New York Berry News

CORNELL UNIVERSITY

Volume 07, Number 8 August 7, 2008

What's Inside

CURRANT EVENTS

August 19, 2008. *Growing Blueberries and Blackberries in the Hudson Valley*. Kinderhook, NY. Details follow.

August 20-21, 2008. *NASGA Summer Tour*. Based out of Columbus, Ohio. News brief follows with details.

August 20, 27-28. *NNY High Tunnel Meetings*. See news brief that follows for times and locations.

August 26-28, 2008. *NE Renewable Energy Conference*. State College, PA. Details follow in news brief below.

September 17, 2008. *Using Hydrostackers to Grow Alpine and Day Neutral Strawberries*. Hudson NY. Details follow.

September 17, 2008. *Introduction to Growing Aronia*. Livingston, NY. Details follow.

September 23, 30, October 7, 14, and 21: *Building a Successful Small Farm Operation* in Orleans County. Contact Paul Lehman of Niagara County CCE or Lynn O'Brien of Allegany/Cattaraugus County CCE for more information.

October 2-3, 2008. I*ntroductory Workshops for Prospective Berry Growers*. Franklin, Jefferson, Lewis, and St. Lawrence Counties. Details follow in news brief below.

October 28-29, 2008. *Cornell Strategic Marketing Conference*. Wappingers Falls, NY. Details follow in news brief below.

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

Dec. 8-10, 2008. *North American Raspberry & Blackberry Conference*, in Grand Rapids, MI, as part of the Great Lakes Expo. More information, email info@raspberryblackberry.com.

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

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

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and Life Sciences

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Growing Blueberries and Blackberries in the Hudson Valley

August 19 at 4:00pm
Samascott Orchards, 5 Sunset Avenue, Kinderhook, NY 12106

*Join **Cornell berry expert Dr. Marvin Pritts**, and visit Samascott Orchards. This family owned business grows a huge array of fruit and vegetables and now operates an ornamental garden market. They market at local stands and have a strong presence at NYC Farmers' Markets. This farm experienced a 30 minute hail storm earlier this season, so some of our discussion will center around management of serious hail damage this year and in the years to come. Additionally we will discuss basic cultural requirements of blueberries and blackberries including pruning, training, cultivar selection, weed and pest control and proper nutrition.*

There is no charge for this meeting, but please call Peggy at 518-828-3346 before August 18th so we can plan appropriately.

NYS DEC Pesticide Applicator recertification credits will be available.

This meeting is being sponsored by the Hudson Valley Fruit Program, the Cornell Small Fruit Program Work Team, Cornell Cooperative Extension inColumbia County, NYFVI Berry Project, NYS Berry Growers Association and the cooperating growers.

N.Y. State Berry Growers Association

NY farm viability INSTITUTE

Directions on next page

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Using Hydrostackers to Grow Alpine and Day Neutral Strawberries

Wednesday, September 17th at 4:00pm
3007 Route 20, Hudson, NY 12534

Join Cornell berry specialists and take a look at a hydrostacker trial sponsored by the Hudson Valley Fruit Growers. This ecologically sensitive system has been used in the hydroponic greenhouse industry and is now being used for strawberry culture. Hydrostackers allow growers to maximize vertical space while minimizing labor. We'll examine pest control issues and nutritional demands of growing ***Alpine and 'Seascape' Day Neutral strawberries*** *in this cropping system.*

There is no charge for this meeting, but please call Peggy at 518-828-3346 before September 15th so we can plan appropriately.

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Introduction to Growing Aronia

Wednesday, September 17 at 2:00pm

Mountain Range Farm, 1288 Route 31,
Livingston, NY 12541

*Join **Hudson Valley Small Fruit Specialist Steven McKay**, and **farm owner Paul Kellner** as we visit a new 10 acre **Aronia planting.***

*Discussion will focus on the cultural needs of the crop and it's relatively small pest complex. Find out what this **"Superfruit"** has to offer growers and their future customers.*

There is no charge for this meeting, but please call Peggy at 518-828-3346 before September 15th so we can plan appropriately.

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N.Y. State Berry Growers Association

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COMMISSIONER RECOGNIZES BLUEBERRY SEASON IN NYS

Health Benefits and Bountiful Harvest Give Good Reason to Celebrate

July 25, 2008. New York State Agriculture Commissioner Patrick Hooker today recognized the peak of blueberry season in New York State and encouraged all New Yorkers to visit their local blueberry patch. Blueberries represent an important sector of the States agricultural industry that are gaining popularity due to their powerful disease fighting abilities.

Not only are they a delicious summer treat, but New York blueberries are powerhouses of antioxidants and other disease fighting compounds, the Commissioner said. Visiting the local blueberry patch has always been a highlight of the summer for me, and it is no secret that blueberries are actually my favorite fruit. With the season well underway and expected to last through the first weeks of August, I encourage all New Yorkers to make a fun family outing to their local blueberry patch to take advantage of the beautiful summer weather and the benefits of this delicious fruit.

The increasing popularity of blueberries can largely be attributed to the variety of health benefits they offer. Blueberries rank number one in antioxidant activity when compared to 40 other fruits and vegetables. These important compounds advance heart health, reduce the risk of certain types of cancer, and boost total body wellness. Most recently, researchers have linked eating blueberries with a reduction in the buildup of so-called "bad" cholesterol that contributes to cardiovascular disease and stroke, an easing of eye fatigue and a slowing of age-related loss in mental capacity. People who ate a cup of blueberries a day performed 5 to 6 percent better on motor skills tests than a control group. For dieters, blueberries are especially appealing, as a cup of blueberries only contains 83 calories and is a good source of dietary fiber.

Blueberry season is one of the longest lasting of all berry seasons in the State, and is now in full swing. The season typically begins around the second week of July and lasts through the middle of August. A good combination of rain, warmth, and sun has resulted in this year's bountiful harvest with berries that are large in size and have an abundance of flavor.

New York State currently ranks ninth in the nation for blueberry production, producing 2.5 million pounds in 2007 with a monetary value of over $3.3 million. The estimated value of the States blueberry production in 2007 was up 21 percent from $2.7 million in 2006 and 72 percent over the estimated $1.9 million value in 2005.

NORTH AMERICAN STRAWBERRY GROWERS SUMMER TOUR: AUGUST 20-21, OHIO

The best way to learn about berry production is to visit farms and talk to other growers. Berry growers can do both during the 2008 NASGA summer tour in central and northern Ohio on August 20 and 21.

This year's tour includes 10 Ohio farms and markets that specialize in strawberries, blueberries, raspberries, and vegetables. At each stop, growers can learn by observing and discussing the farming techniques found here in Ohio. Specialists from Ohio State University will join the group at various points to discuss latest research and extension initiatives.

Among the farms to be visited are the Champaign Berry Farm, in Mutual, which has more than 27 acres of raspberries; The Blueberry Patch & Café, in Lexington, said to be the largest blueberry grower in the state; Polter's Berry Farm, in Fremont, with 13 acres of strawberries among other crops on the 2,000 acre farm; Holthouse Farms, in Willard, a grower of salad vegetables; Jacquemin Farms, in Dublin, which sells much of their produce in their own farm market; Robert Rothschild Farm, in Urbana, which features pick your own crops, as well as their own café; and Fulton Farms, in Troy, where strawberries and vegetables are grown for retail and wholesale markets.

The headquarters hotel for the North American Strawberry Growers Association tour will be the Drury Inn at the Convention Center in Columbus. Tours will then proceed by bus to the respective Ohio farms. For further information, visit the website at http://www.nasga.org, or call executive director Kevin Schooley, at (613) 258-4587. Register NOW to guarantee a spot on the tour.

WHERE ARE YOU NOW, MY LOVE?

Discovery related to Japanese beetles' sex pheromones has implications for agricultural pest control

June 24, 2008**.** Having a good nose is essential to a Japanese beetle's survival. The beetle's sense of smell helps it avoid enemies and zero in on a mate. Meanwhile, the potential mate is programmed to release sex pheromones in exactly the right proportions. Like cheap perfume, there is such a thing as too much: Excessive pheromones can get the attention of a passing fly, leading her to the beetle. The fly can then lay her eggs on the beetle's back, setting up emerging fly larvae for their first meal (fresh Japanese beetle).

If all of this isn't challenging enough, the male beetles have to track females while they're both flying. This requires a mechanism within the males that loses the pheromone scent from a moment before and picks up the latest scent as the females move through the air.

Walter Leal, professor of entomology at UC Davis, receives a handful of Japanese beetles. Credit and Larger Version

This mechanism is well understood by Walter Leal, a chemical ecologist at the University of California, Davis. With funding from the National Science Foundation, Leal has isolated, identified, cloned and expressed a pheromone-degrading enzyme that allows receptors in the beetle's nose to lose the pheromone scent from the female's earlier locations as she moves to new places.

Isolating this enzyme offers the potential to eliminate entirely the beetle's reception of the pheromone scent, making them unable to find females, mate and reproduce. This potential could be useful to agricultural pest control, since the Japanese beetle is an invasive species responsible for millions in damages to crops each year. To learn more, go to the UC Davis press release.

