# New York Berry News

CORNELL UNIVERSITY

Volume 08, Number 9 September 11, 2009


## What's Inside



## CURRANT EVENTS

**September 22, 2009.** *NE IPM Berry Webcast Series #2*: **Sap beetles, Tarnished Plant Bug, Strawberry Vine Weevil**. More information: Laura McDermott, lgm4@cornell.edu, 518-746-2562, or go to: http://www.fruit.cornell.edu/Berries/webinarindex.htm.

**September 24, 2009**. *Raspberry High Tunnel Field Day and Demonstration*. NYSAES, Geneva. For more information: Dr. Courtney Weber, caw 34@cornell.edu 315-787-2395.

**October 2, 2009.** *Cornell Hardy Kiwifruit Open House*, 1-3 PM, Lansing Orchard, Sweazey Rd, Lansing, NY. More information: Cathy Heidenreich, mcm4@cornell.edu, 315-787-2367.

**October 7, 2009.** *NE IPM Berry Webcast Series #3*: **Strawberry root rots and powdery mildew.** More information: Laura McDermott, lgm4@cornell.edu, 518-746-2562, or go to: http://www.fruit.cornell.edu/Berries/webinarindex.htm.

**October 15, 2009.** *Cornell 4th Annual Raspberry and Blackberry High Tunnel Tour*, 1 to 4 PM, East Ithaca Farm, Maple Avenue, Ithaca, NY. More information: Cathy Heidenreich, mcm4@cornell.edu, 315-787-2367.

**October 30, 2009.** *NE IPM Berry Webcast Series #3*: **Strawberry Weed Control: products overview, cultural approaches**. More information: Laura McDermott, lgm4@cornell.edu, 518-746-2562, or go to: http://www.fruit.cornell.edu/Berries/webinarindex.htm.

**November 8-10, 2009.** *Southeast Strawberry Expo*, Sheraton Imperial Hotel, Research Triangle Park, NC. For information, contact the NC Strawberry Association, phone 919-542-4037, info@ncstrawberry.com.

**Dec. 7, 2009.** *NASGA Annual meeting as part of the Great Lakes Fruit Vegetable and Farm Market Expo***.** DeVos Place Convention Center, Grand Rapids, MI. More information: http://www.nasga.org/.

**Dec. 8-10, 2009.** *Great Lakes Fruit Vegetable and Farm Market Expo***.** DeVos Place Convention Center, Grand Rapids, MI. For more information www.gleexpo.com.

**January 25-27, 2010.** *Empire State Fruit and Vegetable EXPO/NYS Farmer's Direct Marketing Association Annual Conference*. OnCenter, Syracuse, NY. Mark your calendars – berry session Wednesday January 27th.

**February 2-4, 2010**. *Mid-Atlantic Fruit and Vegetable Convention*, Hershey Lodge, Hershey, PA. For more information visit http://www.mafvc.org/html/.

**February 24-26, 2010.** *North American Raspberry & Blackberry Conference*, Monterey, California, preceded by preconference tour. More information: http://www.raspberryblackberry.com/.

**June 22-26, 2011.** *10th International Rubus and Ribes Symposium, Zlatibor, Serbia***.** For more information contact: Prof. Dr. Mihailo Nikolic, Faculty of Agriculture, University of Belgr, Belgrade, Serbia. Phone: (381)63 801 99 23. Or contact Brankica Tanovic, Pesticide & Environment Research Inst., Belgrade, Serbia. Phone: (381) 11-31-61-773.

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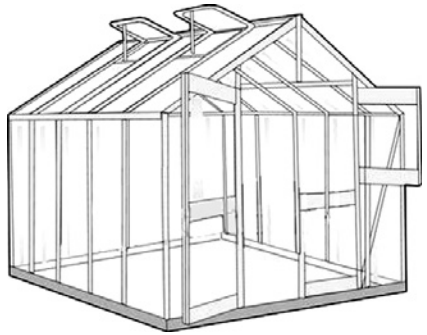
# Innovations in Greenhouse Crop Varieties

## September 26, 2009
## 8:45 a.m. - 1:00 p.m.

**$15 per person or $25 per business**

**Town of Chenango Community Room**
Town of Chenango
1529 State Rte 12
Binghamton, NY 13901



Sponsored by

**Cornell Cooperative Extension of Broome County**

Cornell Cooperative Extension
Broome County

# Schedule

**8:45 - 9 a.m.**
**Registration & Visit Information tables**

**9 a.m.**
**Welcome & Introductions**

**9:15 a.m.**
**Dr. Marvin Pritts**
**Cornell University, Horticulture Department**
Speaking on berry and bramble crops well suited to growing in a greenhouse/hoop house

**10:15 a.m.**
**Judson Reid**
**Cornell Cooperative Extension, Yates County**
Speaking on vegetable crops well suiting to growing in a greenhouse/hoop house

**11:15 a.m.**
**Dr. Chris Wein**
**Cornell University, Horticulture Department**
Speaking on the best varieties of cut flowers to grow in a greenhouse or hoop house

**12:15 p.m.**
**Chad Miller**
**Cornell University, Horticulture Department**
Speaking on greenhouse bulb production for cut flowers and containers

# Registration:

**Name(s):** _____

**Farm/Business Name:** _____

**Address:** _____

**Phone Number:** _____

**Email Address:** _____

**Types of Greenhouse Crops Currently Growing:**

_____

_____

_____

**Types of Greenhouse Crops Looking to Learn More about Growing:**

_____

_____

_____

**For more information, contact Carol at (607) 584-9966 or clf62@cornell.edu**

# GROWING CRANBERRIES IN THE NORTH COUNTRY – AN AGRICULTURAL ALTERNATIVE?

*Richard Gast; Programs Assistant – Horticulture / Natural Resources, Cornell Cooperative Extension Franklin County*

Cranberries are certainly unique. They are a wetland fruit. They grow on trailing vines, somewhat like strawberries. Natural cranberry beds are comprised of acid peat soil, sand and fresh water. A winter dormancy period is required to mature fruiting buds.

Man-made bogs must simulate natural conditions. If everything has been prepared correctly and the vines are properly cared for, new plantings will need to grow for about three years before they will bear harvestable fruit. After that, they will produce fruit indefinitely.

Earlier this summer, I had a look at some very exciting work being undertaken by an experienced Massachusetts cranberry grower at a site near the hamlet of Bombay, in northwestern Franklin County. I found what he is doing there truly remarkable. I had never seen anything like it.

You could say that he is reclaiming land, but in fact, it might be more appropriate to say that he is terraforming tracts of land, approximately 5 to 7 acres at a time; creating bogs that will very soon be producing a crop of red, ripe cranberries; a crop that he states will pay tens of thousands of dollars per acre. He's currently got about 50 acres in production. You do the math.

The grower has generously given me the go ahead to offer an Extension field meeting in September, and to open it up to the public, an opportunity which will allow visitors to see producing cranberry vines in man-made bogs with a crop of berries on them, nearly ready for harvest. It is, without a doubt, going to be a remarkable and thought-provoking event.

Date: Sept. 19th, 2009
Time: 10:30 AM
Cost: Free
Registration: Please contact Cornell Cooperative Extension of Franklin County.
Phone 518-483-7403 or email rlg24@cornell.edu
Location and directions will be provided upon registering.

Cranberries are one of only three commercially grown fruits native to North America. (The other two are blueberries and concord grapes.) The State of Massachusetts produces about 40 percent of the nation's cranberries. They are that state's number one agricultural commodity crop, harvested on approximately 15,000 acres of producing cranberry bogs. Another 35,000 or so acres of cranberries are cultivated on bogs located in Delaware, Maine, Michigan, New Jersey, New York, Oregon, Rhode Island, Washington, and Wisconsin. Cranberries are also grown in the Canadian Provinces of British Columbia, New Brunswick, Nova Scotia, Ontario, Prince Edward Island, and Quebec.

Other than as a side dish, essentially a condiment to complement the turkey at the Thanksgiving dinner table, it seems to me Americans pay very little attention to cranberries, which is a real shame, considering the versatility, the health benefits, and the history of the humble cranberry. They are loaded with vitamin C, keep wonderfully when frozen and can be used in breads, soups, teas, salads, desserts, stuffing and relishes.

No one can say for certain whether or not cranberries were a part of the first Thanksgiving supper in Plymouth, but there is a strong likelihood that they were. The Pilgrims would have learned about them from the Native Americans, including the Cape Cod Pequots, who called them 'ibimi (bitter berry) and used them as a staple; eating them fresh, ground, mashed, sweetened with maple sugar and made into a sauce, and baked into bread made with cornmeal. They also used cranberries to make 'pemmican,' a winter mainstay made from berries, dried game meat (usually venison), and melted fat. Although the Indians used cranberry juice as a dye, there is debate about whether or not they actually drank cranberry juice. Raw cranberry juice is quite bitter and if it were served as a drink it is very likely that maple sugar and / or other juices would have been added, or it may have been diluted with water and a bit of maple sugar or honey, to make it palatable.

There are several theories about how the European settlers came to call the little crimson fruits cranberries. The most universally accepted is that the Pilgrims actually referred to them as crane-berries, either because the blossoms resembled

the heads, necks and bills of English cranes before the flowers open, or because the berries were a favorite food of sandhill cranes. Cranberry is derived from that original name.

The first documented successful cultivation and harvesting of cranberries occurred sometime between 1810 and 1816, when Captain Henry Hall, a veteran of the Revolutionary War, began transplanting cranberry vines, fencing them in (to keep cattle out) and spreading sand on them (to simulate the natural windblown sand that occurred in particularly productive natural bogs), at his Cape Cod home in Dennis, Massachusetts. Captain Hall soon began shipping his cultivated berries to Boston and New York City. Eventually others began cultivating their own cranberries and, in 1871, the first association of American cranberry growers was formed.

It is interesting to note that cranberries shipped to Europe from Boston were packed in water in barrels; 100 pounds of berries per barrel. A number of the barrels were designated for use by the sailors, who ate them medicinally to prevent scurvy. (The vitamin C kept them healthy.) The barrel (100 pounds), a standard measure unique to cranberries, is still used today. By the way, in 1871 a barrel of cranberries cost about 60 cents.

