	2686	340	0.00	-0.68	22.26	3.45
Glens Falls	83	32	57	-2	54	2142	102	0.07	-0.63	21.19	2.61
Poughkeepsie	86	41	61	0	81	2764	294	0.00	-0.77	25.28	3.67
Mohawk Valley											
Utica	82	35	54	-2	33	1682	87	0.20	-1.06	27.33	0.85
Champlain Valley											
Plattsburgh	83	33	57	-1	57	2060	-6	0.08	-0.61	19.21	0.99
St. Lawrence Valley											
Canton	82	30	55	-2	45	2065	207	0.42	-0.47	19.97	0.48
Massena	84	30	56	-2	51	2056	114	0.38	-0.43	17.84	0.05
Great Lakes											
Buffalo	86	46	63	3	90	2492	225	0.13	-0.65	21.03	1.66
Colden	83	40	58	-1	54	1899	61	0.20	-0.90	23.07	0.49
Niagara Falls	85	43	61	1	80	2375	104	0.11	-0.73	18.38	0.54
Rochester	87	40	62	1	84	2596	400	0.00	-0.68	14.18	-2.44
Watertown	86	31	58	0	61	2118	215	0.12	-0.63	19.37	3.87
Central Lakes											
Dansville	86	37	60	-2	70	2312	107	0.18	-0.59	20.24	2.01
Geneva	85	39	59	-2	64	2288	103	0.02	-0.75	18.25	0.24
Honeoye	86	34	60	-2	73	2224	-70	0.00	-0.71	18.38	0.58
Ithaca	87	33	58	-2	57	2113	138	0.09	-0.75	17.76	-1.67
Penn Yan	87	39	62	2	83	2647	462	0.00	-0.77	17.46	-0.55
Syracuse	88	37	60	-2	71	2492	273	0.00	-0.91	18.28	-2.17
Warsaw	82	41	57	1	52	1879	188	0.11	-0.81	25.92	4.57
Western Plateau											
Alfred	82	33	56	-1	44	1658	-9	0.11	-0.73	20.05	-0.13
Elmira	87	32	60	1	69	2285	199	0.01	-0.69	15.64	-2.63
Franklinville	81	36	57	2	53	1747	216	0.25	-0.66	22.49	0.95
Sinclairville	83	38	59	2	63	1994	265	0.08	-1.02	19.96	-4.23
Eastern Plateau											
Binghamton	86	38	59	1	66	2254	236	0.04	-0.73	18.54	-0.78
Cobleskill	84	35	58	0	57	2071	193	0.06	-0.81	24.32	3.49
Morrisville	83	39	57	-1	50	1926	139	0.02	-0.91	20.00	-0.86
Norwich	86	35	57	-1	54	2002	122	0.05	-0.84	17.32	-3.36
Oneonta	90	38	60	5	73	2346	623	0.00	-0.84	17.32	-4.84
Coastal											
Bridgehampton	76	44	62	-1	88	2600	255	0.00	-0.78	21.45	1.17
New York	89	54	69	2	134	3530	414	0.00	-0.77	22.11	0.68

1. *D*eparture *from N*ormal
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WEATHER REPORTS OF TEMPERATURES AND PRECIPITATION THROUGHOUT NEW YORK STATE FOR WEEK ENDING SUNDAY 8:00am, September 28th, 2008

	Temperature				Growing Degree Days (*Base 50*)			Precipitation (*inches*)			
	High	***Low***	***Avg***	***DFN[1]***	***Week***	***YTD[2]***	***DFN***	***Week***	***DFN***	***YTD***	***DFN***
Hudson Valley											
Albany	76	44	61	4	79	2765	363	0.58	-0.50	22.84	3.40
Glens Falls	74	32	57	3	51	2193	110	0.29	-0.40	21.48	2.21
Poughkeepsie	77	45	60	2	70	2834	301	1.34	0.59	26.62	4.26
Mohawk Valley											
Utica	73	37	55	3	40	1721	96	0.55	-0.63	27.88	0.22
Champlain Valley											
Plattsburgh	74	32	56	1	50	2110	0	0.36	-0.27	19.57	0.72
St. Lawrence Valley											
Canton	75	31	56	2	46	2111	214	0.37	-0.46	20.34	0.02
Massena	78	33	57	4	56	2112	132	0.25	-0.50	18.09	-0.45
Great Lakes											
Buffalo	79	47	63	5	91	2583	254	0.05	-0.69	21.08	0.97
Colden	74	39	58	2	55	1954	70	0.02	-1.00	23.09	-0.51
Niagara Falls	78	43	61	3	78	2453	120	0.04	-0.72	18.42	-1.26
Rochester	79	41	60	2	72	2668	409	0.11	-0.52	14.29	-2.96
Watertown	74	35	57	2	53	2171	223	0.41	-0.29	19.78	2.58
Central Lakes											
Dansville	75	39	58	0	58	2378	113	0.47	-0.26	20.71	1.75
Geneva	75	41	57	-2	49	2337	94	0.25	-0.45	18.50	-0.21
Honeoye	78	35	56	-4	44	2268	-92	0.32	-0.38	18.70	0.20
Ithaca	76	37	58	2	57	2170	145	0.50	-0.28	18.26	-1.95
Penn Yan	78	41	61	4	79	2726	483	0.54	-0.16	18.00	-0.71
Syracuse	76	41	59	2	65	2557	277	0.84	0.00	19.12	-2.17
Warsaw	73	40	56	3	45	1924	195	0.27	-0.60	26.19	3.97
Western Plateau											
Alfred	74	35	56	2	40	1698	-7	0.43	-0.35	20.48	-0.48
Elmira	78	36	60	4	71	2356	218	0.94	0.24	16.58	-2.39
Franklinville	76	38	57	4	47	1794	228	0.11	-0.80	22.60	0.15
Sinclairville	78	40	59	5	65	2059	287	0.00	-1.04	19.96	-5.27
Eastern Plateau											
Binghamton	73	44	60	5	69	2323	257	0.74	-0.01	19.28	-0.79
Cobleskill	73	36	56	1	44	2115	192	0.83	0.01	25.15	3.50
Morrisville	74	43	57	3	52	1978	150	0.59	-0.31	20.59	-1.17
Norwich	77	38	58	3	57	2058	134	0.58	-0.25	17.90	-3.61
Oneonta	77	40	58	5	59	2405	644	0.55	-0.25	17.87	-5.09
Coastal											
Bridgehampton	76	45	62	2	87	2687	265	2.52	1.75	23.97	2.92
New York	80	56	66	2	111	3641	421	1.60	0.86	23.71	1.54