NEW YORK STATE AGRICULTURAL SOCIETY SEEKING CENTURY FARMS FROM WESTERN HALF OF THE STATE

Family Farms Operating 100 Years Sought For Recognition

The New York State Agricultural Society is seeking applications from farms in the Western half of the state in continuous ownership by the same family for 100 years or more. Ten farms selected from applications received will be honored as Century Farms at the Society's 177th Annual Meeting January 8, 2009, in Syracuse.

Since 1937 the Society has celebrated farms that have thrived for hundreds of years in the hands of the same family. It is a hallmark role of the organization which allows us all to appreciate and honor New York's rich agricultural heritage of agriculture. This year, the Society is seeking to recognize Century Farms from the Western half of the state. (Counties west of I-81) For a list of eligible counties, please visit www.nysagsociety.org

Applications can be obtained from the web site or by contacting Society Executive Secretary, Penny Heritage, at 518-384-1715. Completed applications must be returned by **September 1, 2008**.

The New York State Agricultural Society was organized in 1832 to foster the state's food and agriculture industry. The Society's original mission--to improve New York agriculture through education, leadership development and recognition programs--remains its focus today.

USDA SIGNS MEMORANDUM OF UNDERSTANDING WITH THE NATIONAL PEST MANAGEMENT ASSOCIATION

Washington, Aug. 1, 2008 -- On July 25, Wildlife Services (WS), a program within the U.S. Department of Agriculture's (USDA) Animal and Plant Health Inspection Service (APHIS) signed a Memorandum of Understanding (MOU) with the National Pest Management Association (NPMA) to strengthen its cooperation and coordination on wildlife

damage involving nuisance birds.

"The National Pest Management Association always has been an important partner for Wildlife Services," said Bruce Knight, under secretary for USDA's marketing and regulatory programs. "This agreement will ensure an even stronger relationship between our organizations by working together to address problems caused by nuisance birds, such as European starlings, house sparrows and pigeons."
The agreement culminates more than a year of discussions between WS and NPMA and establishes regular meetings and communication between the two organizations while recognizing WS responsibility for the control of invasive species.

Under this agreement, entities and individuals seeking assistance with nuisance bird problems will continue to have the choice of using pest management companies or seeking WS help to respond to damage concerns. WS will not actively seek to become involved in the control of nuisance birds in areas where pest management companies have the established capacity to meet consumers' needs. The MOU complies with the 2008 Farm Bill Manager's Statement encouraging APHIS to enter into such agreements with private industries.

WS actively researches and develops contraceptive agents and other control techniques for birds, such as pigeons and geese, and will provide training to the NPMA on new techniques as they are developed. The NPMA, with more than 5,000 members, was established in 1933 to support the pest management industry's commitment to protect the public's health, food and property.

COMMISSIONER HOOKER CHALLENGES NYERS TO EAT LOCAL

New Yorkers Challenged to Eat Only Locally Grown Food for One Day This Week

Jessica A. Chittenden, Director of Communications, NYS Department of Agriculture & Markets, 10B Airline Drive, Albany, NY 12235, 518-457-3136

August 3, 2008. New York State Agriculture Commissioner Patrick Hooker today challenged all New Yorkers to eat local for at least one day this week. During the week of August 3-9, National Farmers Market Week and the peak of fresh summer produce, New Yorkers are challenged to only eat foods that are produced or grown here in New York.

Here's the challenge, the Commissioner said. Pick a day this week and try to eat only locally grown or made products for breakfast, lunch, dinner and any snacks in between. This simple task has tremendous benefits for everyone in New York. Buying and eating local foods supports our hard working farmers, keeps farmland open and productive, reduces food miles which saves on gas and can cut greenhouse gas emissions, and last but not least, it tastes great as it is picked at the peak of harvest and offers not only excellent flavor, but maximum nutrition.

To kick off the Eat Local Challenge, Commissioner Hooker will visit three local food systems in Albany tomorrow, Tuesday, August 5. He will visit a specialty food store, a community garden and a local farm and cafe highlight the diversity of products and places consumers can buy local food in New York State.

The purpose of this challenge is to raise the awareness of locally grown foods, get consumers to ask for local products and get people to look at their labels and learn more about their food, the Commissioner said. So don't stop after the challenge, make it a point to include New York products in every meal, all year long.

New York State has a diverse food and agricultural industry that offers consumers an abundance and wide variety of fresh fruits and vegetables, dairy products, meats, eggs, sauces, confections, breads and more. These local products and more can be found at many retail and specialty stores, at roadside stands and farmers markets, and restaurants throughout the State. Consumers can also visit their local farmer directly or join a CSA or community garden for fresh products. The Pride of New York program uses an emblem to help consumers identify New York State products where they shop.

The concept of buying local is simply to buy food or any goods or service that is produced, grown or raised as close to home as possible. With industrialization and globalization, food now travels further to reach the average consumer's refrigerator. Food miles is a term that refers to the distance food travels. The food miles for items in an average grocery store tend to be 27 times higher than the food miles for goods bought from local sources, such as farmers markets.

In the U.S., produce sold at a grocery store travels nearly 1,500 miles with approximately 40 percent of fruit grown overseas and 9 percent of red meat coming from countries as far away as Australia and New Zealand. Roughly 80 percent of the energy used in the U.S. food system goes to processing, packaging, transporting, storing and preparing food, and therefore, buying and eating local food helps reduce transportation costs, allowing more of the food dollar to be returned to the farmer.

To find New York grown, produced or made food, please visit the Pride of New York's website at www.prideofny.com . The Pride of New York is the States marketing and promotion program that generates interest and demand for New York food and agricultural products.

SECRETARY SCHAFER AWARDS $21.8 MILLION IN GRANTS TO STATES FOR THE SENIOR FARMERS' MARKET NUTRITION PROGRAM

Washington, July 30, 2008 - Agriculture Secretary Ed Schafer today announced $21 million in final Fiscal Year 2008 grant awards to 49 state agencies and tribal organizations for the Senior Farmers' Market Nutrition Program. These senior's markets provide low-income seniors with coupons exchanged for fresh produce at farmers' markets, roadside stands and community-supported agriculture programs.

"The Senior Farmers' Market Nutrition Program provides low-income seniors with improved nutrition choices while also helping local farmers gain new customers who will eat more fresh fruits and vegetables," said Schafer.

These grants will serve more than 900,000 low-income senior citizens nationwide this season. This year, coupons for fresh produce will be accepted by over 14,000 farmers at more than 5,100 markets, roadside stands and/or community-supported agriculture programs.

The new Farm Bill provides $20.6 million to operate the seniors' market grants this year, an increase of $5.6 million in appropriated funds. An additional $1.2 million in FY 2007 unspent funds are also available for use. All 46 State agencies that received funding in 2007 will receive funding in 2008. In addition, 2 new State agencies - Arizona and New Mexico - and one new Indian Tribal Organization - Standing Rock Sioux in North Dakota - will receive funding.

FY 2008 SFMNP FINAL GRANT LEVELS

Alabama	$1,732,673	Mississippi	$102,388
Alaska	$92,065	Montana	$101,920
Arizona * (New State Agency)	$161,111	Nebraska	$246,775
Arkansas	$119,666	Nevada	$164,125
California	$809,837	New Hampshire	$101,431
Chickasaw Nation of Oklahoma	$177,985	New Jersey	$1,171,273
Connecticut	$87,688	New Mexico * (New State Agency)	$337,004
District of Columbia	$154,926	New York	$1,906,553
Five Sandoval Indian Pueblos, Inc.	$19,240	North Carolina	$86,083
Florida	$104,903	Ohio	$1,719,840
Georgia	$250,000	Oregon	$906,879
Grand Traverse Band of Ottawa & Chippewa Indians	$9,592	Osage Tribal Council	$38,140
Hawaii	$553,412	Pennsylvania	$1,907,481
Illinois	$852,695	Pueblo of San Felipe	$17,474
Indiana	$59,604	Puerto Rico	$1,000,000
Iowa	$573,087	Rhode Island	$276,740
Kansas	$188,580	Standing Rock * (New State Agency)	$22,200
Kentucky	$316,371	South Carolina	$638,737
Louisiana	$418,972	Tennessee	$545,887
Maine	$997,454	Vermont	$91,479
Maryland	$224,622	Virginia	$474,337
Massachusetts	$555,915	Washington	$241,576
Michigan		West Virginia	$544,630
Minnesota		Wisconsin	$343,944
Mississippi Band of Choctaw Indians		NATIONAL TOTAL	$21,835,982

USDA's nutrition assistance reaches one in five Americans every year, serving as the nation's first line of defense against hunger. USDA's 15 assistance programs include the Food Stamp Program, Senior Farmers' Market Nutrition Program, school meals programs and the Special Supplemental Nutrition Program for Women, Infants and Children, known as WIC.