I hope that you will join me on Sept 19th by accepting this rare invitation to visit a working cranberry farm just as the berries are ripening on the vines. It is also an opportunity to see cranberry bogs in various states of development (producing, not yet in production and under construction) and to learn about the 12-month operation of cranberry bogs, how cranberries are grown and harvested, and what it takes to get started.

The ground at the farm is relatively level and walking is easy. But we will be outdoors and walking, so please, wear appropriate shoes and dress for the weather. See you there!

## NEIPM BERRY WEBINAR SERIES UPDATE

The NEIPM Berry webinar series continues this month with the second in the series of talks taking place on September 22nd. Speakers for this webinar, airing at 12:45 PM are Dr. Greg Loeb, Cornell University, discussing management of strawberry sap beetle and tarnished plant bug and Dr. Richard Cowles, University of Connecticut, who will help growers better understand strawberry vine weevil and its management.

Please note a correction for the Wednesday October 7th, 2009 webinar. Dr. Michael Ellis, Ohio State University, will speak on managing strawberry *fruit rots,* not root rots as previously advertised. *(Our apologies Mike)*; Dr. David Gadoury, Cornell University will speak on strawberry powdery mildew management.

Friday October 30th, 2009, 12:45 PM. Dr. Robin Bellinder, Cornell University, will give an overview of strawberry weed management products; Dr. Marvin Pritts, Cornell University, will speak on cultural approaches to strawberry weed management.

The blueberry/cranberry miniseries kicks off on Wednesday, November 4th, 2009 with talks on weed management issues. Hilary Sandler, University of Massachusetts, will speak on IPM for dodder in cranberries; Dr. Eric Hansen, Michigan State University, will discuss new approaches to blueberry weed management.

Wednesday, November 18th, 2009 is the date for the webinar on blueberry and cranberry diseases. Dr. Annemiek Schilder, Michigan State University, will speak on blueberry viruses; Dr. Frank Caruso, University of Massachusetts, will speak on cranberry diseases.

The third webinar in the blueberry/cranberry series is slated for Wednesday, December 2nd, 2009. Blueberry and cranberry production is the focus for this webinar. Gary Pavlis of Rutgers will speak on site preparation and fertility; Sonia Schloemann of University of Massachusetts will discuss pollination considerations.

Details on the remaining webinars in the series will follow in the next issue of New York Berry News.

There is no charge for webcast participation, but registration is required. Email with URL connection details is only sent to people who have registered. Connection details are sent about two days before the webinars. Please be connected by 12:45 PM.

Connections for each webcast are limited to 70 participants so register now by contacting Laura McDermott, lgm4@cornell.edu or calling 518-746-2562.

Check the web site for additional program and group viewing location details: www.fruit.cornell.edu/webinar.

# FARM COMPUTER USAGE INCREASES

In 2009, 71 percent of New York farms had computer access, up from 67 percent in 2007 and 63 percent in 2005, reports Stephen Ropel, Director of USDA's National Agricultural Statistics Service, New York Field Office. Nationally, 64 percent had access. Only eight states had a higher percentage of farms with computer access. Sixty-six percent of New York farms have internet access, compared with 59 percent of U.S. farms. Forty-four percent of New York farms use computers for farm business, also higher than the U.S. percent of 36.

The primary method of internet access in New York was DSL with 31 percent of the total. Next was cable at 23 percent, then dialup at 29 percent.

# NEW YORK FARM NUMBERS

The 2007 Census of Agriculture placed New York farm numbers at 36,352. Of these, 18,743 farms were primarily engaged in crop production and 17,609 were primarily engaged in livestock production, according to Steve Ropel, Director of USDA's National Agricultural Statistics Service, New York Field Office. These were designated as defined by the North American Industrial Classification System (NAICS). The crop production operations had $1.51 billion in sales and the livestock production operations had $2.91 billion in sales.

The Census, which is conducted every five years, provides facts and figures on virtually every aspect of U.S. agriculture, including number and types of farm operations, the economic aspects of farm production and the demographics of U.S. farm operators.

*Details on this and other Census data can be found on-line through the New York NASS web site: www.nass.usda.gov/ny/. U.S., State and County tables are available in PDF, Text, and CSV files. Printed copies will be available along with the CD-ROMS and a searchable database. For further information or assistance, please call the New York office at 800-821-1276 or send an e-mail to: nass-ny@nass.usda.gov.*

# NORTHEAST SARE SUSTAINABLE COMMUNITY GRANT

Sustainable Community Grants make a direct connection between community revitalization and farming. Projects must address specific key issues such as farm finance, marketing, land use, water use, enterprise development, value-added product development, or other delineated topic areas. To apply, you must be affiliated with Cooperative Extension, NRCS, a municipality, a state department of agriculture, a college or university, a community organization, or other institutional entity. Proposals are due November 24, 2009.
For more information:

# NORTHEAST SARE FARMER GRANT

Farmer Grants are for commercial producers who have an innovative idea they want to test using a field trial, on-farm demonstration, or other technique. A technical advisor often an extension agent, crop consultant, or other service professional is required as a project participant. Projects should seek results other farmers can use, and all projects must have the potential to add to our knowledge about effective sustainable practices. Proposals are due December 8, 2009.

For more information: http://nesare.org/get/farmers/ or contact: Northeast SARE 655 Spear St. University of Vermont Burlington, VT 05405-0107; phone :(802) 656-0471.

# RFA RELEASED FOR THE IPM PARTNERSHIP GRANTS PROGRAM

The Northeastern Integrated Pest Management Center is pleased to announce the availability of funding for 2010 through the **IPM Partnership Grants Program,** which is supported by the USDA. A full Request for Applications (RFA) for the program is linked from http://NortheastIPM.org . Approximately $450,000 will be available in 2010 to fund projects that foster the development and adoption of integrated pest management. The program seeks applications for five project types: (1) IPM Working Groups, (2) IPM Issues, (3) Regional IPM Publications, (4) IPM Planning and Assessment Documents, and (5) IPM Minigrants.

**ELIGIBILITY:** Anyone in the Northeast may apply. Submissions from private individuals, public and private institutions or organizations, businesses, and commodity groups are encouraged. The primary project director must be from the northeastern region.

**SUBMISSION DEADLINE:** Applications must be submitted online and are due Monday, December 14, 2009. See the complete RFA for full submission instructions.

**QUESTIONS:** If you have questions about the program, please contact grants manager John Ayers, co-director of the Northeastern IPM Center, Pennsylvania State University (phone 814-235-0688; email jea@psu.edu).

# SERVSAFE FOOD SAFETY CERTIFICATION COURSE - SEPTEMBER 23 & 30

This 2-day course (8:30am-5:30pm both days) provides nationally-recognized certification in food safety and fulfills NYS food safety certification standards. ServSafe certification is valid for a period of 5 years. Fee: $150 per person, includes textbook, all written materials, certification exam, and light refreshments. Call 607-272-2292 to register by September 7, or email Carole Fisher at crf11@cornell.edu for more information. The course to be held at the CCE-Tompkins County office.

# 2009 CORNELL STRATEGIC MARKETING CONFERENCE – NOVEMBER 2 & 3

*Story Telling: Marketing the Unique Story of Your Business for Success!*

The marketing decisions of today's agribusiness selling agricultural, food, and specialty products are becoming more and more complex. Buyers are demanding a closer connection to their food and knowing, not only more about the products, but more about the farm or firm that produces it.

Marketing the unique story of your business provides the opportunity to showcase the unique qualities of your firm, separates you from your competitors & allows you to capitalize on your competitive advantages. Effectively communicating and marketing the story is what this conference is all about.

Conference features:

- successful local food and agribusinesses describing their stories and keys to success
- elements to defining your successful business story and using it as a marketing tool
- ways to identify and market your products to growing markets and diverse market channels
- key experts detailing low-cost & effective marketing methods and analyzing performance

The conference is open to all members of the agricultural and food industry and will be held at the Henry A Wallace Visitor and Education Center at the FDR Presidential Library and Museum in Hyde Park, NY.

The conference is organized by the Agricultural Marketing and Management Program Work Team (PWT), with support provided by the Cornell Program on Agribusiness and Economic Development http://agribusiness.aem.cornell.edu, the Department of Applied Economics and Management at Cornell University http://aem.cornell.edu, and CCE-Dutchess County http://blogs.cce.cornell.edu/dutchess/.

For more information contact Todd Schmit, Department of Applied Economics and Management, 607-255-3015, tms1@cornell.edu or Les Hulcoop, CCE-Dutchess County, 845-677-8223, lch7@cornell.edu.

Agenda and registration materials can be found athttp://marketingpwt.aem.cornell.edu.

# FUTURE CLEANSWEEPNY COLLECTION EVENTS

Planning has begun for a Fall 2009 CleanSweepNY program which will target the following counties: Broome, Cayuga, Chenango, Cortland, Madison, Onondaga, Oswego, Tioga and Tompkins.

## About CleanSweepNY

CleanSweepNY is an Environmental Benefit Project which was initiated by the New York State Department of Environmental Conservation's Bureau of Pesticide Management and it describes in one word an effort to safely and economically dispose of canceled, unwanted, unusable, or otherwise obsolete pesticides and other chemicals from agricultural or non-agricultural business activities. CleanSweepNY also provides for the disposal of elemental mercury, mercury containing devices such as thermometers, manometers, etc... from schools and other entities.

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

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

Due to the low number of metal pesticide containers being turned in and due to the added cost for providing this service, CleanSweepNY will no longer collect for recycling any metal pesticide containers or drums. We apologize for any inconvenience this may bring.

## Fall 2009 CleanSweepNY Collections

Specific collection sites and dates are to be determined and will be posted on the CleanSweep website (http://www.cleansweepny.org/) as soon as the information becomes available.

If you have questions or comments, please call 1-877-SWEEPNY (1-877-793-3769) or send email to: info@cleansweepny.org.