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WEATHER REPORTS OF TEMPERATURES AND PRECIPITATION THROUGHOUT NEW YORK STATE FOR WEEK ENDING SUNDAY 8:00am, October 5th, 2008

	Temperature				Growing Degree Days (*Base 50*)			Precipitation (*inches*)			
	High	***Low***	***Avg***	***DFN[1]***	***Week***	***YTD[2]***	***DFN***	***Week***	***DFN***	***YTD***	***DFN***
Hudson Valley											
Albany	77	36	57	3	55	2820	376	1.29	0.66	24.13	4.06
Glens Falls	75	32	56	4	46	2239	125	0.87	0.23	22.35	2.44
Poughkeepsie	70	38	58	3	59	2893	313	0.62	-0.08	27.24	4.18
Mohawk Valley											
Utica	66	37	49	-2	14	1735	88	0.72	-0.34	28.60	-0.12
Champlain Valley											
Plattsburgh	68	37	54	2	35	2145	4	0.85	0.26	20.42	0.98
St. Lawrence Valley											
Canton	70	37	52	2	26	2138	213	0.86	0.09	21.15	0.06
Massena	69	35	52	0	27	2139	131	0.51	-0.16	18.60	-0.61
Great Lakes											
Buffalo	66	38	54	-3	32	2615	238	0.92	0.22	22.00	1.19
Colden	63	33	51	-3	22	1976	57	1.91	1.01	25.00	0.50
Niagara Falls	68	37	53	-3	30	2483	102	0.88	0.21	19.30	-1.05
Rochester	65	39	54	-3	31	2699	391	0.89	0.33	15.18	-2.63
Watertown	65	35	52	-2	22	2193	211	2.15	1.52	21.93	5.10
Central Lakes											
Dansville	70	35	54	-2	36	2420	109	0.90	0.24	21.61	1.99
Geneva	63	39	53	-3	24	2361	74	1.02	0.32	19.52	0.11
Honeoye	66	35	53	-4	29	2297	-114	1.06	0.37	19.76	0.57
Ithaca	65	33	52	-2	27	2197	134	1.30	0.53	19.56	-1.42
Penn Yan	67	41	55	1	38	2764	477	0.85	0.15	18.85	-0.56
Syracuse	69	42	54	-3	27	2584	258	0.81	0.04	19.93	-2.13
Warsaw	62	35	50	-3	18	1942	185	1.80	1.00	27.99	4.97
Western Plateau											
Alfred	63	27	49	-3	14	1712	-22	1.41	0.68	21.89	0.20
Elmira	68	29	53	-1	30	2386	209	0.97	0.32	17.55	-2.07
Franklinville	66	30	51	-1	23	1817	226	2.28	1.44	24.88	1.59
Sinclairville	68	32	52	-1	29	2088	285	1.86	0.91	21.82	-4.36
Eastern Plateau											
Binghamton	67	34	52	-3	22	2345	243	0.47	-0.22	19.75	-1.01
Cobleskill	70	35	54	1	35	2150	195	0.57	-0.17	25.72	3.33
Morrisville	67	38	50	-3	16	1994	136	1.18	0.36	21.77	-0.81
Norwich	69	32	53	1	31	2089	134	2.72	1.95	20.62	-1.66
Oneonta	70	34	54	3	39	2444	655	1.23	0.46	19.10	-4.63
Coastal											
Bridgehampton	73	40	61	3	77	2764	281	0.53	-0.20	24.50	2.72
New York	74	53	64	2	98	3739	435	0.75	0.05	24.46	1.59

1. *D*eparture *from N*ormal
2. *Y*ear *to D*ate: Season accumulations are for April 1st to date

The information contained in these weekly releases are obtained from the New York Agricultural Statistics Service (http://www.nass.usda.gov/ny/), who in turn obtains information from reports from Cornell Cooperative Extension agents, USDA Farm Service Agency, Agricultural Weather Information Service Inc., the National Weather Service and other knowledgeable persons associated with New York agriculture.