NEW WEBSITE CATERS TO BEGINNING FARMERS

"What are my marketing options?" "How can I finance my farm start-up?" "What should I grow on my land?" If you have questions about starting a farm or are considering diversifying your farm enterprises, the new NY Beginning Farmers Resource Center at http://beginningfarmers.cce.cornell.edu can offer you information and inspiration to help you begin.

This interactive website offers a forum where new farmers can swap ideas and stories and ask specific questions. It also contains lessons that walk new farmers through the steps of starting a farm business, including setting goals, evaluating land, and learning about markets and regulations. Online worksheets embedded in the farm planning lessons allow new farmers to respond to questions and apply what they learn to their own situation, and then download their completed worksheets for later use in a business plan if desired.

The Frequently Asked Questions section is a treasure trove of information on the farm-start-up process, with responses to the most commonly-asked questions like "Where can I find a grant to start my farm?" and "What regulations apply to me?" Visitors can also peruse the events calendar, get connected with agencies that can provide personalized assistance, download the Guide to Farming in NY, and find production information on our sister site at the Cornell Small Farms Program. Visitors seeking advice and inspiration will find it in the Voice of Experience section, which contains articles by and about successful farmers in NY.

The site was developed by the NY Beginning Farmer Project, which is working to build the Grow Local movement to support the Buy Local movement. The NY BFP is funded by the NY Farm Viability Institute and Cornell Cooperative Extension and is a project of the Cornell Small Farms Program. Please visit the NY Beginning Farmer Resource Center online at http://beginningfarmers.cce.cornell.edu.

FUNDING OPPORTUNITIES

Northeast SARE Partnership Grant Program

The Partnership Grant is for agricultural professionals who work directly with farmers--specifically Cooperative Extension, NRCS personnel, non-governmental organizations, and others operating in the farm community--who are interested in developing on-farm demonstration, research, or marketing projects related to sustainable agriculture. The purpose of the Partnership Grant is to build knowledge farmers can use, to encourage the understanding and widespread use of sustainable techniques, and to strengthen partnerships among farmers, extension, non-governmental organizations, and NRCS personnel that support useful inquiries into how agriculture can be made more profitable through good stewardship. Partnership projects can address a variety of topics, including the development of beneficial insect habitat, alternative crops or animals, practices that make use of biological cycles for improved soil, plant, and pest management, marketing, adding value, grazing, tool or technology development, agroforestry, farm management, and water quality. **Proposals are due December 9, 2008.**

Specialty Crop Research Initiative

USDA is making available $28.4 million for the Specialty Crop Research Initiative (SCRI) program. The purpose of the SCRI is to address the critical needs of the specialty crop industry. SCRI projects must be designed to solve critical specialty crop agriculture issues, address priorities, and/or solve problems through multifunctional research and extension activities. The SCRI has five legislatively mandated focus areas: Research in plant breeding, genetics, and genomics to improve crop characteristics; Efforts to identify and address threats from pests and diseases, including threats to specialty crop pollinators; Efforts to improve production efficiency, productivity, and profitability over the long term; New innovations and technology, including improved mechanization and technologies that delay or inhibit ripening; and Methods to prevent, detect, monitor, control, and respond to potential food safety hazards in the production and processing of specialty crops, including fresh produce. See the Request for Applications (PDF/289KB). **Proposals are due August 14, 2008.**

Specialty Crop Block Grant Program

The Agricultural Marketing Service (AMS) announces the availability of approximately $10 million in grant funds, less USDA administrative costs, to enhance the competitiveness of specialty crops. Specialty crops are defined as fruits and vegetables, dried fruit, tree nuts, horticulture and nursery crops (including floriculture). State departments of agriculture are eligible to apply, and are encouraged to involve industry groups, academia, and community-based organizations in the development of applications and the administration of projects. **Proposals are due September 8, 2008.**

NY Farm Viability Institute Applied Research Partnership Program

The New York Farm Viability Institute seeks proposals for innovative projects that help farmers increase profits and provide models for other farmers to follow. Applied Research Partnership projects emphasize practical, on-farm efforts designed to produce measurable benefit to participating farms within the lifespan of the project, including testing theory

in farm conditions, adapting technology for not-yet-tested conditions, demonstration of under-used technology in New York, and more. Funding of up to $250,000 per project is available. **Proposals are due by Sept. 9.**

2008 NE RENEWABLE ENERGY CONFERENCE -- AUGUST 26-28

The 2008 NE Renewable Energy Conference will be held August 26-28 at the Penn Stater Conference Center in State College, Pennsylvania. The conference will showcase regional renewable energy and energy efficiency research, demonstration, and university-industry-government partnerships for sustainable economic development. The audience will be drawn from across the northeastern U.S. and the states of Michigan and Ohio. We are anticipating 300 - 400 attendees from the 14 states in the region as well as Washington, D.C. Sponsors include the Northeast Sun Grant Initiative, the Northeastern Regional Association of State Agricultural Experiment Station Directors, NE SARE, and several other companies and organizations. The conference will include a mix of plenary and break-out sessions, with several receptions featuring posters and a trade show.

Poster abstracts should be submitted through the web site by August 8 and companies should sign-up for the trade show by August 8.

Break-out sessions are organized in five tracks: Biomass production, bioenergy conversion, wind and hydro, solar and efficiency, and economic development. An additional track of "Energy Basics" mini-courses will provide introductions to these topics for general audiences. A set of final break-outs will be planning sessions to develop renewable energy roadmaps for the region. Products of the conference will include regional roadmaps for various sustainable energy strategies and a book of presentation and poster abstracts.

Conference registration and additional information are available at http://www.nesungrant.cornell.edu/

NNY HIGH TUNNEL EVENTS AUGUST 20, 27-28 IN ADAMS CENTER, WILLSBORO & KEENE

Due to increasing interest in using covered structures known as high tunnels to extend the growing season in the cooler North County climate, a series of four High Tunnel Open Houses are set for Adams Center on August 20, Willsboro on August 27 and Keene Valley, NY on August 28. Speakers at each event include Cornell University high tunnel specialist H. Christian Wien, greenhouse and high tunnel vegetable specialist Judson Reid of the Cornell Vegetable Program, and the host growers.

Wien, a professor of horticulture at Cornell, will answer questions on high tunnel design and construction and on wind and temperature management.

“Just putting a sheet of clear plastic over plants can profoundly affect many aspects of plant growth and performance,” Wien says.

Wien says he expects the use of high tunnels in New York to return a gain of $500,000 per year in the farm-gate value of the state’s horticultural crops by 2010.
Reid has worked with growers producing diverse crops, including tomatoes, watermelon, cantaloupe, cabbage and onions, using high tunnels up to 300 feet long. He says, “For example, tomatoes are well-suited to high tunnel production. Growers can produce 15 to 20 pounds of saleable tomatoes per plant – that definitely makes this type of production something to consider.”

The host growers will share their local experiences with using the tunnels to grow fruit, vegetables and flowers.

At Almedan Produce in Adams Center, Almeda Grandjean built Jefferson County’s first high tunnel for commercial production in 2005 and rebuilt in 2006 after a fall storm destroyed the first structure. She has grown tomatoes, colored

peppers and cucumbers in the tunnel and sells to area schools, farmers' markets shoppers and through a Community Supported Agriculture program that provides food by subscription to members.

In 2008 for the first time at Carriage House Garden Center in Willsboro, Christine and Mike McAuliffe tested a high tunnel with battery-powered roll-up sides. Christine says, "We are already thinking about putting up another one. It worked very well this year with the annuals we raised on pallets and the plants we in the ground under cover."

At the Cornell E.V. Baker Agricultural Research Farm in Willsboro, Farm Manager Michael Davis and Farm Technician Richard Lamoy have grown a variety of crops in a tunnel they constructed in 2006. Davis says, "Much of our tunnel space is devoted to strawberries, raspberries, and blackberries. Having these fruit crops protected from all the rain has been a huge benefit this summer as we've had excellent yields of high quality berries with no disease problems."

At Rivermede Farm in Keene Rob Hastings grows a wide variety of fresh produce, herbs and flowers in 10 high tunnels and greenhouses. He has made good use of season extension techniques in the North Country and will talk about the pros and cons of the various types of tunnels. Hastings is developing production practices that will allow him to grow multiple crops 12 months a year in the challenging Adirondack climate.

Open house co-organizer Amy Ivy of Cornell Cooperative Extension of Clinton County says, "Growing certain types of produce and cut flowers makes good sense in the North Country. The tunnels extend our short growing season by several weeks and reduce disease problems by keeping rain off the plants. More and more calls are coming in to Extension offices around our region for information and those who are already using high tunnels love them. These open house events provide an excellent opportunity to learn first hand from Cornell specialists and regional growers."

The free Open Houses will be held:
Wednesday, August 20th from 5:30-7:30 pm at Almedan Produce, 13501 County Route 155, Adams Center (Jefferson County)

- Wednesday, August 27th from 5:30-6:30 pm at Carriage House Garden Center, 4002 Route 22, Willsboro (Essex County)
- Wednesday, August 27th from 6:30-7:30 pm at Cornell E.V. Baker Agricultural Research Farm, Point Road, Willsboro (Essex County)
- Thursday, August 28th from 5;30-7:30 pm at Rivermede Farm, Beede Road, Keene Valley.