The following Three CleanSweepNY Sites will be used for the Fall 2009 Collections:

**November 2nd and 3rd**
N. Syracuse NYSDOT Facility
5430 South Bay Road
N. Syracuse, NY 13212

**November 4th and 5th**
Cortland NYSDOT Facility
3668 Rte 281
Cortland, NY 13045

**November 6th**
Castle Creek NYSDOT Facility
1225 Route 11
Castle Creek, NY 13744

# NY FARM VIABILITY INSTITUTE AWARDS GRANTS TO 28 FARM PROJECTS

*Rebecca Schuelke Staehr, NYFVI Communication Specialist*

August 24, 2009. The New York Farm Viability Institute awarded close to $3 million in grants to 28 projects that are designed to help the state's farmers improve profitability and provide models for other farms to follow.

"We are excited to announce investments in these projects. Our outcome-based program model promotes economic development in New York's communities," said John Lincoln, chair of the Farm Viability board of directors an owner of Linholm dairy farm in Bloomfield, NY.

For example, 33 projects funded in 2005, now all completed, returned more than $35 million to New York farmers in new revenue, decreased expenses and capital investment. That's more than 10 times the amount the Institute invested in the projects.

The New York Farm Viability Institute is a farmer-led nonprofit group that supports efforts to help New York farmers improve profitability. The Institute funds applied research and outreach education projects that work with farms of all sizes, production practices, agricultural sectors, commodities, and locations in the state.

New York Farm Viability received funding from the New York State legislature, and Department of Agriculture and Markets.

Successful proposals under NY Farm Viability's 2009 grant program include a project by the nonprofit American Farmland Trust to promote best management environmental practices among field crop growers, without compromising crop yields.

Cornell University's animal science and applied economics departments will offer management tools to help dairy farmers control costs. Cornell Pro-Dairy's Dairy Profit Monitor program helps farmers analyze production costs, opportunities and profit on a monthly basis. The university's Applied Economics and Management program's Dairy Farm Business Summary provides farmers with an annual financial benchmarking tool for comparing costs and profits against peers', and identifying places for change.

The New York Wine Grape Growers will develop certification standards for grape growers seeking to market their products as raised with environmentally-friendly practices.

Cornell University economists will help farmers analyze the economic feasibility of feedstock grown for bioenergy, as well as facilitate contracting between farmers that grow biomass and companies that produce energy. The Institute received 73 proposals, seeking more than $8 million in funds.

"The New York Farm Viability Institute is farmer-driven," Lincoln said. "Farmers identify the priority areas for research and programs. Farmers help design the projects, implement the change on their farms, and share in outreach, promoting what worked and what didn't to other farmers.

"Our interest is in providing practical solutions to questions farmers have now, to help drive innovation on the farm."

The Institute's all farmer board of directors makes all grant funding decisions. The board seeks input from advisory panels comprised of farmers active in the different agricultural sectors in the state.

Grants were awarded in four program categories. Agriculture Innovation Center projects work with farmers to improve business planning, structure and marketing, and develop new products. Energy Management & Bioenergy projects promote farm-to-fuel systems to develop bioenergy production and processing in the state, and increase alternative energy use at the farm.

A new grant category this year, Outreach & Applied Research, funds projects that focus on educational outreach and service, transfer of information to new and underserved audiences, testing theory in farm conditions, adapting technology for not-yet-tested conditions, and more.

Focus Opportunity projects do not fit the Institute's core funding programs and may require additional coordination and broader scope than other projects.

Funded projects last from six months to two years.

Grants were awarded to American Farmland Trust, Cornell Cooperative Extension of Tompkins County, Cornell University, Farm Fresh First, Finger Lakes Area Resource Conservation & Development Council, Finger Lakes Dexter Creamery, Hudson Mohawk Resource Conservation & Development Council, New York Corn Growers Association, New York State.

# *NYFVI 2009 Grant Awards*

| *Grant Program* | *Project Title* | *Organization* | *Award $* |
|---|---|---|---|
| **AIC 09 002** | Stimulating the Rural NYS Economy via Farm Business Planning | Cornell University | ***150,000.00*** |
| **AIC 09 005** | Develop a Standard for Spreadable Kefir Cheese and Establish Benchmarks for Aging a Raw Milk Spreadable Cheese | Finger Lakes Dexter Creamery | ***8,181.34*** |
| **AIC 09 014** | New Product for NY: Southern Greens & Spinach Grown for Frozen Processing | Farm Fresh First | ***34,000.00*** |
| **AIC 09 019** | Establishing a grower-based organization for the certification and marketing of sustainable NY grape and wine products with the Vine Balance program. | New York State Wine Grape Growers | ***148,410.00*** |
| **FOC 09 001** | Evaluation and Future Directions for NYFVI-funded Marketing Projects on Specialty Crops (fruits, Vegetables & Ornamentals): 2006-Present | Cornell University | ***128,653.00*** |
| **FOC 09 002** | NY Beginning Farmer Initiative | Cornell University | **40,000.00** |
| **NRG 09 001** | Improved Establishment and Weed Management Methods for Shrub Willow Bioenergy Crops | Cornell University | ***50,000.00*** |
| **NRG 09 002** | Building Biomass Markets through the Development of Long-Term contracts between Farmers and End-Users | Cornell University | ***149,999.00*** |
| **NRG 09 003** | Cellulosic Sorghum Feedstocks for Northern Latitude Energy Production: Line Evaluation and Economic Feasibility for Upstate NY | Cornell University | ***140,000.00*** |
| **NRG 09 009** | Integrated Management of Switchgrass Smut to Prevent Spread and Biomass Losses in NY State | Cornell University | ***121,694.00*** |
| **OAR 09 001** | Biological Control of Alfalfa Snout Beetle: On farm rearing and application of biocontrol nematodes. | Cornell University | ***99,729.00*** |
| **OAR 09 002** | Optimizing Timing of Tannin Additions for Quality New York Wine Production | Cornell University | ***40,781.00*** |
| **OAR 09 003** | Increasing Dairy Farm Profitability | Cornell University | ***149,404.00*** |
| **OAR 09 004** | Promoting Sustainability in Bulk Juice and Wine Operations Through Business Planning, Cost Accounting and Innovative Implementation Strategies. | Cornell University | ***127,406.00*** |
| **OAR 09 006** | Enhanced tools for dairy farm business analysis by New York farms | Cornell University | ***149,884.00*** |
| **OAR 09 007** | Improving Pest Management by Optimizing Nitrogen Inputs and Novel Insecticides in Fresh Market Onions | Cornell University | ***40,285.00*** |
| **OAR 09 010** | Improving Production Efficiency for NYS Berry Farmers | Cornell University | ***149,769.00*** |
| **OAR 09 015** | Extending Nursery Pest Control Innovations | Cornell University | ***13,027.00*** |
| **OAR 09 016** | Irrigation and Fertigation of Tall Spindle Apple Orchards To Improve Early Growth, Early Yield and Long-term Profitability | Cornell University | ***110,561.00*** |
| **OAR 09 017** | Expanding Use of Reduced Tillage Systems on NY Vegetable Farms | Cornell University | ***99,743.00*** |
| **OAR 09 019** | Improving Potash Management on Dairy and Cash Crop Farms for Reduced Cost of Production or Increased Yield | Cornell University | ***149,952.00*** |
| **OAR 09 020** | Reducing Financial Management Barriers Faced by Organic Dairy Producers in Western New York | Finger Lakes Resource Conservation & Development | ***20,090.00*** |
| **OAR 09 021** | Passive Isolation of Manure Solids and Liquids | Cornell University | ***59,000.00*** |
| **OAR 09 022** | Increasing Profitability for NY Livestock & dairy Farmers Via Grazining Technical Assistance | Hudson Mohawk Resource Conservation & Development Council | ***75,000.00*** |
| **OAR 09 025** | Profit Team Pilot Program for Field Crops Farmers | New York Corn Growers Association | ***100,000.00*** |
| **OAR 09 028** | Evaluating Marketing Channel Performance for Small, Mid-sized and Large Farms | CCE Tompkins County | ***127,486.00*** |
| **OAR 09 030** | Reducing Barriers to Environmental Best Management in Field Crops | American Farmland Trust | ***64,013.00*** |
| **OAR 09 038** | Expanding maple production in NYS by increasing trees tapped and improving operation efficiency | NYS Maple Producers Association | ***80,000.00*** |

# NYBGA AND NYFVI CONTINUE TO WORK PROMOTE BERRY PRODUCTION EFFICIENCY IN NEW YORK

A new two year project submitted by the New York Berry Growers Association (NYBGA), in conjunction with the Cornell Small Fruit Program Work Team, has been funded by the New York Farm Viability Institute (NYFVI). The purpose of this project is to continue to facilitate the demonstration and implementation of technologies that will improve the production efficiency of practices involved in producing high quality berry fruit.

Dr. Pritts, Professor and Chair of the Department of Horticulture, Ithaca, will serve as project leader for the new project. Other collaborators on the project will include Cathy Heidenreich, Berry Extension Support Specialist with the Dept. of Horticulture, Laura McDermott, Capital District Vegetable and Small Fruit Team, Molly Shaw, South Central Ag Program, Mario Miranda Sazo, Lake Ontario Fruit Team, and Sandy Menasha, Long Island.

The project will involve four areas of berry production efficiency: berry crop nutrition, planting year weed management, bird management in blueberries, and season extension techniques.

The Board of Directors of the NYSBGA, together with selected members of the Fruit Program Work Team, will serve as the advisory board for the project. NYSBGA will help design the tools to evaluate the project, identify willing participants for more in-depth evaluations, and be directly involved in project assessment.

Members of the NYSBGA Board of Directors have also agreed to cooperate in demonstrations and applied research on their farms, and host on-farm meetings.

In addition to the direct involvement of berry growers in on farm demonstrations trials and twilight meetings, project information will be disseminated through printed and electronic mediums, twilight meetings, field days, and in-depth conferences.

**Who Can Participate?**
The project will be accessible to all commercial berry growers, regardless of scale, method of production, location within the state, or enrollment in a county organization.

**Project Background and Scope**
Areas of berry production efficiency addressed through the previous project (NYFVI 2007-2009) included reinforcement of weed and pest management practices and methodology, while on-farm research demonstrated improved weed control and pest management techniques. A series of 16 'Introduction to Commercial Berry Growing' workshops provided training for more than 500 potential commercial berry growers. CCE educators that provide support to berry farmers were involved in training opportunities via webcasts and a weekly seasonal 'berry call'.