For more information on the open houses, contact Sue Gwise at Cornell Cooperative Extension of Jefferson County, 315-788-8450, or Amy Ivy at Cornell Cooperative Extension of Clinton County, 518-561-7450.

INTRODUCTORY WORKSHOPS FOR PROSPECTIVE BERRY GROWERS October 2-3, 2008

Cornell Cooperative Extension of Franklin, Jefferson, Lewis and St. Lawrence Counties are sponsoring workshops for beginning berry growers in early October. The workshops, which are identical, will be held in each county to facilitate travel. Registration will be $10/farm enterprise. This fee covers the informational packet and refreshments. The first workshop will be in Franklin County on Thursday, October 2nd from 1:30 – 4:00pm at 355 West Main Street in Malone. Call to register at 518-483-7803. The second workshop will be Thursday, October 2nd beginning at 6:30pm at the Extension Learning Farm Classroom, 1894 State Hwy 68 in Canton. Call 315-379-9192 to register.

On Friday, October 3rd, the workshops will be held in Jefferson County, beginning at 9:00am at the Cornell Cooperative Extension office at 203 North Hamilton Street in Watertown and then later that day in Lowville from 1:30 – 4:00pm at the CCE office on Outer Stowe Street. Call Jefferson county CCE at 315-788-8450 to register for the Watertown location or 315-376-5270 to register for the Lowville location. You must call the site where you will attend by September 30th to register for this class.

Cornell Berry Extension Support Specialist, Laura McDermott will discuss the keys to successful berry farming including: marketing; startup costs; site selection; site preparation and layout; cultivar selection and planting; crop production; fertilizing; pest management, trellising, irrigation; and labor.
The talk will focus on strawberries, brambles and blueberries, but there will be some discussion of other minor fruits. This is a great chance to meet Cornell's berry specialist for eastern New York and learn the latest information on New York berry production.

The fee for this program is $10 per farm or family for handouts and refreshments. This program is made possible through a grant from the New York State Farm Viability Institute.

2008 CORNELL STRATEGIC MARKETING CONFERENCE

TURNING LEMONS INTO LEMONADE: TUNING YOUR MARKETING PRACTICES FOR TODAYS FOOD SAFETY SYSTEM

SAVE THE DATE: October 28th & 29th, 2008

Consumers are demanding fresher, safer, more convenient, more local, and higher quality food products. Preferences are evolving and demanding more information that connects the food they eat to how and where it is produced, processed, transported, and sold. Increasing attention to food safety standards, product traceability, and environmental sustainability are affecting market systems, production practices, and agribusiness returns. Food producers and processors are adept and talented in revising production, packaging, and distribution practices in meeting market and consumer demands for today's food safety system. However, these production adjustments also provide opportunities for improved and innovative marketing practices that can effectively translate into information that consumers demand about the foods they eat.

The 2008 Cornell Strategic Marketing Conference will address these production challenges and marketing opportunities in today's food safety system. Important information from key experts, producers, and industry leaders on product safety standards, traceability requirements, and audit procedures will provide a solid production base from which updated marketing ideas will spring. Innovative marketing models and effective merchandising techniques will be presented that highlight consumer needs for safe, quality, and sustainable products. Multiple commodity track sessions will focus on production responses and marketing opportunities for fruits and vegetables, meat products, and value-added dairy products. Tools to help develop efficient and traceable transportation logistics for stakeholder products will also be presented.

The Conference is open to all members of the agricultural community and will be held at The Villa Borghese in Wappingers Falls, New York. A conference agenda and registration materials will be posted soon on our website, http://marketingpwt.aem.cornell.edu/.

For more information contact: Todd Schmit, Assistant Professor, Dept. of Applied Economics and Management, Cornell University, 607-255-3015 or tms1@cornell.edu; or Les Hulcoop, Extension Issues Leader, Cornell Cooperative Extension-Dutchess County, 845-677-8223 ext 130, lch7@cornell.edu.

THAT'S A BERRY GOOD QUESTION!!!

Kathy Demchak, Pennsylvania State University

Q. I have a really heavy crop load on my blueberry plants, and very few leaves. Why? Can these plants mature this crop? What should I do?? Will these plants survive? (Several blueberry growers, usually with 'Bluecrop').

A. Flower bud initiation in blueberries is influenced by many factors including cultivar, day length, temperature, thickness of fruiting wood, and time of year that the fruiting wood formed. The flower buds for this year's crop were initiated last summer and fall, so everything that determined the flower bud to vegetative bud ratio on fruiting wood happened last year. The only thing that growers can do in the current year is adjust pruning practices to decrease the crop load, and adjust other cultural practices to try to encourage new cane and shoot growth.

If a very heavy crop load remains on the plant after pruning, the plant will try to mature the crop. Berries on very heavily cropped plants are small, and ripen slowly. The plants probably will mature the crop, but will do so very slowly. Since the leaves do the work of producing the sugars for the berries, and there were few leaves relative to the amount of fruit to ripen, plus little new vegetative growth, there just isn't much sugar to go around. Often the plant tries to conserve resources by producing less vegetation, and the plant declines. So, would these blueberries get into a biennial bearing cycle, as happens with fruit trees, or does the stressed plant just continue to fruit? My own observation is that 'Bluecrop' does not give itself a rest. Luis Valenzuela, a Ph.D. student here in the department, looked at this question, and found that 'Bluecrop' plants that produced a heavy crop in one year still produced a heavy crop the next year. Other cultivars may be different.

So, what should you do at this point? Next year's (and future years) crops are being determined right now, which is why we're discussing this in the summer, so it's important to keep the plants as healthy as possible in order to encourage them to produce vegetation. This means keeping them watered, controlling leaf-feeding insects, and keeping existing foliage healthy by minimizing diseases (i.e., don't let the tomatoes and pumpkins make you forget about your blueberries after harvest). It's getting a little late for applying nitrogen fertilizers, however. In order to have a "heads-up" for what might happen next year, take a look at your blueberry canes this fall. You should be able to tell what your fruit bud to leaf bud ratio is like (flower buds will be plump-looking, and leaf buds will be narrow).

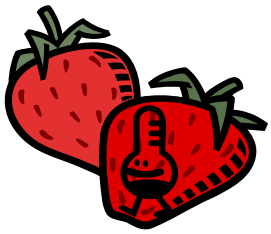
Then, when you're doing your dormant pruning this winter, be ready to make some adjustments, quite likely pruning heavier than you have in the past. You will need to make different adjustments for different cultivars. Among Northern highbush cultivars, 'Bluecrop' in particular has a tendency to over crop, and in our cultivar trial in Luzerne County, it appeared that 'Bluegold' also could form a very heavy crop load relative to the amount of foliage. Then take a close look, and make sure that you are removing enough flower buds. Some detail pruning to remove flower buds may also be in order. After that, pay attention to fertilization (you may need to increase nitrogen rates somewhat), and mulch and water to encourage new growth.

Now, what can you do if you just can't seem to get the plants back into balance? Well, I had some 'Bluecrop' plants that I'd struggled with for five years or so, and they just would not send up new canes. I figured they were taking the slow train to the hereafter, and decided to speed up the process. So, we whacked them off at ground level last fall, and rather than finishing them off, I found out why this process is sometime referred to as "rejuvenation"... Each one of those plants that had refused to send up new canes now has fifteen to twenty healthy new canes. I do need to point out I don't recommend you try "whacking off" all of your plants. I'd try getting them into balance by other means first, or try this with just a few of the worst plants, and see what happens.

All of the above adjustments will help if a heavy crop load was the primary problem. Another factor such as disease, insufficient watering or nutritional difficulties may negatively influence the amount of foliage produced, so those issues may need to be corrected also. However, even plants that have problems in these areas may also benefit from your "lightening the load" while pruning and correcting the other problems.

AUGUST BERRY BAROMETER

HELPING TO KEEP YOU UP TO THE MARK!



Cathy Heidenreich, Western NY Berry Extension Support Specialist, Department of Horticulture, Cornell CALS, Ithaca, NY 14853

ALL BERRY CROPS:

1. **Leaf Analysis –** Still time to get this done if you move on it now!
2. **Fertilization** – The window for fertilizing new transplants is pretty much closed for the season. Nothing further with the exception of late season N applications for strawberries. More on that in the next issue.
3. **Weeds** – Hand-weeding or spot applications to control weeds in new plantings through the end of this month; gearing up for fall applications.
4. **Diseases and Insects** –Stay the course- the end is in sight! Make applications promptly when environmental conditions are conducive to disease development/build-up or economic thresholds are exceeded for insect pests.
5. **Harvest/Post Harvest** – Hot summer months are no time for harvested berries to be left sitting in the field. Set up a do-it-yourself forced air cooler and keep those berries moving into the cold chain ASAP!