Weed management continues to be the greatest challenge for berry growers. The growing market for organic and no-spray berries, in addition to the small number of labeled herbicides for berry crops, makes this task particularly difficult. This project will continue to evaluate and foster implementation of alternate weed management practices that promote production efficiency while minimizing environmental impacts and reducing inputs of conventional agro-chemicals. Initial work in the previous project supports continued work with growers to refine the killed cover crop technique and the use of biodegradable plastic mulch (biofilm) on many different berry crops.

Berry crop nutrition management was identified by CCE educators as a top priority for berry production training needs. Berry crop growers currently have a low level of participation in soil and leaf analysis – this project will first need to demonstrate the utility of these practices before expecting growers to use the diagnoses more regularly Rising costs of fertilizer products and concerns about environmental impacts of fertilizers make a tissue analysis-based approach to crop nutrition highly desirable. This project will assist growers in gaining an understanding of the principles and practices of berry crop nutrition though regular tissue analysis and how to use this tool to maximize production while reducing overall fertilizer usage. The timing of this study is good as the Cornell Nutrient Analysis Laboratory is now focusing on research and commercial nutrient analysis work will be done by a non-profit entity.

The increase in blueberry acreage in NYS will mean more attention to blueberry production methods and pest problems. Birds are a huge problem that impact overall yield and quality. On-farm trials examining a variety of bird control methods and emphasizing the importance of being pro-active when managing these pests will make a difference in blueberry growers' productivity.

One of the challenges to berry crop enterprise profitability is New York's short growing season. Season extension techniques such as floating row covers, frost protection, use of new cultivars, and high tunnels can greatly extend the berry production season, increasing the availability of local, high quality fresh market berries. The marketing season of berries can also be expanded by improving post-harvest handling and better utility of farm scale fruit preservation. Extending availability of local fresh market berries will promote consumer health, reduce reliance on imported product and improve farm profitability for more than 400 berry farmers in NYS.

**Proposed Milestones and Activities**

I. *NYS berry farmers will improve their approach to berry crop fertility leading to a 5% increase in yield/acre and a more appropriate use of fertilizer.* Growers will receive educational training on collecting and preparing leaf samples, evaluating, and implementing nutrient data for small fruit crops using foliar nutrient tests through 4 state-wide berry nutrition workshops. Sixty-five growers (50 conventional and 15 organic) will be invited to participate in nutrient testing. This will include a baseline soil test and 3 foliar analyses for berry crops. Thirty-nine growers (30 conventional and 9 organic) from across the state that participated in the foliar analysis program will be recruited to implement foliar test result recommendations on at least one berry crop per farm as compared to their normal fertility plan.

II. *Sixty NYS berry growers will improve their approach to establishment year weed management resulting in a 5% reduction in production expenses associated with cultivation and herbicide use.* Growers will be trained in alternative approaches to planting year berry crop weed management. Twelve growers will be identified to participate in biofilm and conservation tillage on farm demonstrations trials. Twilight meetings will be held to permit other growers to see the techniques first hand and receive information on these and other planting year weed management practices. Factsheets will be developed and made available to growers for both techniques.

III. *Field studies and improved education on bird management will result in a 20% increase in blueberry yield for 6 farms that initiate bird control programs.* Educational programs will be held on the use of a variety of methods to reduce bird damage in blueberry crops. Six growers statewide will participate in a bird control study in blueberries looking at the effectiveness and overall effect on productivity of chemical bird repellent and bird netting, and/or other bird management techniques.

IV. *Twenty NYS Berry farmers will adopt a season extension production method, resulting in a 10% increase in farm revenue from berry crops.* Four regional workshops will be held on the use of low cost methods of season extension: row covers; frost protection monitoring; variety selection to extend the season, use of day neutral strawberries, and primocane fruiting blackberries. Season extension efforts will be implemented on 10 berry farms across the state. Additionally, post harvest shelf-life of harvested berries will be improved through various techniques including proper harvest and post harvest handling of berries, use of forced air cooling , Individual Quick Freeze (IQF) equipment; dehydration etc.

More information will be forthcoming on the project's various educational events and on farm demonstration trial opportunities as the April 2010 starting date approaches. Stay tuned!

# HIGH TUNNELS EXTEND GROWING SEASON, MARKETS FOR NEW YORK GROWERS

*Rebecca Schuelke Staehr, NYFVI communication specialist*

August 28, 2009. The opportunity to extend New York's growing season, and produce crops that are bigger, better looking and higher yielding has many growers considering high tunnels.

``Living in the northeast, we have a lot of weather that is not good for growing crops. The more high tunnels I can put up, the more I will,'' said Zaid Kurdieh, owner of Norwich Meadows Farm, in Norwich, NY.

With more than four acres of vegetables and fruit under plastic, Norwich Meadows is one of the biggest high tunnel operations in the state.

A high tunnel is a relatively low-tech, ribbed structure covered in clear plastic. Plants grow in the ground, and enjoy the benefits of naturally-trapped heat, and less stress from wind, rain, and some pests. Most high tunnels rely solely on the sun's rays as a heat source, and most models can be moved to different ground.

High tunnels are gaining popularity with growers seeking a lower-cost alternative to greenhouses, and the chance to grow crops earlier, and later, in the season. Some New York growers report they can harvest vegetables nine months of the year in a high tunnel system.

For the past few years, Cornell University has been conducting on-farm research trials to be able to make recommendations about production practices, crops, varieties, pest management, economics, and more. An outreach campaign to share information with farmers includes field days, a website, blog, farm visits by Cooperative Extension educators, and more.

These research and outreach efforts are supported by grant funds from the New York Farm Viability Institute, a farmer-led nonprofit organization that promotes projects that help farmers improve profitability. The Institute received funds from the New York State legislature and Department of Agriculture and Markets.

In late July, the project, led by Cornell horticulture professor Dr. Chris Wien, hosted a field day at Norwich Meadows. More than 60 people from around the state turned out.

"A cool, wet season is a good argument for high tunnels, especially if you are growing warm-season crops – tomatoes, eggplants, and so on,'' said Judson Reid, a vegetable specialist with Cornell Cooperative Extension.

The chance to increase yields, or attract premium prices for, say, fresh and local lettuce in April, or strawberries in September, has attracted the interest of numerous growers and start-up farmers. But, the startup costs make some growers wary of additional expenses.

"Do you have a market that will pay for a premium product? That is the market you want to find,'' said Harry Edwards, a representative from Haygrove Tunnels. The manufacturer's high tunnels start at a 28' x 200' model that sells for $7,200 and go up from there, to high tunnels that cover several acres of ground.

Customers often find they need a bigger high tunnel quicker than they anticipated, Edwards said. In addition to lining up a market for crops, Edwards advised high tunnel growers to raise crops that don't ship well, so New York farmers don't have to compete with grocery store prices. Flowers and berries are good choices, he said.

At Norwich Meadows, taste and quality drive the choices about what the farm grows and sells. 'We have items nobody else has,'' Kurdieh said. "It may be a cucumber, but it is a variety and a taste no one else has. People eat with their eyes, so we have a nice-looking display. "The quality of your product speaks for itself.''

Norwich Meadows sells its produce through several community-supported-agriculture programs and farmers markets, primarily in New York City. Although the majority of produce is sold fresh, Norwich Meadows has been experimenting with selling jarred tomato sauce and jarred pickled vegetables.

"High tunnels are great, if you can manage them,'' Kurdieh said. "Market is the first thing you need to think about. High tunnels are not cheap. ... They require management. You can't treat them like you are growing outdoors.''

Kurdieh started farming fulltime in 2000. Since 2003, he has put up more than 30 high tunnels on his farm. To educate himself, he visited farms in Egypt, where high tunnel production is more common, and, more advanced. Anyone thinking of putting up a high tunnel should visit with other farmers already in high tunnel production, and check with the Cooperative Extension service, books and the internet for information, Kurdieh recommended.

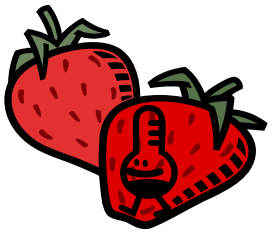
"Read up. There is a lot of information out there,'' he advised.

Cornell University's horticulture department has a website devoted to high tunnels, including information about choosing a structure, agronomics of growing in high tunnels, ongoing on-farm trials related to yield, variety, and pest control, and more. The site includes downloadable spreadsheets for record keeping and cost-analysis by crop.

Dr. Wien recently released the results of a study of the net income per square foot of various crops grown in high tunnels in New York. Raspberries netted $1.51, while cucumbers cost a grower 53 cents. As with any production system, results will vary by farm. In the study, one grower netted 57 cents per square foot on tomatoes, and a peer netted $1.44 per square foot with tomatoes.

Kurdieh reported his yields increased by four times for many crops. Depending on yield and market price, tomatoes may translate to $30,000-$50,000 per acre, he said. But, he added, the need to rotate crops as well as provide customers with a diverse mix of products means not all fruits and vegetables grown are so profitable. Artichokes, for example, gross around $8,000 per acre, he said.

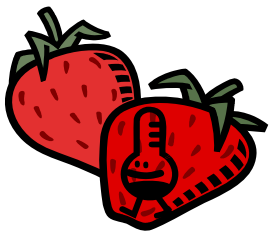
On the web:
Norwich Meadows, www.norwichmeadowsfarm.com
Cornell University, High Tunnels, www.hort.cornell.edu/hightunnel/
Cornell High Tunnel Blog, http://blogs.cornell.edu/hightunnels/
New York Farm Viability Institute, www.nyfvi.org



# SEPTEMBER BERRY BAROMETER

*HELPING TO KEEP YOU UP TO THE MARK!*

*Cathy Heidenreich, Berry Extension Support Specialist, Department of Horticulture, Cornell CALS, Ithaca, NY and Laura McDermott, Regional Agricultural Specialist, Capital District Vegetable and Small Fruit, Cornell Cooperative Extension-Washington County, Hudson Falls, NY.*



It's time to start looking forward to 2010. Review your notes and records for concerns that may need addressing next year. Begin gathering needed information and making plans over the late fall and winter months on how best to address them. Have plans and products in place before the 2010 season begins.

## ALL BERRY CROPS:

1. **Weeds** – Start organizing those fall applications. Review weed problems and available products for their control. Purchase product and adjuvants as needed. Check labels to review timing and application requirements indicated (temperature, adjuvants, need for watering in after application etc.). Calibrate application equipment to be sure you are getting the most bang for your buck out of the products you apply!
2. **Site Preparation** – Hopefully your site preparation for new plantings, including preplant weed management, is well underway for all 2010 berry plantings. September is the month for seeding cover crops such as rye or oats – be sure to get cover crops planted in a timely fashion and at a high enough seeding rate to get good stand establishment. Also get those plant orders in to be sure of getting sufficient quantities of the varieties you have selected. Need help finding small fruit nurseries that carry the variety you may be interested in? Check out the Cornell Small Fruit Nursery Guide: http://www.fruit.cornell.edu/Berries/nurseries/. Have on hand sufficient irrigation supplies to be able to water immediately after planting next spring to get those new plants off to a good start.
3. **Wildlife Management** – Watch for deer browse. Take immediate steps to deter feeding. Mow row middles, field borders and ditches just before winter to reduce habitat for moles and voles.
4. **Sod alley ways** - Fall is a good time to plant grass alleyways. Consider using hard fescues for this purpose. They are very durable and slow growing – lessening the need for frequent mowing. Spartan, Aurora, SR3000, SR3100 and Reliant as well as sheep fescues are low growing and grow readily in a wide range of soil pH. Unlike other grasses, hard fescues do not propagate from rhizomes but are bunch grasses, not encroaching into the crop plant area. Their dense sod with extensive root systems protects soil structure. Use higher seeding rates for a more rapid establishment and full cover. While hard fescue seed is relatively expensive, the cost is most often off set by the reduced need for mowing.

## STRAWBERRIES:

*Established plantings:*

1. **Fertilizer** – Fall is the time for your final nitrogen application for the season. Apply 30 lb actual N per acre in early September. Your seasonal total of N should be around 120 lbs N/acre for bearing fields. If you did not apply fertilizer at renovation, you cannot make it all up during this time, but you could up the levels slightly (the same for soils that have a very low OM content). If you took some leaf samples following renovation, now would be a good time to take a look at those results. Magnesium and Boron are sometimes deficient – if that's your case

consider applying Epsom salts (15 lbs/100gal/acre) for magnesium and Solubor (3 lbs/100gal/ acre) for boron. Just be careful of applying these nutrients on a hot humid day, because they can cause significant leaf burn.

2. **Diseases** – **Foliar diseases** remain a concern while leaves are actively growing. Severe epidemics may result in weakened plants that are more susceptible to winter injury; fruit bud set may also be reduced. **Powdery mildew** has been a particular problem this year, both in high tunnels and field plantings. White powdery mycelium appears on leaf lower surfaces first, causing leaf edges to curl (right). White patches may also appear on upper leaf surfaces, fruit stems, and fruit. Several products are labeled for mildew management – see the berry guidelines for details. If **Red stele** has been identified in your planting, use a soil applied fungicide like Ridomil Gold EC or a foliar application of Alliette or Phostrol. All of these fungicides should be applied in late September or early October as the soils cool.
3. **Weeds** - Apply Dacthal, Sinbar, or Devrinol for winter annuals; Stinger for thistles. Remember you have one more shot at it in early November – 2,4-D may be an option if the weather is warm. Or later in November, Devrinol and/or Sinbar may be used before applying winter mulch. Check labels for timings, application rates and methods. Remember total product application/season restrictions apply for most products. See labels for details.
4. **Winter mulch** – Are you ready? Are you set? Grain mulches are the most common; the best include wheat, rye, or Sudan grass straws. Apply after several frosts and leaves flatten in late fall early winter. Apply 2-3 tons/A (2-3" layer) on average; 4-5 tons/A in cold windy climates or on raised beds.

*New plantings:*

1. **Fertilizer** – Fall is the time for your final nitrogen application for the season; apply 30 lbs/acre to promote root growth and improve flower bud initiation.
2. **Diseases** – Some growers have experienced serious problems this season with **Verticillium wilt** in new plantings. Outer leaves brown and collapse, leaving inner leaves green; plants eventually die. Short, stubby adventitious roots may form at the crown after infection.

Sites with a history of verticillium wilt may need fumigation to mitigate effects of the disease, which persists in soil for several years. Fall is the time for fumigation to avoid planting delays in the spring. Control weed hosts to further reduce inoculum levels: might shade, ground cherry, redroot pigweed, lambs quarters, horsenettles. Plant only resistant varieties in problem areas such as 'Earliglow', 'Guardian', 'Allstar', 'Tribute' or 'Tristar'. Whenever possible avoid movement of contaminated soil to uninfected fields by disinfesting equipment and tools.

3. **Weeds** – Did you remember to cultivate in mid-August then apply Dacthal (12 lb/A)? You have one more shot at weed control in Late November with Devrinol and/or Sinbar before applying winter mulch.
4. **Winter mulch** – Are you ready? Are you set? Grain mulches are the most common; the best include wheat, rye, or Sudan grass straws. Apply after several frosts and leaves flatten in late fall early winter. Apply 2-3 tons/A (2-3" layer) on average; 4-5 tons/A in cold windy climates or on raised beds.

## BLUEBERRIES:

*Established plantings:*

1. **Fertilizer** – Avoid adding nitrogen during the fall. Apply 200 lb/A sulfur in plantings where pH is still above desired levels. Amendments like sulfur should be added *before* you add the next layer of mulch.
2. **Diseases** - Check for weak plants and try to determine what the damage is caused by. Check for rodent damage to the roots, but also look for flagging caused by canker. You will be hearing more about virus diseases of blueberry, which we are quite concerned about, so call if you have bushes that look stressed.
3. **Insects** – look for insect stem galls after leaves have fallen- cut out and burn any galls to reduce overwintering populations.
4. **Weeds** – Remember to not cheat on the mulch – you should have 6" of mulch on those berries at all times. If you have a deep and consistent mulch layer you can save on weed control and irrigation. If you are having a hard time spreading the mulch, consider the implement pictured right – this is a mini-manure spreader offered by Mill-Creek that has made mulch application much easier. September into October – Sinbar after harvest (avoid contact with foliage), Devrinol, Solicam (if not applied in spring), Surflan, or Princep (low rate). November – Kerb for grasses. Casoron if needed for grasses and broadleaves- apply uniformly in late fall when daily temperatures hold below 45°F. Rage in the row if weeds are still actively growing. See berry pest management guidelines (http://ipmguidelines.org/BerryCrops/) for more information.

*New plantings:*

1. **Fertilizer** – Avoid adding nitrogen during the fall. Apply 200 lb/A sulfur in plantings where pH is still above desired levels.
2. **Insects** – Look for **insect stem galls** after leaves have fallen- cut out and burn any galls to reduce overwintering populations.
3. **Weeds** – Low rate of Princep in October. One more shot at it in late November with Kerb for grass control (before ground freezes) and/or Casoron for grasses or broadleaves- apply uniformly in late fall when daily temperatures hold below 45°F.All have different application requirements – check labels for details.

## RASPBERRIES AND BLACKBERRIES:

*Established plantings:*

1. **Fertilizer** – Avoid adding nitrogen during the fall.
2. **Diseases –** Mid-summer heavy rainfall may have set the stage for problems with **Phytophthora root rots** on sites with a history of the disease. Infected plants often wilt and collapse just before harvest or during warm dry weather. Infected plants usually occur in groups and are most often found in the lowest or wettest parts of the field. Look for signs of Phytophthora – wilting and a brick-red color under the bark at the crown of the plant. Treatment options include fall applications of Ridomil Gold (Note: DO NOT apply within 45 days of harvest), Alliette 80 WP, Prophyt, or Phostrol. See berry pest management guidelines (http://ipmguidelines.org/BerryCrops/) for more information. **Late leaf rust** may be another concern in raspberries. Look for small yellow spots on the undersides of leaves. Heavily infected leaves may drop prematurely, leaving canes bare by September. Flowers, petioles and fruit may also be infected. Cabrio or Pristine may provide some disease suppression. Cultural practices to

reduce disease next season include removal of the alternate host (white spruce) and cane thinning, maintaining narrow rows and good weed control to increase air circulation and reduce leaf drying time.

3. **Insects** – Check for **Cane borer/girdler** damage (red-necked cane borer, flat-headed cane borer). These consist of swellings 1-3 inches long and a few inches to several feet above the ground. Some infested canes may wither and die; in other cases the infected cane breaks off in the region of the swelling. With other borer species (Raspberry cane borer) no swelling is evident but the tips of new canes may wilt and blacken. Cut out and burn all infested canes. **Crown borer** *will* also cause wilting. Several canes of a bush may be weakened by activity of a singe larva in the crown; the entire plant may be killed. Crown borer adults are active now as they lay eggs. The adults look like a large yellowjacket, but they are actually a moth *(adult, right)*. Prune out dying canes; remove infested crowns. If you did not make a spring application you may apply Capture 2EC as a postharvest drench directed at the crown (minimum 200 gal water/A).Another potential fall insect pest is **tree crickets**. Adults lay eggs in canes, leaving long rows of punctures that greatly weaken the cane above. Remove and burn infested canes as they appear. Late August to mid- September applications of insecticides such as carbaryl may also be effective.
4. **Weeds** – September into October – Sinbar, Devrinol, Surflan, Solicam (if not applied in spring). Check labels for timings, application rates and methods. Princep at high rate if not applied in spring. Remember total product application/season restrictions apply for most products. See labels for details. You have one more shot at it with Casoron for broadleaves and grasses in November if needed - apply uniformly in late fall when daily temperatures hold below 45°F.

*New plantings:*

1. **Fertilizer** – Avoid adding nitrogen during the fall.
2. **Weeds** – Limited options the planting year. October – low rate of Princep (Note: Not to be used on tissue culture plants). Late November, Casoron as above.

*(This is the last Berry Barometer for the season. Hope you have found this monthly feature timely and helpful. Please send any suggestions or comments to Cathy Heidenreich, mcm4@cornell.edu. Thanks!)*

# NEW BERRY RELEASES: A RESEARCH BRIEF

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

# 'WENDY' STRAWBERRY

A new early season (short day) strawberry variety, 'Wendy', was recently released by the Atlantic Food And Horticulture Research Center of Agriculture and Agri-Food Canada.