STRAWBERRIES:

Established plantings:

1. **Diseases** – Recent wet weather may promote development of leaf diseases (leaf spot, leaf scorch, and leaf blight). Protectant fungicide applications made to newly expanding leaves may be of some benefit in plantings with a history of disease.
2. **Insects –** Some fields are potato leaf hopper damage. Young plants are most seriously affected by injury resulting in short petioles and small distorted leaves. Look for very active adults and nymphs by brushing foliage. Watch for leaf yellowing starting at the leaf margin and progressing toward the midvein (right). Options for control

may be found in the berry pest management guidelines for control strategies (http://ipmguidelines.org/BerryCrops/).

3. **Weeds** - Spot treatments, cultivation, hand-weeding for now followed by Dacthal, Sinbar, or Devrinol for winter annuals next month. September is also the time for thistle control using Stinger.
4. **Straw Mulch** – It's just around the corner! Be sure to secure sufficient straw to cover your planting. A general rule of thumb is 2-3 tons/acre, more if you are in a colder area with little snow cover or have plants on raised beds (4-5 tons/A). Be sure straw is glyphosate residue and weed-seed free!

New plantings:

1. **Plant establishment** – The end is in sight! Direct runner plants from aisles back into planting row area. Remove blossoms as they open to encourage good plant establishment and growth. Cultivate in mid-August then apply Dacthal (12 lb/A) for weed control.

BLUEBERRIES:

Established plantings:

1. **Soil pH** – If your pH is still above 5.0 remember to schedule a late fall sulfur application (200 lb/A). The prilled form of sulfur takes a little longer to break down in the soil than the powdered formulation but tends to be more user-friendly to work with.
2. **Weeds** – Hand –weeding and spot treatments.
3. **Diseases** – The wet weather continues – if anthracnose is a concern an application during harvest of Cabrio, Pristine, or Switch may be indicated. All three products have a 0 DTH and 12 hour REI. For more information see the berry pest management guidelines (http://ipmguidelines.org/BerryCrops/).
4. **Insects** –Japanese beetle continues to be a concern. Options for control may be found in the berry pest management guidelines (http://ipmguidelines.org/BerryCrops/). Note Assail 30SG, a new product recently labeled in NYS, has been shown to have good efficacy against Japanese beetle. Labels for this product may be accessed from the lower left hand side bar of: http://www.fruit.cornell.edu/berry.html.

New plantings:

1. **Soil pH** – If your pH is still above 5.0 remember to schedule a late fall sulfur application (200 lb/A). The prilled form of sulfur takes a little longer to break down in the soil than the powdered formulation but tends to be more user-friendly to work with.
2. **Weeds** – Hand –weeding and spot treatments.
3. **Wildlife** – Watch for deer browse on new plants. Take immediate steps to deter feeding.

RASPBERRIES AND BLACKBERRIES:

Established plantings:

1. **Diseases –** The weather continues to be wet - keep ripening fruit protected from gray mold.
2. **Insects –** Insects of concern include Sap beetles, and Japanese beetle. Potato leaf hopper may also be a problem on raspberries, causing leaf yellowing from margin to midvein (right) similar to that in strawberries. See the 2008 Pest Management Guidelines for Berry Crops to review your control options (http://ipmguidelines.org/BerryCrops/).

New plantings:

1. **Plant establishment** – Keep weeds at bay with spot treatments and hand weeding.

CURRANTS AND GOOSEBERRIES:

New and Established plantings

1. **Diseases –** Continue to watch for leaf diseases such as white pine blister rust (yellow-orange powdery spots), powdery mildew (white powdery spots), or leaf spots (black necrotic spots) on leaves. Be sure to check both upper and lower leaf surfaces. See the 2008 Pest Management Guidelines for Berry Crops to review your control options (http://ipmguidelines.org/BerryCrops/).
2. **Insects –** Postharvest insects of concern include Japanese beetles, and Two-spotted spider mites.

COVER CROP TRIALS….AND TRIBULATIONS!

Laura McDermott, Berry Extension support Specialist, Eastern NY

A primary focus of the ongoing NYFVI funded berry project is weed control in strawberries. Weed control has been identified as a serious obstacle for strawberry growers for many years. The implications of rising start-up costs as well as the disposal challenges associated with plasticulture in addition to the reduced availability of fumigants and herbicides, has encouraged growers to experiment with a variety of systems that incorporate cover crops.

Cover crops are an integral part of a pre-plant protocol. Growers are encouraged to use cover crops in conjunction with an appropriate crop rotation to reduce cultural problems associated with over cropping including soil-borne diseases, stubborn weed populations, poor soil fertility and reduced tilth.

Farmers cooperating with our trial were asked to compare their normal pre-plant system to the following two options. Both protocols begin with the farmer planting a fall cover crop of winter rye at 40#/A. In the spring, growers would allow the cover crop portion of their fields to grow, and then kill it either by rolling it or by using a non-selective herbicide. Growers would plant strawberries directly through the killed rye.

The second protocol required that the growers mow the fall planted cover crop in the spring when it reached about 8", then apply glyphosate, wait for one month and zone-till into the killed cover crop. If the grower desired, they could also apply Devrinol immediately after planting.

During the first season, we have measured weed encroachment between the experimental planting and the farm's normal approach. Next year we will also evaluate yield between the two systems.

The farmers working on the project felt strongly that another approach to weed control was important. Their reasons were variable: timing herbicide applications for strawberry weed control is a big challenge for one grower; availability of chemicals was a problem for another. One of the cooperators is an organic farmer, so herbicides are not part of that weed management plan. Still the vagaries of nature and the dozens of demands on time threw up a few obstacles providing the rest of us an even more realistic picture of the utility of cover crops for most berry growers.

One challenge that we are seeing with most of the plots is that the rye needs to be planted at a high rate and as early in the fall as possible. A good, thick stand is necessary for the rye to be able to smother emerging seedlings the following spring.

THE BEEF ON RYE

Best nitrogen scavenger and weed suppressor among cool season cover crops, rye typically carries 25 to 50 lb nitrogen per acre over to spring. It outcompetes annual weeds such as lamsquarters, pigweed, velvetweed, chickweed and foxtail. Rye also releases a natural herbicide as it decomposes that suppresses many other weeds including dandelion and Canada thistle.

Rye prefers light loams or sandy soils but also grows on heavy clays or poorly drained soils. Some cultivars tolerate water logging.

It may be established in very cool weather; germinating at temperatures as low as 34 °F. Vegetative growth occurs at >38 °F.

Recommended planting time for rye is late summer to mid-fall for zones 3 to 7.

Rye is sensitive to seeding depth and should not be planted deeper than 2 inches.

Drill 60 to 120 lb/A of rye into prepared seed bed or broad cast rye at 90-160 lb/A, then disk in lightly. If broadcasting in late fall seeding rates may be increased as high as 300 to 350 lb/A to ensure adequate stand.

Fall seedings after October 1 generally provide only winter cover and are slower to produce heavy spring growth. Excessive early spring top growth can create tillage problems if the crop is not incorporated by early to mid-May depending on location and season.

Rye provides added organic matter producing 3 to 4,000 lb/A dry matter in the Northeast and provides erosion control on sloping fields. As a killed cover crop it also helps conserve soil moisture.

Secondly, rolling and mowing the rye, without using a non-selective herbicide to provide kill, is not foolproof. The equipment needs to be large enough to really flatten the plants, and most rototillers will not adequately strip till the rows. Keeping a mowed strip of cover crop between the rows is also only practical with very diligent mowing.

There are also many other ways that cover crops can be included in a whole farm plan. Dan Martin, a grower in St. Lawrence County, has established permanent drive rows using ryegrass and white clover. His cooler, heavier soils and his continuous management of the drive rows help him control this cover to his benefit.

New strawberry plants under row cover. Cover crop between rows will be mowed throughout the season and tilled when rows are established.

Despite the initial, and predictable, tribulations with these field trials, the number of participating growers has increased. We hope to have some initial data available at the Empire Expo this winter, but could still use more growers for next year.

(Editor's note: If you are interested in being involved in this project, please contact, Cathy Heidenreich 315-787-2367, mcm4@cornell.edu or Laura McDermott, 518-746-2562, lgm4@cornell.edu for more information.

BERRY WEED CONTROL "GOES GREEN"

Cathy Heidenreich, Western NY Berry Extension Support Specialist, Jeff Miller, Agriculture Team Leader, Oneida County Cooperative Extension, and Michael Candella, Candella's Fruit and Vegetable Farm, Marcy, NY

There's a lot of talk these days about '"going green", which in its simplest terms involves minimizing negative impacts on our environment. For fruit and vegetable grower Mike Candella, of Candella's Farm in Marcy, NY this year it meant testing a new brand of black "plastic" mulch. But this is mulch with a twist of green – its biodegradable!

Mike routinely uses plastic mulch to minimize weed pressure in his vegetable operation and for day neutral strawberries as well (left). It is typically not utilized in other types of small fruit production, however, as crops like June-bearing strawberries and raspberries reproduce annually by either sending out runner plants or sending up new canes adjacent to existing plants. Standard black plastic mulches would inhibit this new growth in addition to newly emerging weeds. Thus, herbicides and/or hand weeding are major players in

berry crop weed management.