'Wendy' is a seedling selected from a cross of K96-5 and 'Evangeline'. Originally designated K98-6, 'Wendy' was selected for its high yields and large, firm, flavorful fruit.

Wendy' offers growers an alternative to 'Annapolis' as an early season variety. Plants are vigorous, resembling those of 'Evangeline', and are well-suited to matted row production, runnering freely.

'Wendy' demonstrated partial resistance to red stele (Phytophthora) root rot during screening trials – performing better than 'Annapolis', 'Cavendish', and 'Sable'. 'Wendy' also demonstrated moderate resistance to leaf scorch and powdery mildew; it is susceptible to leaf spot.

Fruit are firmer than those of 'Sable' and 'Evangeline' with very good flavor. 'Wendy' has a large calyx, extending over the edges of the fruit shoulder, and a more intense strawberry flavor than 'Annapolis'.

This new strawberry, with its attractive, flavorful berries appears to be well-adapted to production throughout eastern Canada and the northeastern US and provides a firm-fruited alternative to other early varieties.

*Editor's Note*: Many thanks to author Andrew Jamieson for providing the photo of 'Wendy' that accompanies this review. 'Wendy' is available from several US nurseries – check out the Cornell On line Nursery Guide for a listing: http://www.fruit.cornell.edu/Berries/nurseries/strawberries.html.

*To read the original journal article in its entirety see:* Jamieson, A., Sanderson, K.R., Privé, J.P., and Tremblay, R.J.A. 2009. 'Wendy' Strawberry. *HortScience* Volume 44 No. 3 June 2009, pages 836-839.

# 'VALLEY RED' STRAWBERRY

A new strawberry recently has been released from the USDA-ARS breeding program in Corvallis, Oregon, 'Valley Red'. The new June-bearing strawberry, a cross between 'Anaheim' and 'Puget Reliance', is a high-yielding strawberry with uniform, medium sized fruit. This berry is particularly suited to processing with its dark red internal and external color.

'Valley Red' consistently ripens with it' parent 'Puget Reliance' and slightly ahead of 'Totem' and 'Tillamook'. Plants are vigorous and uniform, although not as open in habit as 'Tillamook' or 'Pinnacle'.

In trials in Washington and Oregon it performed at or near the top in yield as compared to other PNW named varieties.

It also scored well in fresh fruit characteristic evaluations compared to other PNW varieties and has been characterized as having a sweet, mild strawberry flavor. While pH fruit pH is comparable to other PNW varieties, soluble solids and titratable acidity are lower (presumably the reason for its perceived sweetness). 'Valley Red' is best grown commercially for processing in perennial, matted row production systems. High-yielding and vigorous, the berries are uniformly shaped, medium-sized and have excellent processing characteristics.
**Editor's note**: Many thanks to author Chad Finn for providing the photo of Valley Red' for this article. He informs me Lassen Canyon and Norcal/Sakuma Bros. Farms should have 'Valley Red' planting material available. While Chad suggests it is always good to try out new varieties he cautions those Northwest selected varieties may not do well in other parts of the country.

*To read the original journal article in its entirety see:* Finn, C.E., Moore, P.P, Kempler, C., Yorgey, B.M., Strik, B.C., and Martin, R.M.. 2009. 'Valley Red' Strawberry. *HortScience* Volume 44 No. 5 August 2009, pages 14681-1471.

# 'NANTAHALA' RASPBERRY

For the first time in 50 years a red raspberry has been released from the North Carolina State University breeding program. 'Nantahala', or "land of the midday sun" in Cherokee, is a new primocane fruiting red raspberry. It differs from other red raspberry cultivars with its late harvest season and large berry size.

**Parentage**
'Nantahala' is a cross between its female parent NC 245 ('Algonquin' x 'Royalty') and its male parent "Rossana'. While predominantly R. idaeus in origin, its parentage also includes R. occidentalis through its 'Royalty' grandparent. 'Nantahala' was selected in 1998 and evaluated as NC 451.

**Performance and Description**
'Nantahala' is an erect, thorny primocane-fruiting red raspberry bearing fruit on the upper 25% of its canes. Fruit is dark red and longer and wider than 'Heritage'; drupelet number and seed size is smaller. 'Nantahala' ripened later than most other primocane-fruiting cultivars in yield trials in North Carolina. Harvests began at the 2 locations the 3rd week of August or 1st week of September and continued 3-4 weeks or until the first hard frost occurred. Yields of this raspberry were lower than 'Caroline' or 'Heritage' in yield trials. Fruit weight was the same or larger than 'Caroline'.

A minimal spray program of dormant fungicides was used in all trials. No significant infections of 'Nantahala' occurred from fungal diseases in the plots such as late leaf rust or leaf spot. Virus susceptibility was not evaluated.

**Sensory Evaluations**
A panel of 57 faculty students and staff evaluated 'Nantahala' along with NC450, Caroline, Heritage and an unknown California cultivar for over all acceptability, red color, shape, flavor, firmness, juiciness, seediness and fuzziness. Flavor, texture and seediness of 'Nantahala' were as god or better than other cultivars evaluated; color and shape were ranked as superior to that of 'Caroline' and 'Heritage'.

*To read the original journal article in its entirety see:* Fernandez, G.E., Ballington, J.R., and Bryson, S.J. 2009. 'Nantahala' Red Raspberry. *HortScience* Volume 44 No. 1 February 2009, pages 25-26.

# SHOULD CUSTOMER SATISFACTION BE PART OF SPECIALTY CROP GROWERS' MARKETING STRATEGY?

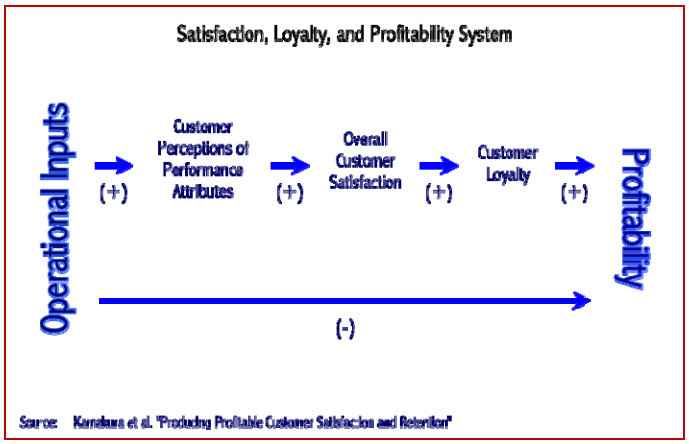

*Miguel I. Gómez, Assistant Professor, Department of Applied Economics and Management, Cornell University*

In recent years, consumer interest in local specialty crops (fruits, vegetables and ornamentals) has increased sharply. Consumers want to know how and where food is produced and are seeking a closer relationship with farmers. Although sales of locally grown food still account for only a small share of total domestic food sales, this is believed to be one of the fastest growing segments of U.S. agriculture. Growing demand for local food products is prompting change. The number of farmers' markets – one important component of local food sales – increased by nearly 150% nationwide between 1994 and 2006 and a growing number of supermarkets and restaurants feature a wide array of local food products.

The growing demand for locally produced goods provides unique opportunities for growers to engage in direct marketing initiatives and to develop closer relationships with retailers (e.g. supermarkets and restaurants). The incentive for growers is to capture a larger portion of the value created along the food supply chain. However, the local food movement also creates challenges to specialty crop growers. In particular, growers need to adopt the mindset of a food retailer. And when it comes to food retailing, customer satisfaction is essential to a successful marketing strategy and profitability.

Why should customer satisfaction be part of growers' marketing strategies? There is a strong correlation between customer satisfaction and profits. Common sense tells us that customers that are completely happy with the products and services provided are less likely to defect. Indeed, companies that are able to reduce customer defections by just 5% have experienced a jump in profits of about 25%. In addition, marketing researchers have estimated that the cost of attracting a new customer is five times higher than the cost of retaining an existing customer. Furthermore, customer profitability tends to increase over time because loyal customers tend to be less sensitive to price increases. These links are illustrated in Figure 1. A positive customer experience leads to increased customer satisfaction, which in turn increases customer loyalty and profitability. However, efforts to create a positive experience for the customer come with a cost. This is why specialty crop growers must identify effective ways to create value through customer satisfaction.

Figure 1: The Customer Satisfaction – Profitability Links

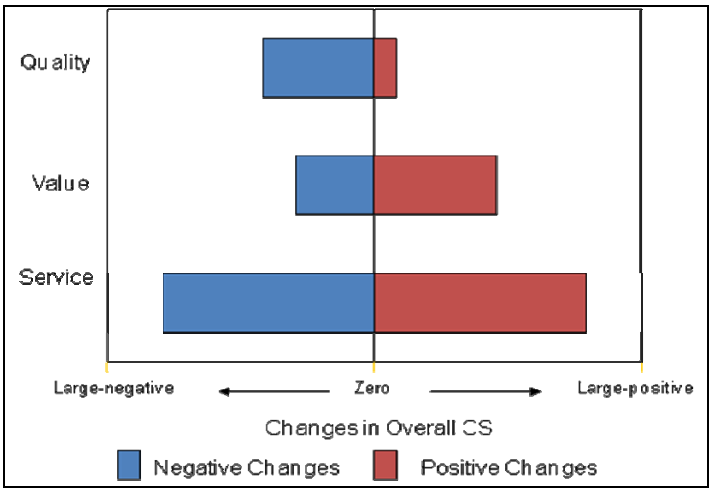



When a specialty crop business sells to wholesalers (i.e. business-to-business) quality and volume consistency as well as prices are the primary drivers of customer satisfaction. However, customer satisfaction is a retail setting is more complex because it involves all factors that affect customers' satisfaction with their shopping experience. In a series of recent studies, Gómez and collaborators examine the factors driving customer satisfaction in food retailing businesses, including supermarkets and restaurants. The findings of these studies may provide important lessons to specialty crop growers participating in local food distribution channels.

In food retailing, their results suggest that businesses must focus on *customer service, quality* and *value* to affect overall customer satisfaction and its ultimate impact on profits. Their results consider more subtle managerial implications for food retailers. Figure 2 indicates that changes in overall customer satisfaction are particularly sensitive to changes in *customer service*. Both negative and positive changes of customer perceptions regarding the service provided have a relative large impact on overall customer satisfaction

and profits. On the other hand, customers may consider *quality* as a pre-condition to satisfaction: positive changes in quality have modest effects on satisfaction and profits, but negative changes in quality result in substantially lower levels of customer satisfaction. However, improvements in *value* have larger impact on overall satisfaction than do negative changes, suggesting that value may be a satisfaction and profitability-enhancing factor.

Figure 2: Drivers of Customer Satisfaction in Food Retailing




So should you care about customer satisfaction? If specialty crop growers want to have an appropriate marketing strategy to take advantage of opportunities in the local food system the answer is definitely 'yes". In fact, Cornell is now conducting a promising study to integrate customer satisfaction into the marketing strategy of wine tasting rooms in the Finger Lakes Region. The ultimate goal of this study is to identify what attributes of the tasting room design and of the customer tasting room experience lead to higher overall customer satisfaction and sales. You will learn about the results in future editions of *Smart Marketing*.

*Further References*


1. Reichheld, F.F. 1990. "Zero Defections: Quality Comes to Service," *Harvard Business Review*, September.
2. Gómez, M.I., McLaughlin, E.W. and Wittink, D.R. 2004. "Customer Satisfaction and Retail Sales Performance: An Empirical Investigation," *Journal of Retailing*, 80(4): 265-278.
3. Gupta, S., E.W. McLaughlin and M.I. Gómez. 2007. "Guest Satisfaction and Restaurant Performance," *Cornell Hotel and Restaurant Administration Quarterly*, Vol. 48, No. 3, 284-298.


***"Smart Marketing"*** *is a marketing newsletter for extension publication in local newsletters and for placement in local media. It reviews elements critical to successful marketing in the food and agricultural industry.*

# WEATHER NOTES

## NEW YORK CROP WEATHER SERVICE NOTES

**Week ending August 23rd:** Large area of high pressure off the east coast of the United States provided very warm and humid conditions. The tropics became active with the first land falling system along the Gulf Coast, of which the remnants tracked off the southeast coast. A cool frontal passage occurred on Wednesday with scattered showers and thunderstorms, however, this frontal boundary lifted north rather quickly for the end of the week with more high humidity values and showers and thunderstorms. Friday and Saturday resulted in a round of severe weather and flash flooding as the combination of Hurricane Bill off the east coast and a frontal boundary approaching from the west kept the region embedded in a moist and unstable atmosphere. Temperatures and rainfall averaged above normal.

**Week ending August 30th:** The week began with Hurricane Bill moving east of the Gulf of Maine and a cold front bringing showers to eastern New York. A large dome of cool Canadian high pressure dominated the weather over New York into the mid week with cool and dry weather. A weak cold front brought some light scattered showers on Wednesday before high pressure came back in on Thursday. The cold front returned northward as a warm front Friday into Saturday with a soaking moderate to heavy rainfall for the region. Tropical Storm Danny weakened and passed east of upstate New York and Long Island on Saturday. Rainfall for the week was normal to above normal across central and eastern New York as well as Long Island. Precipitation was generally below normal over northern and portions of western New York. Temperatures were near normal or slightly above normal.

**Week ending September 8th:** High pressure dominated New York State much of this period after a cold front moved east of the state Sunday accompanied by isolated showers. Another weak cold front settled south across the state on Saturday, again accompanied only by isolated showers across northern and central New York. Temperatures and precipitation averaged below normal statewide during this period.

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Questions or Comments about the New York Berry News?

Ms. Cathy Heidenreich
NYSAES Cornell, 630 W. North Street, Geneva, NY 14456
*Phone*: 315-787-2367 *Email*: mcm4@cornell.edu



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, August 23rd, 2009**

| | 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 | 62 | 78 | 10 | 198 | 2013 | 80 | 1.62 | 0.81 | 22.38 | 6.59 |
| Glens Falls | 90 | 55 | 75 | 8 | 175 | 1714 | 20 | 0.80 | -0.04 | 17.58 | 2.17 |
| Poughkeepsie | 91 | 66 | 79 | 9 | 202 | 2120 | 99 | 0.85 | 0.08 | 26.51 | 8.26 |
| ***Mohawk Valley*** | | | | | | | | | | | |
| Utica | 85 | 55 | 71 | 8 | 149 | 1242 | -93 | 0.56 | -0.59 | 22.14 | 0.98 |
| ***Champlain Valley*** | | | | | | | | | | | |
| Plattsburgh | 91 | 55 | 78 | 8 | 168 | 1641 | -80 | 0.17 | -0.81 | 16.32 | 1.45 |
| ***St. Lawrence Valley*** | | | | | | | | | | | |
| Canton | 88 | 54 | 72 | 8 | 158 | 1451 | 0 | 1.23 | 0.25 | 18.68 | 3.14 |
| Massena | 91 | 54 | 74 | 9 | 166 | 1685 | 59 | 1.31 | 0.47 | 17.03 | 2.83 |
| ***Great Lakes*** | | | | | | | | | | | |
| Buffalo | 88 | 63 | 76 | 8 | 185 | 1881 | 36 | 1.13 | 0.15 | 16.53 | 0.83 |
| Colden | 85 | 59 | 73 | 8 | 161 | 1483 | -19 | 0.62 | -0.34 | 18.59 | 0.56 |
| Niagara Falls | 88 | 61 | 76 | 9 | 184 | 1877 | 23 | 0.79 | -0.12 | 19.43 | 4.27 |
| Rochester | 90 | 62 | 75 | 9 | 180 | 1794 | 9 | 0.45 | -0.35 | 17.31 | 3.76 |
| Watertown | 89 | 54 | 75 | 10 | 177 | 1645 | 86 | 0.31 | -0.47 | 14.81 | 2.66 |
| ***Central Lakes*** | | | | | | | | | | | |
| Dansville | 91 | 63 | 75 | 8 | 180 | 1865 | 69 | 0.56 | -0.20 | 14.99 | 0.09 |
| Geneva | 91 | 62 | 75 | 8 | 175 | 1765 | -16 | 0.46 | -0.25 | 16.03 | 1.24 |
| Honeoye | 88 | 60 | 74 | 6 | 172 | 1738 | -116 | 0.56 | -0.21 | 20.33 | 5.68 |
| Ithaca | 90 | 62 | 74 | 8 | 171 | 1602 | -13 | 0.84 | 0.07 | 16.96 | 0.99 |
| Penn Yan | 90 | 62 | 75 | 8 | 177 | 1890 | 109 | 0.74 | 0.03 | 14.32 | -0.47 |
| Syracuse | 91 | 62 | 77 | 10 | 193 | 1999 | 188 | 0.50 | -0.28 | 16.14 | -0.62 |
| Warsaw | 85 | 60 | 73 | 9 | 161 | 1418 | 21 | 1.03 | 0.12 | 21.68 | 4.31 |
| ***Western Plateau*** | | | | | | | | | | | |
| Alfred | 84 | 53 | 70 | 6 | 138 | 1276 | -101 | 2.60 | 1.76 | 20.19 | 3.53 |
| Elmira | 91 | 60 | 74 | 7 | 169 | 1770 | 61 | 0.84 | 0.14 | 12.55 | -2.72 |
| Franklinville | 87 | 58 | 72 | 10 | 154 | 1372 | 111 | 1.59 | 0.68 | 24.51 | 6.93 |
| Sinclairville | 87 | 58 | 73 | 9 | 161 | 1581 | 166 | 1.56 | 0.51 | 24.02 | 4.44 |
| ***Eastern Plateau*** | | | | | | | | | | | |
| Binghamton | 86 | 63 | 74 | 8 | 169 | 1734 | 74 | 1.84 | 1.07 | 18.62 | 2.55 |
| Cobleskill | 89 | 61 | 74 | 9 | 170 | 1607 | 63 | 1.33 | 0.55 | 19.46 | 2.28 |
| Morrisville | 86 | 61 | 73 | 8 | 162 | 1477 | 5 | 0.62 | -0.21 | 20.54 | 3.52 |
| Norwich | 89 | 59 | 73 | 8 | 161 | 1564 | 18 | 1.30 | 0.53 | 24.21 | 7.17 |
| Oneonta | 89 | 62 | 74 | 10 | 171 | 1626 | 198 | 1.37 | 0.53 | 19.93 | 1.27 |
| ***Coastal*** | | | | | | | | | | | |
| Bridgehampton | 90 | 68 | 79 | 9 | 206 | 1985 | 130 | 0.00 | -0.79 | 22.30 | 5.43 |
| New York | 93 | 72 | 83 | 9 | 233 | 2594 | 94 | 0.93 | 0.09 | 25.67 | 7.63 |

1. *D*eparture *from N*ormal
2. *Y*ear *to D*ate: Season accumulations are for April 1st to date. Weekly accumulations are through 7:00 AM Sunday Morning