Then, too, while mulches are an effective way to reduce herbicide usage and hand labor for vegetables, trade-offs remain. To be effective, standard plastic mulch is machine applied to achieve the close soil contact needed to inhibit weeds and then needs to be removed at the end of the production season, either by hand or machine. All that muddy plastic must then be disposed of. Soiled black plastic (pun intended) is currently not eligible for any of the standard recycling venues. What to do?

As part of the New York Farm Viability Institute (NYFVI) berry production project, berry researchers are testing a new type of biodegradable mulch that has been successful in trials with vegetables at Cornell (For more on the vegetable research with this product see Biodegradable Mulch Testing Summary 2006).

BioTelo black mulch film (pictured right) is made of a corn starch based raw material, biodegradable and compostable. Temperature, humidity, and micro organisms in the ground transform BioTelo into water, carbon dioxide, and biomass. There is no toxic residue left. This mulch has the same mechanical and physical characteristics as the plastic mulch without the negative impact on environment and pick up and land fill costs.

Dubois Agrinovation (www.DuboisAg.com**,** 1-800-667-6279) was contacted and generously agreed to supply three 5,000 ft rolls for trial with strawberries and raspberries across NY State. Mike volunteered his farm as one site for testing the new biodegradable mulch with both summer and fall-bearing raspberries.

Mike already feels the mulch has been beneficial in suppressing weeds in first planting year. Apart from some weeds coming through the planting holes, the weed pressure in-row is greatly diminished, even 6 weeks after planting (above right). The mulch is beginning to break down and fissures and holes are appearing at various intervals in-row. The final test of success comes when the first year raspberries produce new canes from the expanding roots below the mulch surface. Will the biodegradable mulch have decomposed sufficiently to allow these new canes to emerge in a normal fashion? Is this the technology of the future for raspberry weed control? Stay tuned!

BioTelo biodegradable mulch being laid at Kelder family farm in Ulster County as part of the NYFVI berry production efficiency project. Berries are planted through the mulch. Photo credits Laura McDermott.

Important Tips for Success with Biodegradable Mulches

- Storage Cool and dry- this product will start to degrade if stored warm and moist!
- For best results buy only what is needed each year.
- Store upright, on end to avoid getting holes in the roll.
- Do not stretch as tight as standard black plastic during application. Stretching starts the degradation and will increase rate of breakdown.
- Apply right before planting.
- -Sunlight and moisture will start breakdown process after planting.

(Editor's note: Many thanks to Mike and Jeff for their help with this project. Thanks also to DuBoi sAgrinovations for donating the biofilm for testing. If you own or have access to a mulch layer and would like to test this product on your farm with strawberries or raspberries for the 2009 season, please contact Cathy Heidenreich 315-787-2367, mcm4@cornell.edu or Laura McDermott, 518-746-2562, lgm4@cornell.edu for more information.)

BERRY WEED CONTROL "GOES GREEN" – THE SEQUEL

Cathy Heidenreich, Western NY Berry Extension Support Specialist, Judson Reid, Vegetable Specialist, Cornell Vegetable Program, and Alan Tomion, Tomion Farms, Penn Yan, NY

Biodegradable mulch isn't the only "green" weed control option being explored on farm by berry growers this season. As with many other commodities, there is serious interest in "no-till" production of small fruit crops. Conservation (or reduced) tillage has many benefits (see side bar right).

Research by Dr. Marvin Pritts at Cornell at Cornell has shown conservation tillage may be used successfully to establish both strawberries and raspberries using preplant cover crops. The technique in this case basically involves good perennial weed control prior to land preparation, followed by establishment of a dense cover crop in late summer early/fall before planting. The most commonly used cover crop is winter rye planted mid August to mid-September; suggested seeding rate is 40 lb/A.

Alan Tomion of Tomion farms in Penn Yan has been growing strawberries for 36 years. He is a third generation farmer on his family farm, which produces both small fruit (strawberries and raspberries), vegetables (potatoes, tomatoes, peppers, winter squash and cabbage), rhubarb, and forage crops (including wheat straw for winter mulching his own strawberries). Alan has 36 acres of strawberries currently under production along with 12 acres of summer and fall-bearing raspberries. Tomions recently added a new retail farm store to their operation, which features their fresh produce, bedding plants, trees and shrubs, a variety of baked goods, ice cream, specialty foods, and craft items. Other market channels for Alan's operation include U-Pick, and wholesales to large chains like Wegmans and many other wholesale buyers.

Weed control is one of Alan's bigger challenges in strawberry production (along with harvest labor). He routinely uses preplant cover crops prior to strawberry planting, but had never tried a no-till approach in combination with his pre-plant cover crops. Having an excellent wheat cover crop established on the 12 acres set aside for his new strawberry planting, he volunteered to participate in an on farm no-till strawberry demonstration.

Wheat cover crop on nearby field planted at the same time as that on the new strawberry planting.

Top 10 Benefits Of Conservation Tillage Systems

Conservation tillage systems offer numerous benefits that intensive or conventional tillage simply can't match:

1 Reduces labor, saves time. As little as one trip for planting compared to two or more tillage operations means fewer hours on a tractor and fewer labor hours to pay ... or more acres to farm. For instance, on 500 acres the time savings can be as much as 225 hours per year. That's almost four 60-hour weeks.
2 Saves fuel. Save an average 3.5 gallons an acre or 1,750 gallons on a 500-acre farm.
3 Reduces machinery wear. Fewer trips save an estimated $5 per acre on machinery wear and maintenance costs—a $2,500 savings on a 500-acre farm.
4 Improves soil tilth. A continuous no-till system increases soil particle aggregation (small soil clumps) making it easier for plants to establish roots. Improved soil tilth also can minimize compaction. Of course, compaction is also reduced by reducing trips across the field.
5 Increases organic matter. The latest research shows the more soil is tilled, the more carbon is released to the air and the less carbon is available to build organic matter for future crops. In fact, carbon accounts for about half of organic matter.
6 Traps soil moisture to improve water availability Keeping crop residue on the surface traps water in the soil by providing shade. The shade reduces water evaporation. In addition, residue acts as tiny dams slowing runoff and increasing the opportunity for water to soak into the soil. Another way infiltration increases is by the channels (macropores) created by earthworms and old plant roots. In fact, continuous no-till can result in as much as two additional inches of water available to plants in late summer.
7 Reduces soil erosion. Crop residues on the soil surface reduce erosion by water and wind. Depending on the amount of residues present, soil erosion can be reduced by up to 90% compared to an unprotected, intensively tilled field.
8 Improves water quality. Crop residue helps hold soil along with associated nutrients (particularly phosphorous) and pesticides on the field to reduce runoff into surface water. In fact, residue can cut herbicide runoff rates in half. Additionally, microbes that live in carbon-rich soils quickly degrade pesticides and utilize nutrients to protect groundwater quality.
9 Increases wildlife. Crop residues provide shelter and food for wildlife, such as game birds and small animals.
10 Improves air quality. Crop residue left on the surface improves air quality because it: Reduces wind erosion, thus it reduces the amount of dust in the air; Reduces fossil fuel emissions from tractors by making fewer trips across the field; and Reduces the release of carbon dioxide into the atmosphere by tying up more carbon in organic matter.

(Source: Core 4 Conservation, Purdue University Conservation Technology Information Center)

In early May before planting, the cover crop was killed with herbicide, then mowed to facilitate incorporation. One section was left with the killed cover crop intact and unincorporated for the on farm trial. The planting was planted with dormant runner plants on 5 May. A post-plant application of Devrinol applied to both sections to further help reduce newly emerging weeds.

Killed cover crop, bottom right corner.

Two generations of Tomions at work during planting.

Alan immediately noticed the difference in soil moisture between the conventional and no-till sections as the planter moved through the soil. The no-till section had much greater soil moisture. This was of special interest to him as there is no water source available on farm for irrigation, making plant establishment difficult in drier years.

Alan checking the plants after planting. Note differences in soil moisture between conventional and no-till section.

No obvious differences in plant size or establishment were seen between conventional and no-till plants during weeks two through four. Weed pressure was relatively equal in both sections; the no-till section had slightly higher pressure, due in part (we suspect) to an edge effect from being adjacent to the drainage ditch.

Planting week 2: left 4 rows conventionally planted, right 4 rows no-till.

Plant becoming established in no-till section.

Alan and his family hosted a joint small fruit and vegetable twilight meeting organized by Judson Reid on July 11 allowing local and regional growers to get updates on vegetable and berry pest management and see first hand the strawberry no-till planting.

Planting Week 4 (conventional left, no –till, right)

Weed pressure increased substantially across the planting during weeks 6-8 as rain fell frequently and abundantly across the region. Data on weed pressure and plant establishment continues to be collected from this trial. More results will be forthcoming in future issues of the New York Berry News. Stay tuned!

(Editor's Note: Many thanks to Jud and Alan for their assistance with this project. If you would be interested in participating in a small fruit no-till trial on your farm, please contact Cathy Heidenreich 315-787-2367, mcm4@cornell.edu or Laura McDermott, 518-746-2562, lgm4@cornell.edu for more information.)

WEATHER NOTES

NEW YORK CROP WEATHER SERVICE NOTES

Week ending July 6th: A couple of cold fronts moved through the region, the first on June 29th and another on July 3rd each triggering a round of showers and thunderstorms. Otherwise, high pressure dominated at the surface with longwave trough over the region aloft. Temperatures were seasonable. In Albany County, the strawberry season was winding down, and producers were satisfied with the crop.

Week ending July 13th: Temperatures were above normal with precipitation generally below normal as the Bermuda high dominated the weather across New York State. A cold front mid week brought showers and thunderstorms to region. Canadian high pressure dominated the weather Thursday and Friday with lower humidity levels and cooler than normal weather for the 2nd week of July. The surface high moved off the eastern New England Coast Saturday morning with a warm front moving north of upstate New York. A warm and humid air mass opened the weekend.

Week ending July 20th: The week started out with seasonable temperatures, however the heat and humidity increased with 90 degree plus readings by the end of the week. A slow moving cold front moved across the state Sunday into Monday eventually becoming stationary just off the coast Monday. This frontal boundary dissipated early in the week as surface high pressure built back in. Another frontal system approached the region by mid week. The flow aloft became zonal and the front oscillated over the region and was the focus for convection for the rest of the week. Severe storms occurred across western into central New York Wednesday and Thursday and across northern and eastern New York and Vermont Friday. The Long Island Region reported Potato leafhoppers are lingering. Japanese beetles had been low but building. The raspberry harvest is coming to a close in Ontario County, while the blueberry harvest has started. In Steuben County, hail damaged blueberries. Parts of Madison County were hit with hail again.

Week ending July 27th: Wet and stormy with a nearly stationary boundary across area much of the week providing focus for convection. Many storms produce very heavy rainfall. Widespread torrential heavy rains occurred mid week and the boundary finally moved off to the east. Another cold front gradually approached the region from the west Saturday triggering another round of convection. Growers in Wayne County awoke on Wednesday to see destruction from yet another high wind hail storm. This one cut a path across the central portion of the county. The storm wrecked crops on farms that had missed earlier storms and added to problems on some farms that had been hit earlier. Rainstorms with hail also hit areas of Ontario County.

Week ending August 4th: Much of the week featured near seasonable temperatures with rainfall at or above normal levels. A series of cold fronts moving from west to east were accompanied by scattered showers and thunderstorms. A low pressure system developed along one of these cold fronts on Saturday bringing more widespread showers and thunderstorms to the state along with locally heavy rainfall. In the Lake Ontario fruit region, blueberry harvest was well underway, summer raspberries were still producing fruit, and strawberries were being renovated. *(Editor's note: During grower visits to Chautauqua County this week I saw one farm with serious hail damage to blueberries which the grower reported to have occurred mid-week.)*

WEATHER REPORTS OF TEMPERATURES AND PRECIPITATION THROUGHOUT NEW YORK STATE FOR WEEK ENDING SUNDAY 8:00am, July 6th, 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	59	72	2	157	1129	196	0.20	-0.56	9.71	-0.98
Glens Falls	83	49	67	-2	121	847	52	0.18	-0.47	8.11	-2.20
Poughkeepsie	89	59	72	2	160	1165	180	1.71	0.81	13.74	1.32
Mohawk Valley											
Utica	77	47	63	-3	90	658	58	0.59	-0.35	13.33	-1.09
Champlain Valley											
Plattsburgh	82	49	67	-3	119	802	-14	0.56	-0.10	10.52	1.19
St. Lawrence Valley											
Canton	83	48	66	-2	116	843	137	0.55	-0.20	11.32	1.54
Massena	81	46	65	-4	107	815	58	0.27	-0.44	9.41	0.46
Great Lakes											
Buffalo	81	52	67	-4	120	976	97	0.80	0.09	9.91	-0.27
Colden	78	47	63	-4	92	743	50	0.58	-0.29	9.97	-2.29
Niagara Falls	82	50	67	-4	117	944	51	0.37	-0.29	8.14	-1.91
Rochester	84	50	68	-2	128	1089	222	0.66	0.03	6.21	-2.67
Watertown	82	44	66	-2	111	839	138	0.62	0.17	9.47	1.21
Central Lakes											
Dansville	82	51	66	-4	114	952	89	0.50	-0.28	6.19	-4.04
Geneva	82	51	66	-4	114	933	92	0.92	0.18	7.76	-2.48
Honeoye	81	46	66	-5	111	900	28	0.65	-0.07	8.65	-1.46
Ithaca	80	50	66	-3	110	853	95	0.82	0.00	9.20	-1.52
Penn Yan	85	50	69	0	137	1120	279	0.64	-0.10	5.27	-4.97
Syracuse	83	51	68	-2	127	1036	159	0.91	0.00	9.36	-1.84
Warsaw	78	48	63	-3	93	737	97	1.01	0.15	10.44	-1.45
Western Plateau											
Alfred	77	43	62	-5	83	649	25	0.57	-0.38	9.31	-1.95
Elmira	82	46	66	-3	117	938	129	0.53	-0.31	8.22	-2.19
Franklinville	78	46	62	-3	86	667	104	0.80	-0.09	10.13	-1.72
Sinclairville	81	51	65	-2	104	768	120	1.16	0.20	10.87	-2.28
Eastern Plateau											
Binghamton	79	53	66	-2	116	924	143	0.30	-0.54	8.47	-2.36
Cobleskill	81	51	67	0	120	811	90	0.48	-0.38	11.11	-0.77
Morrisville	81	52	66	-1	112	767	89	0.50	-0.36	10.48	-1.16
Norwich	83	51	66	-1	118	786	67	0.24	-0.61	7.60	-4.34
Oneonta	86	56	70	5	140	963	303	0.16	-0.75	8.06	-4.74
Coastal											
Bridgehampton	89	63	73	4	164	999	165	0.46	-0.25	8.78	-3.18
New York	93	68	78	3	199	1468	206	0.37	-0.54	9.96	-2.01

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, July 13th, 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	88	56	75	4	176	1305	218	0.32	-0.38	10.03	-1.36
Glens Falls	88	51	72	3	157	1004	69	0.03	-0.60	8.14	-2.80
Poughkeepsie	90	57	76	4	181	1346	207	0.05	-0.86	13.79	0.46
Mohawk Valley											
Utica	83	52	67	2	123	781	69	0.61	-0.30	13.94	-1.39
Champlain Valley											
Plattsburgh	87	53	71	1	148	950	-6	0.02	-0.61	10.54	0.58
St. Lawrence Valley											
Canton	88	54	70	3	140	982	150	0.56	-0.15	12.07	1.58
Massena	87	53	69	0	137	952	62	0.47	-0.23	9.88	0.23
Great Lakes											
Buffalo	87	58	74	4	174	1150	124	0.33	-0.32	10.24	-0.59
Colden	86	55	71	4	147	890	76	0.44	-0.37	10.41	-2.66
Niagara Falls	89	55	74	5	173	1117	77	1.51	0.88	9.65	-1.03
Rochester	93	57	76	6	182	1271	264	0.12	-0.46	6.33	-3.13
Watertown	90	53	71	4	151	990	160	0.43	0.02	9.90	1.23
Central Lakes											
Dansville	89	54	72	2	156	1108	105	2.26	1.56	8.45	-2.48
Geneva	90	58	73	3	163	1096	115	0.16	-0.52	7.92	-3.00
Honeoye	89	51	72	1	156	1056	37	0.19	-0.44	8.84	-1.90
Ithaca	88	53	71	4	150	1002	115	0.34	-0.43	9.27	-2.22
Penn Yan	92	59	77	7	188	1308	327	0.47	-0.21	5.74	-5.18
Syracuse	89	56	74	4	169	1205	188	0.11	-0.77	9.47	-2.61
Warsaw	84	54	71	5	146	883	129	0.94	0.17	11.38	-1.28
Western Plateau											
Alfred	84	49	68	3	129	778	42	0.42	-0.43	9.73	-2.38
Elmira	90	51	73	4	162	1100	154	0.52	-0.25	8.74	-2.44
Franklinville	85	49	69	4	134	801	133	0.84	0.00	10.97	-1.72
Sinclairville	86	55	71	5	150	918	154	0.71	-0.20	11.58	-2.48
Eastern Plateau											
Binghamton	86	54	72	3	156	1080	166	0.05	-0.74	8.52	-3.10
Cobleskill	87	51	71	4	150	961	114	0.03	-0.77	11.14	-1.54
Morrisville	86	53	68	2	130	897	100	0.40	-0.43	10.88	-1.59
Norwich	88	51	69	2	134	920	75	0.23	-0.56	7.83	-4.90
Oneonta	89	52	71	6	150	1113	334	0.32	-0.59	8.38	-5.33
Coastal											
Bridgehampton	84	58	73	3	165	1164	181	0.00	-0.69	8.78	-3.87
New York	91	69	79	4	207	1675	231	0.08	-0.83	10.04	-2.84