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**WEATHER REPORTS OF TEMPERATURES AND PRECIPITATION THROUGHOUT NEW YORK STATE FOR WEEK ENDING SUNDAY 8:00am, August 30th, 2009**

| | Temperature | | | | Growing Degree Days (*Base 50*) | | | Precipitation (*inches*) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | *High* | *Low* | *Avg* | *DFN*[1] | *Week* | *YTD*[2] | *DFN* | *Week* | *DFN* | *YTD* | *DFN* |
| ***Hudson Valley*** | | | | | | | | | | | |
| Albany | 82 | 53 | 68 | 1 | 128 | 2141 | 87 | 1.49 | 0.72 | 23.87 | 7.31 |
| Glens Falls | 80 | 45 | 64 | -2 | 102 | 1816 | 17 | 2.33 | 1.49 | 19.91 | 3.66 |
| Poughkeepsie | 85 | 56 | 69 | 2 | 136 | 2256 | 106 | 0.77 | -0.03 | 27.28 | 8.23 |
| ***Mohawk Valley*** | | | | | | | | | | | |
| Utica | 75 | 43 | 61 | -2 | 77 | 1319 | -99 | 1.72 | 0.50 | 23.86 | 1.48 |
| ***Champlain Valley*** | | | | | | | | | | | |
| Plattsburgh | 80 | 44 | 64 | -2 | 97 | 1738 | -87 | 1.33 | 0.41 | 17.65 | 1.86 |
| ***St. Lawrence Valley*** | | | | | | | | | | | |
| Canton | 77 | 42 | 62 | -3 | 85 | 1626 | -12 | 1.34 | 0.36 | 20.02 | 3.50 |
| Massena | 79 | 43 | 64 | 0 | 98 | 1783 | 59 | 0.12 | -0.78 | 17.15 | 2.05 |
| ***Great Lakes*** | | | | | | | | | | | |
| Buffalo | 76 | 54 | 66 | -2 | 110 | 1991 | 27 | 1.12 | 0.14 | 17.65 | 0.97 |
| Colden | 75 | 53 | 63 | -2 | 91 | 1574 | -27 | 0.83 | -0.20 | 19.42 | 0.36 |
| Niagara Falls | 76 | 56 | 66 | -2 | 113 | 1990 | 18 | 1.12 | 0.18 | 20.55 | 4.45 |
| Rochester | 78 | 53 | 65 | -2 | 110 | 1904 | 5 | 0.34 | -0.44 | 17.65 | 3.32 |
| Watertown | 79 | 41 | 65 | 1 | 110 | 1755 | 94 | 0.40 | -0.44 | 15.21 | 2.22 |
| ***Central Lakes*** | | | | | | | | | | | |
| Dansville | 81 | 53 | 65 | -2 | 110 | 1975 | 63 | 0.34 | -0.43 | 15.33 | -0.34 |
| Geneva | 80 | 52 | 65 | -2 | 107 | 1872 | -24 | 0.72 | -0.05 | 16.75 | 1.19 |
| Honeoye | 79 | 51 | 64 | -4 | 101 | 1839 | -138 | 1.51 | 0.74 | 21.84 | 6.42 |
| Ithaca | 80 | 51 | 65 | -1 | 108 | 1710 | -10 | 2.13 | 1.34 | 19.09 | 2.33 |
| Penn Yan | 79 | 50 | 66 | -1 | 113 | 2003 | 107 | 0.86 | 0.09 | 15.18 | -0.38 |
| Syracuse | 81 | 49 | 66 | -1 | 117 | 2116 | 190 | 1.04 | 0.20 | 17.18 | -0.42 |
| Warsaw | 75 | 52 | 63 | 0 | 93 | 1511 | 26 | 0.88 | -0.04 | 22.56 | 4.27 |
| ***Western Plateau*** | | | | | | | | | | | |
| Alfred | 75 | 50 | 63 | 0 | 92 | 1368 | -97 | 0.95 | 0.11 | 21.14 | 3.64 |
| Elmira | 81 | 50 | 66 | 1 | 117 | 1887 | 69 | 1.52 | 0.82 | 14.07 | -1.90 |
| Franklinville | 76 | 49 | 62 | 1 | 89 | 1461 | 118 | 0.94 | 0.01 | 25.45 | 6.94 |
| Sinclairville | 78 | 52 | 64 | 1 | 98 | 1679 | 171 | 0.96 | -0.11 | 24.98 | 4.33 |
| ***Eastern Plateau*** | | | | | | | | | | | |
| Binghamton | 77 | 53 | 65 | 0 | 107 | 1841 | 75 | 1.56 | 0.79 | 20.18 | 3.34 |
| Cobleskill | 79 | 46 | 64 | 0 | 103 | 1710 | 67 | 1.89 | 1.05 | 21.35 | 3.33 |
| Morrisville | 79 | 49 | 64 | 1 | 101 | 1578 | 12 | 1.89 | 1.03 | 22.43 | 4.55 |
| Norwich | 80 | 50 | 66 | 2 | 112 | 1676 | 31 | 2.68 | 1.86 | 26.89 | 9.03 |
| Oneonta | 80 | 51 | 65 | 3 | 110 | 1736 | 218 | 0.88 | 0.04 | 20.81 | 1.31 |
| ***Coastal*** | | | | | | | | | | | |
| Bridgehampton | 89 | 60 | 72 | 4 | 159 | 2144 | 153 | 0.63 | -0.21 | 22.93 | 5.22 |
| New York | 87 | 66 | 75 | 3 | 180 | 2774 | 109 | 0.73 | -0.11 | 26.40 | 7.52 |

1. *D*eparture *from N*ormal
2. *Y*ear *to D*ate: Season accumulations are for April 1st to date. Weekly accumulations are through 7:00 AM Sunday Morning.

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**WEATHER REPORTS OF TEMPERATURES AND PRECIPITATION THROUGHOUT NEW YORK STATE FOR WEEK ENDING SUNDAY 8:00am, September 6th, 2009**

| | Temperature | | | | Growing Degree Days (*Base 50*) | | | Precipitation (*inches*) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | *High* | *Low* | *Avg* | *DFN*[1] | *Week* | *YTD*[2] | *DFN* | *Week* | *DFN* | *YTD* | *DFN* |
| ***Hudson Valley*** | | | | | | | | | | | |
| Albany | 80 | 46 | 64 | -2 | 98 | 2239 | 79 | 0.00 | -0.76 | 23.87 | 6.55 |
| Glens Falls | 80 | 41 | 61 | -3 | 78 | 1894 | 5 | 0.00 | -0.78 | 19.91 | 2.88 |
| Poughkeepsie | 83 | 44 | 65 | -3 | 106 | 2362 | 97 | 0.01 | -0.83 | 27.29 | 7.40 |
| ***Mohawk Valley*** | | | | | | | | | | | |
| Utica | 75 | 44 | 58 | -3 | 59 | 1376 | -111 | 0.08 | -1.20 | 23.94 | 0.28 |
| ***Champlain Valley*** | | | | | | | | | | | |
| Plattsburgh | 77 | 43 | 61 | -3 | 81 | 1819 | -96 | 0.00 | -0.85 | 17.65 | 1.01 |
| ***St. Lawrence Valley*** | | | | | | | | | | | |
| Canton | 79 | 41 | 60 | -3 | 69 | 1693 | -27 | 0.21 | -0.77 | 18.10 | 0.60 |
| Massena | 79 | 41 | 61 | -2 | 77 | 1860 | 53 | 0.47 | -0.41 | 17.62 | 1.64 |
| ***Great Lakes*** | | | | | | | | | | | |
| Buffalo | 79 | 50 | 63 | -3 | 95 | 2086 | 14 | 0.00 | -0.91 | 17.65 | 0.06 |
| Colden | 74 | 44 | 58 | -5 | 59 | 1633 | -55 | 0.42 | -0.68 | 19.84 | -0.32 |
| Niagara Falls | 77 | 47 | 62 | -4 | 85 | 2075 | -3 | 0.00 | -0.91 | 20.55 | 3.54 |
| Rochester | 77 | 45 | 61 | -4 | 81 | 1985 | -17 | 0.01 | -0.76 | 17.66 | 2.56 |
| Watertown | 78 | 39 | 59 | -5 | 65 | 1820 | 70 | 0.04 | -0.80 | 15.25 | 1.42 |
| ***Central Lakes*** | | | | | | | | | | | |
| Dansville | 77 | 43 | 61 | -6 | 76 | 2051 | 35 | 0.00 | -0.80 | 15.33 | -1.14 |
| Geneva | 78 | 47 | 61 | -4 | 81 | 1953 | -47 | 0.07 | -0.70 | 16.82 | 0.49 |
| Honeoye | 78 | 42 | 60 | -7 | 70 | 1909 | -179 | 0.09 | -0.68 | 21.93 | 5.74 |
| Ithaca | 78 | 40 | 60 | -4 | 71 | 1779 | -33 | 0.03 | -0.81 | 19.12 | 1.52 |
| Penn Yan | 77 | 46 | 61 | -4 | 82 | 2085 | 85 | 0.02 | -0.75 | 15.20 | -1.13 |
| Syracuse | 79 | 46 | 63 | -3 | 90 | 2206 | 176 | 0.04 | -0.84 | 17.22 | -1.26 |
| Warsaw | 77 | 45 | 60 | -2 | 71 | 1582 | 21 | 0.12 | -0.86 | 22.68 | 3.41 |
| ***Western Plateau*** | | | | | | | | | | | |
| Alfred | 77 | 43 | 60 | -2 | 70 | 1436 | -105 | 0.11 | -0.73 | 21.25 | 2.91 |
| Elmira | 79 | 42 | 61 | -4 | 78 | 1965 | 50 | 0.02 | -0.68 | 14.09 | -2.58 |
| Franklinville | 77 | 41 | 59 | -3 | 61 | 1520 | 107 | 0.43 | -0.54 | 25.88 | 6.40 |
| Sinclairville | 77 | 43 | 60 | -3 | 70 | 1749 | 160 | 0.12 | -1.00 | 25.10 | 3.33 |
| ***Eastern Plateau*** | | | | | | | | | | | |
| Binghamton | 76 | 44 | 61 | -4 | 76 | 1917 | 59 | 0.00 | -0.77 | 20.18 | 2.57 |
| Cobleskill | 78 | 42 | 60 | -3 | 71 | 1781 | 51 | 0.00 | -0.87 | 21.35 | 2.46 |
| Morrisville | 77 | 48 | 61 | -2 | 80 | 1658 | 11 | 0.11 | -0.80 | 22.42 | 3.63 |
| Norwich | 80 | 42 | 61 | -3 | 77 | 1753 | 21 | 0.00 | -0.86 | 26.89 | 8.17 |
| Oneonta | 77 | 44 | 61 | -1 | 79 | 1815 | 220 | 0.00 | -0.84 | 20.81 | 0.47 |
| ***Coastal*** | | | | | | | | | | | |
| Bridgehampton | 84 | 49 | 65 | -3 | 110 | 2254 | 140 | 0.00 | -0.84 | 22.93 | 4.38 |
| New York | 85 | 59 | 72 | -1 | 153 | 2927 | 109 | 0.00 | -0.84 | 26.40 | 6.68 |

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2. *Y*ear *to D*ate: Season accumulations are for April 1st to date. Weekly accumulations are through 7:00 AM Sunday Morning.

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