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, July 20th, 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	91	56	75	3	178	1483	242	1.33	0.63	11.36	-0.73
Glens Falls	89	50	72	2	154	1158	83	1.71	1.05	9.85	-1.75
Poughkeepsie	92	59	76	4	184	1530	232	0.71	-0.20	14.50	0.26
Mohawk Valley											
Utica	82	53	68	2	128	909	82	0.77	-0.09	14.71	-1.48
Champlain Valley											
Plattsburgh	83	50	69	-2	134	1084	-17	2.56	1.88	13.10	2.46
St. Lawrence Valley											
Canton	84	56	71	2	146	1134	170	0.42	-0.35	12.49	1.23
Massena	82	50	68	-2	131	1083	54	1.83	1.13	11.71	1.36
Great Lakes											
Buffalo	85	58	74	3	167	1317	141	0.60	-0.07	10.84	-0.66
Colden	85	52	70	3	142	1032	92	0.85	0.08	11.26	-2.58
Niagara Falls	87	55	74	3	169	1286	97	0.74	0.12	10.39	-0.91
Rochester	89	55	75	5	175	1446	293	0.57	-0.01	6.90	-3.14
Watertown	82	54	71	3	148	1138	175	0.81	0.40	10.71	1.63
Central Lakes											
Dansville	89	53	73	3	162	1272	124	0.80	0.15	9.13	-2.45
Geneva	87	54	73	3	163	1259	131	1.91	1.28	9.83	-1.72
Honeoye	87	51	71	-1	152	1208	36	1.53	0.94	10.37	-0.96
Ithaca	89	53	71	3	152	1154	134	2.09	1.32	11.36	-0.90
Penn Yan	92	58	76	6	186	1494	366	3.34	2.71	9.08	-2.47
Syracuse	89	57	74	4	166	1371	207	0.98	0.14	10.45	-2.47
Warsaw	83	51	69	3	136	1019	146	1.41	0.67	12.79	-0.61
Western Plateau											
Alfred	85	46	67	0	118	894	41	1.04	0.27	10.77	-2.11
Elmira	90	50	72	2	153	1253	167	1.47	0.71	10.21	-1.73
Franklinville	85	48	68	4	129	930	153	1.90	1.13	12.87	-0.59
Sinclairville	87	50	71	5	146	1064	181	0.97	0.09	12.55	-2.39
Eastern Plateau											
Binghamton	87	58	73	4	159	1239	188	1.20	0.43	9.72	-2.67
Cobleskill	87	52	72	4	154	1115	142	1.77	1.00	12.91	-0.54
Morrisville	83	54	69	2	137	1034	112	1.86	1.09	12.74	-0.50
Norwich	91	51	71	3	149	1069	97	0.71	-0.06	8.54	-4.96
Oneonta	92	54	73	7	161	1274	376	1.48	0.59	9.86	-4.74
Coastal											
Bridgehampton	91	58	77	6	189	1353	216	0.00	-0.63	8.78	-4.50
New York	97	70	83	7	231	1906	273	0.54	-0.41	10.58	-3.25

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, July 27th, 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	87	58	73	2	162	1645	249	5.06	4.36	16.42	3.63
Glens Falls	83	54	69	-2	134	1292	77	4.57	3.87	14.42	2.12
Poughkeepsie	94	57	75	3	177	1707	248	2.46	1.60	16.96	1.86
Mohawk Valley											
Utica	77	53	65	-2	110	1019	74	3.11	2.20	17.82	0.72
Champlain Valley											
Plattsburgh	83	55	68	-3	130	1214	-30	1.99	1.25	15.09	3.71
St. Lawrence Valley											
Canton	79	56	69	0	131	1265	168	2.51	1.73	15.00	2.96
Massena	80	55	69	-1	136	1219	51	2.35	1.62	14.06	2.98
Great Lakes											
Buffalo	80	59	71	-1	146	1463	135	0.92	0.20	11.76	-0.46
Colden	79	55	68	0	128	1160	94	4.38	3.61	15.64	1.03
Niagara Falls	81	58	70	-3	140	1426	87	1.51	0.87	11.90	-0.04
Rochester	84	58	72	2	155	1601	303	2.69	2.06	9.59	-1.08
Watertown	80	55	68	-2	129	1267	171	2.47	2.02	13.18	3.65
Central Lakes											
Dansville	86	55	72	2	153	1425	130	3.50	2.87	12.63	0.42
Geneva	85	58	71	0	146	1405	130	2.23	1.60	12.06	-0.12
Honeoye	85	54	70	-2	142	1350	24	3.29	2.68	13.66	1.72
Ithaca	88	55	71	2	146	1300	147	2.40	1.64	13.76	0.74
Penn Yan	90	61	74	4	169	1663	388	1.15	0.52	10.23	-1.95
Syracuse	86	61	72	2	158	1529	218	2.62	1.78	13.07	-0.69
Warsaw	79	54	67	1	122	1141	149	3.53	2.79	16.32	2.18
Western Plateau											
Alfred	81	46	65	-2	109	1003	31	2.48	1.71	13.25	-0.40
Elmira	89	51	70	1	144	1397	171	0.83	0.13	11.04	-1.60
Franklinville	82	52	68	3	125	1055	166	2.25	1.48	15.12	0.89
Sinclairville	82	51	69	2	132	1193	191	2.33	1.44	14.88	-0.95
Eastern Plateau											
Binghamton	85	57	70	0	139	1378	187	2.98	2.21	12.70	-0.46
Cobleskill	84	56	70	2	139	1254	154	6.46	5.69	19.37	5.15
Morrisville	82	52	68	-1	125	1159	111	2.11	1.34	14.85	0.84
Norwich	90	53	69	1	138	1207	104	4.22	3.51	12.76	-1.45
Oneonta	90	54	72	6	155	1429	412	3.09	2.25	12.95	-2.49
Coastal											
Bridgehampton	86	60	75	3	177	1530	238	1.37	0.70	10.15	-3.80
New York	94	70	80	3	213	2119	297	1.57	0.66	12.15	-2.59

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, August 4th, 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	84	61	73	1	159	1804	254	0.49	-0.27	16.91	3.36
Glens Falls	83	56	69	0	138	1430	76	0.00	-0.76	14.42	1.36
Poughkeepsie	91	59	74	2	168	1875	256	0.91	0.07	17.87	1.93
Mohawk Valley											
Utica	77	55	66	-1	111	1130	73	0.60	-0.35	18.42	0.37
Champlain Valley											
Plattsburgh	84	55	70	0	140	1354	-30	0.92	0.10	16.01	3.81
St. Lawrence Valley											
Canton	78	57	68	-1	130	1402	177	0.93	0.08	15.82	2.93
Massena	80	55	69	1	139	1358	57	0.45	-0.32	14.51	2.66
Great Lakes											
Buffalo	82	62	72	2	155	1618	143	0.78	-0.03	12.54	-0.49
Colden	79	57	68	1	128	1288	96	0.86	0.03	16.50	1.06
Niagara Falls	81	56	71	0	149	1575	89	1.04	0.30	12.94	0.26
Rochester	82	62	72	3	156	1757	319	0.60	-0.09	10.19	-1.17
Watertown	78	56	69	0	133	1400	171	0.17	-0.39	13.35	3.26
Central Lakes											
Dansville	84	58	71	0	149	1574	138	1.22	0.57	13.85	0.99
Geneva	82	59	71	1	147	1552	132	0.28	-0.35	12.34	-0.47
Honeoye	82	57	71	-2	145	1495	20	0.39	-0.25	14.05	1.47
Ithaca	82	56	69	1	136	1436	150	0.69	-0.08	14.45	0.66
Penn Yan	85	61	73	4	163	1826	406	1.74	1.11	11.97	-0.84
Syracuse	82	57	72	3	157	1686	232	0.57	-0.22	13.64	-0.91
Warsaw	79	57	67	1	122	1263	153	1.27	0.50	17.59	2.68
Western Plateau											
Alfred	82	51	67	0	119	1122	33	0.28	-0.49	13.53	-0.89
Elmira	86	56	71	2	149	1546	181	0.32	-0.38	11.36	-1.98
Franklinville	80	53	66	2	117	1172	178	0.23	-0.61	15.35	0.28
Sinclairville	83	55	69	3	135	1328	207	0.47	-0.44	15.35	-1.39
Eastern Plateau											
Binghamton	81	59	70	1	142	1520	196	0.14	-0.63	12.84	-1.09
Cobleskill	81	54	68	1	130	1384	158	0.36	-0.40	19.73	4.75
Morrisville	81	56	69	2	132	1291	121	0.76	-0.04	15.58	0.80
Norwich	84	55	69	2	138	1345	116	0.34	-0.36	13.10	-1.81
Oneonta	88	58	72	6	155	1584	448	0.09	-0.75	13.04	-3.24
Coastal											
Bridgehampton	87	57	74	2	169	1699	251	2.83	2.13	12.98	-1.67
New York	90	68	80	4	209	2328	317	0.72	-0.18	12.87	-2.77

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

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